Compartment Review Presentation

Shingleton Forest Management Unit

Compartment 109
Entry Year 2015
Acreage: 5,278
County Schoolcraft
Management Area: Danaher Kingston Outwash

Revision Date:

Stand Examiner: Mario Molin

Legal Description:

T47N R13W Sections 16-21, 28-33

Identified Planning Goals:

Provide for the protection, integrated management, and responsible use of a healthy, productive forest and mineral resource base for the social, recreational, environmental, and economic benefit of the people of the State of Michigan.

Soil and topography:

There are three main soil types in this compartment; Rubicon Sand, Eastport Sands and Saugatuck Sand. All are listed as being naturally low in fertility. The terrain is mainly flat to rolling with steeper depressions making frost pockets.

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

This compartment has State Land on the East, West and South side of its boundaries consisting of timber types represented within compartment 109. The North is bordered by the Forest Land Group containing hardwood cover types.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

There are known concerns within the compartment. All proposed management activities have taken these concerns into consideration.

Special Management Designations or Considerations:

The East Branch of the Fox River and Camp 7 Creek are designated Natural Rivers as part of the Fox River system. This should be stated in the Special Management Designations and Considerations section. This compartment falls entirely within the Kingston Outwash LTA.

Watershed and Fisheries Considerations:

The East Branch Fox River is classified as designated trout water. In fact, the stretch of the East Branch upstream from M-77 contains the largest average size brook trout in the Eastern Upper Peninsula. Fisheries Division maintains two sand traps, one just upstream from the M-77 bridge and one off the woods road just north of the plateau immediately north of the bridge. Camp 7 Creek is not actively managed for trout but forestry personnel have sighted many small brook trout in the creek in the fall. Dutch Fred Lake is managed as a splake and yellow perch fishery.

Wildlife Habitat Considerations:

This compartment is located south of Dutch Fred Lake in the Grand Marais Sandy End Moraine and Outwash Sub-subsection. White pine, hemlock, yellow birch, red maple and beech were the major component species in the circa 1850 forests. Balsam fir, red pine, and spruce were recorded as moderately important while sugar maple and white birch were minor components. Mountain ash was found in the understory throughout the compartment. Current vegetation within the compartment is substantially different from that of pre-settlement times. Red pine and jack pine plantations intermixed with large openings constitute the majority of the compartment.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. There is insufficient data to determine the glacial drift thickness. The Ordovician Trenton and Black River Groups subcrop below the glacial drift. These are used for stone/dolomite. Gravel pits at not found in the general area and potential appears to be limited. There is no commercial oil and gas production in the UP.

Vehicle Access:

Access is very good through the entire compartment. Dutch Fred Lake Road runs through the center with many good two-tracks spurring off giving access to almost the entire compartment. Sandy soils can make logging difficult during dry seasons.

Survey Needs:

As of this time there are no known survey needs.

Recreational Facilities and Opportunities:

The only developed recreation facility within this compartment is the boating access site located on Dutch Fred Lake. However, the Danaher Plains ORV trail and snowmobile trail #431 are located immediately east of the compartment on the east side of State Highway M-77.

Fire Protection:

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**

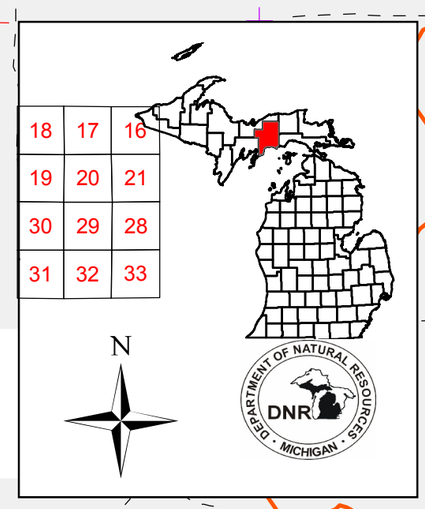
The following information is displayed, where pertinent, on the attached compartment maps:

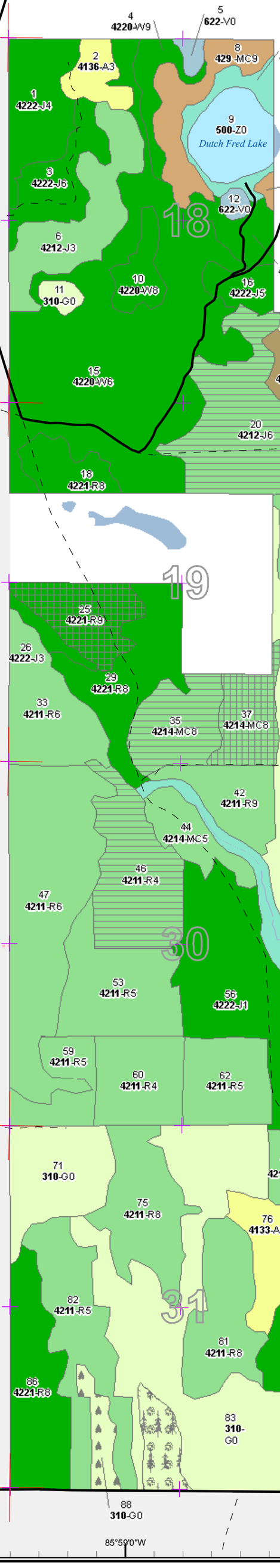
- **Base feature information, stand boundaries, cover types, and numbers**
- **Proposed treatments**
- **Site condition boundaries**
- **Details on the road access system**

Cover Type & Treatment Map

Compartment: 109
T47N R13W
16 17 18 19 20 21 28 29 30 31 32 33
County: Schoolcraft
Unit: Shingleton
YOE: 2015
Acres: 5,093 GIS Calculated
Examiner: Mario Molin
Map Revised: 09/12/2013
Map Phase: Pre-Review

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





Legend

- Miris Corners
- Remonumented Section Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- ORV Trails
- ORV Trail
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Non-Forest Regeneration

Planned Regeneration

- Natural
- Planted

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Planting (tree species)
- Regeneration Survey

Forest Stands

Level 3

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

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub

1 0.5 0 1 Miles

85°59'0"W 85°58'0"W 85°57'0"W 85°56'0"W 85°55'0"W
46°29'0"N 46°28'0"N 46°27'0"N 46°26'0"N 46°25'0"N

Stand Boundary Map

Compartment: 109
T47N R13W
16 17 18 19 20 21 28 29 30 31 32 33
County: Schoolcraft
Unit: Shingleton
YOE: 2015
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Map Revised: 09/12/2013
Map Phase: Pre-Review

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

18	17	16
19	20	21
30	29	28
31	32	33

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Legend

- Miris Corners
- Remonumented Section Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- ORV Trails
- ORV Trail
- Stream
- Intermittent Stream
- Stand Boundaries

Forest Stands

Level 3

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

Non-Forest Stands

Level 3

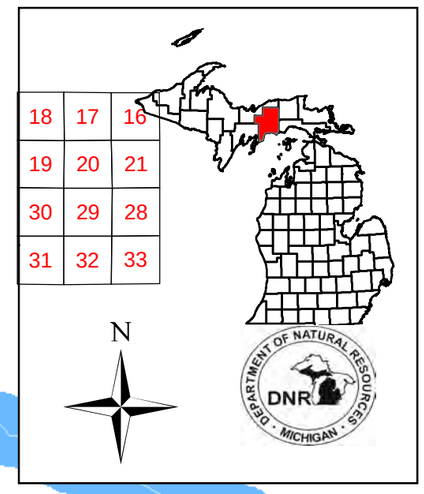
310 - Herbaceous Openland
500 - Water
622 - Lowland Shrub

1 0.5 0 1 Miles

Special Conservation Areas & Site Conditions Map

Compartment: 109
T47N R13W
16 17 18 19 20 21 28 29 30 31 32 33
County: Schoolcraft
Unit: Shingleton
YOE: 2015
Acres: 5,093 GIS Calculated
Examiner: Mario Molin
Map Revised: 09/12/2013
Map Phase: Pre-Review

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



Legend
- Miris 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
- 3A: Potential old growth / biodiversity
- 3G: Other Influence zones - See comments
- 3J: Water quality / BMPs (stream, river, or lake)

Reviewable SCAs
- Proposed SCA
- SCA Removal

Dedicated Special Conservation Area
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer

3A - 002
3G - 005
3J - 004
5C - 003

1 0.5 0 1 Miles

Report 1 – Total Acres by Cover Type and Age Class

Shingleton Mgt. Unit **Compartment 109 Year of Entry 2015**

Mario Molin : 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	89	60	0	0	79	11	3	0	0	0	0	0	0	0	**242**
Bog	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
Herbaceous Openland	1847	0	0	0	0	0	0	0	0	0	0	0	0	0	**1847**
Jack Pine	0	203	165	43	206	162	12	0	0	0	0	0	0	0	**792**
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	2	0	0	**2**
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	32	0	0	0	0	0	**32**
Mixed Upland Deciduous	0	0	0	15	0	0	0	0	0	0	0	0	0	0	**15**
Natural Mixed Pines	0	0	0	0	0	0	155	0	2	0	0	0	0	0	**157**
Northern Hardwood	0	0	0	0	0	0	34	0	34	0	0	0	0	0	**69**
Planted Mixed Pines	0	0	0	0	45	100	10	0	0	0	0	0	0	0	**155**
Red Pine	0	0	0	0	121	993	79	50	76	0	0	0	0	0	**1319**
Upland Conifers	0	0	0	0	0	0	0	0	128	0	0	0	0	0	**128**
Upland Mixed Forest	0	28	0	0	0	0	0	0	0	0	0	0	0	0	**28**
Water	30	0	0	0	0	0	0	0	0	0	0	0	0	0	**30**
White Pine	0	0	0	0	0	217	17	0	21	0	0	0	16	0	**270**
Total	**1974**	**292**	**165**	**58**	**451**	**1483**	**310**	**50**	**293**	**0**	**0**	**2**	**16**	**0**	**5093**

Report 2 – Proposed Treatment Summaries

Shingleton Mgt. Unit
Year of Entry 2015

Compartment 109
Total Compartment Acres: 5,278

Acres by Treatment Type

Commercial Harvest - 523	Tree Planting - 18	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Natural Pines	0	0	34	0	76	0	**110**
Planted Pines	248	0	27	0	138	0	**413**
Total	**248**	**0**	**61**	**0**	**214**	**0**	**523**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
96	31040_island	0.6	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	56	81-110	Harvest	Clearcut	413 - Aspen	Cmpt. Review Proposal

Prescription Specs: Clear cut the aspen as well as 3 rows of red pine adjacent to the aspen pockets to promote more regeneration of aspen. red line will be actually 2 or 3 islands. Maintain a 200 ft buffer of off the river, this will also serve as retention.

Other Comments: Stand is a steep ridge with planted red pine, it has a couple of small pockets of aspen.

Next Steps: Follow up according to work instructions.

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
96	31040_island_2	1.1	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	56	81-110	Harvest	Clearcut	413 - Aspen	Cmpt. Review Proposal

Prescription Specs: Clear cut the aspen as well as 3 rows of red pine adjacent to the aspen pockets to promote more regeneration of aspen. These islands are a best guess from the imagery, and will most likely change in size and location when lines are put in. Maintain a 200 ft buffer of off the river, this will also serve as retention.

Other Comments: Stand is a steep ridge with planted red pine, it has a couple of small pockets of aspen.

Next Steps: Follow up according to work instructions.

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
96	31040_island_3	0.9	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	56	81-110	Harvest	Clearcut	413 - Aspen	Cmpt. Review Proposal

Prescription Specs: Clear cut the aspen as well as 3 rows of red pine adjacent to the aspen pockets to promote more regeneration of aspen. red line will be actually 2 or 3 islands. Maintain a 200 ft buffer of off the river, this will also serve as retention.

Other Comments: Stand is a steep ridge with planted red pine, it has a couple of small pockets of aspen.

Next Steps: Follow up according to work instructions.

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
20	41109020-Cut	98.5	42120 - Planted Jack Pine	High Density Pole	55	51-80	Harvest	Clearcut with Reserves	4212 - Planted Jack Pine	Cmpt. Review Proposal

Prescription Specs: Clear cut with red pine reserved. Mark red pine if necessary for operations (including site prep). Red pine was scattered around the stand, inventory plots only showed 10 -30 BA which is what I would like to have remain.

Other Comments: Site was planted twice- 1959 and 1971

Next Steps: Follow up according to work instructions.

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
25	41109025-Cut	34.0	42210 - Natural Red Pine	High Density Log	68	111-140	Harvest	Seed Tree with Reserves	4221 - Natural Red Pine	Cmpt. Review Proposal

Prescription Specs: Leave tree mark (20-40BA) red pine and occasional white pine. Focus on spacing of the trees; the follow up treatment is to root rake with the large dozer from wildlife, so to not damage the roots of the seed trees.

Other Comments:

Next Steps: Follow up treatment is to root rake with the large dozer from wildlife. If root rake is unavailable trench and plant red pine. Continue to follow up according to work instructions.

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	41109028-Cut	40.3	42110 - Planted Red Pine	High Density Log	54	81-110	Harvest	Crown Thinning	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Remove all jack pine, thin red pine as needed.

Other Comments: Site was planted multiple times (1959 and 1971)

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
35	41109035-Cut	35.5	42141 - Planted Mixed Pine, Mixed Deciduous	Medium Density Log	54	51-80	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Clear cut with paper birch reserved.

Other Comments: Site has small pockets of aspen, try to promote more aspen. Site will not fully regenerate with aspen.

Next Steps: Wait 2 growing season and locate areas that have not regenerated with aspen, these areas will be trenched and planted with red pine.

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
37	41109037-Cut	27.1	42140 - Planted Mixed Pine	Medium Density Log	56	81-110	Harvest	Seed Tree with Reserves	42290 - Natural Mixed Pine	Cmpt. Review Proposal

Prescription Specs: Seed tree cut (20-40BA) focus on spacing. Follow up treatment will be the large wildlife dozer with root rake.

Other Comments:

Next Steps: Follow up treatment will be the large wildlife dozer with root rake. If root rake is unavailable trench asnd plant with red pine.

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
41	41109041-Cut	35.3	42110 - Planted Red Pine	High Density Log	54	81-110	Harvest	Crown Thinning	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Remove all jack pine and thin red pine as needed.

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
46	**41109046-Cut**	58.9	42110 - Planted Red Pine	Low Density Pole	54	1-50	Harvest	Clearcut with Reserves	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Clear cut with reserves/retention. Small finger in the nrth end of stand can sereve as retention.

Other Comments:

Next Steps: Trench and replant with red pine. Follow up according to work instructions.

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
50	**41109050-Cut**	16.8	42140 - Planted Mixed Pine	High Density Pole	42	51-80	Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal

Prescription Specs: Clear cut with reserves/retention being everything on the slope on the east side. Run the red line along the top of the slope and included only where aspen is abundant, treatment area will be smaller than proposed because the objective is to promote aspen. Maintain a 200ft buffer off of river.

Other Comments:

Next Steps: Follow up according to work instructions.
Aspen is the M.O, should aspen fail to regenerate any mix of species currently on site will be accepted.

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
61	**41109061-Cut**	12.1	42110 - Planted Red Pine	High Density Pole	54	51-80	Harvest	Clearcut with Reserves	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Clear cut with reserves, reserves being oak and any other unique species to the site. Maintain a 200 ft buffer of off the river, this will also serve as retention.

Other Comments:

Next Steps: Trench and plant with red pine. Follow up according to work instructions.

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
64	**41109064-Cut**	15.3	42110 - Planted Red Pine	Medium Density Pole	49	51-80	Harvest	Clearcut with Reserves	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Clear cut with reserves, reserves are any oak or other species unique to the site.

Other Comments:

Next Steps: Trrench and plant to red pine. Follow up according to work instructions.

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
66	41109066-Cut	7.6	42110 - Planted Red Pine	Medium Density Pole	54	51-80	Harvest	Clearcut with Reserves	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Clear cut with reserves, reserves being any oak or other species unique to the site. Maintain a 200 ft buffer of off the river, this will also serve as retention.

Other Comments:

Next Steps: Trench and plant to red pine, follow up according to work instructions.

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
67	41109067-Cut	36.3	42110 - Planted Red Pine	High Density Pole	49	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Third row thin.

Other Comments:

Next Steps: Follow up according to work instructions.

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
78	41109078-Cut	75.7	42210 - Natural Red Pine	High Density Log	85	51-80	Harvest	Crown Thinning	42290 - Natural Mixed Pine	Cmpt. Review Proposal

Prescription Specs: Thin pine as needed, in more open areas make them larger and remove all trees to promote red pine regeneration.

Other Comments:

Next Steps: Follow up according to work instructions.

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
95	41109095-Cut	26.0	42110 - Planted Red Pine	High Density Log	50	111-140	Harvest	Systematic Thinning	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Third row thin.

Other Comments:

Next Steps: follow up according to work instructions.

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
103	NF_41109103-Plant	17.6	3105 - Mixed Upland Herbaceous				Tree Planting	Hand Plant	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Re-plant

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

Report 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 109
Year of Entry 2015

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
Total Treatment Acreage Proposed:		**539.6**								

Report 4 -- Treatments Prescribed with a Limiting Factor

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 4 -- Treatments Prescribed with a Limiting Factor

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

Shingleton Mgt. Unit

Mario Molin : Examiner

Compartment 109

Year of Entry 2015

Availability for Management

Total Acres	Acres Available	Acres Not Available		Dominant Site Conditions No	5C	3J	3G	3A
242	233	9	**Aspen**	233			9	
792	792		**Jack Pine**	780	12			
2	2		**Lowland Conifers**	2				
32		32	**Lowland Spruce/Fir**			32		
15	15		**Mixed Upland Deciduous**	15				
157	157		**Natural Mixed Pines**	157				
69	69		**Northern Hardwood**	69				
155	155		**Planted Mixed Pines**	155				
1319	1319		**Red Pine**	1,319				
128	128		**Upland Conifers**	128				
28	28		**Upland Mixed Forest**	28				
270	254	16	**White Pine**	254				16
3,208	3,152	57	Total Forested Acres	3,139	12	32	9	16
	98%	2%	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		**Not Available**	**3A: Potential old growth / biodiversity**	16				

Comments:

Overstory trees are very old and advanced regeneration is present.

Site No.	Dominant Site Cond	Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
003		**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	12				

Comments:

004	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	32	3A: Potential old growth / biodiversity	3D: Recreational / Scenic values

Comments:

005	**Not Available**	**3G: Other Influence zones - See comments**	9		

Comments:

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 – DEDICATED CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	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 Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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.
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.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42220 - Natural Jack Pine	Low Density Pole	39.6	20	1-50	
2	4136 - Aspen, Mixed Conifer	High Density Sapling	15.2	13		A3 with scattered white pine and fir.
3	42220 - Natural Jack Pine	High Density Pole	29.8	30	51-80	
4	42200 - Natural White Pine	High Density Log	14.7	85	51-80	Long skinny stand with many super story white pine, as you head south the timber gets smaller. Understory is light with balsam fir and red maple.
6	42120 - Planted Jack Pine	High Density Sapling	50.4	15		Was most likely two stands but now looks similar.
7	4112 - Maple, Beech, Cherry Association	High Density Pole	32.2	65	51-80	Super story white pine in abundance soouthwest of marsh.
8	429 - Mixed Upland Conifers	High Density Log	16.0	85	1-50	Skinny buffer around lake.
10	42200 - Natural White Pine	Medium Density Log	15.7	174	51-80	Amazing white pine regeneration.
13	4112 - Maple, Beech, Cherry Association	High Density Pole	2.1	65	81-110	Small stand on compartment line.
14	42200 - Natural White Pine	Medium Density Log	16.8	65	1-50	
15	42200 - Natural White Pine	High Density Pole	216.6	55	1-50	Mix of white and jack pine, understory is scattered patchy aspen.
16	42220 - Natural Jack Pine	Medium Density Pole	13.2	39	1-50	
18	42210 - Natural Red Pine	Medium Density Log	19.3	41	51-80	
19	4311 - Pine, Aspen Mix	Low Density Sapling	28.4	10	1-50	Old opening with a mix of species.
20	42120 - Planted Jack Pine	High Density Pole	98.5	55	51-80	Some mortality in the stand, very patchy. Conrers found- wood posts.
21	42290 - Natural Mixed Pine	High Density Log	2.1	84	1-50	Carry over from adjacent compartment.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	42120 - Planted Jack Pine	Medium Density Pole	55.4	42	51-80	General comment for all the plantations in this compartment: All of these plantations have been planted multiple times and with different species. Generally red pine twice and then jack pine the 3rd to make a stocked stand. Red pine is app. 56 yrs and the jack pine is app. 42 yrs. More exact dates are available on the old 1985 OI map. I am using this broad satement because many of the individual plantations have been combined into one and some have a different year or origin by only a 2-3 years.
23	42140 - Planted Mixed Pine	Low Density Pole	5.7	45	1-50	
24	42120 - Planted Jack Pine	High Density Pole	34.9	45	81-110	
25	42210 - Natural Red Pine	High Density Log	34.0	68	111-140	Red and white pine are seeding in in openings.
26	42220 - Natural Jack Pine	High Density Sapling	6.7	10		Formerly a V0 stand, filled in with natural mixed pine and doing well.
28	42110 - Planted Red Pine	High Density Log	40.3	54	81-110	General comment for all the plantations in this compartment: All of these plantations have been planted multiple times and with different species. Generally red pine twice and then jack pine the 3rd to make a stocked stand. Red pine is app. 55yrs and the jack pine is app. 38 yrs. More exact dates are available on the old 1985 OI map. I am using this broad satement because many of the individual plantations have been combined into one and some have a different year or origin by only a 2-3 years.
29	42210 - Natural Red Pine	Medium Density Log	50.3	70	1-50	Semi open patchy stand, aspen and red maple scattered throughout, does have a mix of age and size classes.
30	42200 - Natural White Pine	High Density Log	6.4	83	1-50	
31	42120 - Planted Jack Pine	High Density Pole	36.8	42	81-110	
32	42141 - Planted Mixed Pine, Mixed Deciduous	Low Density Log	10.1	60	51-80	Scattered oak.
33	42110 - Planted Red Pine	High Density Pole	46.8	54	81-110	Larger trees on the north end, thin next entry.
34	42140 - Planted Mixed Pine	High Density Log	37.7	50	81-110	RP- 60 80 20 JP- 20 30 60
35	42141 - Planted Mixed Pine, Mixed Deciduous	Medium Density Log	35.5	54	51-80	
36	4112 - Maple, Beech, Cherry Association	High Density Log	34.5	86	1-50	RM- 60, 40, 20 WP- 20 Hem- 10

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
37	42140 - Planted Mixed Pine	Medium Density Log	27.1	56	81-110	
39	42120 - Planted Jack Pine	High Density Pole	42.0	45	51-80	
40	42120 - Planted Jack Pine	High Density Pole	37.3	45	81-110	
41	42110 - Planted Red Pine	High Density Log	35.3	54	81-110	General comment for all the plantations in this compartment: All of these plantations have been planted multiple times and with different species. Generally red pine twice and then jack pine the 3rd to make a stocked stand. Red pine is app. 55yrs and the jack pine is app. 38 yrs. More exact dates are available on the old 1985 OI map. I am using this broad satement because many of the individual plantations have been combined into one and some have a different year or origin by only a 2-3 years.
42	42110 - Planted Red Pine	High Density Log	29.3	50	81-110	Ground cover indicates better site quality.
44	42141 - Planted Mixed Pine, Mixed Deciduous	Medium Density Pole	22.0	45	1-50	
45	4130 - Aspen	High Density Sapling	34.9	15		
46	42110 - Planted Red Pine	Low Density Pole	58.9	54	1-50	Start cutting some sites early to better balance out the age classes. Clear cut and replant to red pine.
47	42110 - Planted Red Pine	High Density Pole	111.4	54	81-110	Combination of 4 planted stands, thin next entry.
48	42120 - Planted Jack Pine	High Density Pole	63.4	50	81-110	Planted in 1959, 1963, 1971. Looks like it was jack pine the first 2 times and then white pine the 3rd time.
50	42140 - Planted Mixed Pine	High Density Pole	16.8	42	51-80	White pine plantation with poor stocking, fillied in with a mix of species-jack pine red pine and aspen.
52	42110 - Planted Red Pine	High Density Pole	38.1	54	81-110	
53	42110 - Planted Red Pine	Medium Density Pole	54.6	54	1-50	General comment for all the plantations in this compartment: All of these plantations have been planted multiple times and with different species. Generally red pine twice and then jack pine the 3rd to make a stocked stand. Red pine is app. 55yrs and the jack pine is app. 38 yrs. More exact dates are available on the old 1985 OI map. I am using this broad satement because many of the individual plantations have been combined into one and some have a different year or origin by only a 2-3 years.
54	42210 - Natural Red Pine	High Density Log	38.4	50	81-110	Very steep slope.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
56	42220 - Natural Jack Pine	Low Density Sapling	125.8	25		Old G0 that is now filling in with a mix of species.
57	42110 - Planted Red Pine	High Density Log	12.0	51	81-110	Strip on steep ridge.
58	42110 - Planted Red Pine	High Density Pole	38.2	42	51-80	
59	42110 - Planted Red Pine	Medium Density Pole	24.2	54	1-50	General comment for all the plantations in this compartment: All of these plantations have been planted multiple times and with different species. Generally red pine twice and then jack pine the 3rd to make a stocked stand. Red pine is app. 55yrs and the jack pine is app. 38 yrs. More exact dates are available on the old 1985 OI map. I am using this broad satement because many of the individual plantations have been combined into one and some have a different year or origin by only a 2-3 years.
60	42110 - Planted Red Pine	Low Density Pole	38.4	60	1-50	Very poor plantation, trees are very bushy, only 2-3 sticks tall.
61	42110 - Planted Red Pine	High Density Pole	12.1	54	51-80	Start cutting some sites early to better balance out the age classes. Clear cut and replant to red pine.
62	42110 - Planted Red Pine	Medium Density Pole	37.0	54	1-50	General comment for all the plantations in this compartment: All of these plantations have been planted multiple times and with different species. Generally red pine twice and then jack pine the 3rd to make a stocked stand. Red pine is app. 55yrs and the jack pine is app. 38 yrs. More exact dates are available on the old 1985 OI map. I am using this broad satement because many of the individual plantations have been combined into one and some have a different year or origin by only a 2-3 years.
63	429 - Mixed Upland Conifers	High Density Log	4.6	85	51-80	Steep slope to stream.
64	42110 - Planted Red Pine	Medium Density Pole	15.3	49	51-80	Part of a plantation that had failed.
65	42110 - Planted Red Pine	Medium Density Pole	12.0	49	81-110	
66	42110 - Planted Red Pine	Medium Density Pole	7.6	54	51-80	Start cutting some sites early to better balance out the age classes. Clear cut and replant to red pine.
67	42110 - Planted Red Pine	High Density Pole	36.3	49	141-170	RP- 150 110 170
69	6122 - Black Spruce	High Density Pole	31.7	85	51-80	Camp 7 creek- river and timber included in polygon, too difficult to meet mapping standards trying to seperated everything out. Stand will include all types of timber but mainly lowland conifer. Creek does dry out in the northwest.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
70	429 - Mixed Upland Conifers	High Density Pole	89.3	85		Mix of everything with varying topography (steep slopes to flat), consider all of it to be river buffer.
72	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	14.7	35	51-80	Site is a mix of everything that naturally regenerated.
73	42120 - Planted Jack Pine	Medium Density Pole	12.2	60	51-80	
74	42110 - Planted Red Pine	Medium Density Log	165.4	50	81-110	2-3 stick bushy red pine.
75	42110 - Planted Red Pine	Medium Density Log	51.3	57	51-80	
76	4133 - Aspen, Mixed Pine	High Density Sapling	41.7	5	1-50	Cut in 2008, aspen regenerating well. Scattered oak regen in the stand.
78	42210 - Natural Red Pine	High Density Log	75.7	85	51-80	R.P- 40 20 40 W.P- 20 60 20 J.P- 10
79	4130 - Aspen	High Density Pole	79.3	47	51-80	
80	4130 - Aspen	High Density Sapling	47.4	7		Opening maintainance done in 2006 Aspen is filling in the site.
81	42110 - Planted Red Pine	Medium Density Log	48.7	56	81-110	
82	42110 - Planted Red Pine	Medium Density Pole	62.4	56	51-80	
84	42260 - Natural Pine, Mixed Deciduous	Low Density Log	72.8	60	1-50	
85	42290 - Natural Mixed Pine	High Density Log	32.1	60	51-80	
86	42210 - Natural Red Pine	Medium Density Log	55.7	56	51-80	Very patchy, multipe old 10 acre plantations lumped together.
87	42120 - Planted Jack Pine	High Density Sapling	146.1	17	1-50	Northwest corner of stnad has a pocket of high density red pine and aspen.
89	42260 - Natural Pine, Mixed Deciduous	High Density Log	49.7	68	81-110	Nice white pine stand with aspen being somewhat codominant in areas. Aspen is healthy but poor quality, consider cutting in next entry to promote the aspen.
91	42110 - Planted Red Pine	High Density Log	6.5	60	111-140	RP- 170 80 120

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
92	4130 - Aspen	High Density Pole	9.3	50	1-50	
94	4130 - Aspen	Medium Density	10.3	12		
95	42110 - Planted Red Pine	High Density Log	26.0	50	111-140	3rd row thin, and crown thin where rows are not present removing 1/3 of the BA.
96	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	16.0	56	81-110	rp- 110 30 120 aspen- 60
97	429 - Mixed Upland Conifers	High Density Pole	18.0	85	51-80	River and buffer, cannot deliniate better with imagery.
98	42110 - Planted Red Pine	High Density Log	21.4	50	81-110	Open grown red pine, planted twice and still low stocking.
99	4130 - Aspen	High Density Log	2.9	60	51-80	Small carry over from other compartment.
100	4130 - Aspen	High Density Pole	1.5	50	1-50	
102	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	1.7	112	1-50	Carry over from other compartment.

Report 9 – Nonforested Stands

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
5	6225 - Bog	3.9	No	Unspecified	
9	50 - Water	30.2	No	Unspecified	
11	3102 - Grass	5.3	No	Unspecified	Vernal pond.
12	6225 - Bog	3.7	No	Unspecified	
17	3105 - Mixed Upland Herbaceous	3.3	No	Unspecified	
27	3105 - Mixed Upland Herbaceous	157.9	Yes	Red Pine	new red pine plantation.
38	3105 - Mixed Upland Herbaceous	8.7	No	Unspecified	
43	3105 - Mixed Upland Herbaceous	7.4	No	Unspecified	
49	3105 - Mixed Upland Herbaceous	26.1	No	Unspecified	
51	310 - Herbaceous Openland	1141.5	Unspecified	Unspecified	
55	3105 - Mixed Upland Herbaceous	17.8	No	Unspecified	
68	3105 - Mixed Upland Herbaceous	2.6	No	Unspecified	
71	3105 - Mixed Upland Herbaceous	47.3	No	Unspecified	
77	310 - Herbaceous Openland	35.3	Unspecified	Unspecified	
83	3105 - Mixed Upland Herbaceous	184.3	No	Unspecified	lots of J.pine seedlings in north 1/2
88	3105 - Mixed Upland Herbaceous	13.1	Natural Regen	Natural Mixed Pines	
90	310 - Herbaceous Openland	159.3	Unspecified	Unspecified	
93	3105 - Mixed Upland Herbaceous	16.6	Yes	Low	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
101	3102 - Grass	20.4	No	Unspecified	Check MNFI if considering any type of management.
103	3105 - Mixed Upland Herbaceous	184.3	Plantation	Red Pine	