Compartment Review Presentation

Shingleton Forest Management Unit

Compartment 137
Entry Year 2015
Acreage: 2,262
County Alger
Management Area: Danaher Kingston Outwash

Revision Date: 07/31/2013

Stand Examiner: Robert Tylka

Legal Description:

T48N R15W sections 4, 9, 16 and 21

Identified Planning Goals:

Due to the loss of beech due to BBD throughout the Kingston Danaher Outwash Management Area and the entire eastern U.P., efforts to improve the quality of wildlife habitat by introducing oak in areas where it is likely to flourish have become a high priority. This compartment provides great opportunities to pursue this goal, and numerous stands are being recommended for this treatment.

Soil and topography:

The soils in this compartment are Kalkaska sands. These loose sands are classified as having a severe hazard of soil blowing, and the drainage class is somewhat excessively drained. The compartment is within the pitted outwash plain landform area. The topography is level to hilly with enclosed depressions. Section 4 contains two steep escarpments.

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

The majority of the surrounding land is state owned land. There are a few parcels owned by The Forest Land Group (previously Shelter Bay Forests) around the north part of the compartment. There are private camps around the small lakes south of the compartment.

Unique Natural Features:

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:

This compartment was previously designated as the control area for the Kingston Plains planting project.

Watershed and Fisheries Considerations:

Ewalt Lake is mostly privately owned and has not seen any active fishery management for many years although it at one time did support a small northern pike and yellow perch fishery. Fishhook Lake is a small shallow lake that is not actively managed.

Wildlife Habitat Considerations:

This compartment is located in the Grand Marais Sandy End Moraine and Outwash Sub-subsection. The pre-settlement forests contained a mix of hemlock, white pine, red maple, balsam fir, yellow birch, beech and spruce. A minor component of mountain ash was recorded in the understory.

Circa 1900 hot slash fires burned through this area destroying both the regenerating forest and the organic component of the soils. As a result the vegetation is this area is substantially different than that of pre-settlement times. Currently the southern ¾ of this compartment are dominated by open grass/stump field and pioneering white pine stands. The remainder of the compartment contains northern hardwoods with a smaller component of conifer than was found during pre-settlement times.

The wildlife habitat objectives in this area include maintaining the large opening complex, enhancing the hard mast component, and restoring hemlock in the northern hardwood stands.

Wildlife species of special interest utilizing this compartment include merlin, sharp-tailed grouse, and sandhill cranes.

Mineral Resource and Development Concerns and/or Restrictions

Sections 4, 9, 16 and 21, T48N-R15W, Alger County
Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and minor lacustrine (lake) sand and gravel. There is insufficient data to determine the glacial drift thickness. The Ordovician Prairie du Chien and the Cambrian Trempealeau Formations subcrop below the glacial drift. These rocks could be used for stone. There are not any gravel pits in the area and potential appears limited. There is no commercial oil and gas production in the UP.

Vehicle Access:

Good. There are two-track roads throughout most of the compartment.

Survey Needs:

Survey work will be needed in Section 4 to facilitate future timber sale activities in the NE 1/4.

Recreational Facilities and Opportunities:

The Fox River Pathway and snowmobile trail #88 runs through the compartment. It is important to ensure that logging and other land management activities do not impact the pathway. Keep the pathway and snowmobile trail clear of logging slash and debris. Also, if winter logging is required, do not plow the trail/road to bare ground and try to maintain the trail/road as wide as possible. Additional uses include: berry picking, sightseeing and hunting.

Fire Protection:

The main cover types in this compartment are Grass and White Pine.

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: 137
T48N R15W
04 09 16 21
County: Alger
Unit: Shingleton
YOE: 2015
Acres: 2,262 GIS Calculated
Examiner: Robert Tylka
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

4
9
16
21

N

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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
- Hiking Trails
- Snowmobile Trails
- Hiking Trail
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Shelter Wood (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Planting (tree species)
- Prescribed Burn
- Site Preparation
- Pesticide

Forest Stands

Level 3

- 411 - Northern Hardwood
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 431 - Upland Mixed Forest

Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland
- 710 - Sand, Soil

0 0.5 1 Miles

86°12'0"W 86°11'0"W 86°10'0"W 86°9'0"W
46°35'0"N 46°34'0"N 46°33'0"N
County Road 731 County Road 730 County Road 721 County Road 723 Adams Trl
Ewatt Lake Fishhook Lake Alger Lake

Stand Boundary Map

Stand # 23

Stocking Density

(412)0) - A7

Level 3 Level 4 OI Code

Cover Type Code

Compartment: 137
T48N R15W
04 09 16 21
County: Alger
Unit: Shingleton
YOE: 2015
Acres: 2,262 GIS Calculated
Examiner: Robert Tylka
Map Revised: 09/12/2013
Map Phase: Pre-Review

4
9
16
21

N

DEPARTMENT OF NATURAL RESOURCES · DNR · MICHIGAN

Legend

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

Forest Stands

Level 3

411 - Northern Hardwood
419 - Mixed Upland Deciduous
422 - Natural Pines
431 - Upland Mixed Forest

Non-Forest Stands

Level 3

110 - Low Intensity Urban
310 - Herbaceous Openland
500 - Water
622 - Lowland Shrub
623 - Emergent Wetland
629 - Mixed non-forested wetland
710 - Sand, Soil

0 0.5 1 Miles

County Road 730
Adams Trl
County Road 724
County Road 725
Ewatt Lake
Fishhook Lake
Clyde Lake
Mallard Lake
Alger Lake

Special Conservation Areas & Site Conditions Map

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

Compartment: 137
T48N R15W
04 09 16 21
County: Alger
Unit: Shingleton
YOE: 2015
Acres: 2,262 GIS Calculated
Examiner: Robert Tylka
Map Revised: 09/12/2013
Map Phase: Pre-Review

4
9
16
21

N

DEPARTMENT OF NATURAL RESOURCES · MICHIGAN · DNR

Legend
- Miris Corners
- Stand Boundaries
- Remonumented Section Corners

Site Condition Available
- Available w/ Constraints (Factor - Number)
  - 5C: Delay treatment for age/size class diversity or exceptional site quality

Reviewable SCAs
- Proposed SCA
- SCA Removal

0 0.5 1 Miles

Report 1 – Total Acres by Cover Type and Age Class

Shingleton Mgt. Unit **Compartment 137 Year of Entry 2015**

Robert Tylka : 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
Herbaceous Openland	1086	0	0	0	0	0	0	0	0	0	0	0	0	0	**1086**
Jack Pine	0	0	9	3	5	0	0	0	0	0	0	0	0	0	**17**
Lowland Shrub	17	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Marsh	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
Mixed Upland Deciduous	0	3	0	0	0	27	0	0	0	0	0	0	0	0	**30**
Natural Mixed Pines	0	0	0	0	0	5	0	0	0	0	0	0	0	36	**40**
Northern Hardwood	9	0	0	0	0	0	53	0	0	0	0	0	0	379	**441**
Sand, Soil	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Upland Mixed Forest	0	0	0	0	0	14	0	0	0	0	0	0	0	0	**14**
Urban	14	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
Water	8	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
White Pine	0	0	0	0	2	143	155	0	3	0	0	0	0	278	**581**
Total	**1149**	**3**	**9**	**3**	**7**	**188**	**208**	**0**	**3**	**0**	**0**	**0**	**0**	**693**	**2262**

Report 2 – Proposed Treatment Summaries

Shingleton Mgt. Unit
Year of Entry 2015

Compartment 137
Total Compartment Acres: 2,262

Acres by Treatment Type

Commercial Harvest - 349	Tree Planting - 432	Other - 85
Habitat Cut - 0	Opening Maintenance - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Natural Pines	5	0	0	286	2	0	**293**
Northern Hardwood	48	0	0	0	0	0	**48**
Upland Mixed Forest	7	0	0	0	0	0	**7**
Total	**61**	**0**	**0**	**286**	**2**	**0**	**349**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	41137005-Cut	19.5	4112 - Maple, Beech, Cherry Association	High Density Pole	70	111-140	Harvest	Clearcut with Reserves	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: CC w/reserves. Retain all white pine & hemlock plus any red pine, oak and cedar encountered in the stand.

Other Comments: Converting to evenaged management.

Next Steps: Spray herbicide to eradicate beech regeneration to release natural regeneration of desireable spp - monitor in accordance with the work instructions. Plant oak to enhance wildlife habitat values. Acceptable regen includes all species present except beech.

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
10	41137010-Cut	28.8	4112 - Maple, Beech, Cherry Association	High Density Pole	70	111-140	Harvest	Clearcut with Reserves	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: CC w/reserves - clear cut approximately 1/3 of the stand, retaining all white pine plus any hemlock, cedar and oak encountered in the harvest area.

Other Comments: Converting to evenaged management.

Next Steps: Natural regeneration - Monitor regen in accordance with the work instructions. Acceptable regen includes all species present except beech. Spray herbicide if necessary to eradicate beech regeneration and release more desireable spp.

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
22	41137022-Cut	105.8	42200 - Natural White Pine	Medium Density Log	100	81-110	Harvest	Shelter Wood with Reserves	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: Seed tree w/reserves - retain all hemlock plus any oak encountered in the stand.. Mark the white & red pine down to approximately 40 sq.ft./acre, keeping the best quality trees for seed sources; cut all others.

Other Comments: PArV/PVE habitat

Next Steps: After harvest, plant oak in the canopy gaps to enhance wildlife habitat values. Monitor regen in accordance with the work instructions. Acceptable regeneration includes all conifer spp., paper birch and oak.

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
24	41137024-Cut	2.5	42200 - Natural White Pine	Medium Density Pole	52	51-80	Harvest	Shelter Wood with Reserves	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: Thin to release the best quality trees to stimulate seed production, retaining approximately 40 sq.ft./acre of pine plus any hemlock and oak encountered in the stand.

Other Comments: PArV/PVE habitat

Next Steps: Scarify for natural regeneration and plant oak in canopy gaps. Monitor regen in accordance with the work instructions. Acceptable regen includes all conifer spp., paper birch and oak.

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
26	41137026-Cut	12.9	42200 - Natural White Pine	Medium Density Pole	52	51-80	Harvest	Shelter Wood with Reserves	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: Thin to release the best quality trees to stimulate seed production, retaining approximately 40 sq.ft./acre of pine plus any hemlock and oak encountered in the stand.

Other Comments: PArV/PVE habitat

Next Steps: Scarify for natural regeneration and plant oak in the canopy gaps. Monitor regen in accordance with the work instructions. Acceptable regen includes all conifer spp., paper birch and oak.

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
31	41137031-Cut	70.1	42200 - Natural White Pine	Medium Density Pole	52	81-110	Harvest	Shelter Wood with Reserves	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: Seed tree w/reserves - retain approximately 40 sq.ft./acre of the best quality red & white pine for seed trees, plus any hemlock & oak encountered in the stand.

Other Comments: PArV/PVE habitat

Next Steps: Scarify for natural regeneration and plant oak in the canopy gaps. Monitor regen in accordance with the work instructions. Acceptable regen includes all conifer spp., paper birch and oak.

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
32	41137032-Cut	3.2	42220 - Natural Jack Pine	Low Density Pole	45	1-50	Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal

Prescription Specs: CC w/reserves - retain all red & white pine plus any hemlock and oak encountered in the stand.

Other Comments: PArV/PVE habitat

Next Steps: Scarify for natural regeneration and plant oak in canopy gaps to enhance wildlife habitat values. Monitor regen in accordance with the work instructions. Acceptable regen includes all conifer spp., paper birch and oak.

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
33	41137033-Cut	2.2	42220 - Natural Jack Pine	High Density Pole	45	81-110	Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal

Prescription Specs: CC w/reserves - retain all red & white pine plus any hemlock and oak encountered in the stand.

Other Comments: PArV/PVE habitat

Next Steps: Scarify for natural regeneration and plant oak in to enhance wildlife habitat values. Monitor regen in accordance with the work instructions. Acceptable regen includes all conifer spp., paper birch and oak.

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
36	41137036_Edt -Cut	7.1	4319 - Mixed Upland Forest	Low Density Log	52	1-50	Harvest	Clearcut with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal

Prescription Specs: CC w/reserves - Cut all trees except any hemlock and oak present. Mark to reserve a few pine to act as seed trees.

Other Comments:

Next Steps: Scarify for natural regeneration and plant oak to improve the wildlife habitat values. Acceptable species for regen include paper birch, oak, and all conifer spp. Monitor in accordance with the 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
44	41137044-Cut	94.6	42200 - Natural White Pine	Medium Density Log	60	81-110	Harvest	Shelter Wood with Reserves	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: Thin to promote growth of the best quality trees and encourage recruitment of paper birch. Reserve any hemlock and oak encountered in the stand.

Other Comments:

Next Steps: Plant oak in canopy gaps to enhance wildlife habitat values.

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	41137052-Cut	2.1	42290 - Natural Mixed Pine	Medium Density Pole	59	111-140	Harvest	Crown Thinning	42290 - Natural Mixed Pine	Cmpt. Review Proposal

Prescription Specs: Thin to promote growth of the best quality red & white pine. Cut all scotch pine, regardless of merchantability.

Other Comments:

Next Steps: Plant oak in canopy gaps to enhance wildlife habitat values.

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
23	41137023-Prep	3.2	42200 - Natural White Pine	Low Density Log	86	1-50	Site Prep	Scarification	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: Scarify open areas to promote increased regeneration of pine and paper birch, then plant oak to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor regeneration in accordance with the work instructions. Acceptable regen includes all species present and oak.

Proposed Start Date: 10/31/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
34	41137034-Plant	5.0	42200 - Natural White Pine	Medium Density Pole	53	51-80	Tree Planting	Hand Plant	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: Plant oak in canopy gaps to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor in accordance with work instructions.

Proposed Start Date: 10/31/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
73	41137073-Plant	5.6	4113 - R.Maple, Conifer	Low Density Sapling	4	1-50	Tree Planting	Hand Plant	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Plant oak saplings while the stand is in the process of regenerating.

Other Comments:

Next Steps: Monitor all regen, including the oak, in accordance with the work instructions.

Proposed Start Date: 10/31/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
75	41137075-Plant	2.5	42200 - Natural White Pine	Low Density Pole	52	1-50	Tree Planting	Hand Plant	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: Plant oak to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor in accordance with work instructions.

Proposed Start Date: 10/31/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
80	41137080-Plant	3.9	4112 - Maple, Beech, Cherry Association	Low Density Sapling	4	1-50	Tree Planting	Hand Plant	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Plant oak saplings while the stand is in the process of regenerating.

Other Comments:

Next Steps: Monitor all regen including the oak in accordance with the work instructions.

Proposed Start Date: 10/31/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
15	NF_41137015-Plant	3.1	3105 - Mixed Upland Herbaceous				Tree Planting	Hand Plant	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: Plant oak to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor in accordance with the 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
18	NF_41137018-Plant	2.5	3105 - Mixed Upland Herbaceous				Tree Planting	Hand Plant	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: Plant oak to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor in accordance with the 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	NF_41137020-Plant	2.9	310 - Herbaceous Openland				Tree Planting	Hand Plant	310 - Herbaceous Openland	Cmpt. Review Proposal

Prescription Specs: Plant oak to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor in accordance with the 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	NF_41137025-Plant	1.5	3105 - Mixed Upland Herbaceous				Tree Planting	Hand Plant	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: Plant oak to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor in accordance with the 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
27	NF_41137027-Plant	2.4	3105 - Mixed Upland Herbaceous				Tree Planting	Hand Plant	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: Plant oak to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor in accordance with the 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
29	NF_41137029-Plant	2.1	3105 - Mixed Upland Herbaceous				Tree Planting	Hand Plant	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: Plant oak to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor in accordance with the work instructions.

Proposed Start Date: 10/31/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30	NF_41137030-Plant	1.7	3105 - Mixed Upland Herbaceous				Tree Planting	Hand Plant	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: Plant oak to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor in accordance with the work instructions.

Proposed Start Date: 10/31/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
63	NF_41137063-Plant	398.6	3101 - Poverty Grass, Cladonia				Tree Planting	Hand Plant	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: Plant oak (bur or red) to enhance wildlife habitat values.

Other Comments: PArV/PVE habitat

Next Steps: Monitor in accordance with the work instructions.

Proposed Start Date: 10/31/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
39	NF_41137039-Burn	8.7	3105 - Mixed Upland Herbaceous				Prescribed Burn	Unspecified	4140 - Paper Birch	Cmpt. Review Proposal

Prescription Specs: Burn to prepare a seedbed for paper birch regeneration.

Other Comments:

Next Steps: Direct seeding to establish paper birch regeneration. Monitor in accordanc with the work instructions.

Proposed Start Date: 10/31/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
6	41137006-Spray	51.9	4112 - Maple, Beech, Cherry Association	Medium Density Log	70	81-110	Pesticide	Skidder	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Spray herbicide to eradicate beech regeneration in order to promote regen of desireable species.

Other Comments: Last partial cutting in 2001; heavy beech regen at present.

Next Steps: Monitor in accordance with work instructions. Acceptable regeneration includes all species present except beech.

Proposed Start Date: 10/31/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
17	41137017-Spray	21.3	4113 - R.Maple, Conifer	Medium Density Log	100	51-80	Pesticide	Skidder	4113 - R.Maple, Conifer	Cmpt. Review Proposal

Prescription Specs: Spray herbicide to eradicate beech regeneration.

Other Comments: Beech regen is very heavy at present.

Next Steps: Monitor in accordance with the work instructions. Acceptable regeneration includes all species present except beech.

Proposed Start Date: 10/31/2013

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

Total Treatment Acreage Proposed: 865.7

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

Robert Tylka : Examiner

Compartment 137

Year of Entry 2015

Availability for Management

Total Acres	Acres Available	Acres Not Available	Dominant Site Conditions	No	5C
17	17		**Jack Pine**	17	
30	30		**Mixed Upland Deciduous**	30	
40	40		**Natural Mixed Pines**	40	
440	440		**Northern Hardwood**	336	104
14	14		**Upland Mixed Forest**	14	
581	581		**White Pine**	581	
1,122	1,122		Total Forested Acres	1,017	104
	100%		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**	52				
	Comments:						
006	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	53				
	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
Pictured Rocks Inland Buffer	Contiguous Resource Area		**SCA**	

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.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
3	4113 - R.Maple, Conifer	High Density Pole	52.8	60	111-140	Red maple/conifer mix. Age class variability is beginning to develop. A few scattered spruce, yellow birch and beech are present. Hold for now while the red maple adjacent to the east is cut and regenerated.
5	4112 - Maple, Beech, Cherry Association	High Density Pole	19.5	Uneven Age	111-140	Relatively poor quality red maple with a variety of other spp scattered throughout. The timber is unevenaged, but no clear records of past cutting are on file. Some beech are still alive but virtually all have BBD, including regen. Cut now and manage on an evenaged basis.
6	4112 - Maple, Beech, Cherry Association	Medium Density Log	51.9	Uneven Age	81-110	Red maple - last cut completed in 2001.
7	4112 - Maple, Beech, Cherry Association	Medium Density Pole	200.0	Uneven Age	51-80	last cut in 2007,
9	42260 - Natural Pine, Mixed Deciduous	High Density Log	35.6	Uneven Age	111-140	Natural white pine/red maple mix displaying unevenaged characteristics. Some partial cutting was done in the 1990's when D.O.C. cut hardwood pulp (fuelwood) from areas of the stand. The understory is well-stocked with a mix of balsam fir, red maple & white pine up to 4" DBH, plus a few beech seedlings/saplings.
10	4112 - Maple, Beech, Cherry Association	High Density Pole	81.0	Uneven Age	111-140	Generally low quality red maple. Cut approximately 1/3 of the stand now, and more next entry. reserve the white pine and hemlock. Manage for evenaged hardwoods. A few beech, black cherry and balsam fir are also present. All the beech has BBD, including the regen
12	42200 - Natural White Pine	Low Density Log	89.4	Uneven Age	51-80	Natural white pine in an unevenaged condition, with semi-open areas scattered throughout the stand. Much of the paper birch has already died, and the rest is in poor condition. A few aspen, spruce and fir are also present. The understory is primarily white pine regeneration ranging from seedlings to 4" dbh. Red maple is common but seldom reaches merchantable size. Other understory species include scrub black cherry and juneberry; ground cover is a variable mix of ferns, blueberry, lichens, and grasses.
13	4112 - Maple, Beech, Cherry Association	High Density Pole	5.2	Uneven Age	81-110	Red maple pole stand on steep ground. There were beech and a few paper birch present but these have all but died out.
16	42200 - Natural White Pine	Medium Density Log	79.4	Uneven Age	81-110	Natural white pine in an unevenaged condition, with semi-open areas scattered throughout the stand. Much of the paper birch has already died, and the rest is in poor condition. A few aspen, spruce and fir are also present. The understory is primarily white pine regeneration ranging from seedlings to 4" dbh. Red maple is common but seldom reaches merchantable size. Other understory species include scrub black cherry and juneberry; ground cover is a variable mix of ferns, blueberry, lichens, and grasses.
17	4113 - R.Maple, Conifer	Medium Density Log	21.3	Uneven Age	51-80	Cut recently - sale completed in 2007. The residual basal area has dropped considerably due to mortality caused by beech bark disease.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4191 - Mixed Upland Deciduous with Conifer	Low Density Sapling	3.1	15	1-50	A lot of paper birch has died out of this stand, and now it is naturally succeeding to a mix of red maple and white pine; however, the stand will very likely remain open for a long time as the red maple displays a very low site index in this area and is unlikely to produce a commercially viable stand. However, it is useful for wildlife habitat and as a nurse crop while the white pine slowly takes over the site. The basal area shown represents a few white pine, some scattered balsam fir poles, and the few surviving paper birch.
21	42200 - Natural White Pine	High Density Log	39.9	55	81-110	Natural white pine - semi-open in places and mostly evenaged, but relicts (white pine up to 18-20" DBH) from the previous stand are well-distributed throughout. This lends more of an unevenaged look to this stand. The understory is a mix of white pine, red maple and balsam fir 0-4" DBH. A few red pine and spruce are also present in both canopy levels.
22	42200 - Natural White Pine	Medium Density Log	105.8	Uneven Age	81-110	Natural white pine - semi-open in places. Could thin from below and underplant oak to improve wildlife habitat values. This stand appears to be on something of a transitional site; it gradually gets lower and the timber gets denser in the western part of the stand. White pine is dominant throughout. The dryer areas generally have less understory.
23	42200 - Natural White Pine	Low Density Log	3.2	86	1-50	Semi-open natural white pine. Some age class diversity is beginning to show as white pine regeneration slowly spreads out around the edges of clumps of timber.
24	42200 - Natural White Pine	Medium Density Pole	2.5	52	51-80	Natural white pine - semi-open in many places. Could thin from below and underplant oak to improve wildlife habitat values.
26	42200 - Natural White Pine	Medium Density Pole	12.9	52	51-80	Natural white pine - semi-open in many places. Could thin from below and underplant oak to improve wildlife habitat values.
31	42200 - Natural White Pine	Medium Density Pole	70.1	52	81-110	Natural white pine - semi-open in places. Could thin from below and underplant oak (bur, red or both) to improve wildlife habitat values.
32	42220 - Natural Jack Pine	Low Density Pole	3.2	45	1-50	Semi-open stand - Harvest along with the adjacent jack pine. Scarify to provide for natural jack pine regenereation.
33	42220 - Natural Jack Pine	High Density Pole	2.2	45	81-110	Ready to cut - reserve the red & white pine.
34	42200 - Natural White Pine	Medium Density Pole	5.0	53	51-80	Semi-open stand that is slowly filling in with trees. As the timber matures, this stand will be re-classified as unevenaged. A few large log-sized trees are scattered throughout.
35	42200 - Natural White Pine	Medium Density Log	1.7	Uneven Age	81-110	A couple of distinctive age classes are present in this white pine stand - log sized trees 14-20" DBH and pole-sized timber 5-9" DBH. The paper birch is rapidly falling out of the stand and is unlikely to remain a significant component; red maple is beginning to appear and will ultimately replace it unless a disturbance such as fire reverses the trend.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	4319 - Mixed Upland Forest	Low Density Log	7.1	52	1-50	Semi-open mix of paper birch and white pine with some red maple thrown in.
38	4319 - Mixed Upland Forest	Medium Density Pole	6.4	56	51-80	Semi-open mix of pines along with red maple & paper birch.
40	42220 - Natural Jack Pine	High Density Pole	5.3	25	51-80	Young jack pine just reaching merchantable size. Many of the white pine, paper birch & red maple are residuals from the last stand.
42	42220 - Natural Jack Pine	High Density Pole	3.4	25	81-110	Young jack pine just reaching merchantable size. Many of the white pine & red maple are residuals from the last stand.
44	42200 - Natural White Pine	Medium Density Log	94.6	60	81-110	Large natural white pine stand - density varies, and some spots have a considerably higher percentage of red pine and/or paper birch. Age shown here represents an average, but numerous trees older than this are present.Thin to improve stand quality and encourage paper birch sprouting where possible. Plant oak in canopy gaps where partial shading will aid in their survival.
50	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	26.7	57	81-110	Located on a ridge between Ewalt and Fishhook Lakes, this was a paper birch stand; but as the birch continues to die out, it is gradually succeeding to red maple/white pine with a few fir and hemlock. Many of the white pine appear to be relicts from the previous stand, and the paper birch that are still surviving are generally in decline. Beech was also present but has died out. The understory is fully-stocked with a mix of red maple, white pine and balsam fir.
52	42290 - Natural Mixed Pine	Medium Density Pole	2.1	59	111-140	Thin to improve quality and eradicate scotch pine.
58	42200 - Natural White Pine	High Density Log	16.5	62	111-140	Natural white pine with red maple and a few pockets of red pine. The understory is fully stocked with a mix of white pine, red maple and balsam fir up to 4" DBH.
62	42200 - Natural White Pine	Medium Density Log	7.0	60	51-80	Natural white pine - Some age class diversity is present, as the trees vary from 5-6" DBH poles up to supercanopy trees 20"+ DBH. Semi-open in spots - Basal area /crown closure are variable.
66	42200 - Natural White Pine	Medium Density Pole	22.0	60	81-110	Cut last entry - 1-2' tall white pine regen appearing under the ferns, and the red maple has sprouted; however, no birch regen was seen. Canopy closure and basal area are extremely variable. Some age class diversity has developed.
67	42200 - Natural White Pine	Medium Density Log	1.2	61	81-110	Natural white pine - Some age class diversity is present, as the trees vary from 5-6" DBH poles up to supercanopy trees 24"+ DBH. Semi-open in spots
69	42200 - Natural White Pine	Medium Density Pole	2.0	48	81-110	White pine poles w/ large relicts from the previous stand.
70	42220 - Natural Jack Pine	High Density Pole	2.6	30	81-110	Young jack pine - many stems are still 4-5" DBH.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
71	42200 - Natural White Pine	Medium Density Pole	2.0	53	51-80	White pine poles with a few scattered log-sized white pine & paper birch, plus a few jack pine on the edges. This stand appears to still be expanding outward.
72	42260 - Natural Pine, Mixed Deciduous	Medium Density Pole	2.7	53	81-110	Mixed pole stand - white & jack pines, red maple and paper birch.
73	4113 - R.Maple, Conifer	Low Density Sapling	5.6	4	1-50	Cut in 2009. BA shown is residuals from the previous stand. Mostly red maple sprouts with a few scattered conifer seedlings mixed into the ferns. The residual basal area represents seed trees left from the previous stand.
75	42200 - Natural White Pine	Low Density Pole	2.5	52	1-50	Slow-growing, semi-open natural pine near several water sources - excellent opportunity to improve wildlife habitat by planting oak saplings where partial shading will aid in their early survival.
76	42200 - Natural White Pine	Medium Density Log	12.4	61	81-110	Natural white pine - Some age class diversity is present, as the trees vary from 5-6" DBH poles up to supercanopy trees 28-30" DBH. Semi-open in spots - Basal area /crown closure are variable. A few hemlock and red pine are also present.
78	42200 - Natural White Pine	Medium Density Log	1.7	61	81-110	Natural white pine - Some age class diversity is present, as the trees vary from 5-6" DBH poles up to supercanopy trees 28-30" DBH. Semi-open in spots - Basal area /crown closure are variable.
79	42200 - Natural White Pine	Medium Density Pole	7.8	53	51-80	Mostly white pine poles, with scattered log-size trees throughout.
80	4112 - Maple, Beech, Cherry Association	Low Density Sapling	3.9	4	1-50	Cut in 2009. BA shown is residuals from the previous stand. Mostly red maple sprouts with a few scattered conifer seedlings mixed into the ferns.
81	42200 - Natural White Pine	Medium Density Pole	1.7	Uneven Age	51-80	Multi-storied white pine stand featuring logs 14-22" DBH over 6-8" poles and a fully-stocked understory of balsam fir, red maple and white pine saplings. At one time this stand had a lot of paper birch in it but almost all of it is dead or dying; red maple is gradually replacing it.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	3105 - Mixed Upland Herbaceous	3.3	No	Unspecified	A few scattered trees in an open area. Upland brush (juneberry, scrub black cherry) are also present.
2	6229 - Mixed lowland shrub	4.5	No	Unspecified	Low area featuring a variety of lowland vegetation and scattered trees, plus areas where seasonally fluctuating ponds exist.
4	3105 - Mixed Upland Herbaceous	4.0	No	Unspecified	Scattered white pine and upland brush in an upland opening.
8	3105 - Mixed Upland Herbaceous	1.1	No	Unspecified	Mix of lichen, blueberry, fern and grass, with a few clumps of cherry & seviceberry. Also a few trees scattered throughout.
11	3105 - Mixed Upland Herbaceous	56.0	Yes	High	Mix of lichen, blueberry, fern and grass; clumps of choke cherry, seviceberry, red maple and scattered pine throughout.
14	3105 - Mixed Upland Herbaceous	27.5	No	Low	Open grass/fern/lichen/BB/upland brush with scattered trees
15	3105 - Mixed Upland Herbaceous	3.1	No	Unspecified	Mix of lichen, blueberry, fern and grass; scattered white pine poles/saplings/seedlings plus a few clumps of red maple & choke cherry saplings are present.
18	3105 - Mixed Upland Herbaceous	2.5	No	Unspecified	Mix of lichen, blueberry, fern and grass; scattered white pine poles/saplings/seedlings plus a few clumps of red maple & choke cherry saplings are present.
20	310 - Herbaceous Openland	2.9	No	Unspecified	Mix of lichen, blueberry, fern and grass; scattered white pine poles/saplings/seedlings plus a few clumps of red maple & choke cherry saplings are present.
25	3105 - Mixed Upland Herbaceous	1.5	No	Unspecified	Upland opening with a few scattered pine etc.
27	3105 - Mixed Upland Herbaceous	2.4	No	Unspecified	Mix of lichen, blueberry, fern and grass; scattered white pine poles/saplings/seedlings plus a few clumps of red maple & choke cherry saplings are present.
28	3105 - Mixed Upland Herbaceous	455.6	Yes	High	Mix of lichen, blueberry, fern and grass; scattered clumps of choke cherry and a few oak are also present.
29	3105 - Mixed Upland Herbaceous	2.1	No	Unspecified	Mix of lichen, blueberry, fern and grass; scattered white pine poles/saplings/seedlings plus a few clumps of red maple & choke cherry saplings are present.
30	3105 - Mixed Upland Herbaceous	1.7	No	Unspecified	Mix of lichen, blueberry, fern and grass; scattered white pine poles/saplings/seedlings plus a few clumps of red maple & choke cherry saplings are present.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
37	3105 - Mixed Upland Herbaceous	8.4	Yes	Unspecified	Scattered trees and clumps of juneberry etc.
39	3105 - Mixed Upland Herbaceous	8.7	Plantation	Paper Birch	Burn under C41-1263 (existing FTP) to provide a seedbed, then direct seed to establish paper birch regeneration.
41	3105 - Mixed Upland Herbaceous	2.0	No	Unspecified	Mix of lichen, blueberry, fern and grass; a few clumps of cherry, seviceberry, and scattered pine throughout.
43	3105 - Mixed Upland Herbaceous	1.0	No	Unspecified	Mix of lichen, blueberry, fern and grass; a few clumps of cherry, seviceberry, and scattered pine throughout.
45	11 - Low Intensity Urban	13.7	Yes	High	Adams Trail
46	3105 - Mixed Upland Herbaceous	3.0	No	Unspecified	Mix of lichen, blueberry, fern and grass; a few clumps of choke cherry, seviceberry, red maple and scattered pine included.
47	710 - Sand, Soil	1.1	Yes	Low	Open borrow pit, but attempts to plant jack pine are evident with a few survivors.
48	6239 - Mixed Emergent Wetland	1.9	No	Unspecified	Low, wet area with a small, seasonally fluctuating pond, wet grass and no trees/tall shrubs.
49	710 - Sand, Soil	1.9	Yes	Low	Open borrow pit, but attempts to plant jack pine are evident with a few survivors.
51	50 - Water	1.7	No	Unspecified	Ewalt lake - south end. Water level varies seasonally.
53	6239 - Mixed Emergent Wetland	1.4	No	Unspecified	Wet grass/low shrubs surrounding Ewalt lake.
54	3105 - Mixed Upland Herbaceous	2.9	No	Unspecified	Open grassy area near the west end of Fishhook Lake - mostly open but something of a transition between a dry upland opening and wet grass/low shrub stand. A few pine are included, so the stand is probably more like an upland stand than a true lowland.
55	50 - Water	1.8	No	Unspecified	Fishhook lake - west end. Water level varies seasonally.
56	6239 - Mixed Emergent Wetland	2.2	No	Unspecified	Wet grass/low shrubs surrounding Fishhook lake.
57	3105 - Mixed Upland Herbaceous	98.3	Yes	High	Mix of lichen, blueberry, fern and grass; scattered clumps of cherry and serviceberry also present.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
59	6239 - Mixed Emergent Wetland	1.8	No	Unspecified	Wet grass/low shrubs surrounding a pond.
60	50 - Water	3.2	No	Unspecified	Pond
61	6239 - Mixed Emergent Wetland	2.8	No	Unspecified	
63	3101 - Poverty Grass, Cladonia	398.6	Yes	High	Mix of lichen, blueberry, fern and grass; clumps of choke cherry, seviceberry, red maple and scattered pine throughout.
64	50 - Water	1.8	No	Unspecified	
65	6229 - Mixed lowland shrub	4.7	No	Unspecified	
68	629 - Mixed non-forested wetland	1.1	No	Unspecified	Low area with small pond surrounded by wet grassland. Water level appears to vary significantly throughout the year,
74	629 - Mixed non-forested wetland	4.5	No	Unspecified	Low area with small ponds surrounded by wet grassland. Water level appears to vary significantly throughout the year, but aquatic vegetation indicates that it does not dry up completely.
77	629 - Mixed non-forested wetland	2.7	No	Unspecified	Low area with a small pond surrounded by wet grassland. Water level appears to vary significantly throughout the year, but aquatic vegetation indicates that it does not dry up completely.