TRAVERSE CITY FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 56 ENTRY YEAR: 2013

Compartment Acreage: 3078 County: Grand Traverse

Stand Examiner: Scott Lint

Legal Description: T25N – R9W – Sections 10, 15, 16, 20, 21, 22

Management Goals: General management goals for this compartment are to provide timber products; maintain or enhance wildlife habitat; protect areas of unique character, threatened, endangered and special concern species; and provide for forest-based recreational uses.

Timber management goals include continuing aspen management to maintain early successional habitat for hunting and other wildlife related recreational opportunities, increasing regeneration of oak and a focus on increasing the red pine age class structure through final harvests of older stands and re-planting.

Soil and Topography: Rubicon with Rifle peat and Lupton muck in low areas. The area is level to very slightly rolling.

Ownership Patterns, Development, and Land Use in and Around the Compartment:
Ownership is private to the north and west with State Forest ownership to the south and east. There is light residential development around the compartment. There has been some recent residential construction along the north and west along Sparling Road. Pugsley Correctional Facility is located just west of the compartment in section 20.

Unique, Natural Features (include only non-site specific and non-sensitive information):
There are a few small pothole lakes and bogs scattered throughout the compartment.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): None known.

Special Management Designations or Considerations: None.

Watershed and Fisheries Considerations: There are several small pothole lakes in Compartment 56. For timber treatments adjacent to these waterbodies (Stand 90), an adequate buffer should left in place. Usually 100’ is sufficient.

Wildlife Habitat Considerations:

A portion of this compartment (section 10 more or less) falls on a ground moraine (landtype association 2221). The ground moraine represents some of the better soils in this area. Consequently, farms and settlements have replaced presettlement northern hardwood dominated forests. The fraction of this LTA occupied by state lands and private forested lands, themselves with a history of management, represent an ecologically insignificant fragment of these landscapes. Existing mixes of oak/pine/aspen forest should be maintained with small patch cuts and thinnings, retaining snags and other habitat elements as much as possible. Tops should be left onsite, unchipped, and in scattered piles for habitat. Some succession to mature white pine forest would be desirable in the long run. Small bogs should be buffered from cuts to maintain adjacent cover.

The remainder of this compartment falls on a flat, excessively well drained outwash plain (LTA 5111), which was historically prone to frequent burning and harbored mixed pine forests, barrens, and some components of oak, and hardwoods. This landscape should continue to be managed for a variety of successional stages of pine-oak-aspen forest and grass-shrub openings, with some mid to late successional forest in places. There is a successional momentum toward white pine over much of the compartment. Several stands could be allowed to gradually succeed to mixed white pine forest, while others should be set back through timber harvesting. Such harvesting should incorporate residual live trees (preferably in patches), snags, brush piles, and some down logs to replicate within-stand habitat structure left after wildfires. Oak is a very important component of forests here and should be maintained or regenerated as much as possible. Prescribed burning will maintain barrens habitat in some stands. Pine plantations should incorporate tree species and structural diversity as much as possible.

Species associated with pine, oak and aspen mixed upland forests and openland habitats, such as badger, wild turkey, scarlet tanager, hog-nosed snake, ruffed grouse, Cooper's hawk, red-backed salamander, and gray squirrel will benefit from management here.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and an end moraine of coarse-textured till along the northwest edge. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift are the Mississippian Marshall Sandstone and Coldwater Shale. The Marshall has been used as a building stone. The nearest gravel pits are in Sections 16 and 20. Gravel potential in the compartment is considered good, especially along the northwest edge. This area is located six miles southeast of the Guelph (Niagaran) reef trend. This Compartment and adjacent lands have been nominated for the May 2011 oil & gas lease auction. The Antrim Shale has not been developed in this area, and is probably too deep to be productive with current technology.

Vehicle Access: No concerns at this time.

Survey Needs: None known at this time.

Recreational Facilities and Opportunities: Boardman Valley Snowmobile Trail, Shore to Shore Riding and Hiking Trail, MCCCT motorcycle trail, ORV Route.

Fire Protection: This compartment is located in a zone dispatch area for priority DNR response. The area is heavy to fire prone cover types such as jack pine, red pine, and pin oak. There are many roads and trails in this compartment which makes access easy and it is located near US 131, M-113, and M-186 which not only surrounds the compartment but also provides for rapid response from nearby DNR fire units in Traverse City, Manton, and Kalkaska. Local volunteer fire department coverage is provided by Grand Traverse Rural Fire volunteers from Fife Lake and Kingsley.

Additional Compartment Information:

****** Cover type details, proposed treatments and stands designated as FDF are listed in the attached reports:**

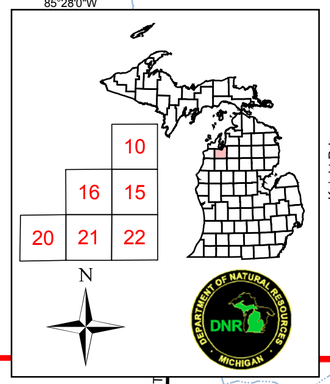
- **Cover Type by Age Class**
- **Cover Type by Management Objective**
- **Compartment Volume Summary**
- **Proposed Treatments – No Limiting Factors**
- **Proposed Treatments – With Limiting Factors**

****** The following information is displayed on the attached compartment maps:**

- **Base feature information, stand numbers, cover types**
- **Proposed treatments**
- **Proposed road access system**
- **Suggested potential old growth**

Cover Type & Treatment Map

Compartment 56
T25N, R09W, Sec. 10, 15-16, 20-22
County: Grand Traverse
Unit: Traverse City
YOE: 2013
Acres: 3,078 GIS Calculated
Stand Examiner: Scott Lint
Map Revised: 5/23/2011
Map Phase: Pre-Review



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

Legend

- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Culverts
- Railroads
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers
- Hiking Trails
- Horse Trails
- MCCCT Trails
- Motorcycle Trails (DNR License)
- Motorcycle Trails (SOS License)
- ORV Routes
- Snowmobile Trails
- Hiking Trail
- Horse Trail
- MCCCT Trail
- Motorcycle (DNR License)
- Motorcycle (SOS License)
- ORV Route
- Snowmobile Trail

Treatments

- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)

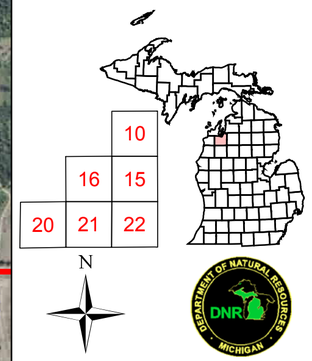
Forest Stands
Level 3
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 431 - Upland Mixed Forest

Non-Forest Stands
Level 3
- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

1 0.5 0 1 Miles

85°28'0"W 85°27'0"W 85°26'0"W 85°25'0"W 85°24'0"W 85°23'0"W 85°22'0"W
44°35'0"N 44°34'0"N 44°33'0"N

Stand Boundary Map



Compartment 56
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Stand # 23
Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code

Legend

- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Culverts
- Railroads
- Intermittent Stream/Drain
- Stream
- Hiking Trails
- Horse Trails
- MCCCT Trails
- Motorcycle Trails (DNR License)
- Motorcycle Trails (SOS License)
- ORV Routes
- Snowmobile Trails
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- Horse Trail
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- Motorcycle (DNR License)
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- ORV Route
- Snowmobile Trail
- Stand Boundaries

Forest Stands

Level 3

411 - Northern Hardwood
412 - Oak Types
413 - Aspen Types
419 - Mixed Upland Deciduous
421 - Planted Pines
422 - Natural Pines
431 - Upland Mixed Forest

Non-Forest Stands

Level 3

122 - Road/Parking Lot
310 - Herbaceous Openland
500 - Water
622 - Lowland Shrub
623 - Emergent Wetland

1 0.5 0 1 Miles

Dedicated & Proposed Special Conservation Area Map

Compartment 56
T25N, R09W, Sec. 10, 15-16, 20-22
County: Grand Traverse
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YOE: 2013
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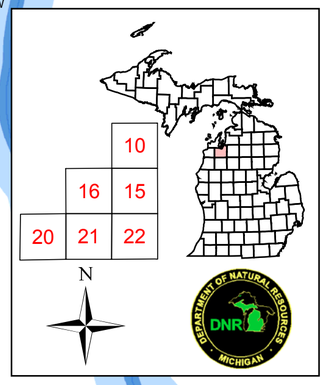

Stand # 23
Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code

Legend
- Miris Corners

Proposed Special Conservation Areas
- SCA - Special Conservation Area
- SCA Removal

High Conservation Value Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District

Special Conservation Areas
- Boat Access Sites
- Campgrounds
- Cold Water Streams
- Wildlife Management Areas
- Stand Boundaries

Forest Stands
Level 3
- 411 - Northern Hardwood
- 412 - Oak Types
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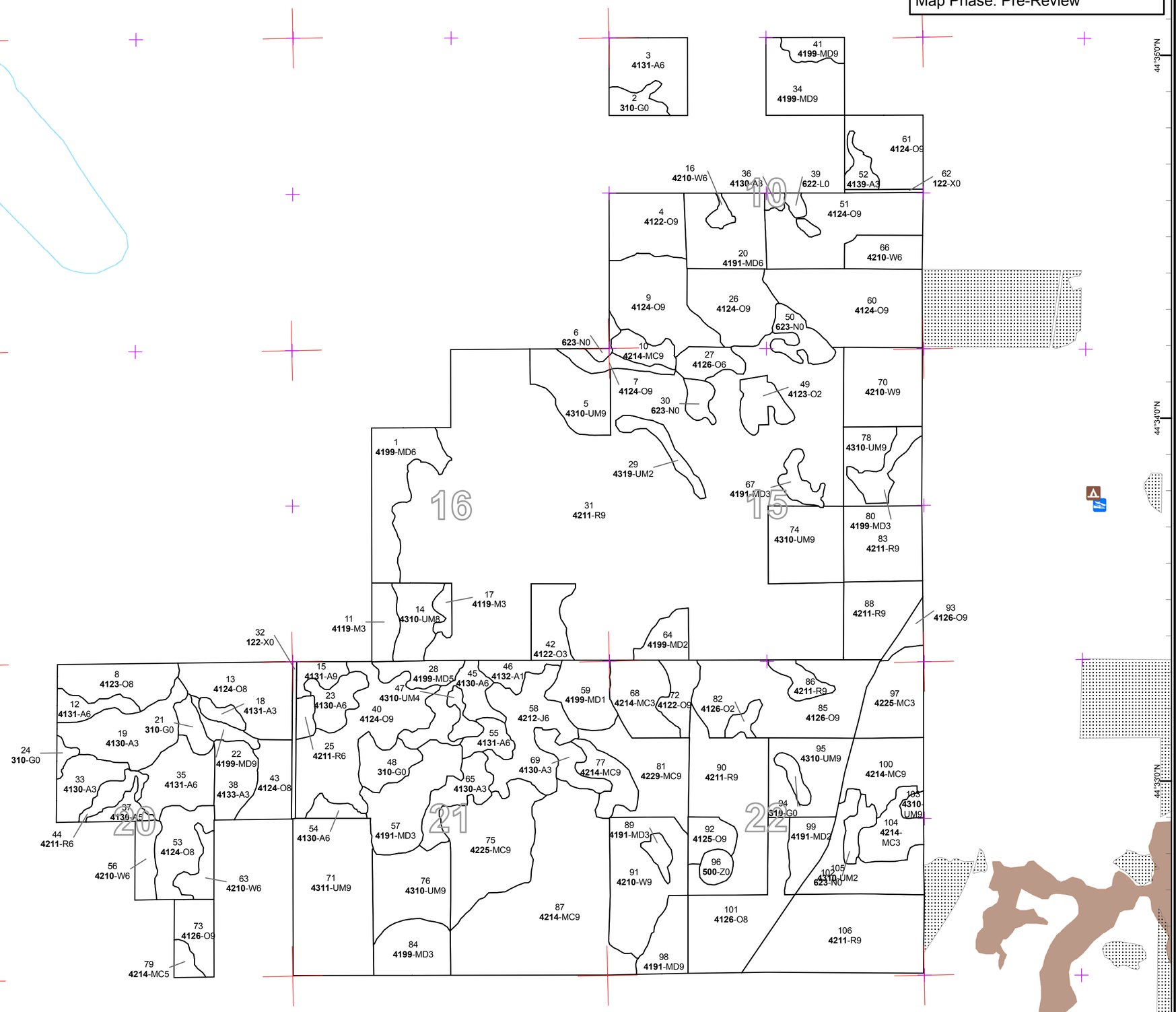

1 0.5 0 1 Miles

85°28'0"W 85°27'0"W 85°26'0"W 85°25'0"W 85°24'0"W 85°23'0"W 85°22'0"W
44°35'0"N 44°34'0"N 44°33'0"N

Table 1 – Total Acres by Cover Type and Age Class

Traverse City Mgt. Unit **Compartment 056 Year of Entry 2013**

Scott Lint : Examiner

Age Class

	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	Total
Aspen	0	0	55	64	28	30	40	36	8	0	0	0	0	0	0	**261**
Herbaceous Openland	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**40**
Jack Pine	0	0	0	0	0	0	0	0	42	0	0	0	0	0	0	**42**
Lowland Shrub	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Marsh	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
Mixed Upland Deciduous	0	25	49	29	35	0	6	39	36	19	0	39	0	0	13	**290**
Natural Mixed Pines	0	0	0	32	0	0	0	0	0	97	0	0	0	0	0	**129**
Northern Hardwood	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Oak	0	0	18	0	18	0	0	0	0	11	80	330	200	0	0	**657**
Planted Mixed Pines	0	0	0	45	0	0	5	0	0	189	0	0	0	0	0	**239**
Red Pine	0	0	0	0	7	0	5	0	0	710	187	0	0	0	0	**909**
Upland Mixed Forest	0	0	34	0	9	0	0	0	5	200	66	3	0	0	0	**318**
Urban	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
Water	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
White Pine	0	0	0	0	0	17	21	0	44	0	51	0	0	0	0	**133**
Total	**83**	**25**	**173**	**170**	**97**	**47**	**76**	**75**	**135**	**1226**	**384**	**373**	**200**	**0**	**13**	**3078**

Table 2 – Proposed Treatment Summaries

Traverse City Mgt. Unit
Year of Entry 2013

Compartment 056
Total Compartment Acres: 3078

Acres by Treatment Type

Commercial Harvest - 940	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	87	0	0	0	0	0	**87**
Mixed Upland Deciduous	49	0	0	0	0	0	**49**
Oak	26	83	90	0	66	0	**265**
Planted Mixed Pines	20	29	0	0	0	0	**49**
Red Pine	135	5	0	0	276	0	**417**
Upland Mixed Forest	36	37	0	0	0	0	**73**
Total	**354**	**154**	**90**	**0**	**342**	**0**	**940**

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	61056003-Cut	13.0	4131 - Aspen, Oak	High Density Pole	40	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal

Prescription Specs: Retain a few high quality oaks where possible and retain all conifer.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
15	61056015-Cut	7.8	4131 - Aspen, Oak	High Density Log	70	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal

Prescription Specs: Clear cut to regenerate aspen. Retain some oak and white pine. Concentrate retention along M-113 for visual management.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
25	61056025-Cut	4.8	42110 - Planted Red Pine	High Density Pole	55	Harvest	Group Selection	42101 - Planted White Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Remove all jack pine and pin oak. Thin red pine with emphasis on larger diameter trees > 14" dbh. Try to retain a residual basal area of around 90-110 square feet.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
31	61056031-clearcut-1	71.8	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	86	Harvest	Clearcut	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Clearcut and replant to red pine. No retention. Do not allow whole tree chipping. Encourage producer to delimb product throughout sale to achieve an even distribution of slash to aid in prescribed burn site prep. to control red maple regeneration.

Other Comments:

Next Steps: Burn to control red maple saplings, trench, replant to red pine.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
31	61056031-clearcut-2	63.6	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	86	Harvest	Clearcut with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal

Prescription Specs: Clear cut to diversify age class. Retention is to be concentrated in 2-4 small clumps adjacent to stand 64. These islands should be selected for density to best provide small clumps for possible use as turkey roosting habitat as requested by WLD. Preliminary location for this retention has been included in the treatment shape to accurately reflect acreage, but may be modified at time of sale preparation. In addition, to help facilitate natural regeneration leave a few scattered individual trees around the perimeter (concentrate along the south and north edges) for a seed source. Do not leave scattered trees throughout like a seed tree treatment.

Other Comments:

Next Steps: Scarify following harvest to encourage natural red pine regeneration along with oak and red maple saplings that are already established on this site. Maple and oak regeneration is heavy in some areas and these areas should not be scarified, but rather allowed to regenerate as oak/maple.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
31	61056031-SW-thin	60.9	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	86	Harvest	Crown Thinning	42250 - Pine, Oak	Cmpt. Review Proposal

Prescription Specs: Thin to remove most of the trees greater than 14" dbh. This will reduce the basal area by approximately 10-20 square feet resulting in a residual basal area of around 60-70 square feet.

Other Comments: Oak and red maple regeneration in this stand is fairly well established. This stand is slowly being converted back to an oak dominated type.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
31	61056031-thin_NE	32.7	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	86	Harvest	Crown Thinning	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Thin to remove most of the trees greater than 14" dbh. Remove all jack pine. Retain oak for mast and cavity trees. Try to retain a residual basal area of at least 100 square feet. Lower basal areas will result in red maple/oak regeneration aggressively taking over the site. Do not cut single stenm red maple. Be mindful of equipment access for removal of product when setting up the sale. Parts of this section of the stand have not been treated and access will be a concern. Include a small clearcut area (1/2 to 1 acre in size) to create a scenic overlook of the bog north of Sparling Rd; see OFS layer for approximate location.

Other Comments: Cycle trail passes through northwest part of treatment area. Snowmobile Trail and Shore to Shore Riding/Hiking Trail runs along east edge of treatment area.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
35	61056035-Cut	27.0	4131 - Aspen, Oak	High Density Pole	65	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal

Prescription Specs: Good opportunities to retain some individual good quality mast producing trees . Retain most large red and white pine as well as sub-canopy white pine. Numerous opportunities to create retention island(s).

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
37	61056037-Cut	8.2	4130 - Aspen	Medium Density Pole	50	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves. Retain some red oaks and larger black cherry for mast production.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
40	61056040-Cut	43.5	4124 - Red with White Oak	High Density Log	105	Harvest	Seed Tree	4122 - Oak, Pine	Cmpt. Review Proposal

Prescription Specs: Retain a few good quality red and white oak seed trees. Retain the few large bigtooth aspen on site for soft snags.

Other Comments: This is a low quality oak stand that borders a non-forested savannah/barrens that Wildlife is prescribing for restoration. Clear cutting this stand will allow an attempt to expand that ecosystem into part of this stand if possible. Cycle trail and North Country Tail pass through this stand.

Next Steps: May want to apply a prescribed fire prescription to this stand to set back red maple and oak developement to allow for savannah expansion.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
42	61056042-Cut	46.3	4122 - Oak, Pine	High Density Sapling	12	Harvest	Seed Tree	4122 - Oak, Pine	Cmpt. Review Proposal

Prescription Specs: Sub canopy is well established and should respond well to release. Remove the majority of red pine from the overstory. Retain a few individual red pine along the road and scattered throughout the stand. This should be light retention however, because these trees will remain as a part of the resulting oak, pine sapling stand.

Other Comments: North Country Trail follows two track north/south through the center of this stand. Protect this trail during sale and scarification operations.

Next Steps: Scarify as soon as possible following harvest to try and encourage natural red pine regeneration.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
45	61056045-Cut	21.9	4130 - Aspen	High Density Pole	52	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal

Prescription Specs: Sub-canopy oak and red maple appear to be well established. Final Harvest and attempt to save some of the sub-canopy oak. Apply individual tree retention and keep some black cherry and white pine. Work with WLD to help achieve their opening maintenance objectives on adjacent stand 47.

Other Comments: Cycle trail and North Country Tail pass through this stand.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
46	61056046-Cut	9.1	4132 - Aspen, Jack Pine	Low Density Sapling	36	Harvest	Clearcut	3301 - Low Density Deciduous Trees	Cmpt. Review Proposal

Prescription Specs: Clearcut with minimal retention, retain white pine and perhaps a few black cherry. Regenerate quaking aspen where possible and WLD may want to convert portions of this stand to a maintained opening.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
47	61056047-Cut	5.4	4310 - Pine, Oak Mix	Low Density Pole	70	Harvest	Clearcut	3102 - Grass	Cmpt. Review Proposal

Prescription Specs: Clearcut this area to assist WLD in the development of a maintained non-forested opening.

Other Comments: Cycle trail and North Country Tail pass through this stand.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
59	61056059-Cut	23.4	4199 - Other Mixed Upland Deciduous	Low Density Sapling	31	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal

Prescription Specs: Remove poor quality pin oak, attempt to regenerate poor quality quaking aspen, retain some black cherry and conifer.

Other Comments: Some poorly stocked, poorly regenerated areas would be acceptable as a part of a larger early successional, non-forested, savannah type complex that is being managed for in this southwest area of the compartment

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
60	61056060-Cut	66.2	4124 - Red with White Oak	High Density Log	105	Harvest	Crown Thinning	4124 - Red with White Oak	Cmpt. Review Proposal

Prescription Specs: Thin to release crowns of good quality red and white oak. Release white pine where possible. Concentrate on removing multiple stem and poor quality trees. Retain single stem red maple.

Other Comments: Cycle trail and North Country Tail pass through this stand. Snowmobile Trail and Shore to Shore Riding/Hiking Trail runs through the center of the stand.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
71	61056071-Cut	30.4	4311 - Pine, Aspen Mix	High Density Log	80	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal

Prescription Specs: Regenerate aspen in patchy clearcuts wherever possible, retain some larger white pine and oaks. Cut most oak so it will regenerate along with aspen. Retain some single stem red maple and a few larger oaks. Some white pine will need to be removed in order to facilitate aspen regeneration. Shape of treatment area is only an approximation, actual location of aspen regeneration may be slightly different. North Country Trail follows two-track along east edge of stand. Cycle trail passes through the southeast corner of the stand.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
72	61056072-Cut	13.2	4122 - Oak, Pine	High Density Log	100	Harvest	Single Tree Selection	4122 - Oak, Pine	Cmpt. Review Proposal

Prescription Specs: Remove most of older pin oak. Create a few regeneration holes. Remove some larger diameter red pine. Steer stand toward a white pine/white oak composition.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
73	61056073-Cut	15.1	4126 - White, Black, N. Pin Oak	High Density Log	90	Harvest	Clearcut with Reserves	4129 - Mixed Oak	Cmpt. Review Proposal

Prescription Specs: Remove most of the overstory to release well established oak saplings. Retain most white pine for nurse crop. Retain a few good quality larger white oaks if possible. There appears to be a heavier concentration of white pine in the north/northwest part of stand. Some of this appears to have been planted. There may be an opportunity to create small retention pocket(s) of pine somewhere in this part of the stand. Retain a portion of existing whitch hazel clumps and also regenerate a portion of them.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
74	61056074-Cut	37.4	4310 - Pine, Oak Mix	High Density Log	90	Harvest	Single Tree Selection	4122 - Oak, Pine	Cmpt. Review Proposal

Prescription Specs: Remove older pin oak, some white oak, and some red pine to create some regeneration holes. Remove all jack pine. Residual basal area should be 70-90 square feet. Retain some good quality red/pin hybrid and white oaks for mast production.

Other Comments: Cycle trail passes this treatment area. Shore to Shore Riding/Hiking Trail runs along the east edge of treatment area.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
77	61056077-Cut	15.5	42141 - Planted Mixed Pine, Mixed Deciduous	High Density Log	86	Harvest	Clearcut with Reserves	42201 - Natural White Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Retain what few good quality white pine that are on site along with any single stem red maple and a few good quality white oak that may be in stand, steer stand toward a white pine/red maple mix. Remove all jack pine, pin oak, and most of the red pine.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
79	61056079-Cut	4.9	42141 - Planted Mixed Pine, Mixed Deciduous	Medium Density Pole	54	Harvest	Clearcut with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal

Prescription Specs: Stand is strips of jack pine/oak saplings and red pine poles. Treatment area is the remaining red pine strips. Treat with adjacent stand. Retain a few pine and pole size oak to nurse regeneration. Strategically locate some individual leave trees along Walton Rd for visual management.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
83	61056083-Cut	38.0	42110 - Planted Red Pine	High Density Log	90	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Marked thinning to reduce basal area to approximately 110 square feet. Remove mature utility poles, large diameter sawlog trees (>14" dbh) and then thin from below to achieve desired basal area. Be mindful of equipment access for removal of utility poles when setting up the sale.

Other Comments: Snowmobile trail runs along east edge of treatment area. Shore to Shore Riding/Hiking Trail runs along west and south edges of treatment area.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
84	61056084-Cut	25.3	4199 - Other Mixed Upland Deciduous	High Density Sapling	11	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Reduce overstory to facilitate prescribed burn and planting of red pine. Retain some large canopy high quality oaks for mast production. There is an area in the center of the stand where an island of resdual oaks could be concentrated, and in addition several larger individual trees scattered throughout the stand could be retained. This will be a small volume sale since the stand was treated in 2005.

Other Comments: The start date on this sale has been moved up to 10/1/2011. The sooner this treatment and the subsequent prescribed fire can be done, the better the chances of successfully controling red maple sprouting. This may qualify for a negotiated sale to help expedite this process.

Next Steps: Prescribed burn to reduce competition and then replant to red pine.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
85	61056085-Cut	69.9	4126 - White, Black, N. Pin Oak	High Density Log	100	Harvest	Group Selection	4129 - Mixed Oak	Cmpt. Review Proposal

Prescription Specs: Remove larger diameter pin oaks and some larger diameter red pine. Create some small canopy openings in areas where the larger pin oaks are removed to create some regeneration holes. Retain sub-canopy sapling white pines wherever possible. Follow "method of Cut" description for group selection as much as possible while still removing most older pin oak. Residual basal area should be in the 50-90 square foot range, however spotty due to the creation of regeneration holes.

Other Comments: Cycle trail and ORV Route pass through treatment area.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
90	61056090-Cut	66.2	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	90	Harvest	Crown Thinning	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Thin red pine by concentrating on removing poor quality and suppressed trees. In addition, remove larger trees in the 14-16" size class to reduce total basal area to approximately 110-120. Create some small regeneration holes by removing some poor quality pin oak. There may be some utility pole quality trees present in this stand. Some of these can be marked as well providied they are mature and there is enough residual basal area.

Other Comments: Cycle trail passes through treatment area. ORV Route runs along the east edge of the treatment area.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
92	61056092-Cut	11.1	4125 - Black, N. Pin Oak	High Density Log	105	Harvest	Clearcut	4129 - Mixed Oak	Cmpt. Review Proposal

Prescription Specs: Pin oak logs rapidly declining. Sub canopy is well established and should respond well to release. Remove all pin oak, jack pine, and most white oak from the overstory. Retain some white pine poles.

Other Comments: This is the classic OI "delayed removal" type cut. Cycle trail passes through the center of this treatment area.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
100	61056100-Cut	29.1	42140 - Planted Mixed Pine	High Density Log	85	Harvest	Group Selection	42101 - Planted White Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Remove all jack pine and pin oak. Thin red pine with emphasis on removing trees > 14" dbh. Residual basal area should be around 90 square feet.

Other Comments: Shore to Shore Riding/Hiking Trail runs along east edge of stand.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
106	61056106-Cut	78.5	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	92	Harvest	Crown Thinning	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Thin red pine from below and take some of the larger diameter trees as well. Possibly throw in some regeneration holes around areas where there are several oaks clustered together. Stand was treated in 1989. Stand was row thinned, however rows are not real obvious. May need to mark some additional trees just to facilitate access. Target residual basal area should be around 110-120.

Other Comments: Shore to Shore Riding/Hiking Trail runs along east edge of treatment area.

Next Steps:

Total Treatment Acreage Proposed: 940.2

Table 4 -- Treatments Prescribed with a Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
			#Error						

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: **0**

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4199 - Other Mixed Upland Deciduous	High Density Pole	39.2	65	81-110	Possible pocket of oak wilt in some older red oaks near southwest corner of stand. See OFS for exact location.
3	4131 - Aspen, Oak	High Density Pole	30.1	40		Stand appears to be several different ages. Different clones of bigtooth. Majority are in the 40 year old class, but also some older and younger clones present. Pocket of white pine plantation with some natural jack pine in SE corner visible in imagery.
4	4122 - Oak, Pine	High Density Log	31.1	110	81-110	
5	4310 - Pine, Oak Mix	High Density Log	29.1	86	81-110	Oaks in sub canopy are combination of red and white. Somewhat spotty distribution, two size classes. There are many in the 3-5 class that are heavily browsed, but there are also a fair number in the 5-10 foot class that are past the browse line.
7	4124 - Red with White Oak	High Density Log	8.2	97	111-140	Stand occupies north facing steep slope between county road and small lake.
8	4123 - Red Oak	Medium Density Log	26.6	110	51-80	
9	4124 - Red with White Oak	High Density Log	46.3	110	81-110	Very similar to adjacent stand to the east except that this stand has planted red pine dominating the sub canopy and the adjacent stand has planted white pine dominating the subcanopy.
10	42141 - Planted Mixed Pine, Mixed Deciduous	High Density Log	10.1	86	200+	See management considerations.
11	4119 - Mixed Northern Hardwoods	High Density Sapling	12.4	12	1-50	Heavy red maple regeneration. Almost no oak regeneration. Suspect slightly better soiland/or Kotar type for this stand.
12	4131 - Aspen, Oak	High Density Pole	9.7	50	81-110	
13	4124 - Red with White Oak	Medium Density Log	39.9	115	51-80	Overall sub-canopy density is high.
14	4310 - Pine, Oak Mix	Medium Density Log	19.2	86	51-80	New stand added. Similar to stand 12, but more BA. Get red maple age from cutting record.
15	4131 - Aspen, Oak	High Density Log	7.8	70		
16	42100 - Planted White Pine	High Density Pole	3.3	78	111-140	
17	4119 - Mixed Northern Hardwoods	High Density Sapling	4.7	12	1-50	Verify cutting record for first age.
18	4131 - Aspen, Oak	High Density Sapling	5.0	20		

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4130 - Aspen	High Density Sapling	36.6	11		
20	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	35.8	78	81-110	
22	4199 - Other Mixed Upland Deciduous	High Density Log	6.0	50	111-140	
23	4130 - Aspen	High Density Pole	13.9	36		
25	42110 - Planted Red Pine	High Density Pole	4.8	55	200+	
26	4124 - Red with White Oak	High Density Log	35.9	110	81-110	Very similar to adjacent stand to the east except that this stand has planted white pine dominating the sub canopy and the adjacent stand has planted red pine dominating the subcanopy.
27	4126 - White, Black, N. Pin Oak	High Density Pole	11.4	86	81-110	
28	4199 - Other Mixed Upland Deciduous	Medium Density Pole	11.7	36		New stand added. Verify cutting record.
29	4319 - Mixed Upland Forest	Medium Density	8.9	36		See management comments.
31	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	670.0	86	111-140	This is a large area dominated by red pine that was planted in 1925. There are small variations in the presence of oak sawlogs depending on previous treatments, however they exist only as a minor part of the stand canopy. Other areas are characterized by a fairly heavy presence of red maple and oak saplings, also resulting from previous treatments.
33	4130 - Aspen	High Density Sapling	18.4	21		
34	4199 - Other Mixed Upland Deciduous	High Density Log	30.2	105	111-140	Traces of hemlock and paper birch in canopy.
35	4131 - Aspen, Oak	High Density Pole	27.0	65	81-110	
36	4130 - Aspen	High Density Sapling	3.7	21		
37	4130 - Aspen	Medium Density Pole	8.2	50		
38	4133 - Aspen, Mixed Pine	High Density Sapling	18.8	12	1-50	
40	4124 - Red with White Oak	High Density Log	60.7	105	81-110	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
41	4199 - Other Mixed Upland Deciduous	High Density Log	9.1	100	81-110	
42	4122 - Oak, Pine	High Density Sapling	17.6	12	1-50	
43	4124 - Red with White Oak	Medium Density Log	20.1	115	51-80	
44	42110 - Planted Red Pine	High Density Pole	6.9	38	141-170	
45	4130 - Aspen	High Density Pole	21.9	52		
46	4132 - Aspen, Jack Pine	Low Density Sapling	9.1	36		
47	4310 - Pine, Oak Mix	Low Density Pole	5.4	70		See Management comments.
49	4123 - Red Oak	Medium Density	12.8	30		
51	4124 - Red with White Oak	High Density Log	54.3	100	81-110	
52	4139 - Aspen, Mixed Deciduous	High Density Sapling	6.9	21		
53	4124 - Red with White Oak	Medium Density Log	24.0	105	51-80	
54	4130 - Aspen	High Density Pole	5.4	36		
55	4131 - Aspen, Oak	High Density Pole	8.9	65		
56	42100 - Planted White Pine	High Density Pole	11.0	57	171-200	
57	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	37.0	11		
58	42121 - Planted Jack Pine, Mixed Deciduous	High Density Pole	41.9	70		
59	4199 - Other Mixed Upland Deciduous	Low Density Sapling	23.4	31		
60	4124 - Red with White Oak	High Density Log	66.5	105	111-140	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
61	4124 - Red with White Oak	High Density Log	30.6	100	81-110	
63	42100 - Planted White Pine	High Density Pole	9.8	57	171-200	
64	4199 - Other Mixed Upland Deciduous	Medium Density	12.6	Uneven Age		Age is wrong. Check cutting records. 13-22?
65	4130 - Aspen	High Density Sapling	18.1	20		
66	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	16.8	40	81-110	
67	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	8.1	20		
68	42141 - Planted Mixed Pine, Mixed Deciduous	High Density Sapling	26.1	20		Planted red pine, natural jack pine.
69	4130 - Aspen	High Density Sapling	11.7	20		
70	42101 - Planted White Pine, Mixed Deciduous	High Density Log	40.9	70	111-140	verify planting records for age
71	4311 - Pine, Aspen Mix	High Density Log	80.9	80	81-110	Stand contains a few pockets of older white pine that appear to be natural in origin even though the majority of the stand was planted.
72	4122 - Oak, Pine	High Density Log	13.2	100	141-170	
73	4126 - White, Black, N. Pin Oak	High Density Log	15.0	90	51-80	
74	4310 - Pine, Oak Mix	High Density Log	37.4	90	81-110	
75	42250 - Pine, Oak	High Density Log	57.8	83	111-140	
76	4310 - Pine, Oak Mix	High Density Log	37.4	83	111-140	New stand added.
77	42141 - Planted Mixed Pine, Mixed Deciduous	High Density Log	15.5	86	51-80	
78	4310 - Pine, Oak Mix	High Density Log	28.6	90	81-110	
79	42141 - Planted Mixed Pine, Mixed Deciduous	Medium Density Pole	4.9	54	141-170	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
80	4199 - Other Mixed Upland Deciduous	High Density Sapling	12.4	11		
81	42290 - Natural Mixed Pine	High Density Log	38.9	86	51-80	
82	4126 - White, Black, N. Pin Oak	Medium Density	4.9	35		
83	42110 - Planted Red Pine	High Density Log	38.9	90	141-170	
84	4199 - Other Mixed Upland Deciduous	High Density Sapling	25.5	6		
85	4126 - White, Black, N. Pin Oak	High Density Log	69.9	100	111-140	
86	42110 - Planted Red Pine	High Density Log	8.4	86	111-140	See management considerations.
87	42141 - Planted Mixed Pine, Mixed Deciduous	High Density Log	133.8	85	81-110	See management comments.
88	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	31.8	86	81-110	
89	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	4.9	25		need age, was this result of last treatment in 99? yes
90	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	66.2	90	111-140	See management comments.
91	42100 - Planted White Pine	High Density Log	51.0	90	81-110	Stand has a few larger oaks in the canopy in the southern part odf the stand (<2% overall).
92	4125 - Black, N. Pin Oak	High Density Log	11.1	105	51-80	
93	4126 - White, Black, N. Pin Oak	High Density Log	6.4	95	81-110	
95	4310 - Pine, Oak Mix	High Density Log	33.5	86	81-110	
97	42250 - Pine, Oak	High Density Sapling	32.1	20		
98	4191 - Mixed Upland Deciduous with Conifer	High Density Log	18.9	83	51-80	
99	4191 - Mixed Upland Deciduous with Conifer	Medium Density	15.5	20		

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
100	42140 - Planted Mixed Pine	High Density Log	29.4	85	111-140	
101	4126 - White, Black, N. Pin Oak	Medium Density Log	50.5	90	51-80	
103	4310 - Pine, Oak Mix	High Density Log	3.4	100		
104	42140 - Planted Mixed Pine	High Density Sapling	18.9	20		
105	4310 - Pine, Oak Mix	Medium Density	33.9	11		
106	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	81.8	92	141-170	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	310 - Herbaceous Openland	9.1	No	Unspecified	
6	623 - Emergent Wetland	2.8	N\A	Unspecified	
21	310 - Herbaceous Openland	7.8	N\A	Unspecified	
24	310 - Herbaceous Openland	2.8	No	Low (NonForested)	
30	623 - Emergent Wetland	6.5	N\A	Unspecified	add water as separate stand
32	122 - Road/Parking Lot	4.0	N\A	Unspecified	
39	622 - Lowland Shrub	2.6	N\A	Unspecified	
48	310 - Herbaceous Openland	14.9	No	Unspecified	New stand added.
50	623 - Emergent Wetland	12.9	N\A	Unspecified	
62	122 - Road/Parking Lot	1.7	N\A	Unspecified	
94	310 - Herbaceous Openland	5.1	No	Unspecified	
96	50 - Water	6.2	N\A	Unspecified	
102	623 - Emergent Wetland	7.2	N\A	Unspecified	treed bog

7 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

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

Stand	SCA Type	SCA Name	Acres	Comments

8 – DEDICATED CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.