



Compartment Review Presentation

Escanaba Forest Management Unit

Compartment 45

Entry Year 2016

Acreage: 1,760

County Menominee

Management Area: Green Bay Lake Plain

Revision Date: 06/17/2014

Stand Examiner: Dustin Salter

Legal Description:

36N 25W Section's 22, 27, and 34

Identified Planning Goals:

This compartment has four primary forest cover types: red pine, upland low quality hardwood, lowland ash/hardwood, and mixed upland and lowland conifer. The majority of the red pine stands are mature at over ninety years old. A number of these stands will be harvested and planted with red pine to maintain the red pine cover types in this area. There were two red pine stands harvested last decade and were mechanically scarified, but they did not successfully regenerate to red pine, so these stands will also be planted with red pine. There are a few upland hardwood stands that have been shelterwood harvested in the past twenty years with the intention of increasing the conifer component within them. This was achieved, so now the overstory needs to be removed to release the advanced regeneration. There are also numerous lowland ash/hardwood stands that are mature and should be regenerated, especially with the threat of Emerald Ash Borer within the Upper Peninsula.

Soil and topography:

There are two primary soil series within the compartment: Deford - Wainola - Rousseau Complex and Tawas - Deford Complex. The D-W-R complex varies from level to undulating to gently rolling. This complex makes up the largest portion of the upland stands. This complex varies from black muck over fine sand to deep fine sands. The Deford areas create wetland pockets within the uplands. The Tawas - Deford Complex is level and very poorly drained. The T - D Complex has black muck over fine sand. This complex is dominated by poor quality ash stands and non-productive lowland shrubs.

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

This compartment is in the middle of a block of state land that is approximately 8 miles wide and 20 miles long, that extends into Delta County. This compartment is primarily surrounded and blocked in with state land; except for some private property on the western edge. There are some primary residences and recreational cabins on the private property. Hunting and ORV riding are the primary uses of this area.

Unique Natural Features:

The Big Cedar River flows through part of the stand.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

The Cedar River State Forest Campground is in an adjacent compartment, but a portion of the access road runs through this compartment. Part of the Cedar River Pathway and trailhead/parking lot is within section 22.

Watershed and Fisheries Considerations:

The Big Cedar River flows through the southern third of the compartment. There is a three chain no-cut buffer along the river.

Wildlife Habitat Considerations:

This compartment is primarily comprised of red pine ridges and upland hardwoods in a matrix of lowland brush and swamp conifer. A large portion of the red pine and mixed conifer habitat will be final harvested this management cycle, and these areas will be reestablished primarily as red pine stands. This area demonstrates a natural tendency to produce red pine, white pine, and balsam fir in upland areas. This habitat type has declined during the past 150 years, and retaining mesic upland conifers provides good habitat for numerous game and non-game species. To further improve the wildlife value in these areas, hard and soft mast trees will be planted as an additional food source. Several stands of mixed hardwoods and lowland deciduous forest will also be harvested which will generate early successional habitat for wildlife species.

Mineral Resource and Development Concerns and/or Restrictions

Vehicle Access:

This compartment is accessed off of two primary roads; County Road 551 and South Fox Lane (County & State Maintained). There are numerous two-track roads that branch off of the primary roads that provide access to most of the compartment.

Survey Needs:

Possibly two registered corners will need to be set.

Recreational Facilities and Opportunities:

Cedar River Pathway traverses through the Northwestern part of the compartment and the trailhead and parking lot is also located within the compartment. The pathway has not been groomed in many years. The Cedar River Campground is in an adjacent compartment.

Fire Protection:

This compartment contains many upland ridges with mature conifers growing on them, so there is a possibility of a fast spreading fire. A number of these stands will be harvested this decade so there will be a large amount of dried out conifer slash. The ridges are surrounded by lowlands and hardwood stands, so there is a low probability of a large fire. There is good access into most of the compartment for fire suppression. The Cedar River offers a good water source.

Additional Compartment Information:

There is some phragmites within the compartment, that should be treated as soon as funding is available.

The following reports from the Inventory are attached:

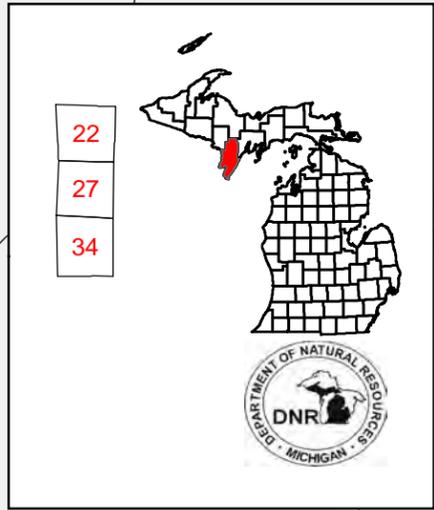
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

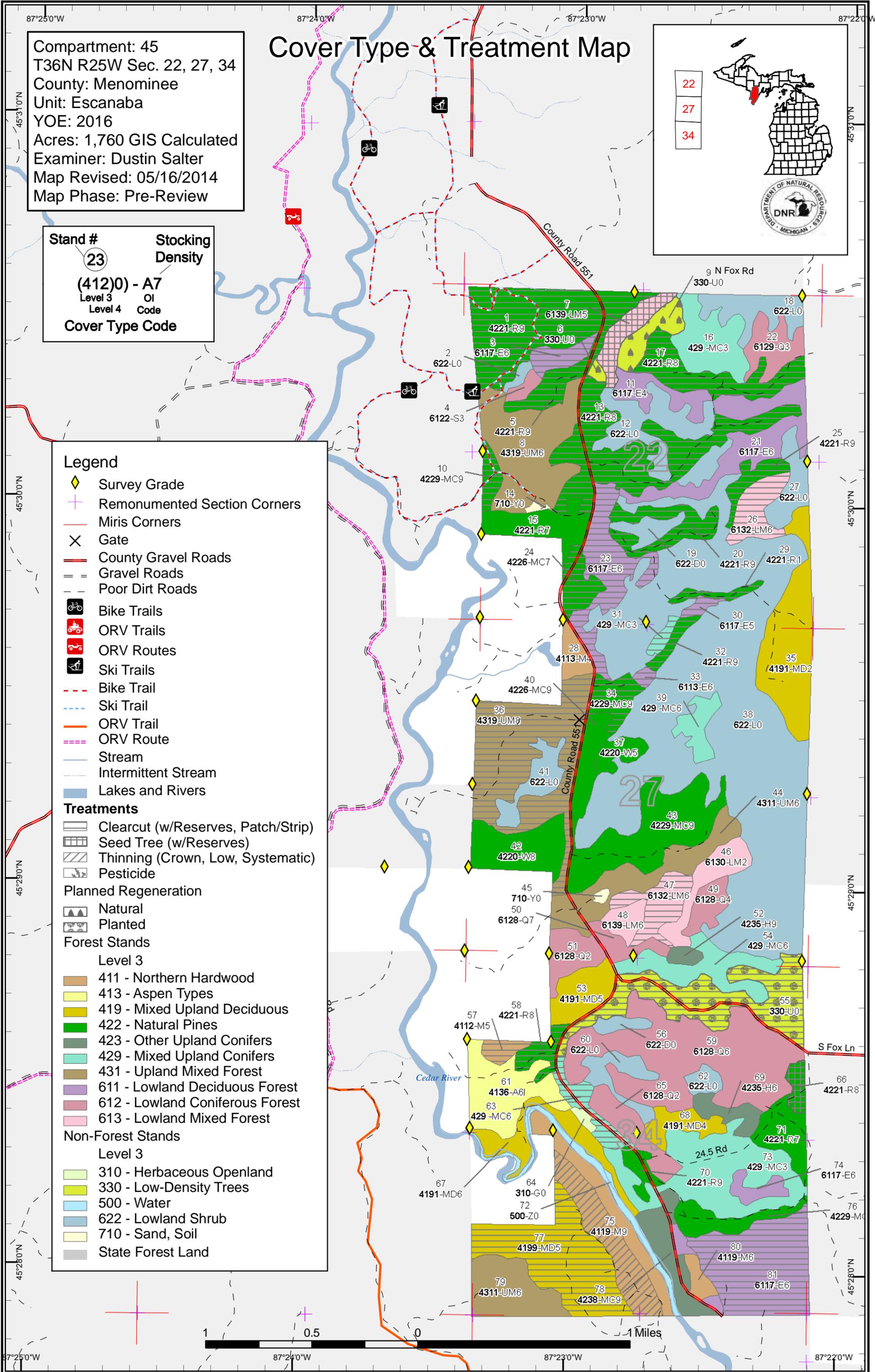
Compartment: 45
 T36N R25W Sec. 22, 27, 34
 County: Menominee
 Unit: Escanaba
 YOE: 2016
 Acres: 1,760 GIS Calculated
 Examiner: Dustin Salter
 Map Revised: 05/16/2014
 Map Phase: Pre-Review



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

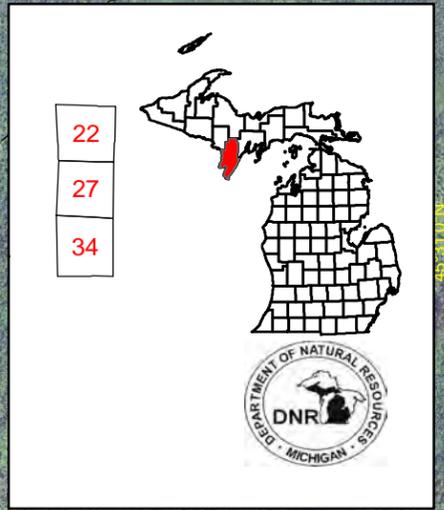
Legend

- ◆ Survey Grade
 - + Remonumented Section Corners
 - Miris Corners
 - × Gate
 - County Gravel Roads
 - Gravel Roads
 - Poor Dirt Roads
 - 🚲 Bike Trails
 - 🛵 ORV Trails
 - 🛵 ORV Routes
 - 🏂 Ski Trails
 - Bike Trail
 - Ski Trail
 - ORV Trail
 - ORV Route
 - Stream
 - Intermittent Stream
 - Lakes and Rivers
- Treatments**
- ▨ Clearcut (w/Reserves, Patch/Strip)
 - ▨ Seed Tree (w/Reserves)
 - ▨ Thinning (Crown, Low, Systematic)
 - ▨ Pesticide
- Planned Regeneration**
- ▲ Natural
 - ▲ Planted
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 429 - Mixed Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
- Non-Forest Stands**
- Level 3
- 310 - Herbaceous Openland
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub
 - 710 - Sand, Soil
 - State Forest Land



Stand Boundary Map

Compartment: 45
 T36N R25W Sec. 22, 27, 34
 County: Menominee
 Unit: Escanaba
 YOE: 2016
 Acres: 1,760 GIS Calculated
 Examiner: Dustin Salter
 Map Revised: 05/16/2014
 Map Phase: Pre-Review



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

Legend

- ◆ Survey Grade
- ◇ Non-Survey Grade
- ✚ Remonumented Section Corners
- Miris Corners
- ✕ Gate
- Paved Roads
- County Gravel Roads
- == Gravel Roads
- - - Poor Dirt Roads
- 🚲 Bike Trails
- 🛵 ORV Trails
- 🛵 ORV Routes
- 🎿 Ski Trails
- - - Bike Trail
- - - Ski Trail
- ORV Trail
- ORV Route
- Stream
- Intermittent Stream
- ▭ Stand Boundaries

Forest Stands

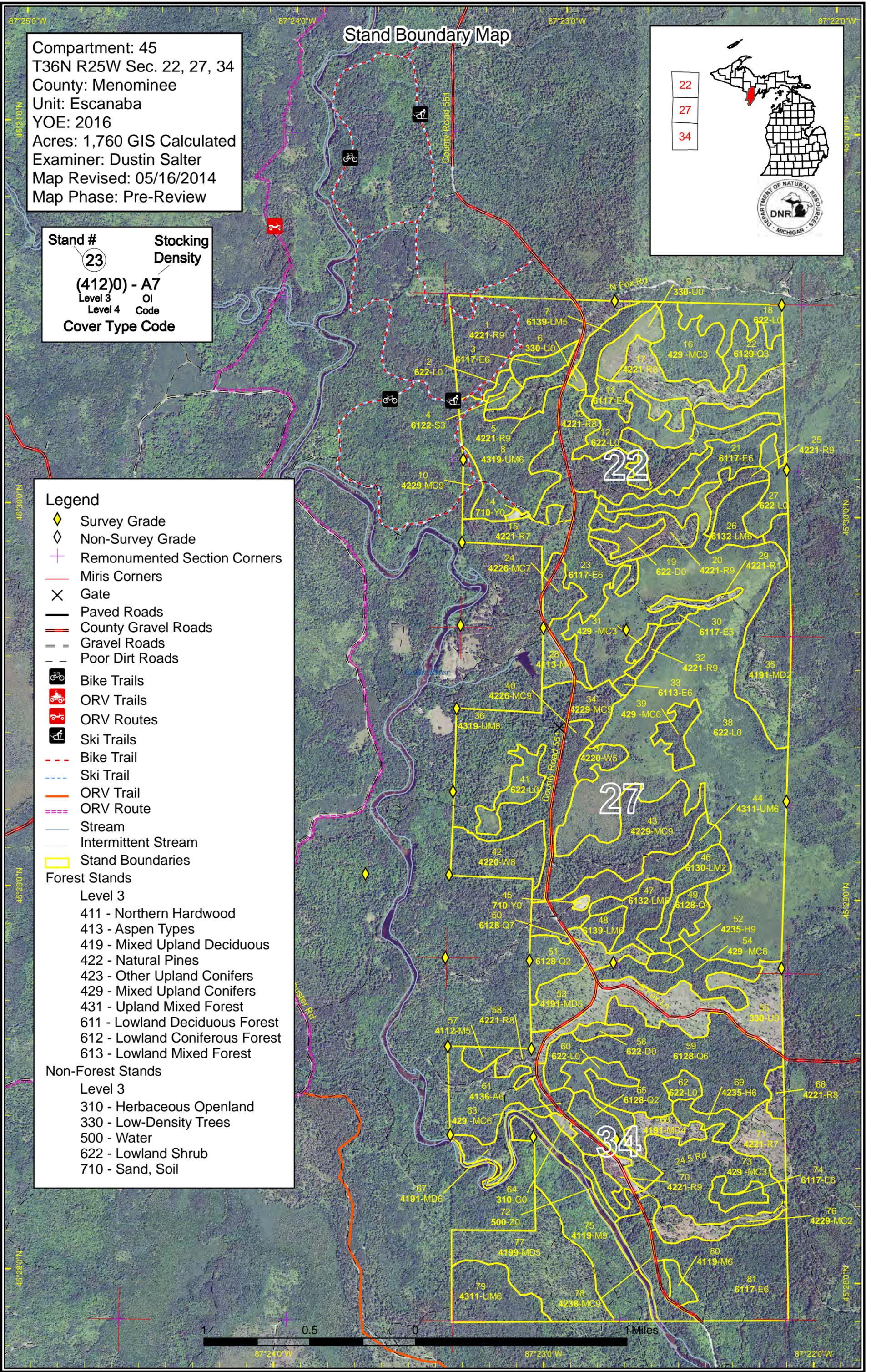
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

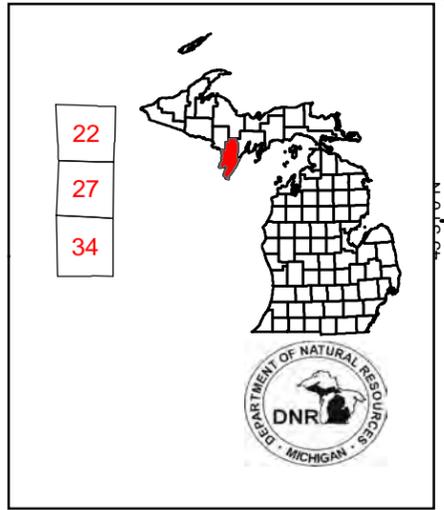
Level 3

- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 710 - Sand, Soil



Special Conservation Areas & Site Conditions Map

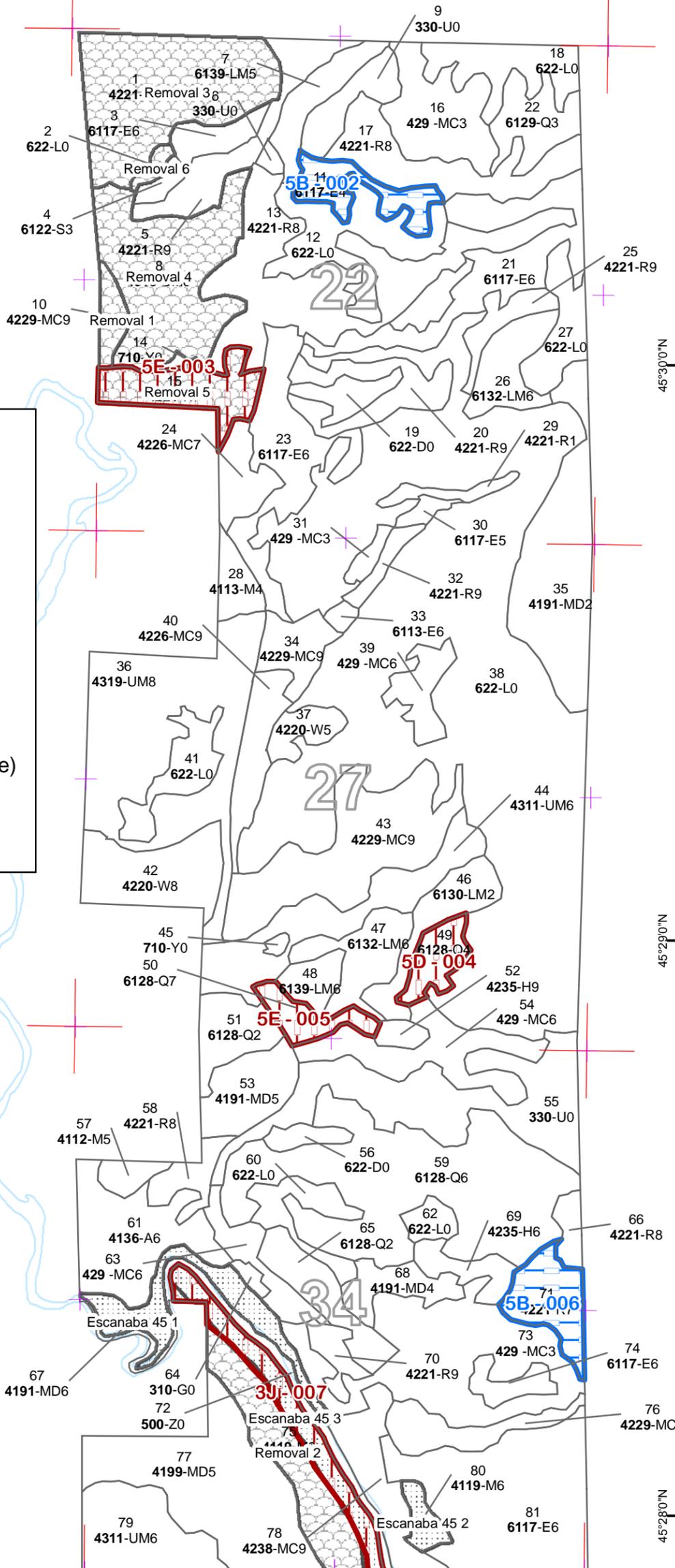
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Stand #
 23
Stocking Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

Legend

- Miris Corners
- Stand Boundaries
- Reviewable SCAs**
- ▨ Proposed SCA
- ▩ SCA Removal
- ▭ Available w/ Constraints (Factor - Number)
- ▭ Unavailable (Factor - Number)
- Site Condition Type**
- Available Factors W/ Constraints
- 5B: Retention for regeneration purposes
- Unavailable Factors
- 3J: Water quality / BMPs (stream, river, or lake)
- 5D: Unproductive Forest Land
- Special Conservation Areas**
- Cold Water Streams



87°25'0"W 87°24'0"W 87°23'0"W 87°22'0"W

45°31'0"N
45°30'0"N
45°29'0"N
45°28'0"N

Report 1 – Total Acres by Cover Type and Age Class



	Age Class													Total	
	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
Aspen	0	0	30	0	0	0	0	0	0	0	0	0	0	0	30
Hemlock	0	0	0	0	0	0	0	0	0	3	0	8	0	0	11
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Low-Density Trees	61	0	0	0	0	0	0	0	0	0	0	0	0	0	61
Lowland Conifers	0	27	14	0	0	0	0	0	9	8	0	0	0	88	146
Lowland Deciduous	0	0	0	0	32	0	0	8	97	12	0	0	0	0	149
Lowland Mixed Forest	0	0	15	0	7	0	0	0	30	0	12	0	0	0	63
Lowland Shrub	392	0	0	0	0	0	0	0	0	0	0	0	0	0	392
Lowland Spruce/Fir	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Mixed Upland Deciduous	0	0	42	0	0	0	0	16	29	53	0	0	0	0	140
Natural Mixed Pines	0	13	0	0	0	0	13	0	45	16	11	0	0	0	98
Northern Hardwood	0	0	0	0	0	0	0	4	12	44	0	0	0	0	60
Red Pine	0	4	0	0	0	0	0	6	20	205	0	0	0	0	235
Sand, Soil	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Treed Bog	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Upland Conifers	0	0	80	24	0	10	0	9	0	0	0	0	18	0	141
Upland Mixed Forest	0	0	0	25	78	0	0	0	0	68	0	0	0	0	172
Water	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13
White Pine	0	0	0	0	0	0	7	0	0	0	0	0	0	24	31
Total	481	47	181	49	118	10	21	44	241	409	22	8	18	112	1760



Report 2 – Proposed Treatment Summaries

Escanaba Mgt. Unit
Year of Entry 2016

Compartment 045
Total Compartment Acres: 1,760

Acres by Treatment Type

Commercial Harvest - 573 Tree Planting - 257 Other - 13
 Habitat Cut - 0 Opening Maintenance - 0

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Low-Density Trees	49	0	0	0	0	0	0	49
Lowland Deciduous Forest	95	0	0	0	0	0	0	95
Lowland Mixed Forest	30	0	12	0	0	0	0	41
Mixed Upland Conifers	13	0	0	0	0	0	0	13
Mixed Upland Deciduous	53	0	0	0	0	0	0	53
Natural Pines	218	0	5	0	0	0	0	223
Northern Hardwood	4	0	0	0	26	0	0	30
Upland Mixed Forest	68	0	0	0	0	0	0	68
Total	531	0	16	0	26	0	0	573

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1 33045001-Cut	52.6	42210 - Natural Red Pine	High Density Log	90	171-200	Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Clearcut - Cut all trees greater than 2 inches. No retention will be left. This stand is being managed for red pine. The Cedar River Pathway									
<u>Specs:</u> must be preserved during harvest and planting.									
<u>Other</u> This stand is currently listed as Potential Old Growth - Remove this designation. This stand does not have any unique conditions and there are									
<u>Comments:</u> many similar stands in the surrounding area. The Cedar River Pathway runs through this stand, almost in the center of the stand. Overall this stand is a very high quality red pine stand/site.									
<u>Next</u> Following harvest herbicide(if necessary), trench, and plant red pine per recommendations of the TMS. There will be some isolated small									
<u>Steps:</u> pockets of lowland that are not suitable for planting, but will regenerate naturally. WLD will plant hard and soft mast along perimeter and in locations not accessed by the trencher.									
<u>Proposed</u>									
<u>Start Date:</u> 10/01/2015									
3 33045003-Cut	7.6	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	81	81-110	Harvest	Clearcut with Reserves	6113 - Lowland Maple	Cmpt. Review Proposal
<u>Prescription</u> Clearcut with Reserves - Cut all trees greater than 3 inches; except hemlock, cedar, and mark some pine and spruce for seed. The retention will									
<u>Specs:</u> be the hemlock, cedar, and pine and spruce seed trees. This stand is being managed for a mix of maple and mixed conifer.									
<u>Other</u> This stand is a lowland red maple type with a mix of advanced conifer regeneration. The understory needs to be released before it becomes									
<u>Comments:</u> stunted.									
<u>Next</u>									
<u>Steps:</u>									
<u>Proposed</u>									
<u>Start Date:</u> 10/01/2015									
5 33045005-Cut	18.2	42210 - Natural Red Pine	High Density Log	90	81-110	Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Clearcut - Cut all trees greater than 2 inches. No retention will be left. This stand is being managed for red pine.									
<u>Specs:</u>									
<u>Other</u> High quality red pine stand. The south half of the stand was thinned in 2002 on contract 043-01-01 and the north half was thinned in 2009 on									
<u>Comments:</u> contract 029-06-01. All species were cut, except the pine which was marked to cut.									
<u>Next</u> Following harvest herbicide (if necessary), trench, and plant red pine per recommendations of the TMS. WLD will plant hard and soft mast along									
<u>Steps:</u> perimeter and in locations not accessed by the trencher.									
<u>Proposed</u>									
<u>Start Date:</u> 10/01/2015									
7 33045007-Cut	11.7	6139 - Mixed Lowland Forest	Medium Density Pole	103		Harvest	Seed Tree with Reserves	6128 - Lowland Coniferous, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Seed Tree with Reserves - Cut all trees greater than 3 inches; except mark some tamarack, spruce, and cedar seed trees. Also, red line out									
<u>Specs:</u> some of the pockets of dense cedar on the north end, retaining all species within these areas. The retention areas along with the seed trees will be the retention for the stand. This stand will be managed for a mix of tamarack, spruce, and maple.									
<u>Other</u> Overall this is a poor quality stand, with a mix of tamarack and red maple primarily. The stand has more cedar on the north end and some									
<u>Comments:</u> pockets of holly on the south half.									
<u>Next</u> Regeneration survey next inventory cycle.									
<u>Steps:</u>									
<u>Proposed</u>									
<u>Start Date:</u> 10/01/2015									

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
10 33045010-Cut	5.5	42290 - Natural Mixed Pine	High Density Log	90	141-170	Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription Specs:</u> Clearcut - Cut all trees greater than 2 inches. No retention will be left. This stand is being managed for red pine. Leave enough trees along the trail to provide adequate confidence markers.									
<u>Other Comments:</u> This stand is currently listed as Potential Old Growth - Remove this designation. This stand does not have any unique conditions and there are many similar stands in the surrounding area. The Cedar River Pathway runs through this stand, almost in the center of the stand. Overall this stand is a very high quality red pine stand/site.									
<u>Next Steps:</u> Following harvest herbicide(if necessary), trench, and plant red pine per recommendations of the TMS.									
<u>Proposed Start Date:</u> 10/01/2015									

13 33045013-Cut	56.1	42210 - Natural Red Pine	Medium Density Log	90	81-110	Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription Specs:</u> Clearcut - Cut all trees greater than 2 inches. No retention will be left. This stand is being managed for red pine; except for the north end and west side of the county road there is a lot of advanced regeneration and some wet areas that would be hard to plant. These area's will be managed for a mix of natural regeneration.									
<u>Other Comments:</u> Stand was thinned in 2003 on contract 043-01-01. All species were cut; except the pine was thinned. High quality red pine stand/site that needs to be regenerated.									
<u>Next Steps:</u> Following harvest herbicide(if necessary), trench, and plant red pine per recommendations of the TMS. There will be some areas of lowland and advanced regeneration that will not be able to be planted. Focus on the open areas following the harvest. WLD will plant hard and soft mast along perimeter and in locations not accessed by the trencher.									
<u>Proposed Start Date:</u> 10/01/2015									

17 33045017-Cut	25.4	42210 - Natural Red Pine	Medium Density Log	96	51-80	Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription Specs:</u> Clearcut - Cut all trees greater than 2 inches. No retention will be left. This stand is being managed for red pine.									
<u>Other Comments:</u> Stand was thinned in 2009 on contract 029-06-01. All species were cut; except the pine was marked to cut. In the fall of 2011 the stand was mechanically scarified with anchor chains on FTP 33-665. A number of red pine have blown over, There are very few red pine seedlings present. The residual overstory is too dense and with all of the residual trees we didn't get good enough scarification. But, even in the more open areas there are very few red pine seedlings present.									
<u>Next Steps:</u> Following harvest herbicide (if necessary), trench, and plant red pine per recommendations of the TMS. There will be some isolated small pockets of lowland that are not suitable for planting, but will regenerate naturally. WLD will plant hard and soft mast along perimeter and in locations not accessed by the trencher.									
<u>Proposed Start Date:</u> 10/01/2015									

20 33045020-Cut	16.3	42210 - Natural Red Pine	High Density Log	84	51-80	Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription Specs:</u> Clearcut - Cut all trees greater than 2 inches. No retention will be left. This stand is being managed for red pine.									
<u>Other Comments:</u> Stand was thinned in 2009 on contract 029-06-01. All species were cut; except the pine was marked to cut. This stand was on FTP 33-665 to mechanically scarify, but there was too much residual to accomplish it, so it wasn't done. High quality red pine stand, the stand didn't respond to the thinning - growth rates did not improve.									
<u>Next Steps:</u> Following harvest herbicide(if necessary), trench, and plant red pine per recommendations of the TMS. WLD will plant hard and soft mast along perimeter and in locations not accessed by the trencher.									
<u>Proposed Start Date:</u> 10/01/2015									



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
23 33045023-Cut	29.6	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	81	111-140	Harvest	Clearcut with Reserves	611 - Lowland Deciduous Forest	Cmpt. Review Proposal

Prescription Clearcut with Reserves - Cut all trees greater than 3 inches; except hemlock and mark some pine and spruce seed trees. Also red line out two dense hemlock and cedar pockets on the north end of the stand. All species will be retained within these areas. The two pockets will be between 1 and 2 acres combined. This stand is being managed for a mix of lowland hardwood and mixed conifer.

Other Lowland hardwood stand with some higher areas of more maple and conifer regeneration. The advanced conifer regeneration needs to be released before it becomes stunted.

Next Steps: Regeneration survey next inventory cycle.

Proposed Start Date: 10/01/2015

24 33045024-Cut	10.2	42260 - Natural Pine, Mixed Deciduous	Low Density Log	90	1-50	Harvest	Clearcut with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
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Prescription Clearcut with Reserves - Cut all species greater than 5 inches; except the hemlock, cedar, and mark some pine seed trees. This stand is being managed for a mix of the current overstory species.

Other Stand was cut in 1994 on contract 046-93-01. All species were cut; except the pine was marked to cut and the cedar and hemlock were retained. Stand has an overstory of mature pine over an understory of mixed species, which needs to be released. There are some scattered cedar and hemlock, but there is not 2%. There was a dense buffer left along the county road after the last harvest.

Next Steps: Regeneration survey next inventory cycle.

Proposed Start Date: 10/01/2015

25 33045025-Cut	7.3	42210 - Natural Red Pine	High Density Log	96	81-110	Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Clearcut - Cut all trees greater than 2 inches. No retention will be left. This stand is being managed for red pine.

Other High quality red pine stand/site.

Next Steps: Following harvest herbicide (if necessary), trench, and plant red pine per recommendations of the TMS. WLD will plant hard and soft mast along perimeter and in locations not accessed by the trencher.

Proposed Start Date: 10/01/2015

26 33045026-Cut	13.8	6132 - Mixed Lowland Forest with Cedar	High Density Pole	83	141-170	Harvest	Clearcut with Reserves	6118 - Lowland Deciduous with Cedar	Cmpt. Review Proposal
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Prescription Clearcut with Reserves - Cut all trees greater than 3 inches; except mark some scattered white pine, spruce, and tamarack seed trees. In addition, there is about a 1 acre pocket of dense high quality cedar that should be red lined out. Also, mark to retain some other dense clumps of cedar throughout the stand. The retention will be a combination of the retention area, along with the scattered seed trees/clumps. This stand will be managed for lowland hardwoods and mixed conifer.

Other Lowland ash stand with areas of denser cedar.

Next Steps: Regeneration survey next inventory cycle.

Proposed Start Date: 10/01/2015

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
29 33045029-Cut	4.2	42210 - Natural Red Pine	Low Density Sapling	15		Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription Clearcut - Cut all trees greater than 4 inches. This stand is being managed primarily for red pine, but a mix of other conifers is acceptable.
Specs:

Other Stand was seed tree cut in 2009 on contract 029-06-01. The majority of the species were cut; except some pine seed trees were retained along with some other species along the edge of the stand. There was some advanced pine regen present when the stand was cut. The open areas of this stand were mechanically scarified with anchor chains in the fall of 2011. The open areas have not regenerated to red pine following scarification.
Comments:

Next After harvest, hand plant red pine; per TMS recommendations. WLD will plant hard and soft mast.
Steps:

Proposed
Start Date: 10/01/2015

30 33045030-Cut	2.5	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	84		Harvest	Clearcut with Reserves	6113 - Lowland Maple	Cmpt. Review Proposal
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Prescription Clearcut with Reserves - Cut all trees greater than 3 inches; except mark some conifers for seed and retention. This stand is being managed primarily for red maple with some mixed conifer.
Specs:

Other Stand was thinned in 1993 on contract 002-93-01. This stand is lowland maple with scattered conifer. There is dense holly and tagalder within the stand.
Comments:

Next Regeneration survey next inventory cycle.
Steps:

Proposed
Start Date: 10/01/2015

31 33045031-Cut	2.8	429 - Mixed Upland Conifers	High Density Sapling	20		Harvest	Clearcut with Reserves	429 - Mixed Upland Conifers	Cmpt. Review Proposal
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Prescription Clearcut with Reserves - Cut all trees greater than 4 inches. The retention will be the advanced regeneration. This stand is being managed for the current mix of species.
Specs:

Other Stand was seed tree cut in 1993 on contract 002-93-01. There is a fully stocked understory, so the overstory should be removed to release it.
Comments: The regeneration is a mix of conifer, with a higher percentage of red pine.

Next Regeneration survey next inventory cycle.
Steps:

Proposed
Start Date: 10/01/2015

32 33045032-Cut	4.1	42210 - Natural Red Pine	High Density Log	81	111-140	Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Clearcut - Cut all trees greater than 2 inches. No retention will be left. This stand is being managed for red pine.
Specs:

Other Stand was thinned in 1993 on contract 002-93-01. Overall this stand is a very high quality red pine stand/site.
Comments:

Next Following harvest herbicide (if necessary), trench, and plant red pine per recommendations of the TMS.
Steps:

Proposed
Start Date: 10/01/2015



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
33	33045033-Cut	1.8	6113 - Lowland Maple	High Density Pole	71		Harvest	Clearcut	6113 - Lowland Maple	Cmpt. Review Proposal
<u>Prescription</u> Clearcut - Cut all trees greater than 3 inches. No retention will be left due to the small stand size. This stand will be managed for a mix of maple and mixed conifer.										
<u>Specs:</u>										
<u>Other</u> Small lowland red maple stand with quite a bit of advanced conifer regeneration, which needs to be released.										
<u>Comments:</u>										
<u>Next</u> Regeneration survey next inventory cycle.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
34	33045034-Cut	10.8	42290 - Natural Mixed Pine	High Density Log	101	51-80	Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Clearcut - Cut all trees greater than 2 inches. No retention will be left. This stand is being managed for red pine.										
<u>Specs:</u>										
<u>Other</u> Mature pine stand, that is heavier than red pine. Overall this stand is a very high quality red pine stand/site.										
<u>Comments:</u>										
<u>Next</u> Following harvest herbicide (if necessary), trench, and plant red pine per recommendations of the TMS. WLD will plant hard and soft mast along perimeter and in locations not accessed by the trencher.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
36	33045036-Cut	67.8	4319 - Mixed Upland Forest	Medium Density Log	90		Harvest	Clearcut with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
<u>Prescription</u> Clearcut with Reserves - Cut all trees greater than 6 inches; except mark some white pine, red pine, and spruce seed trees and retain all hemlock and cedar. This stand will be managed for a mix of the current species.										
<u>Specs:</u>										
<u>Other</u> Stand was shelterwood cut between 1996 and 1999 on contract 029-06-01. Stand was cut to manage for a mix of maple, pine, and spruce/fir.										
<u>Comments:</u> The maple and ash greater than 8 inches were cut along with all of the shorter lived species. The pine and hemlock were retained. The stand has a dense understory of a mix of species including pine, spruce/fir, maple and aspen; which need to be released before they become stunted. Within portions of the stand there is little to no overstory, so these portions can be excluded from the sale if feasible.										
<u>Next</u> Regeneration survey next inventory cycle.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
47	33045047-Cut	15.7	6132 - Mixed Lowland Forest with Cedar	High Density Pole	88		Harvest	Clearcut with Reserves	6118 - Lowland Deciduous with Cedar	Cmpt. Review Proposal
<u>Prescription</u> Clearcut with Reserves - Cut all trees greater than 3 inches; except leave all hemlock, red line out some of the densest pockets of cedar, and mark some spruce and white pine seed trees to retain. This stand will be managed for a mix of ash, maple, and mixed conifer.										
<u>Specs:</u>										
<u>Other</u> Mature lowland mixed stand with some denser areas of cedar. Most of the cedar is not dense enough to provide winter cover (in the winter of 2013-14, there was very little deer use).										
<u>Comments:</u>										
<u>Next</u> Regeneration survey next inventory cycle.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
57 33045057-Cut	4.5	4112 - Maple, Beech, Cherry Association	Medium Density Pole	72		Harvest	Clearcut with Reserves	42201 - Natural White Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Clearcut with Reserves - Cut all hardwood species greater than 4 inches. All conifer will be retained. This stand will be managed for a mix of upland conifer and red maple stump sprouts.

Other Stand was shelterwood cut in 2008 on contract 031-06-01. The cut was done to release the advanced white pine regeneration. All of the hardwood overstory should have been removed, so now this treatment will remove it to release the regen. The advanced regen will provide enough shade for the areas that are opened up after this harvest to regenerate more white pine.

Next Regeneration survey next inventory cycle.

Proposed
Start Date: 10/01/2015

58 33045058-Cut	7.5	42210 - Natural Red Pine	Medium Density Log	95	51-80	Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Clearcut - Cut all trees greater than 2 inches. This stand is being managed for red pine.

Other Stand was thinned in 2008 on contract 031-06-01. Overall this stand is a very high quality red pine stand/site. The stand is starting to convert to other cover types, it needs to be opened up to allow red pine to regenerate.

Next Following harvest; herbicide (if needed), trench, and plant red pine; per TMS recommendations.

Proposed
Start Date: 10/01/2015

63 33045063-Cut	10.2	429 - Mixed Upland Conifers	High Density Pole	50		Harvest	Clearcut	4319 - Mixed Upland Forest	Cmpt. Review Proposal
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Prescription Clearcut - Cut all species greater than 3 inches; except mark some pines seed trees to retain. Leave the residual trees away from the edge of the road. 3% retention will not be left due to the small stand size and proximity to the county road. This stand will be managed for a mix of pine, aspen, and spruce/fir.

Other Mature stand with older pine and younger aspen and birch. Most of this stand is a result of leaving a buffer along the county road in the past. The County Road Commission has expressed an interest in opening up along the road.

Next Regeneration survey next inventory cycle.

Proposed
Start Date: 10/01/2015

66 33045066-Cut	4.5	42210 - Natural Red Pine	Medium Density Log	95	51-80	Harvest	Seed Tree	42211 - Natural Red Pine, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Seed Tree Harvest - Cut all tree greater than 2 inches; except mark enough red pine seed trees to provide an adequate seed source. Less than 10 BA should be left. This stand is being managed for red pine primarily, but a mix with the other current species is acceptable.

Other Stand was thinned in 2010 on contract 029-10-01. This stand is filling in with shade tolerant species and moving towards other cover types, so this stand needs to be opened up and to allow red pine to regenerate.

Next Regeneration survey next inventory cycle.

Proposed
Start Date: 10/01/2015



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
75 33045075-Cut	26.0	4119 - Mixed Northern Hardwoods	High Density Log	90	141-170	Harvest	Crown Thinning	4111 - S.Maple, Hard Mast Association	Cmpt. Review Proposal

Prescription Thinning - In the northern and southern 1/3 rds of the stand lower the residual BA down to 70 to 80. In the central portion mark to leave 20 to 30 BA of mixed species, to provide partial shade to regenerate a mix of conifer. No regen is expected in the thinned portions, this is the stands first thinning. In the central portion it will be managed for a mix of maple, aspen, and conifer.

Other Comments: This stand was listed as Potential Old Growth last entry. That designation should be removed. In the compartments to the south we have been leaving a 3 chain buffer along the Big Cedar River. This 3 chain buffer should be classified as an SCA, it provides mature forest conditions along the river. The northern 1/3rd and southern 1/3rd of the stand is high quality northern hardwood and the center portion is a red maple, mixed conifer, and aspen mix. The high quality portions should be thinned for quality sawlogs and the center portion should be shelterwood cut, managing for a mix of conifer, maple and aspen. There are a couple of ravines that lead down to the river that need to be protected/buffered.

Next Steps:

Proposed Start Date: 10/01/2015

77 33045077-Cut	53.3	4199 - Other Mixed Upland Deciduous	Medium Density Pole	90	1-50	Harvest	Clearcut with Reserves	4113 - R.Maple, Conifer	Cmpt. Review Proposal
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Prescription Clearcut with Reserves - Cut all species greater than 5 inches; except leave all hemlock, cedar, and pine. The reserves will consist of the hemlock, cedar, and pine; along with the advanced regeneration. This stand is being managed for a mix of red maple and conifers primarily.

Other Comments: This stand was shelterwood cut in 2009 on contract 025-06-01. A very large percentage of the maple stumps cut have sprouted back. This stand is pushing to remain as a hardwood stand, so the overstory should be removed to allow the other hardwood to sprout before the regen becomes too dense. The maple regen from the previous harvest is already 10 to 20 feet tall and it will provide enough shade for more conifers to get established. There is already quite a bit of advanced conifer regeneration. Some of the residual birch and ash are dying out as well.

Next Steps: Regeneration survey next inventory cycle.

Proposed Start Date: 10/01/2015

81 33045081-Cut	53.6	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	86	81-110	Harvest	Clearcut with Reserves	6119 - Mixed Lowland Deciduous Forest	Cmpt. Review Proposal
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Prescription Clearcut with Reserves - Cut all trees greater than 4 inches; except leave all hemlock and mark some white pine and spruce seed trees, In addition, leave 3 retention patches. These patches will be centered on the densest patches of cedar. Red line out these areas retaining all species within them. This stand will be managed for a mix of the current species, but should be an equal mix of hardwoods and conifers.

Other Comments: Stand was cut in 1998 and 2000 on contract 03-96-01. All hardwood species greater than 10 inches were cut and no conifers were cut. This cut produced a shelterwood, which now in most parts of the stand there is a dense understory of mixed conifer regeneration. This regeneration needs to be released and the lowland hardwoods are mature.

Next Steps: Regeneration survey next inventory cycle.

Proposed Start Date: 10/01/2015

55 NF_33045055-Cut	49.2	3302 - Low Density Conifer Trees				Harvest	Clearcut	4211 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Clearcut - Cut all trees greater than 2 inches. This stand is being managed for red pine. There are only scattered seed trees left from the last harvest that will be cut.

Other Comments: Stand was seed tree cut between 2008 and 2010 on contract 031-06-01. There were only scattered pine seed trees left, mostly red pine. The stand was then scarified in the fall of 2011 on FTP 33-665 to expose mineral soil to allow red pine to seed in. There is very little red pine regen showing up at this time.

Next Steps: Following harvest herbicide (if needed), trench, and plant red pine; per TMS recommendations. WLD will plant hard and soft mast along perimeter and in locations not accessed by the trencher.

Proposed Start Date: 10/01/2015



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
51 33045051-Other	12.7	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Sapling	17		Other	Unspecified	6128 - Lowland Coniferous, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: There is at least one patch of Phragmites in the center of the stand that should be treated when funding becomes available. No harvesting is needed.

Other Comments: Stand was clearcut in 1997 on contract 046-93-01. Only the hemlock, cedar, and some scattered seed trees were left.

Next Steps:

Proposed Start Date: 10/01/2014

**Total Treatment
Acreage Proposed: 585.7**



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

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Type!

Limiting Factor

Total Treatment
Acreage Proposed: 0.0

Report 5 – Site Conditions

Escanaba Mgt. Unit
Dustin Salter : Examiner

Compartment 045
Year of Entry 2016

Availability for Management

Total Acres	Acres		Dominant Site Conditions	No	5E	5D	5B	3J
	Available	Not Available						
30	30		Aspen	30				
11	11		Hemlock	11				
146	129	17	Lowland Conifers	129	8	9		
149	149		Lowland Deciduous	137			12	
63	63		Lowland Mixed Forest	63				
3	3		Lowland Spruce/Fir	3				
140	140		Mixed Upland Deciduous	140				
98	98		Natural Mixed Pines	98				
60	42	18	Northern Hardwood	42				18
235	217	18	Red Pine	202	18		15	
141	141		Upland Conifers	141				
172	172		Upland Mixed Forest	172				
31	31		White Pine	31				
1,280	1,227	53	Total Forested Acres	1,200	26	9	27	18
	96%	4%	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	5B: Maintain for regeneration purposes	12				
Comments: This stand was shelterwood cut and the remaining overstory is being retained to provide partial shade for the regeneration of conifers.							
003	Not Available	5E: Long Term Retention	18				
Comments: There was some mature pine left within the aspen clearcut to provide diversity and seed.							

Report 5 – Site Conditions

Escanaba Mgt. Unit
Dustin Salter : Examiner

Compartment 045
Year of Entry 2016

004 **Not Available** **5D: Unproductive Forest Land** 9

Comments:

There are some patches of merchantable timber, but they are very scattered. A high percentage of this stand is lowland brush.

005 **Not Available** **5E: Long Term Retention** 8

Comments:

This stand was clearcut and the hemlock, cedar, and some scattered seed trees were left. Wildlife wanted to retain the hemlock and cedar for diversity.

006 **Available** **5B: Maintain for regeneration purposes** 15

Comments:

This stand was seed tree cut, so the residual stems are providing a seed source. There are not enough stems remaining to come back and harvest once the stand regenerates.

007 **Not Available** **3J: Water quality / BMPs (stream, river, or lake)** 18

Comments:

This stand buffers the Big Cedar River and provides mature forest conditions along it.



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
Escanaba 45 2 Comments Decent quality hardwood stand in need of a light thinning.	Type 1 or Type 2 Old Growth	Possible Type 1 Old Growth Area	SCA	4.7
Escanaba 45 1 Comments	Spring-Seeps, Riparian Areas	Riparian Area	SCA	18.3
Escanaba 45 3 Comments	Spring-Seeps, Riparian Areas	Riparian Area	SCA	44.2
Removal 6 Comments	Potential Old Growth		SCA Removal	2.0
Removal 1 Comments	Potential Old Growth		SCA Removal	5.5
Removal 5 Comments	Potential Old Growth		SCA Removal	18.1
Removal 2 Comments	Potential Old Growth		SCA Removal	44.2
Removal 4 Comments Over all this stand is a mix of aspen/maple with a mix of conifers. There are some patches of older conifer throughout the stand that was left after the last harvest. Wait 10 years and harvest the aspen is mature.	Potential Old Growth		SCA Removal	48.4
Removal 3 Comments	Potential Old Growth		SCA Removal	52.6



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	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.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42210 - Natural Red Pine	High Density Log	52.6	90	171-200	This stand is currently listed as Potential Old Growth - Remove this designation. This stand does not have any unique conditions and there are many similar stands in the surrounding area. The Cedar River Pathway runs through this stand, almost in the center of the stand. Overall this stand is a very high quality red pine stand/site.
3	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	7.6	81	81-110	This stand is a lowland red maple type with a mix of advanced conifer regeneration. The understory needs to be released before it becomes stunted.
4	6122 - Black Spruce	High Density Sapling	3.2	12		Stand was clearcut in 2002 on contract 043-01-01. There were two small retention/seed tree patches retained, along with some scattered pine. This stand is fully regenerated, primarily to a mix of black spruce and white pine.
5	42210 - Natural Red Pine	High Density Log	18.2	90	81-110	High quality red pine stand. The south half of the stand was thinned in 2002 on contract 043-01-01 and the north half was thinned in 2009 on contract 029-06-01. All species were cut, except the pine which was marked to cut.
7	6139 - Mixed Lowland Forest	Medium Density Pole	11.7	103		Overall this is a poor quality stand, with a mix of tamarack and red maple primarily. The stand has more cedar on the north end and some pockets of holly on the south half.
8	4319 - Mixed Upland Forest	High Density Pole	48.4	49		Over all this stand is a mix of aspen/maple with a mix of conifers. There are some patches of older conifer throughout the stand that was left after the last harvest. Wait 10 years and harvest the aspen is mature.
10	42290 - Natural Mixed Pine	High Density Log	5.5	90	141-170	This stand is currently listed as Potential Old Growth - Remove this designation. This stand does not have any unique conditions and there are many similar stands in the surrounding area. The Cedar River Pathway runs through this stand, almost in the center of the stand. Overall this stand is a very high quality red pine stand/site.
11	6117 - Lowland Deciduous, Mixed Coniferous	Low Density Pole	12.1	90	1-50	Stand was shelterwood cut in 2009 on contract 029-06-01. The majority of the stand is regenerating with a mix of mixed conifer and red maple. The overstory is not dense enough to shade out the regeneration.
13	42210 - Natural Red Pine	Medium Density Log	56.1	90	81-110	Stand was thinned in 2003 on contract 043-01-01. All species were cut; except the pine was thinned. High quality red pine stand/site that needs to be regenerated.
15	42210 - Natural Red Pine	Low Density Log	18.1	90	1-50	Stand was cut in 2008 on contract 029-06-01. All species were cut; except the pine was marked to cut. On average there is about 20 BA of pine left. The stand has a full stocking of aspen and red maple saplings, these species will be the feature stand in the future.
16	429 - Mixed Upland Conifers	High Density Sapling	23.6	20		Stand was clearcut in 1994 on contract 002-94-01. All species were cut; except hemlock, cedar, pine. Some of the pine was marked to cut.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	42210 - Natural Red Pine	Medium Density Log	25.4	96	51-80	Stand was thinned in 2009 on contract 029-06-01. All species were cut; except the pine was marked to cut. In the fall of 2011 the stand was mechanically scarified with anchor chains on FTP 33-665. A number of red pine have blown over, There are very few red pine seedlings present. The residual overstory is too dense and with all of the residual trees we didn't get good enough scarification. But, even in the more open areas there are very few red pine seedlings present.
20	42210 - Natural Red Pine	High Density Log	16.3	84	51-80	Stand was thinned in 2009 on contract 029-06-01. All species were cut; except the pine was marked to cut. This stand was on FTP 33-665 to mechanically scarify, but there was too much residual to accomplish it, so it wasn't done. High quality red pine stand, the stand didn't respond to the thinning - growth rates did not improve.
21	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	32.3	48		Overall this stand is a younger lowland hardwood stand, with areas of upland red maple with conifer. There are also some older hardwood stems that were left from the previous harvest, must have been sub-merchantable at the time.
22	6129 - Mixed Coniferous Lowland Forest	High Density Sapling	14.1	20		Stand was clearcut in 1994 on contract 002-094-01. All species were cut; except cedar hemlock, and some pine were marked to cut. Fully stocked stand with a mix of lowland conifer species.
23	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	29.6	81	111-140	Lowland hardwood stand with some higher areas of more maple and conifer regeneration. The advanced conifer regeneration needs to be released before it becomes stunted.
24	42260 - Natural Pine, Mixed Deciduous	Low Density Log	10.2	90	1-50	Stand was cut in 1994 on contract 046-93-01. All species were cut; except the pine was marked to cut and the cedar and hemlock were retained. Stand has an overstory of mature pine over an understory of mixed species, which needs to be released. There are some scattered cedar and hemlock, but there is not 2%. There was a dense buffer left along the county road after the last harvest.
25	42210 - Natural Red Pine	High Density Log	7.3	96	81-110	High quality red pine stand/site.
26	6132 - Mixed Lowland Forest with Cedar	High Density Pole	13.8	83	141-170	Lowland ash stand with areas of denser cedar.
28	4113 - R.Maple, Conifer	Low Density Pole	6.9	88	1-50	Stand was shelterwood cut in 2009 on contract 029-06-01. This stand is being managed for a mix of red maple and mixed conifer. The understory still needs some shade, so the overstory is being retained.
29	42210 - Natural Red Pine	Low Density Sapling	4.2	15		Stand was seed tree cut in 2009 on contract 029-06-01. The majority of the species were cut; except some pine seed trees were retained along with some other species along the edge of the stand. There was some advanced pine regen present when the stand was cut. The open areas of this stand were mechanically scarified with anchor chains in the fall of 2011.



Stand	Escanaba Mgt. Unit		Report 8 – Forested Stands			Compartment: 045 Year of Entry: 2016	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
30	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	2.5	84		Stand was thinned in 1993 on contract 002-93-01. This stand is lowland maple with scattered conifer. There is dense holly and tagalder within the stand.	
31	429 - Mixed Upland Conifers	High Density Sapling	2.8	20		Stand was seed tree cut in 1993 on contract 002-93-01. There is a fully stocked understory, so the overstory should be removed to release it. The regeneration is a mix of conifer, with a higher percentage of red pine.	
32	42210 - Natural Red Pine	High Density Log	4.1	81	111-140	Stand was thinned in 1993 on contract 002-93-01. Overall this stand is a very high quality red pine stand/site.	
33	6113 - Lowland Maple	High Density Pole	1.8	71		Small lowland red maple stand with quite a bit of advanced conifer regeneration, which needs to be released.	
34	42290 - Natural Mixed Pine	High Density Log	10.8	101	51-80	Mature pine stand, that is heavier to red pine. Overall this stand is a very high quality red pine stand/site.	
35	4191 - Mixed Upland Deciduous with Conifer	Medium Density	42.3	20		Stand was clearcut in 1994 on contract 024-88-01. This stand is about half upland and contains primarily aspen and pine regeneration and the lowland half is a mix of many different species, with some lowland brush pockets as well. The majority of the conifer regeneration was established prior to the last harvest.	
36	4319 - Mixed Upland Forest	Medium Density Log	67.8	90		Stand was shelterwood cut between 1996 and 1999 on contract 029-06-01. Stand was cut to manage for a mix of maple, pine, and spruce/fir. The maple and ash greater than 8 inches were cut along with all of the shorter lived species. The pine and hemlock were retained. The stand has a dense understory of a mix of species including pine, spruce/fir, maple and aspen; which need to be released before they become stunted. Within portions of the stand there is little to no overstory, so these portions can be excluded from the sale if feasible.	
37	42200 - Natural White Pine	Medium Density Pole	7.1	64	1-50	Stand was cut in 1994 on contract 046-93-01. The pine was retained from last harvest. There are some dense pockets of older pine and open areas that have regenerated to a mix of white pine, spruce, and maple.	
39	429 - Mixed Upland Conifers	High Density Pole	9.5	75		This stand is a mix of many upland species with the majority of the conifers being older than the hardwoods. Treat with the large pine stand to the south in the future.	
40	42260 - Natural Pine, Mixed Deciduous	High Density Log	13.5	64	51-80	Mixed pine stand with younger aspen, spruce/fir, and pine.	
42	42200 - Natural White Pine	Medium Density Log	24.0	Uneven Age	51-80	Stand was cut in 1994 on contract 046-93-01. All species were cut; except the hemlock, cedar, and pine. The pine was marked to cut. This stand has a mature overstory of pine with a fully stocked understory of pine and spruce/fir regeneration. The western half of the stand has a much higher BA of residual pine than the east half. This stand is multi-storied; there is the mature pine, an age class of 40 with multiple species, and the 20 year old regeneration. There is lowland areas within the stand as well.	



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
43	42290 - Natural Mixed Pine	High Density Log	45.4	84	200+	This stand was cut in 1994 on contract 046-93-01. All species were cut; except cedar, hemlock, and pine. The pine was marked to cut. Overall this stand is a very high quality red pine stand/site. The BA was left too high after the last harvest, now the stand is converting to a mix of white pine and spruce. Hold off treatment on this stand till next decade when most of the saplings will be merchantable and than clearcut it, managing for red pine.
44	4311 - Pine, Aspen Mix	High Density Pole	30.1	46		This stand is a mix of aspen and pine. The majority of the aspen within this stand is Big Tooth and overall it is very poor quality. At almost 50 years old, a large percentage of it is still sub-merchantable. This stand should be converted to red pine in the future.
46	6130 - Fir, Aspen, Maple	Medium Density	14.7	20		Stand was clearcut in 1997 on contract 046-93-01. This stand is a mixed lowland stand with pockets of tagalder.
47	6132 - Mixed Lowland Forest with Cedar	High Density Pole	15.7	88		Mature lowland mixed stand with some denser areas of cedar. Most of the cedar is not dense enough to provide winter cover (in the winter of 2013-14, there was very little deer use).
48	6139 - Mixed Lowland Forest	High Density Pole	6.8	41		High quality - fully stocked lowland mixed stand.
49	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Pole	8.7	88		Very poor quality and stocked stand.
50	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Log	7.9	90		Stand was shelterwood cut in 2010 on contract 031-06-01. All cedar and hemlock were retained, along with some hardwood, pine, and spruce that were marked to retain. There is some regen showing up, but there was a foot of snow on the ground when I looked at it. Quite a few of the hemlock and cedar have blown over.
51	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density	12.7	17		Stand was clearcut in 1997 on contract 046-93-01. Only the hemlock, cedar, and some scattered seed trees were left.
52	42350 - Upland Hemlock	High Density Log	3.2	97		Mostly a pure hemlock stand.
53	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	16.3	72	1-50	Stand was shelterwood cut in 2008 on contract 031-06-01. Stand is being managed for a mix of maple, spruce/fir, and pine. Next decade the overstory should be removed.
54	429 - Mixed Upland Conifers	High Density Pole	23.8	35		Fully stocked stand with a mix of aspen, maple, spruce, balsam, and white pine. The stand is so dense the growth rates are very low.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
57	4112 - Maple, Beech, Cherry Association	Medium Density Pole	4.5	72		Stand was shelterwood cut in 2008 on contract 031-06-01. The cut was done to release the advanced white pine regeneration. All of the hardwood overstory should have been removed, so now this treatment will remove it to release the regen. The advanced regen will provide enough shade for the areas that are opened up after this harvest.
58	42210 - Natural Red Pine	Medium Density Log	7.5	95	51-80	Stand was thinned in 2008 on contract 031-06-01. Overall this stand is a very high quality red pine stand/site. The stand is starting to convert to other cover types, it needs to be opened up to allow red pine to regenerate.
59	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	87.7	Uneven Age		This stand must have previously had a diameter limit cut done. There are pockets of older wood and than larger areas of younger stems. These individual areas would be too hard to separate out, so as the younger stems become mature treat the whole stand together. Overall the stand is lowland with some upland ridges mixed in. The eastern third of the stand has a higher percentage of cedar than the rest of the stand.
61	4136 - Aspen, Mixed Conifer	High Density Pole	30.2	27		Stand was clearcut in 1987-88 on contract 002-85-01. Overall the stand is aspen with some heavier pockets of red maple and white pine.
63	429 - Mixed Upland Conifers	High Density Pole	10.2	50		Mature stand with older pine and younger aspen and birch. Most of this stand is a result of leaving a buffer along the county road in the past. The County Road Commission has expressed an interest in opening up along the road.
65	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density	14.6	16		Stand was clearcut in 1998 on contract 028-96-01. All species were cut; except the cedar, hemlock, and pine. Overall the stand is mostly stocked with a mix of species, but there is more conifers than hardwoods. There are also some pockets heavy to lowland brush.
66	42210 - Natural Red Pine	Medium Density Log	4.5	95	51-80	Stand was thinned in 2010 on contract 029-10-01. This stand is filling in with shade tolerant species and moving towards other cover types, so this stand needs to be opened up and scarified to allow red pine to regenerate.
67	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	18.3	80		Stand was designated as Potential Old Growth last inventory. Make it a SCA - it provides mature forest conditions along the Big Cedar River, as well as a buffer. This stand has dense pockets of buckthorn within it. It appears some buckthorn had been planted in the partial opening in the northern part of the stand. If funding becomes available the buckthorn should be treated.
68	4191 - Mixed Upland Deciduous with Conifer	Low Density Pole	10.3	84	1-50	Stand was shelterwood cut in 2012 on contract 029-10-01. All cedar and hemlock were retained and a mix of other species were marked to retain. This stand is being managed for a mix of maple, white pine, and spruce/fir. The majority of the maples cut have sprouted and there is some conifer regen showing.
69	42350 - Upland Hemlock	High Density Pole	7.9	116	141-170	Dense hemlock stand with very few other species. Very little deer sign in this stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
70	42210 - Natural Red Pine	High Density Log	5.7	70	81-110	Stand was thinned in 2012 on contract 029-10-01.
71	42210 - Natural Red Pine	Low Density Log	14.8	90	1-50	Stand was seed tree cut between 2010 and 2012 on contract 029-10-01. Red pine and white pine seed trees were left. There is also some advanced pine and maple regen.
73	429 - Mixed Upland Conifers	High Density Sapling	53.7	22		Stand was clearcut in 1992 on contract 020-88-01. The cedar, hemlock, and pine were not cut. This is a fully stocked upland conifer stand with mixed hardwoods.
74	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	6.0	75		Younger, decent quality lowland hardwood stand that should be treated next decade.
75	4119 - Mixed Northern Hardwoods	High Density Log	44.2	90	141-170	This stand was listed as Potential Old Growth last entry. That designation should be removed. In the compartments to the south we have been leaving a 3 chain buffer along the Big Cedar River. This 3 chain buffer should be classified as an SCA, it provides mature forest conditions along the river. The northern 1/3rd and southern 1/3rd of the stand is high quality northern hardwood and the center portion is a red maple, mixed conifer, and aspen mix. The high quality portions should be thinned for quality sawlogs and the center portion should be shelterwood cut, managing for a mix of conifer, maple and aspen. There are a couple of ravines that lead down to the river that need to be protected/buffered.
76	42290 - Natural Mixed Pine	Medium Density	12.7	15		Stand was clearcut in 2010 and 2012 on contract 029-10-01. The hemlock was retained along with some pine seed trees. This stand had a dense understory of pine regeneration prior to it being harvested. A significant portion of that was destroyed during harvest. So about 60% of the stand has dense advanced pine regeneration and the other 40% is regenerating. The overstory should have been removed earlier, before the pine regen became so dense.
77	4199 - Other Mixed Upland Deciduous	Medium Density Pole	53.3	90	1-50	This stand was shelterwood cut in 2009 on contract 025-06-01. A very large percentage of the maple stumps cut have sprouted back. This stand is pushing to remain as a hardwood stand, so the overstory should be removed to allow the other hardwood to sprout before the regen becomes too dense. The maple regen from the previous harvest is already 10 to 20 feet tall and it will provide enough shade for more conifers to get established. There is already quite a bit of advanced conifer regeneration. Some of the residual birch and ash are dying out as well.
78	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Log	17.7	220		Stand is currently designated as Potential Old Growth. This stand should be an SCA. This stand provides mature forest conditions along the Big Cedar River and contains some old growth Hemlock. A portion of this stand contains very old hemlock, but most of the stand is mature hardwoods and cedar. This area is called the "Worth Hemlocks". Some of the trees along the county road need to be marked to open up the road, per County Road Commission request. Mark these trees and include them with a timber sale in the adjacent stands.
79	4311 - Pine, Aspen Mix	High Density Pole	25.3	37		Dense aspen pole stand with a two-aged overstory of white pine. Treat this stand when the aspen is mature.

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Escanaba Mgt. Unit

Report 8 – Forested Stands

Compartment: 045
Year of Entry: 2016



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
80	4119 - Mixed Northern Hardwoods	High Density Pole	4.7	86	111-140	Decent quality hardwood stand in need of a light thinning.
81	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	57.5	86	81-110	Stand was cut in 1998 and 2000 on contract 03-96-01. All hardwood species greater than 10 inches were cut and no conifers were cut. This cut produced a shelterwood, which now in most parts of the stand there is a dense understory of mixed conifer regeneration. This regeneration needs to be released and the lowland hardwoods are mature.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	6229 - Mixed lowland shrub	2.0	No	Unspecified	
6	3302 - Low Density Conifer Trees	1.4	Natural Regen	Lowland Spruce/Fir	Stand was clearcut in 2009 on contract 029-06-01. This stand is fully stocked with a mix of lowland species, but there is more black spruce and white pine than anything else. The regen is just less than 3 feet tall, to call it a forested stand.
9	3302 - Low Density Conifer Trees	10.6	Natural Regen	Lowland Conifers	Stand was clearcut in 2009 on contract 029-06-01. This stand is fully stocked with a mix of lowland species, but there is more black spruce and white pine than anything else. The regen is just less than 3 feet tall, to call it a forested stand.
12	6229 - Mixed lowland shrub	25.2	No	Unspecified	
14	710 - Sand, Soil	0.9	No	Unspecified	This is the parking lot for the Cedar River Pathway.
18	6229 - Mixed lowland shrub	16.8	No	Unspecified	
19	6224 - Treed Bog	6.8	No	Unspecified	
27	6229 - Mixed lowland shrub	12.7	No	Unspecified	
38	6229 - Mixed lowland shrub	307.2	No	Unspecified	
41	6229 - Mixed lowland shrub	12.7	No	Unspecified	
45	710 - Sand, Soil	1.0	No	Unspecified	Stand is an old sand borrow pit.
55	3302 - Low Density Conifer Trees	49.2	Plantation	Red Pine	Stand was seed tree cut between 2008 and 2010 on contract 031-06-01. There were only scattered pine seed trees left, mostly red pine. The stand was then scarified in the fall of 2011 on FTP 33-665 to expose mineral soil to allow red pine to seed in. There is very little red pine regen showing up at this time.
56	6224 - Treed Bog	4.2	No	Unspecified	
60	6229 - Mixed lowland shrub	11.1	No	Unspecified	
62	6229 - Mixed lowland shrub	4.5	No	Unspecified	
64	3105 - Mixed Upland Herbaceous	1.7	No	Unspecified	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
72	50 - Water	12.6	No	Unspecified	Big Cedar River