



GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 20 ENTRY YEAR: 2014

GIS Compartment Acreage: 1817 County: Oscoda

Revision Date: September 5, 2012

Stand Examiner: Tom Barnes

Legal Description: T28NR1E, Sections 26, 27, 34 and 35
Greenwood Township

Management Goals: The primary management objective is to maintain stands for species and structural diversity, health, productivity and sustainability while also managing for multiple use and visual management.

Soils and Topography: Soil types consist of Grayling and Graycalm-Grayling sands in the upland areas. The lowland areas which include the two streams are dominated by Tawas Lupton Muck and Deford-Au Gres-Croswell Complex. Croswell Sands are found in close association with these two lowland soils. The overall topography of the compartment is flat with the exception of where the two streams have cut through the landscape.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The compartment is comprised largely of state ownership that is contiguously blocked in. However, several large blocks of private ownership are found within the compartment too. These private holdings are used predominantly as large hunting camps. A strip of land, owned in fee by Consumers Power Company, contains high voltage power lines run through sections 26, 27 and 35. There is also a two-acre piece of land found at the intersection of Farrington Road and County Road 489 in section 27 that is owned by Greenwood Township. It is used as a waste transfer station.

Unique, Natural Features: None.

Archeological, Historical, and Cultural Features: None.

Special Management Designations or Considerations: Special consideration for visual management should be considered when treating stands along County Road 489.

Watershed and Fisheries Considerations: Two streams, the East Branch of Big Creek and Wright Creek, flow through the compartment. Wright Creek is dammed on private land, but the impoundment also covers a portion of state ownership.

Wildlife Habitat Considerations: The lowland conifer forest types in the compartment are used extensively for winter deer yarding. The objective is to maintain and manage the lowland conifer forest types along Wright Creek and the East Branch of Big Creek for winter deer yards and to manage adjacent aspen stands for usable winter food. There are several maintained wildlife openings, scattered throughout the

compartment, that have been planted to rye. We need to maintain age structure in the aspen type for Ruffed Grouse.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. Glacial drift thickness varies between 600 and 800 feet. There is elevation relief of approximately 80 feet in the compartment. Beneath the glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. The nearest gravel pit is six miles to the east, and gravel potential maybe good on the upland areas. This compartment is not leased for oil and gas development. The Antrim Shale has been developed just to the north. There may be Antrim gas potential here in the future.

Vehicle Access: County Road 489 runs north and south along the west edge of compartment. Farrington Road runs east and west across the center of the compartment. Several two-track roads branch off of these county roads into other parts of the compartment. Nancy Brown Road and Town Hall Road traverse east and west along a small portion of the compartment also. Stickfort Road runs north and south along the east edge of the compartment.

Survey Needs: None.

Recreational Facilities and Opportunities: No designated recreational facilities are found within the compartment. However, dispersed recreational opportunities include fishing, hunting, mushrooming and bird watching.

Fire Protection: There is good access to and within the compartment for fire equipment. Nearby water sources include Wright Creek and the East Branch of Big Creek. The large Consumer Power Company cleared easement acts as a large fuel-break between the west side of compartment and the east side of the compartment.

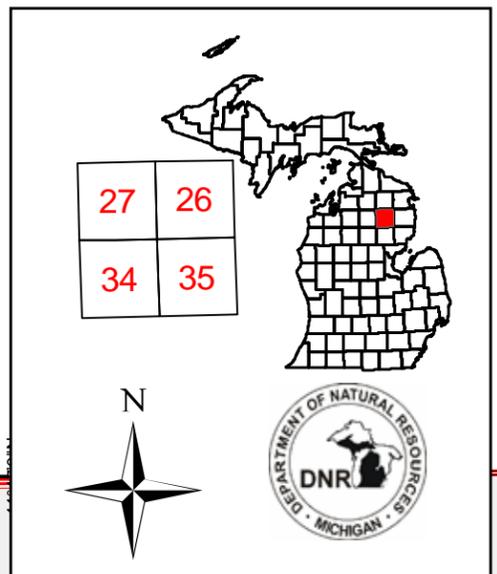
Additional Compartment Information: None.

- **The following reports are available:**
 - ◆ **Total Acres by Cover Type and Age Class**
 - ◆ **Proposed Treatment Summaries**
 - ◆ **Dedicated Conservation Area Details**
 - ◆ **Listing of Forested Stands**
 - ◆ **Listing of Non-Forested Stands**
 - ◆ **Proposed Treatments with No Limiting Factor**
 - ◆ **Proposed Treatments with Limiting Factors**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand numbers, cover types, recreation trails and facilities**
 - ◆ **Proposed treatments**
 - ◆ **Dedicated & Proposed Special Conservation Areas**

22 Cover Type & Treatment Map

Compartment: 020
 T28N R01E Sec. 26, 27, 34, 35
 County: Oscoda
 Unit: Grayling
 YOE: 2014
 Acres: 1,817 GIS Calculated
 Examiner: Thomas Barnes
 Map Revised: 09/06/2012
 Map Phase: Pre-Review



Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

Legend

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

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Opening Maintenance
- Other Treatment - See Comments

Forest Stands

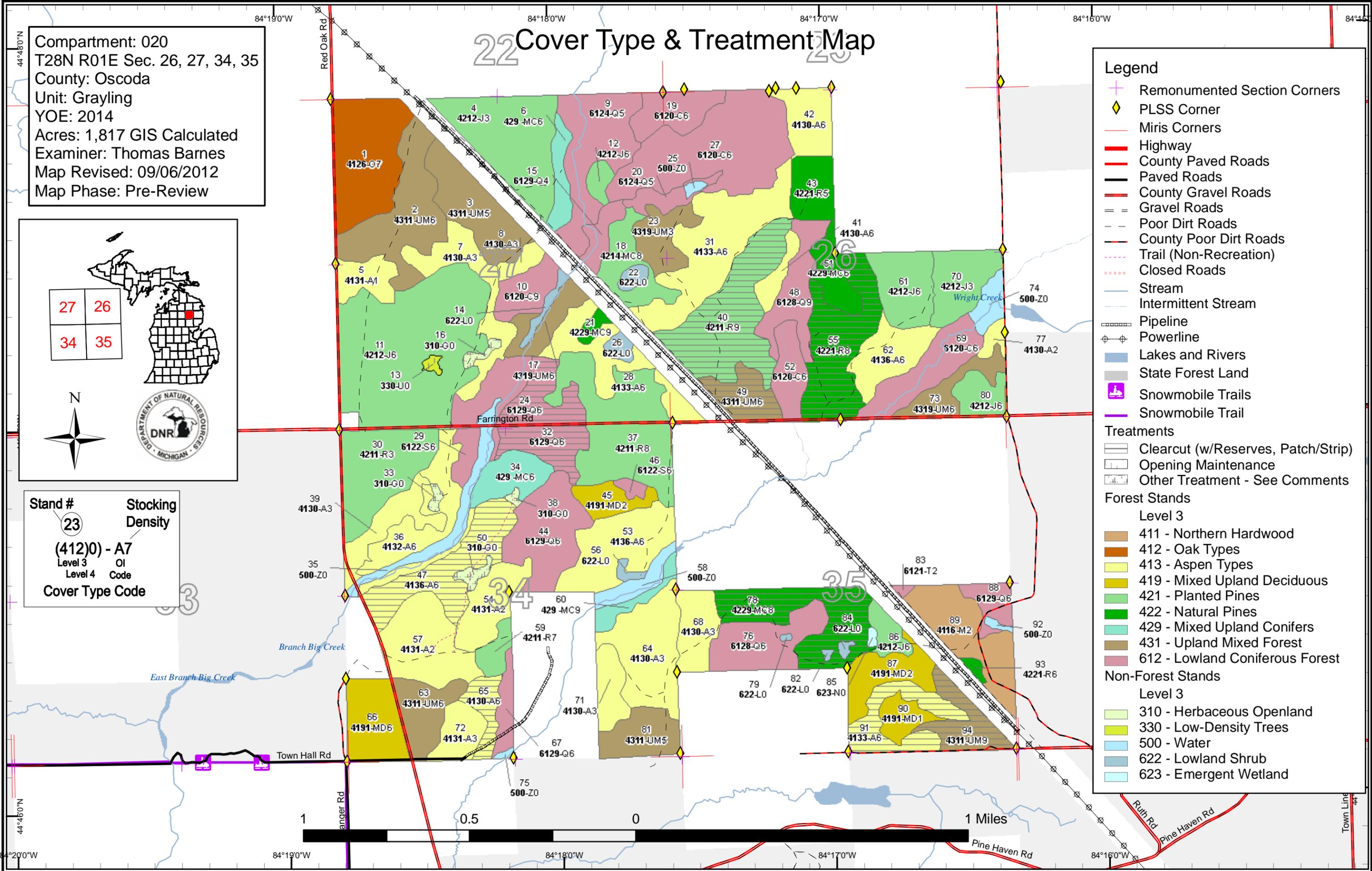
Level 3

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

Non-Forest Stands

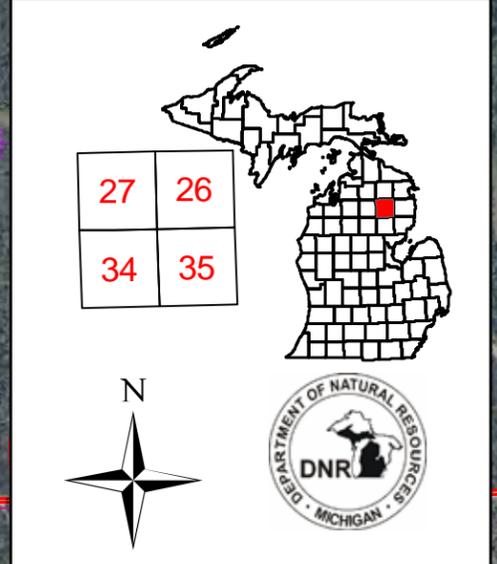
Level 3

- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland



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22 Stand Boundary Map 23



27	26
34	35

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Stocking Density
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Legend

- Remonumented Section Corners
- Miris Corners
- Highway
- County Paved Roads
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- Gravel Roads
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- Stream
- Intermittent Stream
- Pipeline
- Powerline
- Snowmobile Trails
- Snowmobile Trail
- Stand Boundaries

Forest Stands

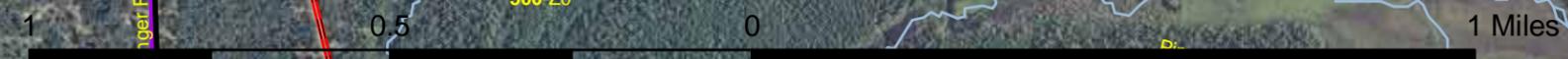
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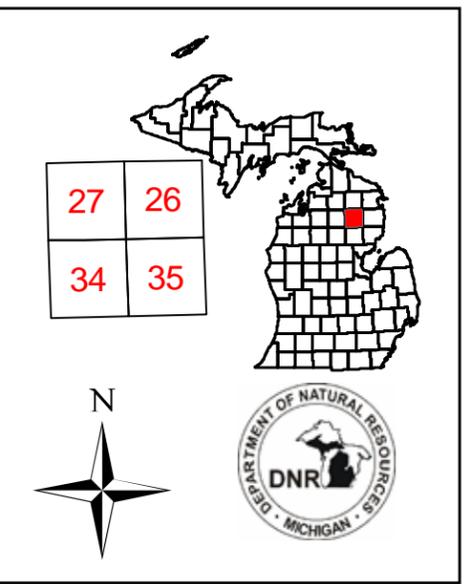
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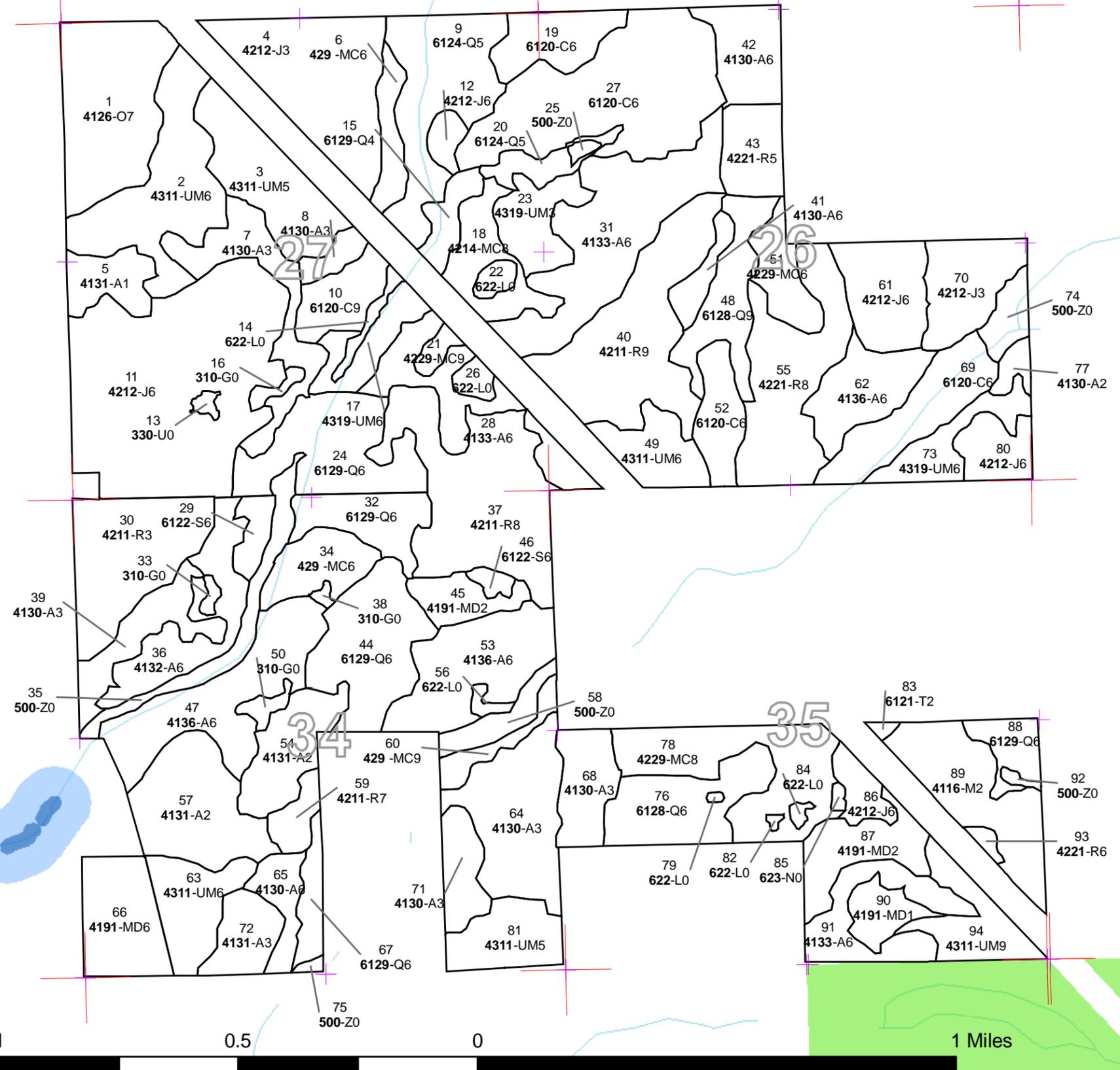


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 Map Phase: Pre-Review



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Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

22 Dedicated & Proposed Special Conservation Area Map



Legend

- ✚ Remonumented Section Corners
- Miris Corners
- Sections
- ▭ Stand Boundaries
- ▭ Dedicated Special Conservation Areas
- Cold Water Streams
- ▭ Natural Rivers Vegetative Buffer
- ▭ Natural Rivers Zoning District
- ▭ Kirtland Warbler Habitat

Forest Stands

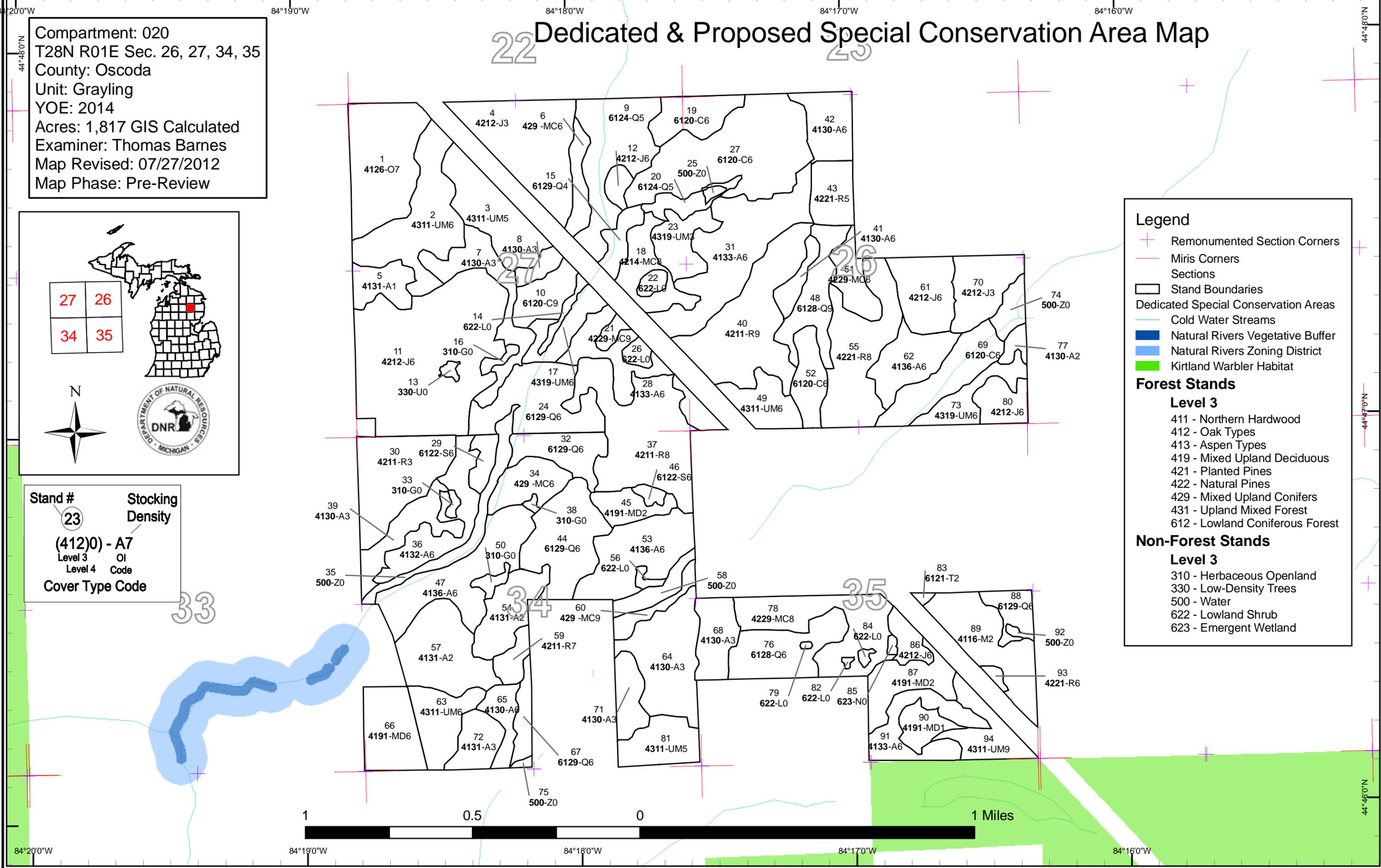
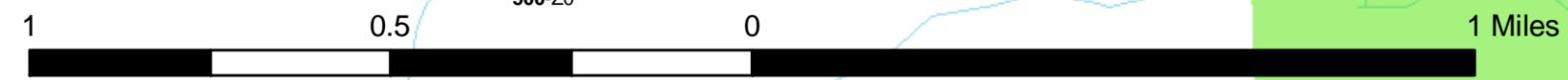
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	Age Class														Total
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	
Aspen	61	123	40	0	195	53	0	0	0	0	0	0	0	0	471
Cedar	0	0	0	0	0	0	0	0	0	114	15	15	0	0	144
Herbaceous Openland	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Jack Pine	0	0	73	0	49	109	0	0	0	0	0	0	0	0	230
Low-Density Trees	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lowland Conifers	0	0	0	0	0	0	0	0	16	140	23	42	0	0	221
Lowland Shrub	14	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Lowland Spruce/Fir	0	0	0	0	0	0	3	0	0	7	0	0	0	0	9
Marsh	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Mixed Upland Deciduous	0	11	0	30	0	0	0	0	26	0	0	0	0	0	66
Natural Mixed Pines	0	0	0	0	0	0	0	0	13	44	0	0	0	0	57
Northern Hardwood	34	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Oak	0	0	0	0	0	0	0	0	48	0	0	0	0	0	48
Planted Mixed Pines	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18
Red Pine	0	0	40	0	0	0	64	0	0	68	56	0	0	0	228
Tamarack	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Upland Conifers	0	0	0	0	26	0	0	0	7	0	0	0	0	0	34
Upland Mixed Forest	0	35	0	77	28	21	16	0	18	0	0	0	0	0	196
Water	35	0	0	0	0	0	0	0	0	0	0	0	0	0	35
Total	155	169	153	108	298	183	83	0	129	390	94	56	0	0	1817



Table 2 – Proposed Treatment Summaries

Grayling Mgt. Unit
Year of Entry 2014

Compartment 020
Total Compartment Acres: 1817

Acres by Treatment Type

Commercial Harvest - 284	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 8
Habitat Cut - 0	Opening Maintenance - 1	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	70	0	0	0	0	0	0	70
Lowland Conifers	38	0	0	0	0	0	0	38
Natural Mixed Pines	40	0	0	0	0	0	0	40
Red Pine	101	0	0	0	0	0	0	101
Upland Mixed Forest	35	0	0	0	0	0	0	35
Total	284	0	0	0	0	0	0	284



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
24 72020024-Cut	20.5	6129 - Mixed Coniferous Lowland Forest	High Density Pole	93		Harvest	Clearcut	6129 - Mixed Coniferous Lowland Forest	Cmpt. Review Proposal

Prescription Specs: Clearcut, riparian management zone will serve as stand retention. Harvest all trees greater than 4 inches DBH. Include Rabbitat spec in contract.

Other Comments: Stand will probably be a winter time only harvest allow sufficient time to be harvested at least 3 year contract length.

Next Steps: Acceptable regeneration is a moderate stand of black spruce with associated lowland conifers in the wetter areas and a mixture of aspen and maple in the drier portions of the stand.

Proposed Start Date: 10/01/2013

32 72020032-Cut	17.5	6129 - Mixed Coniferous Lowland Forest	High Density Pole	93		Harvest	Clearcut	6129 - Mixed Coniferous Lowland Forest	Cmpt. Review Proposal
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Prescription Specs: Clearcut without retention, riparian management zone along creek (100ft) will serve as stand retention. Remove all trees greater than 4 inches DBH. Include Rabbitat spec.

Other Comments: Stand will probably be a winter time only harvest allow sufficient time to be harvested at least 3 year contract length.

Next Steps: Acceptable stand regeneration is a moderately stocked stand of black spruce combined with associated lowland conifers, as you move away from the stand regeneration will shift to aspen and maple.

Proposed Start Date: 10/01/2013

40 72020040-Cut	56.2	42110 - Planted Red Pine	High Density Log	103	111-140	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Specs: Clearcut with retention, follow standard retention guidelines. Heron Rookery is located within this stand place, harvesting restricted to September to February. Add Rabbitat Spec, drop red painted trees into swamp.

Other Comments: Stand was thinned in 2006'ish. Very mature pine stand consisting of red and white pine of good quality. Red pine released well and growth has started to diminish. Understory composition is white pine and red maple. Located a heron rookery at the NE corner of the stand, not many nest guessing less than a dozen. Rookery is next to a small stand of dead trees, possibly old nesting trees. BA for RP was 76 and for WP was 66.

Next Steps: Plant to red pine following harvest, herbicide if necessary.

Proposed Start Date: 10/01/2013

47 72020047-Cut	37.4	4136 - Aspen, Mixed Conifer	High Density Pole	52		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
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Prescription Specs: Clear cut with retention, follow stand retention guidelines. Final harvest, install proper RMZ for the East Branch Big Creek. Leave super canopy red and white pine, remove all other species. Focus some of the retention along County RD 489.

Other Comments: Leave boundary trees along wildlife opening and do not allow wildlife opening to be used as a landing.

Next Steps: Stand should come back heavy to aspen with a small component of other associated canopy species. Acceptable regeneration is a moderate to well stocked stand of aspen, maple, oak and mixed conifer.

Proposed Start Date: 10/01/2013



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
49	72020049-Cut	16.4	4311 - Pine, Aspen Mix	High Density Pole	63	111-140	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription:</u> Clear cut with retention, follow stand retention guidelines. Removal all species, except leave all red and white pine equal to or greater than 18" DBH. Some retention can be located along Farrington.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Aspen is of poor quality and fungus is present on many of the trees.</p> <p><u>Next Steps:</u> Stand should regenerate as an aspen stand with maple and oak as a small component. Mixed conifer will also be a small component of the stand.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										

55	72020055-Cut	45.2	42210 - Natural Red Pine	Medium Density Log	93	111-140	Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<p><u>Prescription:</u> Clear Cut with retention, follow stand retention guidelines. Some retention could be located near Farrington Rd. Remove all species 2" and up to help facilitate planting.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Stand is very similar to stand 41. Pine released well from thinning and the growth has been maximized and has greatly reduced to a crawl. Site was harvested in 2006, Stand BA is 132, 72 for red pine and 50 for white pine.</p> <p><u>Next Steps:</u> Following harvest trench and plant to red pine, treat with herbicide if necessary.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										

65	72020065-Cut	10.3	4130 - Aspen	High Density Pole	54		Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
<p><u>Prescription:</u> Clearcut with retention, follow stand retention guidelines. Removal all species except white pine. Keep retention around 3 percent to help maximize aspen regeneration. Add Rabbitat spec to contract fell boundary line trees into swamp.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Small stand dominated by aspen bordering a cedar swamp.</p> <p><u>Next Steps:</u> Stand should regenerate heavily to aspen with a mixed component of maple, oak, and conifers and this is acceptable.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										

78	72020078-Cut	40.4	42290 - Natural Mixed Pine	Medium Density Log	97	51-80	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription:</u> Clearcut with retention, follow stand retention guidelines. Remove all species larger than 2" DBH to help with planting operation.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Pine stand with small component of other species. There are drainages that run thru this stand which has improved the species diversity.</p> <p><u>Next Steps:</u> Trench and plant to red pine, herbicide if necessary.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
91	72020091-Cut	22.2	4133 - Aspen, Mixed Pine	High Density Pole	41		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription:</u> Clear cut with retention, follow stand retention guidelines. Removal merchantable species, except white pine greater than 18" DBH.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Western portion of stand has a strong red pine component, eastern have is predominately aspen.</p> <p><u>Next Steps:</u> Acceptable regeneration is aspen with red maple, oak and conifer.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										

94	72020094-Cut	18.4	4311 - Pine, Aspen Mix	High Density Log	84	81-110	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription:</u> Clearcut with retention, follow stand retention guidelines. Remove all species except white pine.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Monitor the success of regeneration during the next inventory period. Acceptable regeneration is mix of aspen, conifers and overstory upland deciduous species.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										

13	NF_72020013-NonFor	1.4	3302 - Low Density Conifer Trees				Non-Forest Management	Brush Cutting	3102 - Grass	Cmpt. Review Proposal
<p><u>Prescription:</u> Remove jack pine to bring site back to a wildlife opening. Either brush hog (mow) or remove by chainsaw any jack pine that is occupying the area that was once a wildlife opening.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Wildlife opening that is seeding in with trees particularly Jack pine.</p> <p><u>Next Steps:</u> Continue to mow to maintain as wildlife opening</p> <p><u>Proposed Start Date:</u> Unspecified</p>										

16	NF_72020016-Other	2.4	3102 - Grass				Other	Unspecified	3102 - Grass	Cmpt. Review Proposal
<p><u>Prescription:</u> Continue to manage as a wildlife opening by utilizing standard wildlife opening management techniques.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Continue to maintain as needed.</p> <p><u>Proposed Start Date:</u> Unspecified</p>										

33	NF_72020033-Other	1.4	3102 - Grass				Other	Unspecified	3102 - Grass	Cmpt. Review Proposal
<p><u>Prescription:</u> Continue to manage as a wildlife opening by utilizing standard wildlife opening management techniques.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Continue to maintain as needed.</p> <p><u>Proposed Start Date:</u> Unspecified</p>										

**Table 3 -- Treatments Prescribed
with No Limiting Factor**



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
38 NF_72020038- Other	1.0	3102 - Grass				Other	Unspecified	3102 - Grass	Cmpt. Review Proposal

Prescription Continue to manage as a wildlife opening by utilizing standard wildlife opening management techniques.

Specs:

Other

Comments:

Next Continue to maintain as needed.

Steps:

Proposed

Start Date: Unspecified

50 NF_72020050- Other	3.0	3102 - Grass				Other	Unspecified	3102 - Grass	Cmpt. Review Proposal
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Prescription Continue to manage as a wildlife opening by utilizing standard wildlife opening management techniques.

Specs:

Other

Comments:

Next Continue to maintain as needed.

Steps:

Proposed

Start Date: Unspecified

**Total Treatment
Acreage Proposed: 293.7**

Table 4 -- Treatments Prescribed with a Limiting Factor



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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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#Error

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Error

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

**Out of YOE -- Treatments
Prescribed with No Limiting Factor**

Year of Entry: 2014



Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
72269_OYOE_cc	2.0					Harvest	Clearcut	4131 - Aspen, Oak	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest except leave any beech, ash, and conifers. No additional retention specified due to small stand size and the proximity of retention in comp 268 stand 28. Set up concurrent with compt 268 (2014 YOE) stand 28.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is a mixture of aspen, oak and hardwoods.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									
72272_OYOE_ccr	5.6					Harvest	Clearcut	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest except leave the RP & WP. No additional retention due to small stand size. Run the north & west boundary to include the operable transition ground (where the densest black spruce cover is) down to the swamp. Cut all JP & Scotch pine stems regardless of merchantability. Harvest concurrent with the adjacent comp 268 stand 6 (aquired through the same land transaction). When harvesting this stand's planted SP, site a secondary landing immediately adjacent to the plantation so that Scotch pine doesn't get dragged through the general stand area, distributing its weed seed. Add hare habitat improvement spec to fell the red-painted boundary line trees bordering the swamp.</p> <p><u>Other Comments:</u> Protect the survey monument and any witness trees associated with the north quarter corner of section 22. Borders the Lovells KW Unit, Management Block 56.</p> <p><u>Next Steps:</u> Trench and plant JP to KW specs. May need site prep treatments (that could include burning, herbicide, etc.) to control scotch pine regen before planting. Artificial regen surveys. Acceptable regen is JP at stockings suitable for KW habitat, with minor components of naturally-established mixed deciduous and native conifer species.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									
72289_OYOE_cc	6.7					Harvest	Clearcut	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest, leaving any RP, WP and white oak. No additional retention due to small stand size. Treat concurrent with the adjacent comp 290 stand 26.</p> <p><u>Other Comments:</u> Protect the survey monument and witness trees associated with the quarter corner common to sections 26 & 27.</p> <p><u>Next Steps:</u> Trench and plant JP to KW specs. Artificial regen surveys. Acceptable regen is JP at stockings suitable for KW habitat, along with naturally-established oak and pine.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									

**Total Treatment
Acreage Proposed: 14.3**



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4126 - White, Black, N. Pin Oak	Low Density Log	47.6	87	1-50	As prescribed, Shelterwood cut to 40 BA except for along 489, a thin irregular strip about 2 chains wide thinned to 70 BA. All aspen and red maple were removed. Stands thinned/shelterwood, tsale # 72-081-04-01, sale completed April, 2007. There is evidence illegal firewood cutting. Stand is coming back as maple and aspen, there is pretty oak regen, however, it is being browsed by wildlife. Oak will be a small component of the next stand. Five BA swings were taken avg BA was 35 for oak.
2	4311 - Pine, Aspen Mix	High Density Pole	45.4	34		Mixed jack pine and aspen stand. Stand was harvested in 2002, however, smaller diameter jack pine and aspen were not harvested. Stand could wait at least 10 to 20 years before being treated.
3	4311 - Pine, Aspen Mix	Medium Density Pole	32.0	34		Stand is very similar to stand 2 in species composition and structure, however, this stand does not have as high of a stem density as stand 2. Treatment should not take place for at least 10 - 20 years and should be treated with stand 2.
4	42120 - Planted Jack Pine	High Density Sapling	50.1	26		Jack pine plantation, with aspen in the northern end. Not much for an understory.
5	4131 - Aspen, Oak	Low Density Sapling	13.0	4		Stand final harvested under contract 72-039-05-01 Farrington Jack/Aspen. Planted Jack Pine May, 2010 per C72-594. Decent stump sprouting. Site is bordering on either 25-50 or 50-75. Planting success seems to be pretty good.
6	429 - Mixed Upland Conifers	High Density Pole	9.9	43		Mixed Conifer/Aspen stand with young jack pine on the west border and swamp on the east border. Heavy beaver activity along the transition between this stand and stand 10.
7	4130 - Aspen	High Density Sapling	25.4	4		Recently harvested aspen. Regen looks good for aspen w/mixture of cherry and oak. Tag present in small valley running in stand. Stand final harvested under contract 72-039-05-01 Farrington Jack/Aspen.
8	4130 - Aspen	High Density Sapling	5.2	27		Young aspen stand.
9	6124 - Lowland Spruce-Fir	Medium Density Pole	41.7	110		Spruce Cedar swamp, southern half of stand is declining or standing dead in water. Northern half is drier and stand is doing much better. Beavers appear to be altering the hydrics of this stand.
10	6120 - Lowland Cedar	High Density Log	14.7	110		Pockets of heavy spruce and fir regeneration, nice cedar stand with good access and nice looking cedar logs. Good wildlife habitat.
11	42120 - Planted Jack Pine	High Density Pole	108.9	52		Fair to poor Jack Pine, large number of stems with double tops. Old O/I showed a grass opening # 404 believe this was also a wildlife opening. Opening is seeding in w/tree species from surrounding area and ground cover is very heavy to sweet fern. Opening does not look like it has been managed for some time. Southeastern portion of stand in the MNFI Rough Fescue Polygon.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
12	42120 - Planted Jack Pine	High Density Pole	4.8	42		Pole size jack pine with a mixture of hardwood and other conifers.
15	6129 - Mixed Coniferous Lowland Forest	Low Density Pole	8.5	97		Mixed lowland conifer stand with tag alder running thru the middle of stand. Dead Tamarack are also in the middle of the stand. E Branch Big Creek also runs thru this stand, not a consistent flow of water, more of an intermittent stream at best.
17	4319 - Mixed Upland Forest	High Density Pole	13.4	47		Mixed aspen balsam fir stand with various size classes of red pine. Red pine was in the pole/log/xlog stage and white pine was in the super canopy stage as well. This stand could have been merged with stand 25, however, I kept them separate due to the amount of fir in the stand. This stand also show signs of the EB of Big Creek flowing thru.
18	42140 - Planted Mixed Pine	Medium Density Log	17.9	94	51-80	Appear to have been a plantation, could be wrong. Large Red and white pine left behind, moderate quality and getting close to moving out of the economic value because of size. Understory coming back as a mixed hardwood conifer stand.
19	6120 - Lowland Cedar	High Density Pole	17.5	95		Nice cedar stand. Super canopy red and white pines. Mixture of aspen, maple and paper birch are also scattered throughout this stand. Good wildlife wintering area.
20	6124 - Lowland Spruce-Fir	Medium Density Pole	7.8	84		Lowland conifer mix, just down stream from a small water impoundment. It appears the impoundment is man made or if made by beavers it has been a number of years since the damn was build as vegetation is tall along the dam/dyke. Stand has many dead snags and standing water is present. It appears this water would drain into the EB of Big Creek.
21	42290 - Natural Mixed Pine	High Density Log	3.3	94	81-110	Nice mixed conifer stand. Provides good vertical diversity for the area.
23	4319 - Mixed Upland Forest	High Density Sapling	16.5	17		Jack Pine plantation with strong intermixing of other hardwood species. Stand was planted in 1995.
24	6129 - Mixed Coniferous Lowland Forest	High Density Pole	37.2	93		Mixed lowland conifer stand, very nice wildlife habitat. More upland types the further away from creek.
27	6120 - Lowland Cedar	High Density Pole	70.1	92		Cedar swamp, many of the cedars have a white-washed appearance on the lowest 4 feet of bole. Looks like an excellent area for wildlife in the winter time. Access to stand is somewhat difficult.
28	4133 - Aspen, Mixed Pine	High Density Pole	25.5	47		Aspen stand with mixed conifer, could go another 10 years before treating.
29	6122 - Black Spruce	High Density Pole	6.5	93		Lowland conifer stand made up primarily of black spruce and tamarack. Good wildlife habitat. As you move up the slope stand transitions to more upland type. Entire stand in the MNFI Rough Fescue Polygon.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
30	42110 - Planted Red Pine	High Density Sapling	40.3	26		From Previous OI notes - "Planted in 1986. Stand was previously Jack Pine that was final harvested with the site index given. Stand was to be replanted to Jack Pine, but Red Pine was planted instead. The site index was good enough to support Red Pine at the time of planting. The adjacent Red Pine / Aspen stand has a site index of (RP-65)." There is a school bus turn-around along County Rd 489. Stand has scattered hardwood species mixed in as well. Entire stand in the MNFI Rough Fescue Polygon.
31	4133 - Aspen, Mixed Pine	High Density Pole	54.9	47		Aspen stand with a good component of red and white pine. Stand should be treated during next inventory cycle.
32	6129 - Mixed Coniferous Lowland Forest	High Density Pole	18.5	93		Mixed lowland conifer stand, provides good wildlife habitat. Further away from creek more upland type.
34	429 - Mixed Upland Conifers	High Density Pole	16.4	40		Mixed Aspen and conifer stand. Red pine has several size classes with some very large trees along the perimeter. Stand was harvested in 1972, assuming much of the pine was not cut.
36	4132 - Aspen, Jack Pine	High Density Pole	26.4	42		Aspen stand w/mixed upland & lowland conifer. As stand transitions to stand 36 higher density of lowland conifer w/aspen. Breaking point is two track to wildlife opening. Majority stand in the MNFI Rough Fescue Polygon. Stand also has had an occurrence of Rough Fescue last obs in 1995
37	42110 - Planted Red Pine	Medium Density Log	61.9	69	51-80	Thinned red pine plantation, not a real high quality stand. Many are past their economic prime and moving out of cabin log size as well. Pockets of dense aspen and maple regen. Stand was cut in 2006. OFS point 44.783272, 84.298131 pile of stumps with rootwod from county rd commish.
39	4130 - Aspen	High Density Sapling	18.1	6		Immature aspen w/good regen and scattered red pine. Majority of stand in the MNFI Rough Fescue Polygon.
40	42110 - Planted Red Pine	High Density Log	56.2	103	111-140	Stand was thinned in 2006'ish. Very mature pine stand consisting of red and white pine of good quality. Red pine released well and growth has started to diminish. Understory composition is white pine and red maple. Located a heron rockery at the NE corner of the stand, not many nest guessing less than a dozen. Rookery is next to a small stand of dead trees, possibly old nesting trees. BA for RP was 76 and for WP was 66.
41	4130 - Aspen	High Density Pole	7.2	47		Heavy to red pine along stand 41, remaining stand is a mixture of aspen and red pine, stand should be treated in 10 years.
42	4130 - Aspen	High Density Pole	18.5	17		Mixed aspen stand immature, there various other species occupying stand as well, pockets of Balsam Fir regen. Stand unsure about what it wants to regenerate too.
43	42210 - Natural Red Pine	Medium Density Pole	15.4	99	111-140	Stand was harvested in 2006'ish, thinned to 110 BA. Mature red and white pine stand, average BA is 133.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	6129 - Mixed Coniferous Lowland Forest	High Density Pole	37.2	93		Jack pine on the perimeter with white pine. Stand mixed lowland conifer with cedar dominating..
45	4191 - Mixed Upland Deciduous with Conifer	Medium Density	10.9	17		A heinz 57 stand, switches was upland to lowland species frequently. Open or low density areas are also frequent. Stand also shows evidence of standing water. Wild iris is also found in this stand. Harvested in 1995
46	6122 - Black Spruce	High Density Pole	2.6	69		Small stand of lowland conifers, nice habitat for wildlife.
47	4136 - Aspen, Mixed Conifer	High Density Pole	43.0	52		Mature aspen stand with scattered oak, maple and mixed conifer. As stand merges with stand 36 more conifer is found in the areas with greater slopes going towards the creek. End sale at the top of slope.
48	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	23.0	102		Mixed conifer swamp, looks like it was prescribed for harvest but was not cut. Adjacent stand 52 was treated, shows evidence of standing water. Good wildlife habitat.
49	4311 - Pine, Aspen Mix	High Density Pole	16.4	63	111-140	Portion of stand was harvested in 2006'ish, this portion has the majority of red and white pine. Remainder of stand is a mixture of aspen and red pine primarily. Aspen is of poor quality and starting to fungus out also a small patch of red maple in this stand as well. Stand has nice regen of white pine.
51	42290 - Natural Mixed Pine	High Density Pole	13.4	86		Mixed stand of conifer with some hardwoods. Stand has been treated or some parts have been harvested in the past. Heavier to aspen and jack pine in the northern portion of the stand. Treat in next inventory cycle.
52	6120 - Lowland Cedar	High Density Pole	14.9	100		Nice Cedar swamp, good wildlife habitat. Understory was a mixture of lowland species, tag alder is occupying many of the small openings.
53	4136 - Aspen, Mixed Conifer	High Density Pole	36.6	46		Aspen stand of mid quality bordering a water impoundment.
54	4131 - Aspen, Oak	Medium Density	21.2	22		Immature aspen stand bordering private property on the east stand side. Stand has good oak and aspen regen coming back, site is around the 75% canopy closure so it could be either 50-75 or 75-100 opted for the 50-75. Combined two separate stands from previous inventory, these two stand will be treated together in the future, age of stand is combined average for the two. Portion of stand was harvested in 1986 and 1995.
55	42210 - Natural Red Pine	Medium Density Log	45.2	93	111-140	Stand is very similar to stand 41. Pine released well from thinning and the growth has been maximized and has greatly reduced to a crawl. Site was harvested in 2006, Stand BA is 132, 72 for red pine and 50 for white pine.
57	4131 - Aspen, Oak	Medium Density	35.9	17	1-50	Mixed oak and aspen stand, appears to be a seed tree cut. Residual BA is between 10 and 20 for oak and red pine. Nice regeneration for both oak and aspen. Stand was harvested in 1995.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
59	42110 - Planted Red Pine	Low Density Log	7.3	91	51-80	Stand was thinned 2006'ish, down to 50 BA for Red pine. Stand does not have much for natural red pine regeneration. BA for stand was 60, Red pine was 53 and white pine was 7.
60	429 - Mixed Upland Conifers	High Density Log	7.4	80	81-110	Mixed stand along the south edge of Wright Creek water body. Stand could be harvested, however, with an RMZ in place there would not be much of a stand left to harvest. Previous OI notes - Stand was part of stand 25, but was not cut in 1998 with rest of stand. (Probably left as a buffer strip for Wright Creek).
61	42120 - Planted Jack Pine	High Density Pole	24.0	42		Young Jack Pine stand with scattered red and white pine along with oak and maple. Log size trees are oak, red and white pine. Recommend treating the stand in the next entry cycle.
62	4136 - Aspen, Mixed Conifer	High Density Pole	21.9	44		Majority of the stand is aspen, with super canopy red and white pine. There are pockets of white pine. Recommend treating during next inventory cycle.
63	4311 - Pine, Aspen Mix	High Density Pole	20.6	54		Mixed jack pine and aspen stand. Not ready for harvest, should be treated in the next inventory cycle. Stand is very similar to stand 65 which is just west of this stand across County Rd 489. This stand does not have the various size classes of oak as stand 65 or the red pine component.
64	4130 - Aspen	High Density Sapling	38.9	15		Aspen clear cut in 2007, sale 72-045-05-01. Stand has regenerated back well to aspen with scatter oak and red maple regen. White pine was left and ranges from pole to super canopy size class.
65	4130 - Aspen	High Density Pole	10.3	54		Small stand dominated by aspen bordering a cedar swamp. Age is based on old inventory from stand that was formerly a part of this one.
66	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	25.6	84	51-80	Stand of mixed hardwood and conifer consisting of oak, aspen, red & jack pine. Oak is in various sizes with good oak regeneration. Average BA is 59. BA's for the following species oak 22, aspen 12, jack pine 20 and red pine 5. There is evidence of a fair amount of browse in this stand. Stand does have open areas thus bringing the canopy closure to the 75% mark. The larger aspen are in decline which should help the stand come back to oak. There is young aspen present and if treat this time around, the aspen could out compete oak for stand dominance.
67	6129 - Mixed Coniferous Lowland Forest	High Density Pole	8.3	87		Mixed lowland conifer, good wildlife habitat.
68	4130 - Aspen	High Density Sapling	17.1	16		SALE 002-94-01 WRIGHT CR. ASPEN cut in 1996. Has regenerated nicely to aspen with small amounts of oak, maple and white pine.
69	6120 - Lowland Cedar	High Density Pole	26.5	94		Lowland conifer swamp dominated by cedar with mixed hardwoods along the edge of the stand.

Stand	Grayling Mgt. Unit		5 – Forested Stands			Compartment: 020
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014
						General Comments:
70	42120 - Planted Jack Pine	High Density Sapling	22.4	26		Young jack pine stand with private land to the north and east.
71	4130 - Aspen	High Density Sapling	12.5	16		Immature aspen stand with scattered oak, maple and cherry, nice regen with high stem density.
72	4131 - Aspen, Oak	High Density Sapling	13.5	26		Stand has very nice oak and aspen regeneration. It will be interesting to see which species will become dominate as time goes on at this point it appears oak has the advantage.
73	4319 - Mixed Upland Forest	High Density Pole	14.9	49		Mixed stand of conifer and hardwoods. Pole size, southern portion is more of a mixture of balsam and aspen. As stand moves northeast and narrows it becomes b fir in the valley/drainage then stand opens up to heavier jack pine and fir. No distinct line to separate out as unique stands. Appears portion of stand might be a failed jack pine plantation that has been over taken by species listed above.
76	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	28.7	91		Mixed lowland stand with conifer and hardwoods. Good wildlife habitat. Stand is adjacent to private land.
77	4130 - Aspen	Medium Density	4.1	4		Immature aspen stand harvested in either 2007/08. 72-039-05-01
78	42290 - Natural Mixed Pine	Medium Density Log	40.4	97	51-80	Pine stand with small component of other species. There are drainages that run thru this stand which has improved the species diversity.
80	42120 - Planted Jack Pine	High Density Pole	12.1	43		Jack pine plantation with scattered aspen and other species.
81	4311 - Pine, Aspen Mix	Medium Density Pole	18.6	16		Mixed stand of aspen and Jack pine with other species listed. There are some openings mixed within this stand as well. Nice species diversity, no treatment at this time.
83	6121 - Tamarack	Medium Density	1.0	39		Small little wet conifer stand. Ground cover is dominated by leather leaf. Canopy a mixture of tamarack and black spruce.
86	42120 - Planted Jack Pine	High Density Pole	7.8	46		Pole size jack pine stand with super canopy white pine.
87	4191 - Mixed Upland Deciduous with Conifer	Medium Density	20.0	35		Stand was previously inventoried as a U3. Open grown stand resulting in short bushy trees. As you move east the stand becomes more dense with younger regrowth.
88	6129 - Mixed Coniferous Lowland Forest	High Density Pole	9.7	92	81-110	Stand is a mixture of upland and lowland species. Upland areas are dominated by Red and white pine and the lowlands by tamarack. Majority of stand is in the lowland types. Five BA swings were taken average stand BA is 96. For individual species BA is WP 30, RP 11, RM 10, JP 4, Tam 34, Aspen 4.





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
89	4116 - Mixed N. Hardwood - Aspen	Medium Density	34.1	5		Stand was harvested in 2007, sale number 72-045-05-01. Regen has come back heavy to cherry. There are pockets of heavy aspen but aspen is not consistent across the stand. Adequate sprouting from stumps for red maple and oak. White pine was left uncut it appears and ranges from pole to log size.
90	4191 - Mixed Upland Deciduous with Conifer	Low Density Sapling	9.8	30		Previous inventory had this stand as a U3, it has moved into a forested stand of mixed hardwoods with some white pine. Open grown trees, not much value.
91	4133 - Aspen, Mixed Pine	High Density Pole	22.2	41		Western portion of stand has a strong red pine component, eastern have is predominately aspen. Recommend final harvest.
93	42210 - Natural Red Pine	High Density Pole	1.8	67	141-170	This stand appears to be a retention island from the previous harvest of stand 88. Stand should be treated but because of retention and size no treatment is prescribed. Nice looking red pine. Avg BA was 144, range was 110 - 180.
94	4311 - Pine, Aspen Mix	High Density Log	18.4	84	81-110	Majority of red pine is very large (> 16"). It is potentially past its economic prime. Not much else in stand is merchantable except a few pockets of log size aspen.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
13	3302 - Low Density Conifer Trees	1.4	Yes	Low (NonForested)	Wildlife opening that is seeding in with trees particularly Jack pine.
14	622 - Lowland Shrub	3.4	No	Unspecified	Lowland shrub bordering East Branch Big Creek.
16	3102 - Grass	2.4	Yes	Low (NonForested)	Managed wildlife opening.
22	6220 - Alder/willow	3.4	No	Low (NonForested)	Small lowland shrub area rimmed with trees.
25	50 - Water	1.2	No	Unspecified	Water body with standing snags throughout.
26	6220 - Alder/willow	3.6	No	Low (NonForested)	Small alder willow kettle.
33	3102 - Grass	1.4	Yes	Medium (NonForested)	Wildlife opening w/napweed.
35	50 - Water	15.7	No	Low (NonForested)	Stream running thru the middle surrounded by grasses with tag and fir along perimeter. Some tag is scattered throughout grassy area. Northern portion of stand in the MNFI Rough Fescue Polygon.
38	3102 - Grass	1.0	Yes	Medium (NonForested)	Appears to be another wildlife opening.
50	3102 - Grass	3.0	Yes	Medium (NonForested)	Managed wildlife opening.
56	6229 - Mixed lowland shrub	1.9	No	Low (NonForested)	Spruce alder wet area.
58	50 - Water	8.8	No	Low (NonForested)	Wright Creek Impoundment.
74	50 - Water	7.7	No	Low (NonForested)	Nice water body, with willow along the perimeter.
75	50 - Water	0.9	No	Low (NonForested)	Small portion of a larger water body that is primarily on private land.
79	622 - Lowland Shrub	0.4	No	Unspecified	Small wet area rimmed with lowland conifer.
82	622 - Lowland Shrub	0.5	No	Unspecified	Small wet area rimmed with lowland conifer.
84	622 - Lowland Shrub	1.1	No	Unspecified	Small wet area rimmed with lowland conifer.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
85	6233 - Wet Meadow	1.0	No	Low (NonForested)	grassy area, wet.
92	50 - Water	1.1	No	Unspecified	Small water hole with grass and leatherleaf as ground cover, Perimeter has Jack and Red Pine.



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	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.
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.