



## GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW RESENTATION

COMPARTMENT # 5 ENTRY YEAR: 2012

GIS Compartment Acreage: 1997 County: Oscoda

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**Revision Date:** September 7, 2010

**Stand Examiner:** Joan Charlebois

**Legal Description:** T27N R1E Sections 16, 17, 18, 19, 20, 21  
Greenwood Township – South Part

**Management Goals:** To maintain forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment while providing for multiple use and visual management.

**Soils and Topography:** The terrain varies from low drainages to steep hills. Soils are primarily Graycalm-Graylings Sands, with lesser representation in moderate to excessively well-drained sands, and organic soils.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** The compartment encompasses state land spread across six sections, with a significant amount of private property interface. Adjacent property development is a mix of seasonal/recreational and year-round residences.

**Unique, Natural Features:** Michigan Impact Monitoring System (MIMS) plots are located in Section 18.

**Archeological, Historical, and Cultural Features:** None known.

**Special Management Designations or Considerations:** None.

**Watershed and Fisheries Considerations:** Small drainages that originate in sections 20 & 21 empty into Sohn Creek, which is part of the AuSable's Natural Rivers designation.

**Wildlife Habitat Considerations:** The compartment's jack pine, aspen, oak, swamp conifer and grass cover types provide habitat for a variety of game and non-game wildlife species.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of ice-contact outwash sand and gravel. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. The nearest gravel pit is two miles to the southwest; however, gravel potential is thought to be good on the upland areas. None of the State land in the compartment is leased for oil and gas development. The Antrim Shale is the main producing formation in the area.

**Vehicle Access:** Most of the compartment is accessible by county roads, including County Road 608, Walsh Road, Griffin Road, Fire Tower Road, Granger Road and Pine Haven Road, and also by a network of two-tracks.

**Survey Needs:** Much of the area had been surveyed by the State in the last thirty years, and nearly all of the corners were located during boundary verification.

**Recreational Facilities and Opportunities:** The Red Oak snowmobile trail (#9) runs through the compartment. Hunting and hiking were the main forms of dispersed recreation noted within the compartment. Evidence of heavy illegal ORV use was found in the south parts of sections 20 & 21, particularly in stand 79.

**Fire Protection:** The compartment has a mix of deciduous and conifer cover, most of it upland, with good access.

➤ **The following reports are available:**

- ◆ **Cover Type by Age Class**
- ◆ **Proposed Treatment Summaries**
- ◆ **Dedicated Conservation Area Details**
- ◆ **Listing of Forested Stands**
- ◆ **Listing of Non-Forested Stands**
- ◆ **Proposed Treatments – No Limiting Factors**
- ◆ **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**
- ◆ **Proposed road access system**
- ◆ **Special Conservation areas**

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

Compartment 5  
 T27N, R01E, Sec. 16-21  
 County: Oscoda  
 Unit: Grayling  
 YOE: 2012  
 Acres: 1,997 GIS Calculated  
 Stand Examiner: Joan Charlebois  
 Map Revised: 9/07/2010  
 Map Phase: Pre-Review

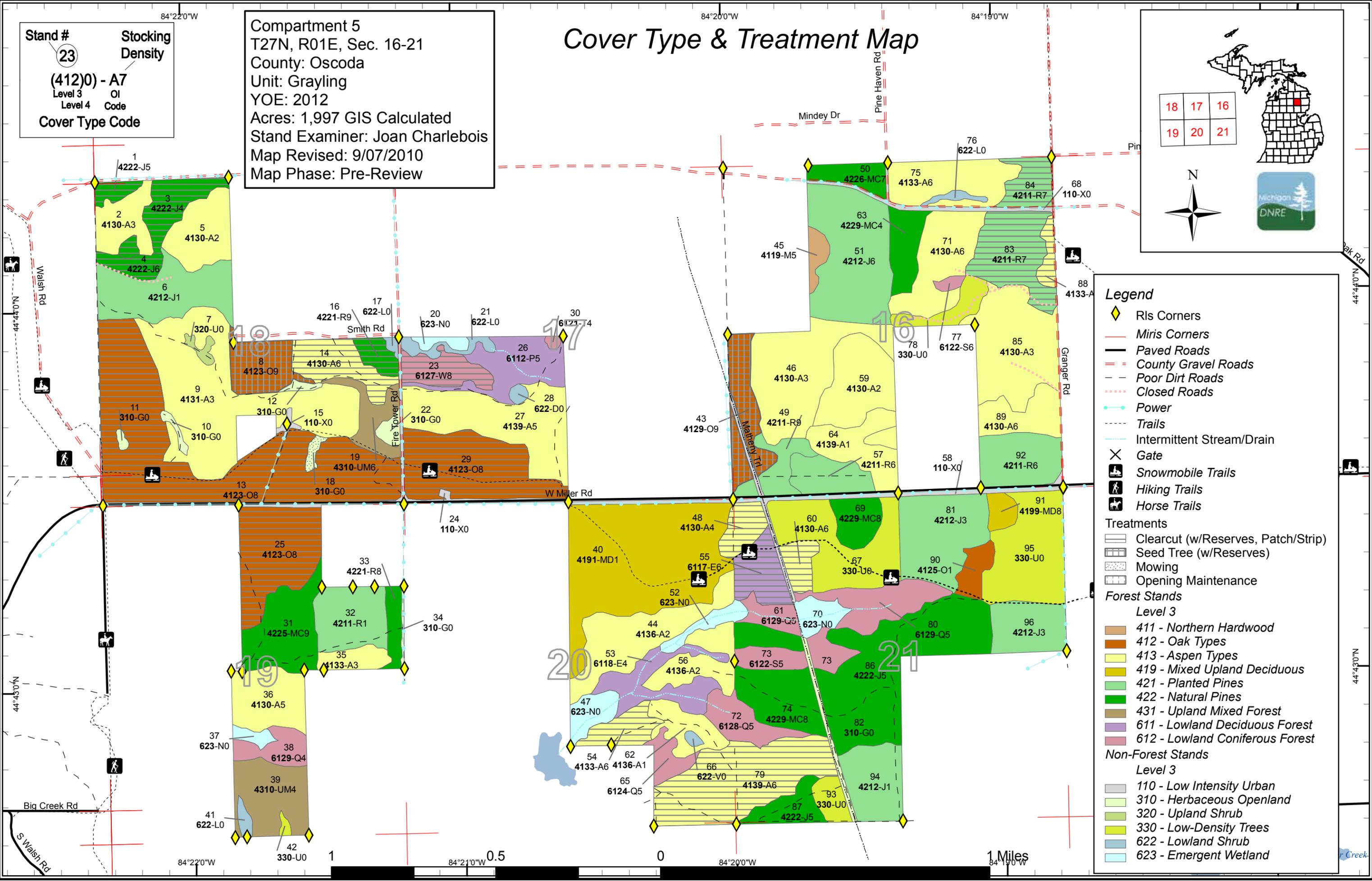
# Cover Type & Treatment Map

18	17	16
19	20	21



## Legend

- RIs Corners
  - Miris Corners
  - Paved Roads
  - County Gravel Roads
  - Poor Dirt Roads
  - Closed Roads
  - Power
  - Trails
  - Intermittent Stream/Drain
  - Gate
  - Snowmobile Trails
  - Hiking Trails
  - Horse Trails
- Treatments**
- Clearcut (w/Reserves, Patch/Strip)
  - Seed Tree (w/Reserves)
  - Mowing
  - Opening Maintenance
- Forest Stands**
- Level 3**
- 411 - Northern Hardwood
  - 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 431 - Upland Mixed Forest
  - 611 - Lowland Deciduous Forest
  - 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3**
- 110 - Low Intensity Urban
  - 310 - Herbaceous Openland
  - 320 - Upland Shrub
  - 330 - Low-Density Trees
  - 622 - Lowland Shrub
  - 623 - Emergent Wetland



# Stand Boundary Map

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

Compartment 5  
 T27N, R01E, Sec. 16-21  
 County: Oscoda  
 Unit: Grayling  
 YOE: 2012  
 Acres: 1,997 GIS Calculated  
 Stand Examiner: Joan Charlebois  
 Map Revised: 9/07/2010  
 Map Phase: Pre-Review

18	17	16
19	20	21

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### Legend

- ◆ RIs Corners
- Miris Corners
- Paved Roads
- == County Gravel Roads
- - Poor Dirt Roads
- ... Closed Roads
- ⚡ Power
- Trails
- ~ Intermittent Stream/Drain
- ✕ Gate
- ▭ Stand Boundaries

### Forest Stands

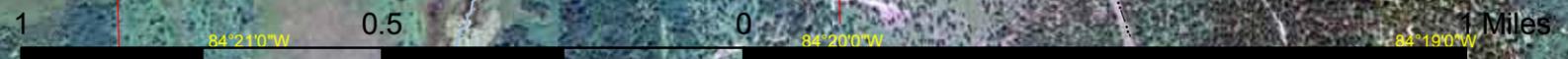
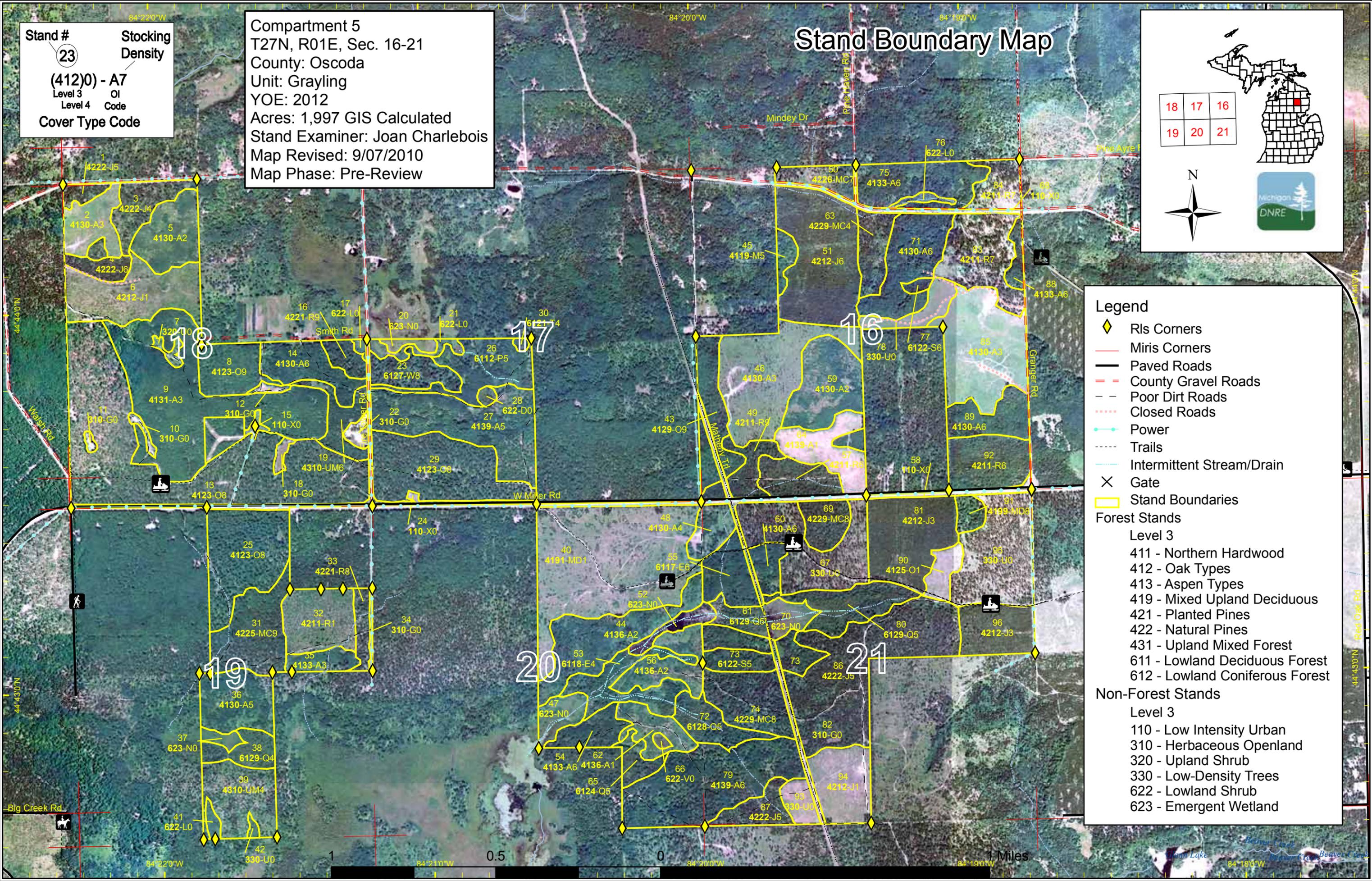
Level 3

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

### Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland



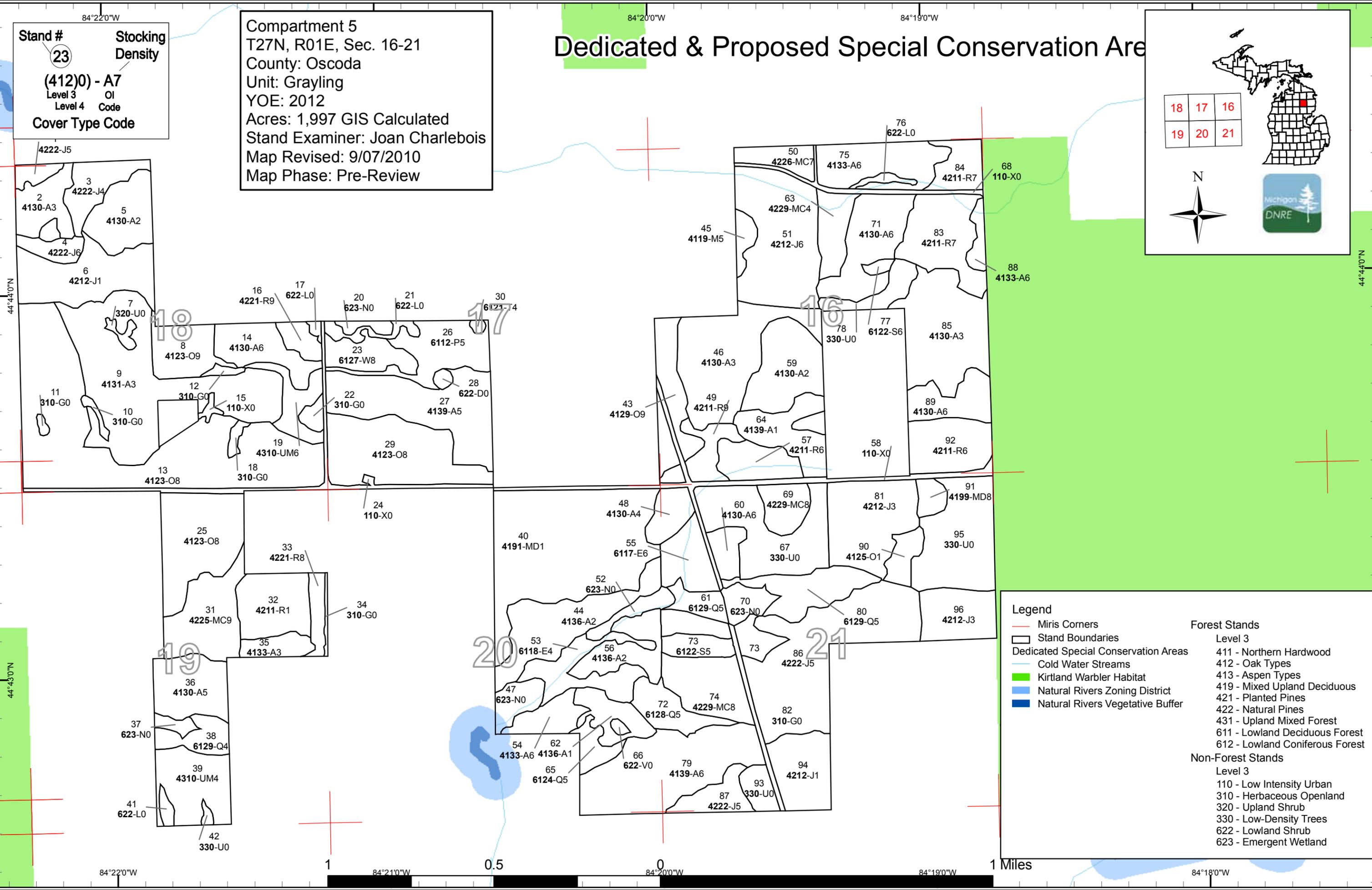
# Dedicated & Proposed Special Conservation Area

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

Compartment 5  
 T27N, R01E, Sec. 16-21  
 County: Oscoda  
 Unit: Grayling  
 YOE: 2012  
 Acres: 1,997 GIS Calculated  
 Stand Examiner: Joan Charlebois  
 Map Revised: 9/07/2010  
 Map Phase: Pre-Review

18	17	16
19	20	21

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- Legend**
- Miris Corners
  - Stand Boundaries
  - Cold Water Streams
  - Kirtland Warbler Habitat
  - Natural Rivers Zoning District
  - Natural Rivers Vegetative Buffer
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
  - 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 431 - Upland Mixed Forest
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- Non-Forest Stands**
- Level 3
- 110 - Low Intensity Urban
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  - 320 - Upland Shrub
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  - 623 - Emergent Wetland

**Table 1 – Total Acres by Cover Type and Age Class**

Data updated before 2:00 PM



	Age Class														Total	
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Uneven Age
Aspen	0	142	138	169	79	119	0	0	0	0	0	0	0	0	0	648
Bog	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Herbaceous Openland	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Jack Pine	0	25	38	120	0	95	7	0	0	0	0	0	0	0	18	303
Low-Density Trees	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	107
Lowland Aspen/Balsam Poplar	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	27
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	15	0	0	23	43	81
Lowland Deciduous	0	0	0	0	0	17	0	0	0	0	0	0	0	0	23	40
Lowland Shrub	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18
Marsh	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108	108
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103	103
Northern Hardwood	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5
Oak	0	8	0	0	0	0	0	0	0	171	50	43	0	0	0	272
Red Pine	0	0	26	41	0	0	0	13	45	0	0	0	0	0	14	139
Tamarack	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Treed Bog	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	41
Upland Shrub	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Urban	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
<b>Total</b>	<b>212</b>	<b>175</b>	<b>202</b>	<b>357</b>	<b>79</b>	<b>231</b>	<b>7</b>	<b>13</b>	<b>50</b>	<b>171</b>	<b>65</b>	<b>43</b>	<b>0</b>	<b>23</b>	<b>368</b>	<b>1997</b>



## Table 2 – Proposed Treatment Summaries

*Data updated before 2:00 PM*

**Grayling Mgt. Unit**  
**Year of Entry 2012**

**Compartment 005**  
**Total Compartment Acres: 1997**

### Acres by Treatment Type

Commercial Harvest - 496	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 4	Tree Seeding - 0	Pesticide - 0	

### Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
<b>Aspen</b>	119	0	0	0	0	0	0	119
<b>Jack Pine</b>	30	0	0	0	0	0	0	30
<b>Lowland Conifers</b>	15	0	0	0	0	0	0	15
<b>Lowland Deciduous</b>	17	0	0	0	0	0	0	17
<b>Oak</b>	223	0	41	0	0	0	0	264
<b>Red Pine</b>	52	0	0	0	0	0	0	52
<b>Total</b>	<b>455</b>	<b>0</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>496</b>



Data updated before 2:00 PM

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
<b>1 72005001-cc</b>	4.6	42220 - Natural Jack Pine	Medium Density Pole	41	Harvest	Clearcut	Planted Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> Final harvest, no retention.								
<u>Specs:</u>								
<u>Other</u>								
<u>Comments:</u>								
<u>Next</u> Trench & plant JP								
<u>Steps:</u>								
<b>3 72005003-ccr</b>	18.0	42221 - Natural Jack Pine, Mixed Deciduous	Low Density Pole	47	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<u>Prescription</u> Harvest the aspen 2" & up, merchantable JP, NPO 8" & up, and leave the few WP & RP. Include smaller polygon to SW in stand 4's Rx.								
<u>Specs:</u>								
<u>Other</u> Treatment objective: regeneration								
<u>Comments:</u>								
<u>Next</u> If mixed natural regen is inadequate, as it may be at the south end of the stand, plant jack pine at the same time as stands 1 & 4.								
<u>Steps:</u>								
<b>4 72005004-cc</b>	7.4	42220 - Natural Jack Pine	High Density Pole	51	Harvest	Clearcut	Planted Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> Final harvest, including stand 3's smaller polygon. Leave the few RP.								
<u>Specs:</u>								
<u>Other</u>								
<u>Comments:</u>								
<u>Next</u> Trench & plant JP								
<u>Steps:</u>								
<b>8 72005008-seed</b>	19.3	4123 - Red Oak	High Density Log	86	Harvest	Seed Tree with Reserves	Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<u>Prescription</u> Seed tree with reserves, 10-20 BA residual, & leave a strip of trees along the edge of the maintained wildlife opening stand 12, excluding the SE peninsula as a retention island. Within main body of stand, mark oak to leave in small clumps in order to minimize the effect on expected sprout-origin regen; avoid leaving oak adjacent to aspen. Leave the few WP & RP.								
<u>Specs:</u>								
<u>Other</u> Treatment objective: regeneration. Fence along N side of stand appears to be in trespass; recent pvt survey. Research plot - OFS - find out if								
<u>Comments:</u> can carry treatment across it or if plot area needs to be excluded.								
<u>Next</u>								
<u>Steps:</u>								
<b>13 72005013-removal</b>	129.7	4123 - Red Oak	Medium Density Log	85	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<u>Prescription</u> Remove most of the overstory oak, leave the RP & WP, mark oak to leave in clumps for visual along 608 & snowmobile trail to augment pine residual. Also leave a strip of trees along the edge of the maintained wildlife opening stand 18. Evaluate white oak health during sale prep - consider leaving all WO. Shortwood only, no chipping of tops, in order to protect the existing regeneration.								
<u>Specs:</u>								
<u>Other</u> Treatment objective: second cut in shelterwood system to release established regeneration.								
<u>Comments:</u>								
<u>Next</u>								
<u>Steps:</u>								



Data updated before 2:00 PM

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
14	72005014-ccr	20.6	4130 - Aspen	High Density Pole	40	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Final harvest 2" & up except leave oak <10" DBH & mark some pine & mature oak for visual relative to the access roads. <u>Specs:</u> <u>Other</u> Treatment objective: regenerating the aspen & oak. <u>Comments:</u> <u>Next Steps:</u>									
16	72005016-ccr	6.8	42210 - Natural Red Pine	High Density Log	91	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<u>Prescription</u> Final harvest with reserves. Mixed natural regen goal. Under contract 720060901, with pine marked to leave in clumps, unit not yet cut. <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next Steps:</u>									
23	72005023-ccr	14.9	6127 - Lowland Pine	Medium Density Log	92	Harvest	Clearcut with Reserves	Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal
<u>Prescription</u> Final harvest with reserves. Mixed natural regen goal. Under contract 720060901, with pine marked to leave in clumps, unit not yet cut. <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next Steps:</u>									
25	72005025-removal	42.8	4123 - Red Oak	Medium Density Log	100	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Remove most of the oak overstory, leave the few pine, & mark oak to leave in small clumps - where pine residual is scarce - for visual along 608 and west line. Evaluate white oak health during sale prep - consider leaving all WO, short-wood harvest and leave tops to minimize damage to existing regen. <u>Specs:</u> <u>Other</u> Treatment objective: second cut in shelterwood system to release the established regen. <u>Comments:</u> <u>Next Steps:</u>									
29	72005029-removal	50.1	4123 - Red Oak	Medium Density Log	90	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<u>Prescription</u> Remove most of the overstory oak, leave the RP & WP, mark oak to leave in clumps for visual along 608 & snowmobile trail to augment pine residual. Evaluate white oak health during sale prep - consider leaving all WO. Shortwood only, no chipping of tops, in order to protect the existing regeneration. <u>Specs:</u> <u>Other</u> Treatment objective: second cut in shelterwood system to release established regen. <u>Comments:</u> <u>Next Steps:</u>									

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
<b>43 72005043-seed</b>	21.8	4129 - Mixed Oak	High Density Log	89	Harvest	Seed Tree with Reserves	Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal

Prescription Seed tree to roughly 20 BA residual by leaving all RP & WP & marking oak to make up the difference. Mark the oak to leave in small clumps to minimize the impact on the sprout-origin regen, & avoid leaving oak near aspen. Hillside on the north end overlooks private residences; select trees to leave there with a focus on visual management.

Other Treatment objective: regeneration.

Comments:

Next Steps:

<b>48 72005048-removal</b>	10.8	4130 - Aspen	Low Density Pole	42	Harvest	Clearcut	Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Remove the overstory to release the existing regen. No retention due to small stand size.

Specs:

Other Treatment objective: regeneration.

Comments:

Next Steps:

<b>54 72005054-cc</b>	12.1	4133 - Aspen, Mixed Pine	High Density Pole	40	Harvest	Clearcut	Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Final harvest; no retention due to small stand size. Leave tops.

Specs:

Other Treatment objective: regenerate the aspen.

Comments:

Next Steps:

<b>55 72005055-ccr</b>	17.0	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	42	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Final harvest with retention islands circa OFS wetlands, mark some SC pine for visual along snow trail, leave the few WO, and where dry enough, cut roughly a chain into the adjacent swamp at the south end. Leave tops.

Specs:

Other Treatment objective: regenerate the aspen.

Comments:

Next Steps:

<b>60 72005060-ccr</b>	8.3	4130 - Aspen	High Density Pole	42	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Final harvest, leave retention islands circa OFS wetlands, leave the few WO, & mark some pine to leave for visual relative to the snow trail. Leave tops.

Specs:

Other Treatment objective: regenerate the aspen.

Comments:

Next Steps:

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Data updated before 2:00 PM

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
79 72005079-ccr	61.8	4139 - Aspen, Mixed Deciduous	High Density Pole	39	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription: Final harvest with reserves: retention pocket circa SCRP & pole inclusion on E side of N-S two-track, leave the WO, mark some oak & pine for visual in SW along access roads, & cut roughly a chain into the adjacent swamp edges. Leave tops.

Other Comments: Treatment objective: regenerate the aspen.

Next Steps:

83 72005083-Removal	32.5	42110 - Planted Red Pine	Low Density Log	73	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription: Remove the overstory, leaving some RP in clumps for visual, focusing on SC-stature stems.

Specs:

Other Comments: Treatment Objective: release established regen.

Next Steps:

84 72005084-removal	12.8	42110 - Planted Red Pine	Low Density Log	72	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
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Prescription: Remove the overstory RP, marking clumps to leave for visual along the roads, avoiding areas with established regen.

Specs:

Other Comments: Treatment objective: regeneration.

Next Steps:

88 72005088-cc	5.1	4133 - Aspen, Mixed Pine	High Density Pole	43	Harvest	Clearcut	Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription: Final harvest, no aspen retention in this small stand. Leave the few SCRP stems.

Specs:

Other Comments: Treatment objective: regeneration

Next Steps:

12 NF_72005012-WLO	1.8	Non-Forested		0	Non-Forest Management	Other - Specify	Mixed Upland Herbaceous	Cmpt. Review Proposal
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Prescription: Routine opening maintenance & forage planting.

Specs:

Other Comments:

Next Steps:



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
18 NF_72005018-WLO	2.2	Non-Forested		0	Non-Forest Management	Mowing	Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Routine opening maintenance.

Specs:

Other

Comments:

Next

Steps:

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**Total Treatment  
 Acreage Proposed: 500.4**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription  
Specs:

Other  
Comment:

Next  
Steps:

Limiting Factor and No  
Treatment Reason

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**Total Treatment**  
**Acreage Proposed:        0**

Data updated before 2:00 PM

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

Year of Entry: 2012



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription  
Specs:

Other  
Comments:

Next  
Steps:

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**Total Treatment  
Acreage Proposed:           0**



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42220 - Natural Jack Pine	Medium Density Pole	4.6	41	51-80	Generally small pole/large sap JP in their 40's, with scattered super-canopy JP (70+ years old) that seeded in the stand. A handful of NPO. Variable stocking with U/G mixed in. Second age on minority SCJP.
2	4130 - Aspen	High Density Sapling	16.7	7		Trembling aspen regen from 2003 cut (720460201 G&G FP). Small U/G inclusions. JP seeded in at the landing.
3	42221 - Natural Jack Pine, Mixed Deciduous	Low Density Pole	18.0	Uneven Age	1-50	Variable mixed stand: JP with trembling aspen, NPO & U/G, scattered RP & WP. Wide range of age & size classes, with the older JP & TA breaking up. No lack of snags & DWD.
4	42220 - Natural Jack Pine	High Density Pole	7.4	51	51-80	JP generally in its 50's, with older & younger minority components; the 70+ year old pioneer JP largely died out. Occasional NPO clumps. Black carpenter ants.
5	4130 - Aspen	Medium Density	23.5	17		Trembling aspen clones separated by U/G. Hypoxylon accelerating the stem weed-out process. Black canker also present in some of the sparser clones. Cut in 1992 under 720149201.
6	42120 - Planted Jack Pine	Low Density Sapling	38.4	15		JP plantation with a minor component of RP planted also. JP making better use of the site. Also large sap/small pole JP residual from the 1992 cut (720149201), and cherry & NPO stump sprouts. Stand's S edge picks up some red maple & aspen regen, along with more oak sprouts. E edge has a narrow uncut strip adjacent to the private.
8	4123 - Red Oak	High Density Log	19.3	86	111-140	Stand dominated by small-medium NRO saw with a minority of notable stems in the xlog category. WO, RM, BTA & TA lesser associates. While the RM is generally sub-dominant & doesn't account for much of the crown cover, poles in the multiple-stem stump clumps account for a disproportionate representation in the BA swings; one "in" clump good for 30-40 sq.ft. A portion of even the dom NRO are showing some upper crown fine branch dieback. Scattered WP & RP saps to S, averages out to less than low stocking level. OFS research plot.
9	4131 - Aspen, Oak	High Density Sapling	91.7	24		Aspen-oak-RM stand with a minority of stems just moved into the pole class. Cut between 1983 & 1986 under 720408301. Trembling aspen mostly N of two-track, BTA predominates S of two-track. RM & NRO stump sprouts are mixed into the aspen clones & constitute the majority cover between aspen clones, particularly to the S. The stump-origin NRO are vigorous codominants - if not dominants - in the canopy and are weeding down nicely toward 1-3 main stems/clump. Small uncut pocket of mature oak on hillside N of CMU tower.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
13	4123 - Red Oak	Medium Density Log	129.7	85	51-80	All aspen, RM & marked oak were removed between 2003 & 2004 under 720050201, down to 50-60 BA. Most of the overstory oak is in the small saw/large pole size range, with fine branch die-back in the upper crown and epicormic branching common. Uneven distribution of RP & WP poles & saw. Understory consists of RM & oak stump sprouts, aspen sprouts (mostly in S1/2), & naturally-recruited WP & RP saps. Generally positive radial growth response to the harvest release, but it was on the order of 2-3 millimeters increase in total growth since the harvest, compared with that over the same length of time prior to the harvest. The oak stump sprouts are working their way out of deer browse range, but have some catching up to do with the RM & BTA. In the west end, someone spent time weeding RM & oak stump clumps by snapping off sub-dominant outer stems. Slash accumulation from the harvest; tops were not chipped.
14	4130 - Aspen	High Density Pole	20.6	40	111-140	BTA, TA & RM from 1969 cut, that grew up under scattered residual oak & RP saw. Some statuesqe NRO saw. Good site; where there was less residual competition, the aspen is moving into the saw class. There appears to have been a 2nd RM regen event, resulting in understory class. Small amt of NRO was cut -- now nice poles.
16	42210 - Natural Red Pine	High Density Log	6.8	Uneven Age	111-140	Stand on ground close to the water table, grading down to adjacent L type & with small tag alder inclusions, clumps of Carpinus caroliniana. Dominated by RP sawtimber with WP of larger stature. Mixed in are trembling aspen, bam, RM, NRO, WO & a trace of basswood.
19	4310 - Pine, Oak Mix	High Density Pole	13.0	Uneven Age	51-80	RP small saw/large pole residual overstory left when NRO, BTA & RM were removed during two harvests: the south half in 1986 under 720408301, and the north half about a decade earlier. Second age is tied to more recent recorded harvest. RP stocking varies across the stand, from poor to 130 BA. Where the RP overstory stocking is poor, the RP tends to be stocky & limby, with weeviled tops. Generally wolfy WO saw also left, along with small WP. BTA & RM regen largely suppressed due to the RP cover, but NRO stump sprouts took off & moved above most of the post-harvest competition. Small herbaceous opening inclusion in NW.
23	6127 - Lowland Pine	Medium Density Log	14.9	92	111-140	RP & WP saw & xlog WP on ground close to the water table, grading down to L3 edge. Standing water in cradle knolls after recent rains, rich forb/fern layer, blue flag iris, poison ivy, pockets of tag alder & swales with thick Carpinus caroliniana cover. WP & RP saw were selectively removed under 720448301 by early 1984.
25	4123 - Red Oak	Medium Density Log	42.8	100	1-50	Shelterwood cut by 1995 under 720189201, all BTA, RM, marked oak. Residual NRO with upper crown die-back & epicormic branching common. Understory dominated by aspen, with RM stump sprouts second. Oak stump sprouts have made it above the browse line but are well below the subcanopy; combined NRO & WO under "oaks" to record in subcanopy. Occasional pine sap/pole/logs.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
26	6112 - Lowland Aspen	Medium Density Pole	26.6	26	1-50	Cut by early '84 under 720448301. On ground close to the water table, if not low ground, cut by tag alder & salix swales, with marsh inclusions. Mostly trembling aspen, with bam on the lowest ground. TA on the lower ground is less vigorous & smaller in diameter than that on the "drier" ground. Because of the merchantable & up cutting spec, there are scattered older aspen stems. Pockets of aspen that were isolated by wetlands were also left uncut. Despite the low ground, there isn't wide-spread WP or balsam fir regen; the conifer understory is concentrated in the W and SE.
27	4139 - Aspen, Mixed Deciduous	Medium Density Pole	52.4	26	1-50	Cut by early '84 under 720448301. Mixed aspen, RM & oak regen from the merchantable & up cut are transitioning into the pole class, with varying age/size residual WP & RP. Species distribution varies, with aspen in dense clones and areas between them heavy to RM & oak stump sprout clumps. Small sparse frost pocket depressions have U/G & scattered pine, along with patches of older oak & RM left on the steeper sidehills. The oak clumps are weeding down to fewer stems & are generally competitive with the RM & aspen.
29	4123 - Red Oak	Medium Density Log	50.1	90	81-110	All aspen, RM & marked oak were removed in 2003 under 720050201, down to 50-60 BA. Upper crown die-back common in the NRO; WO holding up better. Stems with the most NPO influence dying out the fastest. GM present, defoliation light - NPV mortality. Oak seedlings are in the ground cover (mostly WO), not much in stump sprouts. Wide range of WP & RP size classes/stocking/distribution. BTA regen pockets. WP & RP saps average to the high end of low range. Areas of stand multi-storied.
30	6121 - Tamarack	Low Density Pole	1.0	Uneven Age		Tamarack, spruce, WP & RP that's been filling in over labrador tea & leatherleaf on a deep sphagnum mat.
31	42250 - Pine, Oak	High Density Log	32.1	Uneven Age	81-110	Naturally-established RP stand. Multi-storied; wide range of age/size classes from saps to the fire-scarred super-canopy saw that spawned the stand. Largely poor-quality NPO & WO mixed in, NPO declining; WO maintaining decent health. Scattered individual stems & small pockets of declining BTA, JP more to S end. Oak seedlings - mostly WO - generally limited to groundcover, under the brackenfern. Some nice oak saps to S, but localized along 2-tracks; doesn't ave out to recordable levels. Also pick up RM saps/poles to SW.
32	42111 - Planted Red Pine, Mixed Deciduous	Low Density Sapling	25.8	16		Trenched & planted in 1994. The well-established RP stems have 14-16" internodal growth, while the RP overtopped by oak stump sprouts are lagging behind. Naturally-recruited JP saps & scattered RP pole/saw resid from cut. Nice oak stump sprouts & seed-origin saps.
33	42210 - Natural Red Pine	Medium Density Log	7.1	Uneven Age	81-110	Variable, naturally-established RP stand with short, poor quality NPO - the older component dying out. Scattered better-health younger NPO poles & WO. Below-recordable amounts of JP & oak saps.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
35	4133 - Aspen, Mixed Pine	High Density Sapling	8.5	17		Cut in 1993 under 720199201. Was trenched & planted to RP in 1994, but the RP either died-out (as under the BTA) or is largely suppressed (under the TA). RP is growing well where not overtopped, but that's the exception. Diameters vary, depending on who's overtopping whom, but the aspen is mostly in the sapling class. Scattered large supercanopy RP.
36	4130 - Aspen	Medium Density Pole	25.3	26		Merchantable stems cut between 1983 & 1985 under 720428301. Mixed aspen, RM & NPO stand on upland ground grading down to wetlands, with a tag alder swale inclusion near the east edge. Hypoxylon & black canker present but not pervasive, mostly near the lowlands. Clones less well-developed & more widely-separated at the stand's south margins; U/G in between with black spruce & JP.
38	6129 - Mixed Coniferous Lowland Forest	Low Density Pole	11.4	Uneven Age	1-50	Spindley black spruce & tamarack poles over layers of regen, swath of short, flooded-ground cedar, dead spire tops common. Over diverse shrub & forb/fern layer. High water table is hampering tree growth & survivorship.
39	4310 - Pine, Oak Mix	Low Density Pole	28.2	Uneven Age	1-50	Merchantable stems cut between 1983 & 1985 under 720428301. NPO, JP, RM & TA for the most part regenerated from the harvest; RP & WP from saps to saw, generally short, limby, as are most of the species out there. NPO stump sprouts moving into the pole class, not weeding down stem density since so much room to grow. Oddly, some have top dieback in the dominant stem. Liberal U/G inclusions. Black spruce adjacent to lowlands and in small lowland inclusion along the stand's center-east edge. Overall, the ground is high & dry (Cadina, sedge, brackenfern) despite lowland proximity.
40	4191 - Mixed Upland Deciduous with Conifer	Low Density Sapling	102.3	Uneven Age	1-50	Nice mixed stand with good oak regen from 2 harvests in addition to RP planted in 2005 under FTP C72-499. 2 age classes of oak & RM stump sprouts (1984 under 720458301, & 2004 under 720470201), naturally recruited JP & RP saps & poles, scattered residual RP saw. TA regen along E edge. Youngest oak already secure, seeing small amount of die-back in the older oak sprouts. Most of the planted RP not yet recordable (under 3' tall).
43	4129 - Mixed Oak	High Density Log	21.8	89	111-140	Northern red oak, northern pin oak & white oak, with red maple, BTA & red pine, on rolling terrain. The oak with the strongest NPO characteristics is declining the fastest. There are two age-classes of aspen; the majority is overmature, but there are also small poles in their early 40's. The understory coverage is variable, with locally full stocking in oak (largely WO). The RM saps are mostly in the N end, at the bottom of the hill fronting the private property. Stand is split by a cleared pipeline corridor.
44	4136 - Aspen, Mixed Conifer	Medium Density	37.9	17		Young trembling aspen stand with short, limby WP & RP residual from the 1992 cut (720209201), and balsam fir mixed in. Majority upland, with tag alder inclusions along its S edge that are relatively dry right now. Beaver cutting created openings along the S edge.
45	4119 - Mixed Northern Hardwoods	Medium Density Pole	5.1	77	81-110	Small stand bordered by young JP plantation to the N-E-S & pvt on the W side. Only the JP removed in 1982. Stump-origin RM stems moving into the cull saw class, along with declining NPO & TA. RM saps filling in below in dense pockets.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
46	4130 - Aspen	High Density Sapling	52.6	6		Vigorous BTA, RM & NPO regen from early 2004 cut (720450202), residual RP saw & poles left scattered across the stand.
48	4130 - Aspen	Low Density Pole	10.8	42		Stand had all the RP removed in early 2004 under 720360201, leaving variable, patchy overstory cover in TA & RM, along with dying out NPO & overmature JP. Areas that were heavy to RP now have 6 year old TA & RM regen. Cut created an unusual 2-aged condition in intolerant spp.
49	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	13.0	68	111-140	RP sawtimber with JP, BTA, NPO, white oak & RM. The RP also has lesser pole & supercanopy components. The overmature JP, NPO & BTA are declining. The stand's E edge picks up part of the adjacent RP plantation that is stagnating under heavier RP saw canopy cover.
50	42260 - Natural Pine, Mixed Deciduous	Low Density Log	10.3	Uneven Age	1-50	All but the RP was cut in 1982. RP represented by scattered supercanopy stems along with younger (early 70's) majority RP saw component. RP concentrated on the hilltop overlooking a frost-pocket opening that is filling in with JP & cherry. The opening has a nice mix of dry prairie plants. OFS: old borrow-pit with small amount of bricks/concrete rubble dumped in it. The stand's east end picks up some trembling aspen.
51	42120 - Planted Jack Pine	High Density Pole	57.9	27	51-80	Cut in 1982 except for RP saw. JP planted in 1983. Scattered cherry & NPO regen from the harvest, also RM & TA near the stand's margins. Trace of RP saw. Decent stocking except around the deciduous competition.
53	6118 - Lowland Deciduous with Cedar	Low Density Pole	22.7	Uneven Age	1-50	Narrow, variable E/Q type left as a buffer along the wetlands & drainages when the adjacent upland stands were cut. Primarily occupies a floodplain with spindley dead-topped black ash, RM, large cull TA, & NWC in small pockets & occurring singly with the ash. Stand also has opener areas with mostly tag alder cover that are being colonized by balsam fir. To the NE, the stream channel becomes more braided. In the SE peninsula, beaver have recently flooded an area and killed most of the conifer cover.
54	4133 - Aspen, Mixed Pine	High Density Pole	12.1	40		Trembling aspen with considerable competition from RP & WP residual overhead & balsam fir below. TA diameters vary widely, depending on severity of conifer competition. RM clumps from cut & scattered terrible health NPO saw mixed in. On upland ground with lowland interface along N edge. Hypoxylon present, but not widespread.
55	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	17.0	42		Aspen stand, 2/3's of it on low ground with tag alder & vernal pond inclusions, E1/3 on upland ground. Scattered large RP & WP saw, mostly on higher ground, along with scattered oak. Balsam fir filling in below & working its way into the canopy. Beaver cutting the aspen along the S edge, adjacent to flooded area.
56	4136 - Aspen, Mixed Conifer	Medium Density	19.8	15		Mixed aspen, red maple, jack pine & oak regen from 1994 harvest (720209201). Beaver cutting adjacent to the lowland drainage corridors have created poorly-stocked areas heavier to balsam fir and jack pine.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
57	42110 - Planted Red Pine	High Density Pole	15.9	27	51-80	RP planted around residual RP saw in 1983, with JP & oak regen from the 1982 harvest. Planted RP diameters vary, depending on the amount of overtopping competition. The RP saw coverage is variable, with densities increasing in the stand's S & W.
59	4130 - Aspen	Medium Density	34.0	17		Regen from late 1992 cut: dense aspen clones with RM & NPO sprouts mixed in, separated by lower-stocked areas with JP, NPO and scattered aspen stems. BTA better developed and healthier than the TA.
60	4130 - Aspen	High Density Pole	8.3	42		Aspen (mostly trembling, minor amount BTA), along with RM, RP & WP poles that regenerated around the residual RP, WP, oak & RM saw left from the 1968 harvest. The stand is solid upland except for a string of 3 small wetland inclusions with minimal transition zones. Beaver reduced the aspen in the stand's S end, creating small openings & shifting the species distribution to more RP & balsam fir. Aspen diameters vary, depending on the amount of overstory competition. The NPO is poor quality; there is also a handful of white oak. The stand's E edge has a trace amount of overmature JP.
61	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	8.2	Uneven Age		Swamp conifer stand bordering meandering drainage, picks up E-type inclusions where the stand grades up out of floodplain. Varying beaver activity causing water levels to fluctuate, flood-killed cedar along the drain. Rich forb/fern layer, standing water, liverwort patches.
62	4136 - Aspen, Mixed Conifer	Low Density Sapling	13.8	15		Mixed aspen, red maple, jack pine & oak regen from 1994 harvest (720209201) Beaver cutting adjacent to the lowland drainage corridors have created poorly-stocked areas heavier to balsam fir and jack pine. Recent beaver flooding along the stand's north edge. SW edge grades down onto low ground adjacent to the swamp.
63	42290 - Natural Mixed Pine	Low Density Pole	14.3	Uneven Age	1-50	Patchy, variable, multi-storied stand with multiple age- & size-classes of JP & RP, along with cherry & struggling TA. Most of the JP is in its 30's & 40's, in the small pole/large sap category, but there are scattered overmature JP large pole/small saw. The RP form tends toward being open grown, limby. The younger JP also tends toward the open-grown form except where in denser pockets. The RP & overmature JP occur mostly in the stand's N 1/2.
64	4139 - Aspen, Mixed Deciduous	Low Density Sapling	22.7	5		Final harvested by spring 2005 (720480201), trenched, but only ~9 acres planted to RP in May 2006 under FTP C72-525, avoiding areas with deciduous competition. The RP that survived are struggling (except for in the landing). The planted RP & most of the naturally-recruited JP are still below 3'. U/G with scattered oak stump sprouts occurs between the areas that regenerated heavy to TA & RM.
65	6124 - Lowland Spruce-Fir	Medium Density Pole	7.9	Uneven Age	81-110	Spindley black spruce & balsam fir poles with pockets of NWC, over tag alder & sphagnum. Balsam fir filling in below. NWC mostly in the stand's west end, more black spruce to the S & SE, open wet prairie inclusions to the NE.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
69	42290 - Natural Mixed Pine	Medium Density Log	12.3	Uneven Age	81-110	Variable mixed pine/oak stand with multiple age- & size classes of RP, JP & WP, along with poor-quality NPO. The overmature JP & NPO are declining, with WP & RP filling in. The WP regen is dog-hair thick in the stand's NW & is beginning to show fine branch flagging characteristic of <i>Diplodia scrobiculata</i> . The stand is bordered by CR 608 & a recent RPP final harvest.
71	4130 - Aspen	High Density Pole	32.3	42		Trembling aspen on dry ground, with roughly 5 acres in the stand's NE that shows signs of a seasonally high water table. That area is dry now, but supporting tag alder, <i>Carpinus caroliniana</i> , sensitive fern, etc. The stand has a small emergent wetland in its S-center (OFS point). The RP saw & xlog WP mostly occur in two areas: a pocket along Griffin Rd in the NW & a 2-acre swath through the stand's east-center. The RM & NPO occur more to the S, and the JP to the W. The late '60's harvest appears to have been merchantable & up, resulting in an older age class of aspen that were pre-commercial at the time. There is a pocket of very overmature aspen in the stand's SW corner.
72	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	15.1	Uneven Age		Mixed Q/E/L stand, with cover alternating between dense pockets of NWC & sparser, poor quality ash/red maple/aspen/balsam fir. On headwaters of small drainage flowing to W that is dammed by beaver. West end of stand is currently flooded. Slash from root-tipped cedar. Areas without tag alder cover generally have dog-hair balsam fir.
73	6122 - Black Spruce	Medium Density Pole	16.0	Uneven Age		Black spruce, tamarack & balsam fir that has been filling in an L type over decades, with NWC along the margins. Tag alder, E-type & wet meadow inclusions. Grades onto higher ground east of the pipeline, with diverse fern cover over deep sphagnum. <i>Platanthera clavellata</i>
74	42290 - Natural Mixed Pine	Medium Density Log	34.3	Uneven Age	51-80	Wide mix of species, age- & size-classes & spatial distribution: RP, JP, WP & balsam fir, with RM, T & BTA, & NPO. Balsam fir is the only species that doesn't have a log-sized component. The WP tends to be limby, with poor form. The overmature JP component is declining, same for the scattered cull aspen stems. The stand's N polygon has small clones of decent-vigor aspen poles. The NPO is nearly all mature & declining. The RM has stump-origin pole & cull saw clumps. Stocking varies widely. RP occur scattered throughout, singly & in pockets of 100-150 BA, and rimming the swamp edges. Black spruce mixes in along the swamp edges. BF & WP are gradually replacing the JP. The RM, aspen & oak components will also be replaced by those species, in the absence of disturbance.
75	4133 - Aspen, Mixed Pine	High Density Pole	29.8	43		Stand on a shallow hillside that gradually slopes S down to the county road & a narrow L2 swale TA with RP, WP & JP upland, and balsam fir, black spruce & bam near the L-type. On the lower half of the slope above the L2, depth-to-water table fluctuates, with seasonally wet ground that is currently dry. Judging by the age-range in the aspen, it was cut merchantable & up, and not cleanly even within that category. There are older stems scattered throughout & in a strip around the L-type. The older aspen is being worked on by hypoxylon, black canker & heart rot. Well-developed shrub layer. Stand gets drier to the N & W. WP terrible form. Most of the JP is in the SW along Griffin Rd.
77	6122 - Black Spruce	High Density Pole	1.9	Uneven Age		Black spruce along with off-site WP that have been filling in a small low swale. Thick sphagnum groundcover but no standing water right now.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
79	4139 - Aspen, Mixed Deciduous	High Density Pole	61.8	39		Mixed aspen stand starting on dry pine site & grading north down to lowlands. Bigtooth & trembling aspen with large RM stump clumps, declining & dying NPO, short limby WP, mostly overmature JP, & pockets of sapling to supercanopy RP. Aspen development & vigor varying widely, depending on severity of overstory competition. The early '70's cut had considerable residual, and the removal was not uniform even in the merchantable aspen. Areas between clones are more open, with mostly open-grown RM, WP & NPO. Far SW corner has some better health oak
80	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	23.2	157	81-110	Mixed conifer swamp occupying a narrow low swale. Ground gets wetter as you go west, ending in a beaver-flooding where the drainage is interrupted. NWC is most common in the stand's middle. Black spruce & balsam fir predominate on the stand's margins where the ground transitions from lowland to upland. Black spruce median small pole age in mid-40's, with oldest large poles nearing 80. Understory is dominated by often dog-hair balsam fir, with lower density black spruce regen. A handful of large WP occur within the swamp's interior, but most of the white pine is near the stand's margins, along with a narrow rim of RP & JP against the uplands.
81	42120 - Planted Jack Pine	High Density Sapling	40.5	27		JP planted in 1983. Stocking in the E half is fuller than in the W where there are more skips in the rows, but overall stocking across the stand is adequate, with decent form & growth. Scattered NPO stump sprout clumps. Narrow strip of older JP poles in the stand's SW corner along the snowmobile trail.
83	42110 - Planted Red Pine	Low Density Log	32.5	73	81-110	Planted RP saw/poles with scattered older xlog stems. Species removal cut in spring 2005 under 720450201, everything but the RP. Widely swinging BA's. Pockets of dense TA regen in canopy gaps & mixed into the residual RP. Scattered pole JP, TA & RM left from the cut.
84	42110 - Planted Red Pine	Low Density Log	12.8	72	81-110	Cut spring 2004 under 720450201, everything but the RP. Drier than rest of harvest area S of Griffin Rd, TA regen is less vigorous & there is more oak & cherry sprout regen from the harvest. RP residual is densest to the N, becoming sparser to the SW & completely open in the SE.
85	4130 - Aspen	High Density Sapling	50.1	6		Cut in early 2004 under 720460201. Vigorous aspen (majority bigtooth), oak and red maple sprouting from the regen cut. On rolling terrain; regen not as dense in the valleys, with less aspen (shifting to quaking) & more oak.
86	42220 - Natural Jack Pine	Medium Density Pole	78.0	47	51-80	Multiple-aged JP stand with RP & NPO associates. Records indicate that a series of harvests occurred across parts of the stand between 1958 & 1971. The various harvest types included diameter-limit cuts, salvages, liberations & firewood cuts. Three main JP age classes resulted from that mosaic of treatments: large sap/small poles 30-40 years old, 7-8" DBH poles 45-50 years old, & large pole/small saw stems 70-90 years old. The RP & overmature JP occur singly & in small pockets scattered throughout the stand, but are concentrated to the north and west, up against the swamp. Most of the WP & a small amount of black spruce also occur there. To the south & east, the JP age-class distribution shifts toward the younger age classes. Poor quality NPO is scattered throughout and has been seeding in localized pockets of nice advanced regen; only averages out to low stocking across the stand. Small amount of TA in the NE. The SW edge has two wetland inclusions (OFS points).



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
87	42220 - Natural Jack Pine	Medium Density Pole	12.1	46	51-80	Two-aged JP stand, majority in it's 40's, with minority component in 70's. Associates include poor-quality NPO, & scattered RP.
88	4133 - Aspen, Mixed Pine	High Density Pole	5.1	43		TA that grew up around the RP plantation. Middle of stand has pocket of nearly intact RP rows. S end picks up some cull saw stump origin RM & declining NPO. TA diameters vary, with scattered saw-sized stems, likely pre-commercial at the time of cut. Breakup beginning. Interior rot; core difficult to age (38?), ended up using previous inventory's age.
89	4130 - Aspen	High Density Pole	17.6	38		BTA, RM & NPO poles from early '70's regen cut. Trace amounts of log-sized oak & aspen that were left during the harvest. WP poles mostly in a dense pocket in the NE around the original seed tree. JP concentrated in a valley in the SW.
90	4125 - Black, N. Pin Oak	Low Density Sapling	8.2	5		NPO stump sprouts from late-summer 2004 cut (720360201) with naturally recruiting JP. Small amount of RP & RM regen. Second cohort of oak sprouts working their way past the 3' benchmark. Sedge & brackenfern groundcover.
91	4199 - Other Mixed Upland Deciduous	Medium Density Log	5.6	Uneven Age	81-110	Small mixed RM, NPO, & pine stand adjacent to CR 608 & recent large RPP cut. Old notes indicate that some amount of oak & RM was cut in 1958, resulting in 2 age-classes in those species, with stump-origin poles alongside cull saw. Mixed in are RP, WP, & JP.
92	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	24.7	27	51-80	RP planted in 1983, NPO, BTA & RM sprout regen from the 1982 harvest along with naturally recruited JP. Scattered RP saw/pole residual from the harvest. BTA pocket in the SW. NPO stump-origin stems up there with the RP.
94	42121 - Planted Jack Pine, Mixed Deciduous	Low Density Sapling	24.7	5		Cut by 2004 under 720470201, oak & cherry stump sprouts resulting, trenched & planted to JP in 2005. Decent JP survivorship near the stand's edges, but poor to medium stocking across much of the interior, if the NPO isn't factored in. Row spacing wide where necessary to avoid heavy stumps. Skips & long non-stocked gaps within rows. Areas with 20%+ weeviled leaders. Two small pockets of RP saw left in stand's SW & SE corners, including one witness tree in SE.
96	42120 - Planted Jack Pine	High Density Sapling	21.8	27		JP planted in 1983, NPO stump sprouts from 1982 harvest, scattered residual RP (mostly saw) planted around in the stand's W half. JP growing well, good stocking & form.



Stand	Cover Type	Acres	Gen Cmts:
7	3201 - Sweet Fern	2.4	Former landing from when surrounding stand was cut. Filled in with sweetfern, sedge & brackenfern.
10	3102 - Grass	1.8	Shallow valley stand with grass, brackenfern & sweetfern.
11	3102 - Grass	1.0	Shallow depression with grass & brackenfern.
12	3105 - Mixed Upland Herbaceous	1.8	Maintained wildlife opening, sandy soil, thin grass cover, knapweed filling in. Sweetfern at margins.
15	11 - Low Intensity Urban	1.5	Fenced CMU broadcast tower facility in small opening.
17	6220 - Alder/willow	1.1	Tag alder & salix over marsh grass.
18	3102 - Grass	2.2	Maintained wildlife opening. Full grass cover, brackenfern & sweetfern at edges. Trace amounts of milkweed, knapweed, mullen in sparser areas.
20	6239 - Mixed Emergent Wetland	3.3	South edge of wetland that is mostly on private. Marsh grass at perimeter, rest of wetland to N on pvt picks up cattail & open water with white waterlily. wood frog
21	6220 - Alder/willow	5.2	Tag alder, salix, spiraea, over black muck, standing water. Blue flag iris, woodcock.
22	3104 - Degraded	3.4	Former gravel pit, re-vegetation hampered by illegal ORV traffic. Trees recently dropped to close off access.
24	11 - Low Intensity Urban	14.0	Maintained county road ROW's.
28	6224 - Treed Bog	1.7	Leatherleaf bog on sphagnum moss, being colonized by JP, WP & RP.
34	3101 - Poverty Grass, Cladonia	1.4	Cleared powerline corridor. Two-track runs along it; gated on pvt at CR 608 (signed Pechota).
37	6233 - Wet Meadow	3.2	Sparse, short shrub layer & widely scattered tamarack & spruce saps over relatively rich herbaceous layer on saturated ground. Road once cut through middle (frozen down in winter for '85 cut?), filled in with iris versicolor, round-leaved sundew. see OFS
41	6220 - Alder/willow	2.4	Small L-type. Survey cut line through tag alder on S edge of section 19. Seen previous year when looking for survey corners during boundary verification.
42	3302 - Low Density Conifer Trees	1.1	Black spruce colonizing tag alder swale. Nodding sedge & sensitive fern below.



Stand	Cover Type	Acres	Gen Cmts:
47	6232 - Wet Prairie	9.8	Sedge/marsh grass lowland with encroaching tag alder. Narrow stream flows through, varying levels of beaver activity over time have made for fluctuating water levels, small ponds with water lily.
52	6239 - Mixed Emergent Wetland	7.0	Narrow stream terraced over time by a series of beaver dams. Recent inactivity led to draw-down, but there is still open water, water lilies, sedges, etc. Flood-killed snags throughout.
58	11 - Low Intensity Urban	18.3	Cleared county road & pipeline ROW's.
66	6225 - Bog	1.2	Dense leatherleaf cover over sphagnum.
67	3303 - Mixed Low Density Trees	43.5	Harvested by early 2010 under Comp 5 RPP (720060901) with RP saw left in clumps & islands. Management objective of mixed natural regen. Oak sprouts from the harvest are not yet recordable (less than 3' tall), but there are sapling-sized oak stump sprouts from the previous 2004 harvest (720360201), along with single-stem saps concentrated along the snowmobile trail.
68	11 - Low Intensity Urban	6.6	Maintained county gravel road corridor.
70	6239 - Mixed Emergent Wetland	8.5	Beaver dam along W edge in pipeline corridor flooded area to E, killing area of Q type. Open water with cattail, water lily, other emergent aqautics. Recent beaver maintenance on dam.
76	6220 - Alder/willow	2.3	Narrow lowland swale with tag alder, salix, dogwood, viburnum and standing water with emergent aqautics. Trembling & balsam poplar & black spruce along the margins.
78	3301 - Low Density Deciduous Tree	10.4	Cut in early 2004 under 720460201. Was pine cover. Largely G now, heavy sedge/grass groundcover with a pocket of BTA at the W end, a pocket of TA near the middle, and scattered NPO & cherry stump sprouts in between.
82	3102 - Grass	5.1	Cleared pipeline corridor. Mostly grass, with sweetfern and brackenfern.
93	3301 - Low Density Deciduous Tree	7.6	Cut in early 2004 under 720470201, not trenched or planted. Heavy sedge cover with cherry & NPO stump sprouts, widely scattered JP seedlings.
95	3303 - Mixed Low Density Trees	44.1	Harvested by early 2010 under Comp 5 RPP (720060901) with reserves: leave islands of RP saw/poles. Management objective of mixed natural regen. NPO stump sprouts from earlier harvest in 2005 (720360201) & a second age class of oak sprouts from this harvest (most still below 3' tall). Small pockets of BTA regen.



### 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.

*Data updated before 2:00 PM*

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.

*Data updated before 2:00 PM*

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.