



GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 001 ENTRY YEAR: 2013

GIS Compartment Acreage: 2,776 County: Oscoda

Revision Date: August 17, 2011

Stand Examiners: Joan Charlebois & Patrick Potter

Legal Description: T27N R01E Sections 29, 30, 31, 32, 33
T26N R01E Sections 02, 03, 04, 05, 06, 07, 08
T26N R01W Section 01
Greenwood Township – south part
Big Creek Township – northwest part

Management Goals: To maintain riparian & forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment while providing for multiple use and visual management. In addition, to maintain a healthy habitat for the endangered species *Dendroica kirtlandii* (Kirtland's warbler), taking into account the warbler management plan.

Soils and Topography: Upland soils vary from excessively well drained Grayling sands on the outwash plains, to less droughty Grayalm-Grayling and Gerrish-Grayling series. The lower ground surrounding wetlands and stream corridors have poorly-drained soil complexes such as Au Gres-Deford and Wakeley-Allendale. The lowest ground is characterized by saturated organic soils such as Tawas-Lupton and Deford mucks. The amount of ponded ground varies with the level of beaver activity.

Ownership Patterns, Development, and Land Use in and Around the Compartment: State ownership is spread across over a dozen sections, with extensive private land interface. Adjacent land use includes a mix of seasonal and year-round residences. The U.S. Fish & Wildlife Service owns thirty acres in Section 32. Several parcels along the AuSable River were acquired from Consumers Power Company, with one former CPC lease left, due to expire in 2013. Two cabins on former CPC property need to be disposed of.

Unique, Natural Features (include only non-site specific and non-sensitive information): The mainstream of the AuSable, along with two of its tributaries, Sohn Creek & Beaver Creek, are part of a designated Natural River system. Kirtland's warbler has been documented within the compartment and there is the potential for associated rare dry prairie plants and insects to share that habitat. There is also the potential for rare plant and reptile species to occur along the riparian corridors.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): There is a deep history of human use along the AuSable River corridor. A concrete and brass monument marks the location of the first Kirtland's Warbler nest discovered on the summer nesting grounds. Past records indicate this monument is located in stand 32 of section 31 but other information indicates it is located directly west of state land on adjacent private property. The monument was not found during inventory.

Special Management Designations or Considerations: The AuSable River is a High Conservation Value Area (HCVA), as is the Kirtland's warbler management unit.

Watershed and Fisheries Considerations: The mainstream of the AuSable is a designated Natural River and a quality trout stream. Its tributaries, Sohn Creek and Beaver Creek, are terraced with beaver dams that receive varying levels of maintenance, depending on the size of the beaver population.

Wildlife Habitat Considerations: The compartment's wide range of cover types -- from jack pine, aspen and oak, to conifer swamp, lowland brush and super-canopy stature pine -- provide habitat for a wide variety of game and non-game wildlife species. The cedar-dominated swamp along the AuSable River corridor is part of a historic deer yard.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. 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 one mile to the southeast and potential is thought to be good. Part of Sections 32 and 33 are leased for oil and gas development. The Conners Marsh PdC field offsets this compartment to the west. The field has produced over 21 Bcf gas. The Antrim Shale development is located six miles to the northeast. The Antrim appears to be losing potential, due to the thickness of overburden, and has not been drilled in this area. The Lakehead pipeline cuts through the compartment.

Vehicle Access: County roads include Cherry Creek Road and CR 489. The snowmobile trail north of Cherry Creek is the primary access to that part of the compartment. Access is limited in other areas by wet ground, beaver flooding, lack of culverts, and lack of deeded CPC easement development &/or private gates.

Survey Needs: The area has seen extensive survey work by Consumers Power Company, the Department of Natural Resources, and county remonumentation efforts. Over 80 corners were located during boundary verification. It is anticipated that remaining needed corners will be found during field preparation.

Recreational Facilities and Opportunities: The AuSable River experiences heavy seasonal use, primarily canoeing and fishing. Dispersed use on the uplands include hunting and birdwatching. The #9 snowmobile trail crosses through the compartment, with the Shore to Shore trail following the same route. The Mio to Meadows MCCCT trail crosses the compartment's east end along CR 489. Parmalee Bridge State Forest Campground is located along the AuSable River just west of CR 489. The Parmalee Access Site is across the river from the campground and receives heavy canoe and kayak traffic.

Fire Protection: Cherry Creek Road and open two-tracks provide good access to the compartment's dry upland types. The Parmalee Access Site is a good water point.

➤ **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**

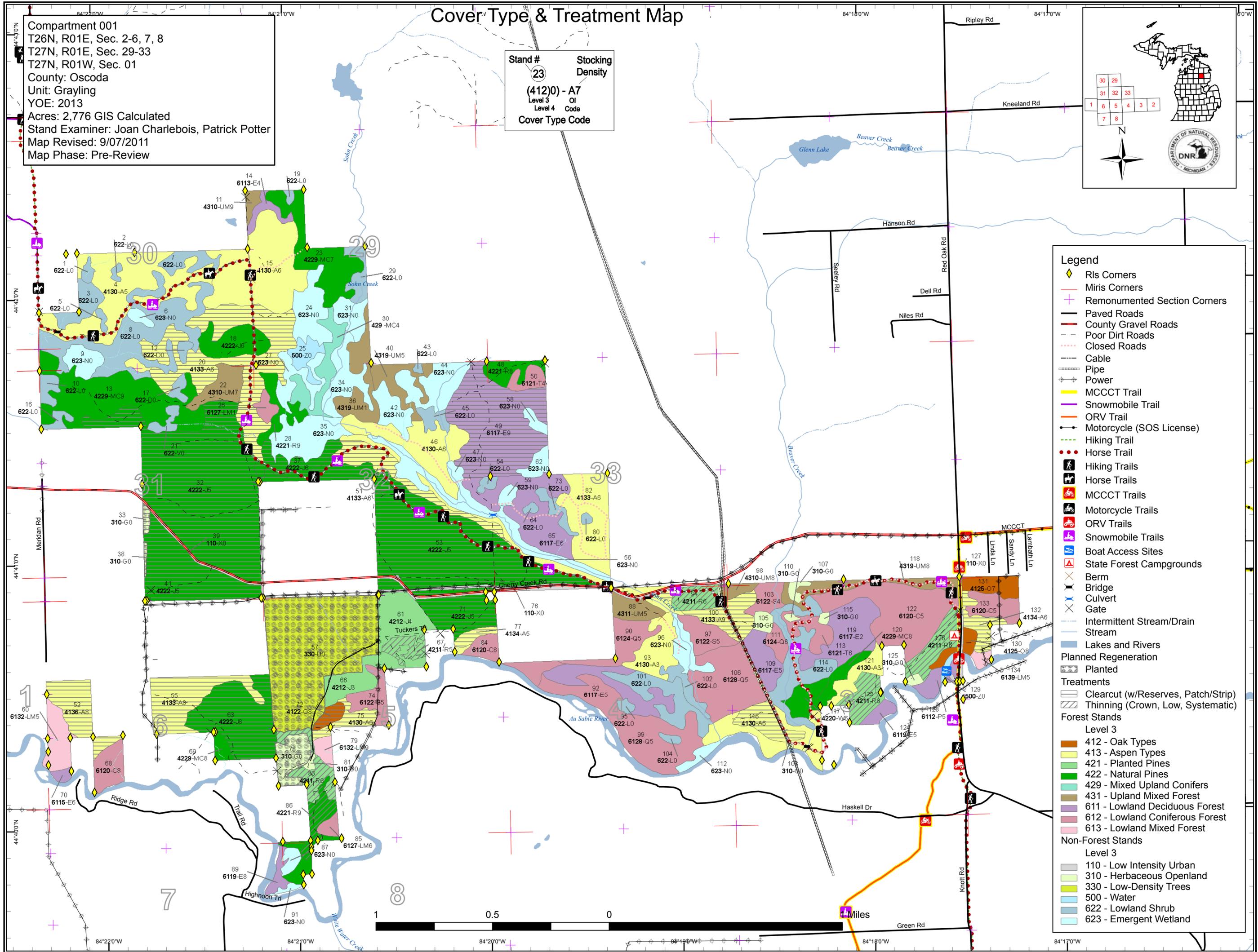
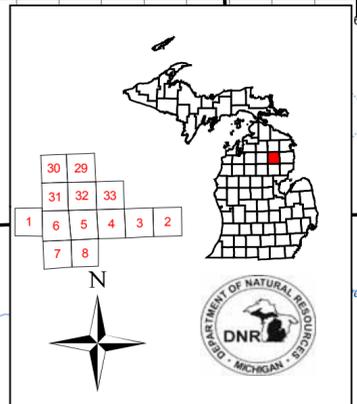
➤ **The following information is displayed, where pertinent, on the attached compartment maps:**

- ◆ **Base feature information, stand numbers, cover types, recreation trails and facilities**
- ◆ **Proposed treatments**
- ◆ **Dedicated & Proposed Special Conservation Areas**

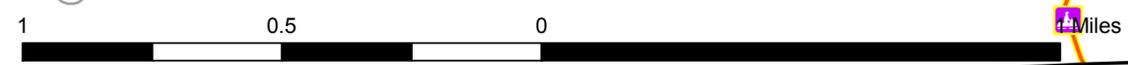
Cover Type & Treatment Map

Compartment 001
 T26N, R01E, Sec. 2-6, 7, 8
 T27N, R01E, Sec. 29-33
 T27N, R01W, Sec. 01
 County: Oscoda
 Unit: Grayling
 YO: 2013
 Acres: 2,776 GIS Calculated
 Stand Examiner: Joan Charlebois, Patrick Potter
 Map Revised: 9/07/2011
 Map Phase: Pre-Review

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



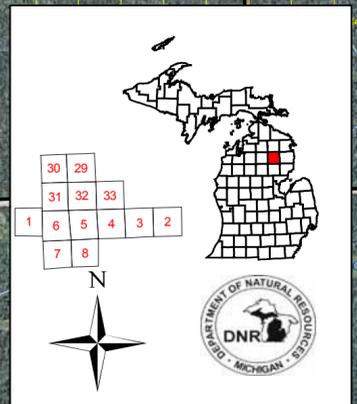
- ### Legend
- ◆ RIs Corners
 - ◆ Miris Corners
 - ◆ Remonumented Section Corners
 - Paved Roads
 - County Gravel Roads
 - Poor Dirt Roads
 - Closed Roads
 - Cable
 - Pipe
 - Power
 - MCCCT Trail
 - Snowmobile Trail
 - ORV Trail
 - Motorcycle (SOS License)
 - Hiking Trail
 - Horse Trail
 - 🚶 Hiking Trails
 - 🐎 Horse Trails
 - 🚗 MCCCT Trails
 - 🏍 Motorcycle Trails
 - 🚙 ORV Trails
 - 🚲 Snowmobile Trails
 - 🚤 Boat Access Sites
 - 🏕 State Forest Campgrounds
 - ⊗ Berm
 - ⊗ Bridge
 - ⊗ Culvert
 - ⊗ Gate
 - Intermittent Stream/Drain
 - Stream
 - Lakes and Rivers
 - Planned Regeneration
 - ▨ Planted
 - Treatments
 - ▨ Clearcut (w/Reserves, Patch/Strip)
 - ▨ Thinning (Crown, Low, Systematic)
 - Forest Stands
 - Level 3
 - 412 - Oak Types
 - 413 - Aspen Types
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 429 - Mixed Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
 - Non-Forest Stands
 - Level 3
 - 110 - Low Intensity Urban
 - 310 - Herbaceous Openland
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland



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 T26N, R01E, Sec. 2-6, 7, 8
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Stand Boundary Map

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 (412)0 - A7
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 Level 4 Code
Cover Type Code



Legend

- RIs Corners
- Miris Corners
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- Stand Boundaries

Forest Stands

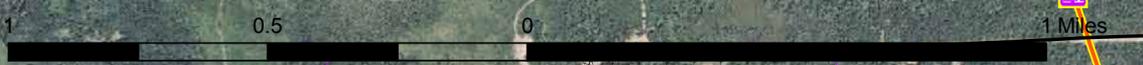
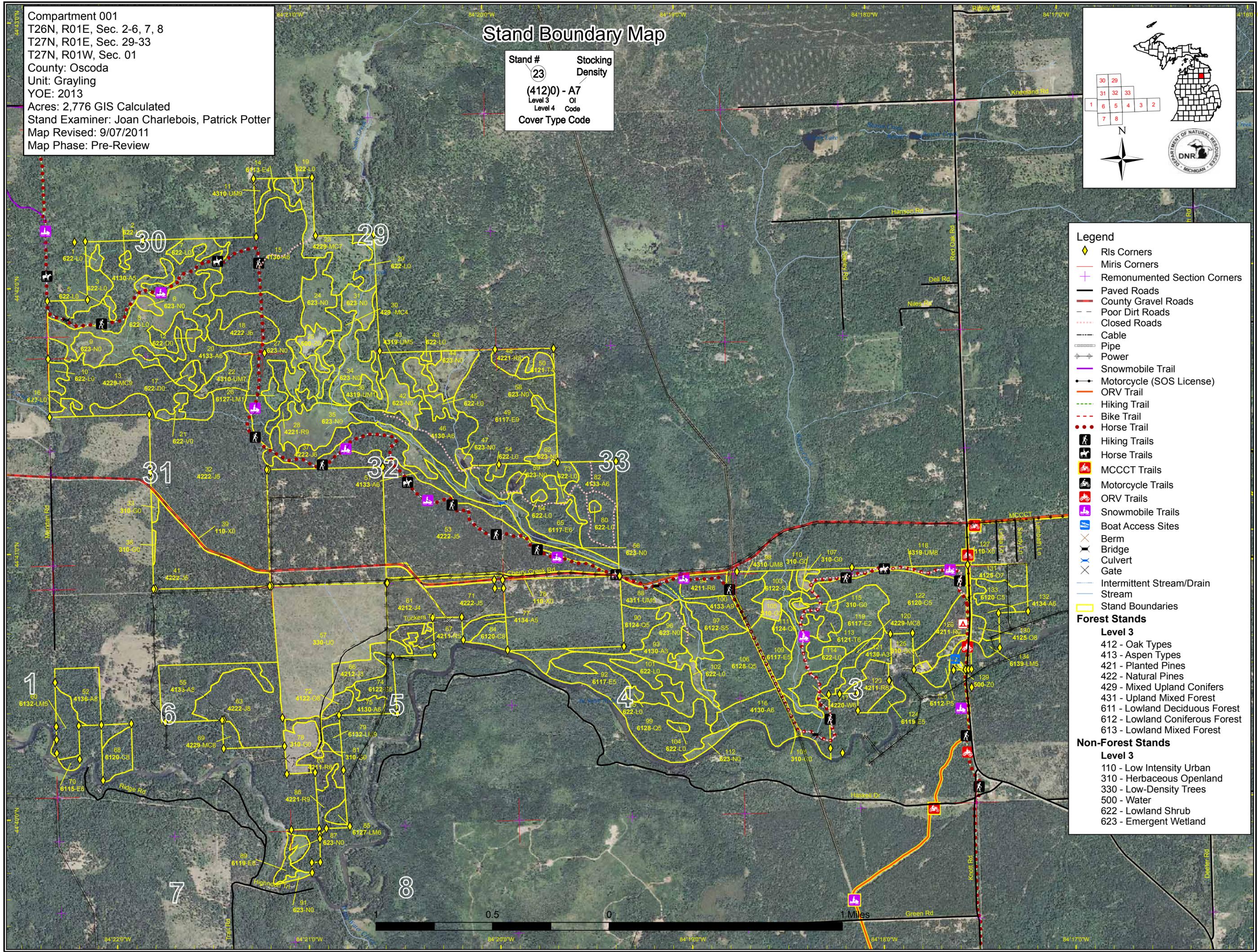
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Non-Forest Stands

Level 3

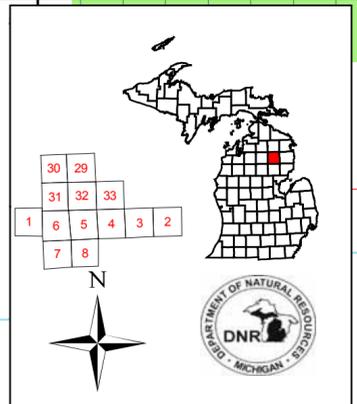
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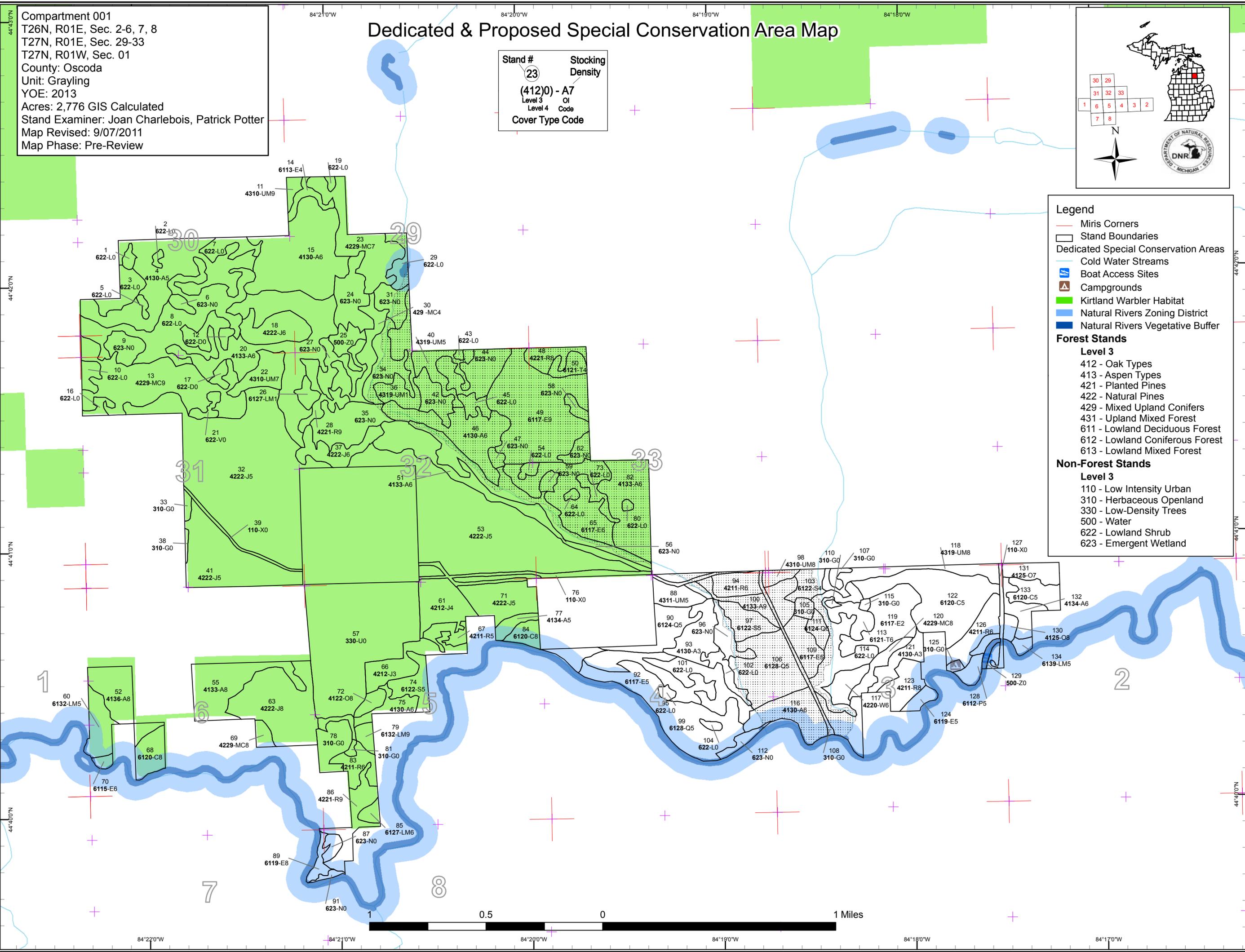
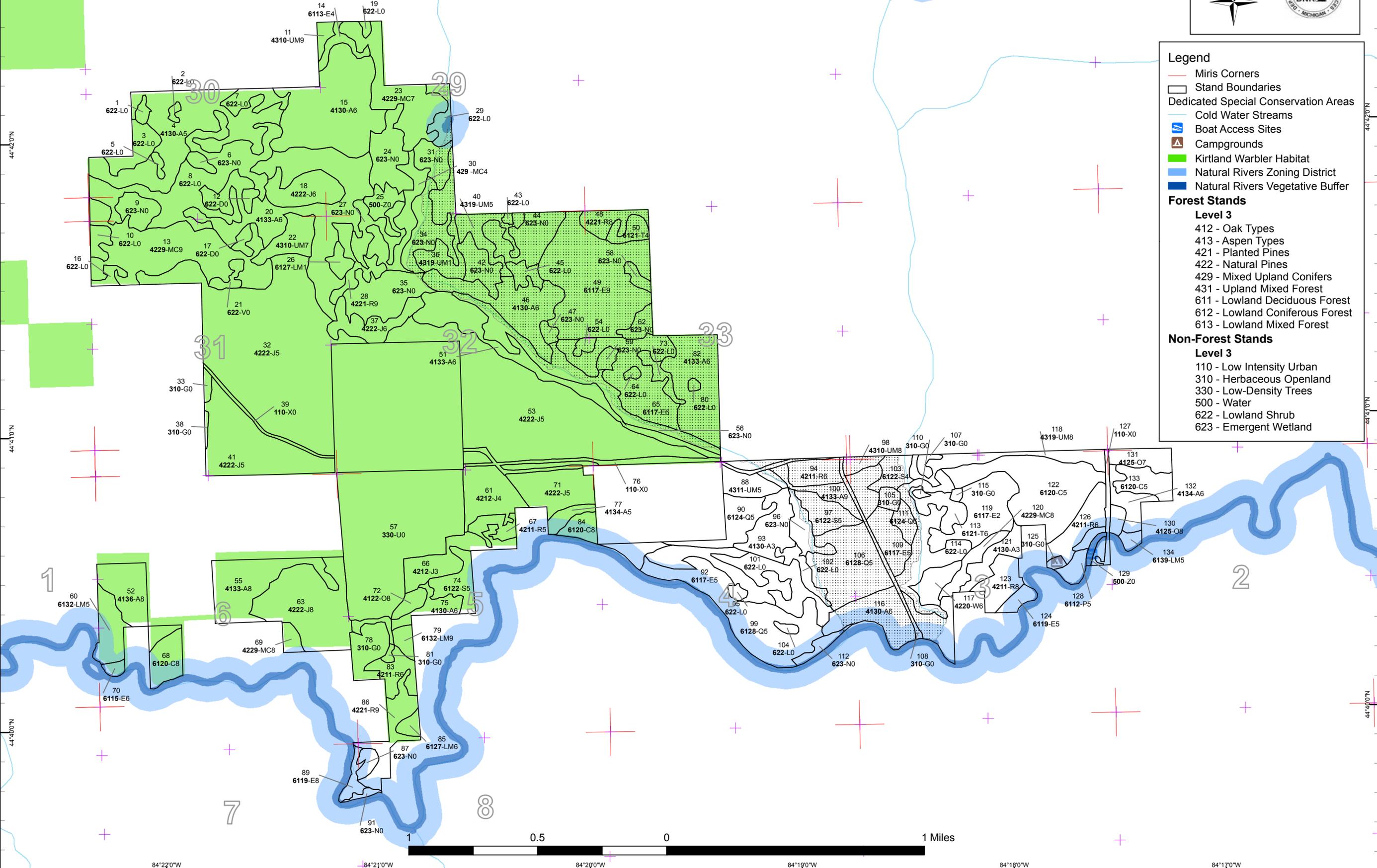
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Dedicated & Proposed Special Conservation Area Map

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



- Legend**
- Miris Corners
 - Stand Boundaries
 - Dedicated Special Conservation Areas**
 - Cold Water Streams
 - ⚓ Boat Access Sites
 - ⛺ Campgrounds
 - Kirtland Warbler Habitat
 - Natural Rivers Zoning District
 - Natural Rivers Vegetative Buffer
 - Forest Stands**
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	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	22	13	0	0	462	75	0	0	0	0	0	0	0	0	572
Bog	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Cedar	0	0	0	0	0	0	0	0	0	0	0	91	14	0	0	106
Herbaceous Openland	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
Jack Pine	0	0	24	0	187	313	0	59	0	0	0	0	0	0	0	583
Low-Density Trees	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9
Lowland Conifers	0	0	5	45	72	19	0	0	0	0	0	0	0	0	0	142
Lowland Deciduous	0	0	34	91	0	6	92	0	0	13	0	0	0	0	0	236
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	8	0	0	17	0	0	25
Lowland Shrub	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	205
Lowland Spruce/Fir	0	0	0	0	0	0	0	14	0	14	10	0	0	0	0	39
Marsh	226	0	0	0	0	0	0	0	0	0	0	0	0	0	0	226
Natural Mixed Pines	0	0	0	0	0	0	5	74	39	0	10	0	0	0	0	128
Oak	0	0	0	0	0	0	0	0	0	19	0	0	6	0	0	24
Red Pine	0	0	0	0	0	37	34	0	0	32	11	0	0	0	0	115
Tamarack	0	0	0	0	0	0	12	0	0	8	0	0	0	0	0	19
Treed Bog	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Upland Conifers	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	20
Upland Mixed Forest	0	0	23	16	0	0	0	9	0	27	20	0	0	0	0	95
Urban	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Water	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
White Pine	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	11
Total	653	22	98	152	291	838	217	156	39	123	60	91	37	0	0	2776



Table 2 – Proposed Treatment Summaries

Grayling Mgt. Unit
Year of Entry 2013

Compartment 001
Total Compartment Acres: 2776

Acres by Treatment Type

Commercial Harvest - 939	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	245	0	0	0	0	0		245
Jack Pine	514	0	0	0	0	0		514
Lowland Deciduous	92	0	0	0	0	0		92
Oak	6	0	0	0	0	0		6
Red Pine	0	0	0	0	82	0		82
Total	857	0	0	0	82	0		939



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
20	72001020-ccr	93.5	4133 - Aspen, Mixed Pine	High Density Pole	44	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: Because the stand is narrow and fragmented to start with, retention will be limited to the inaccessible islands and the supercanopy/xlog stature RP & WP. Apply hare specs along the lowland interface.</p> <p><u>Specs:</u></p> <p><u>Other</u> Quaking aspen stand with mixed pine, poor-quality oak, and considerable wetland interface. PARVHa/PVCd crossover in the interior and & PARVCo along the outer margins. Low-ground inclusions with black spruce, balsam poplar and red maple rim the wetland edges. RP tends to be concentrated along the lowland edges, but also occurs as scattered individual stems in the interior. The stand did not have a uniform QA regen event; there are older stems mixed in, as well as pockets that were uncut due to access problems. The stand boundary picks up islands of aspen in the SW that are currently cut off by low ground tag alder swales. Hypoxylon and P. tremulae are weeding some of the driest site clones down to A5. WP has pockets of D. scrobiculata flagging.</p> <p><u>Comments:</u></p> <p><u>Next</u> Stand is expected to regenerate to aspen and mixed conifers; follow-up with natural regen survey.</p> <p><u>Steps:</u></p>									
32	72001032-ccr	189.5	42220 - Natural Jack Pine	Medium Density Pole	45	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Monument KW block 46 is scheduled for planting entry in 2022. To meet that timeframe, set up the harvest in 2019 (October 1, 2018 start date). Leave the RP & WP in addition to JP vortice retention. WBHG: will be planted, don't leave tops.</p> <p><u>Specs:</u></p> <p><u>Other</u> Naturally-established JP stand that didn't result from one regen event. A majority of the JP is in its mid-40's, but there are immature and overmature components mixed in. Second age is on the overmature JP which occurs singly and in pockets throughout the stand. Top-kill and mortality is concentrated in that age class. The NPO is poor quality. DWD is building as the overmature JP & NPO break up. Stand has a trace of WP & QA, mostly along the margins. The stand's east-center peninsula picks up a couple acres of younger JP on ground close to the water table. The stand's NW peninsula is heavier to the overmature JP component. Fencewire is on state along the west edge.</p> <p><u>Comments:</u></p> <p><u>Next</u> Trench & plant JP to KW specs, follow-up with regen survey.</p> <p><u>Steps:</u></p>									
37	72001037-ccr	18.1	42220 - Natural Jack Pine	High Density Pole	46	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Monument KW block 46 is scheduled for planting entry in 2022. To meet that timeframe, set up the harvest in 2019 (October 1, 2018 start date). Leave the RP & WP and roughly a tree-length buffer along the marsh edge.</p> <p><u>Specs:</u></p> <p><u>Other</u> Burned? No groundcover/moss, almost no needles. Found a couple of large diameter RP. RP/WP mostly at the stand's NW & NE ends. First age on younger majority JP cover, second age on overmature JP component.</p> <p><u>Comments:</u></p> <p><u>Next</u> Trench & plant JP to KW specs, follow-up with regen survey.</p> <p><u>Steps:</u></p>									
41	72001041-ccr	60.2	42220 - Natural Jack Pine	Medium Density Pole	47	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Monument KW block 46 is scheduled for planting entry in 2022. To meet that timeframe, set up the harvest in 2019 (October 1, 2018 start date). Leave the RP & WP in addition to JP vortice retention. WBHG: will be planted, don't leave tops. The two timber trespass pockets along the west edge will be incorporated into this stand's treatment boundary.</p> <p><u>Specs:</u></p> <p><u>Other</u> Naturally-established JP stand that didn't result from one regen event. A majority of the JP is in its mid-40's, but there are immature and overmature components mixed in. Second age is on the overmature JP which occurs singly and in pockets throughout the stand. Top-kill and mortality is concentrated in that age class. The mature NPO is poor quality, although there are some younger vigorous poles. Oak coverage increases to the stand's south. DWD is building as the overmature JP & NPO break up. WP sapling branch flagging and mortality along the south edge (OFS pt.) Fencewire is on state along the west edge. See Non-Forest stands 33 & 38 regarding timber trespass. Gate on state land in the stand's SW (drive signed "MUELLER"). A steep segment of the road south of the gate was hard-surfaced.</p> <p><u>Comments:</u></p> <p><u>Next</u> Trench & plant JP to KW specs, follow-up with regen survey.</p> <p><u>Steps:</u></p>									



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
49	72001049-ccr	91.8	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	55	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: leave approximately 3% in island retention (one of them encompassing the OFS wetland) and leave supercanopy-stature/xlog WP & RP. Apply hare specs along lowland interface.</p> <p><u>Specs:</u></p> <p><u>Other</u> Heart rot in the aspen, range of ages. Flagging and dead tops on white pine, pocket of blister rust. More RP & WP north of grassy opening.</p> <p><u>Comments:</u> Climbing a hill, more RP & WP regen and a few oak trees. Stand is dotted with small pockets of tag alder.</p> <p><u>Next Steps:</u> Stand is expected to regenerate to aspen and mixed conifers; follow-up with natural regen survey.</p>									
51	72001051-ccr	24.8	4133 - Aspen, Mixed Pine	High Density Pole	41	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> This stand's south edge borders Monument KW block 46 that is scheduled for planting entry in 2022. To meet that timeframe, the adjacent JP stand 53 will be set up for harvest in 2019 (October 1, 2018 start date). Incorporate into the KW harvest part of this aspen stand that lies outside of Sohn Creek's Natural Rivers restricted cutting zone. Retention will consist of the RP & xlog WP, and the Natural Rivers buffer. Apply hare specs along the riparian corridor.</p> <p><u>Specs:</u></p> <p><u>Other</u> Long narrow stand bordering over 1.5 miles of the Sohn Creek, on the transition ground between the dry upland JP and the floodplain. The stand's two eastern polygons contain the creek valley itself, with a small amount of floodplain wetland inclusion. The aspen age ranges from the early 40's in the west end to mid-50's and overmature in the east end where the stand occupies a steep sideslope down to the creek. Black canker is impacting a few clones. JP, WP, and poor-quality NPO separate the aspen clones. RP & WP saw, including some xlog, are concentrated along the floodplain and in a pocket near the stand's west end (second age, previous inventory on that RP).</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Stand is expected to regenerate to aspen and mixed conifers; follow-up with natural regen survey.</p>									
52	72001052-ccr	26.7	4136 - Aspen, Mixed Conifer	Medium Density Log	46	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves in order to regenerate the aspen -- is being overtaken by the mixed conifer. Retain roughly 3% total cover by leaving xlog RP & WP and make up the rest through island retention. Apply hare specs along the swamp edge.</p> <p><u>Specs:</u></p> <p><u>Other</u> Stand is mostly QA & RM with a heavy WP & BF understory. Mix of ages present in the aspen. Scattered supercanopy RP & WP. NPO all in bad shape. Areas between aspen clones heavy to just BF & WP. A pocket of JP & roughly a half acre of grassy opening in the stand's NE, adjacent to former golf course on the private property.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Stand is expected to regenerate to aspen and mixed conifers; follow-up with natural regen survey.</p>									
53	72001053-ccr	160.6	42220 - Natural Jack Pine	Medium Density Pole	39	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Monument KW block 46 is scheduled for planting entry in 2022. To meet that timeframe, set up the harvest in 2019 (October 1, 2018 start date). Leave the RP & WP in addition to JP vortice retention. This harvest boundary will include part of stand 51 that lies outside of Sohn Creek's Natural Rivers restricted cutting zone.</p> <p><u>Specs:</u></p> <p><u>Other</u> JP cut merch & up in 1972 under #53-71A. Blueberry, lichen, moss, bearberry groundcover. Trees cored ranged from 33-45 years old. Trace of aspen, NPO & WP along N edge.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Trench & plant JP to KW specs, follow-up with regen survey.</p>									
55	72001055-ccr	38.1	4133 - Aspen, Mixed Pine	Medium Density Log	44	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves in order to regenerate the aspen -- is being replaced by WP. Leave xlog WP, the planted RP, and a roughly quarter-acre island.</p> <p><u>Specs:</u></p> <p><u>Other</u> QA breaking apart. Stand blends into JP type to east, and also contains three half-acre patches of planted RP. Heart rot in most of the aspen.</p> <p><u>Comments:</u> Aspen clones variable; some just pole sized, others overmature. Oak is concentrated in the SW (dying out) with the SC-WP.</p> <p><u>Next Steps:</u> Stand is expected to regenerate to aspen and mixed conifers; follow-up with natural regen survey.</p>									



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
63	72001063-ccr	58.5	42220 - Natural Jack Pine	Medium Density Log	62	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: Leave xlog RP & WP & a roughly 2-acre island in the old burn area, encompassing younger JP. To address green-up concerns along the 5 chain shared boundary with stand 78 (scheduled for planting), leave approximately 10 BA of retention along that edge, preferably RP or WP.</p> <p><u>Specs:</u></p> <p><u>Other</u> Variable, naturally-established JP stand with two main age bands. Property was acquired in 1980. Fire plow lines & aerial image series from the 60's & 70's indicate that portions of the stand saw wildfire and partial salvage operations roughly 40 years ago. The JP that regenerated after those events averages 3 sticks and 6" in diameter (second age). The older JP is pole-log in stature (first age). The RP is mostly in the stand's S half.</p> <p><u>Comments:</u></p> <p><u>Next</u> Trench & plant JP, follow-up with regen survey.</p> <p><u>Steps:</u></p>									
67	72001067-thin	8.4	42110 - Planted Red Pine	Medium Density Pole	46	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Third-row thin the RP.</p> <p><u>Specs:</u></p> <p><u>Other</u> RP plantation on more of a JP site. Was part of the 720239301 harvest area in 1993, but only JP & aspen 4" & up were cut. The species removal left small gaps between the intact planted RP portions. A few oak along the S boundary.</p> <p><u>Comments:</u></p> <p><u>Next</u></p> <p><u>Steps:</u></p>									
71	72001071-ccr	27.4	42220 - Natural Jack Pine	Medium Density Pole	46	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Monument KW block 46 is scheduled for planting entry in 2022. To meet that timeframe, set up the harvest in 2019 (October 1, 2018 start date). Leave the RP & WP. WBHG: will be planted, don't leave tops.</p> <p><u>Specs:</u></p> <p><u>Other</u> Dry site, a lot of suppressed JP.</p> <p><u>Comments:</u></p> <p><u>Next</u> Trench & plant JP to KW specs, follow-up with regen survey.</p> <p><u>Steps:</u></p>									
72	72001072-ccr	5.6	4122 - Oak, Pine	Medium Density Log	111	Harvest	Clearcut with Reserves	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest the oak, JP & aspen. Leave the WP, RP & balsam fir. No additional retention due to small stand size and poor oak health.</p> <p><u>Specs:</u></p> <p><u>Other</u> Upland NPO stand with mixed conifer and aspen. The poor-quality NPO is exhibiting increasing decline symptomatic of TLCB and armillaria. The amount of oak mortality is being masked by fuelwood cutting. The stand is close to dropping down a level to 25-50% canopy closure. The JP ranges from small poles to overmature saw. WP & balsam fir, and to a lesser extent RP & JP, are filling in below. Branch flagging symptomatic of <i>D. scrobiculata</i> is occurring in the WP.</p> <p><u>Comments:</u></p> <p><u>Next</u> Between the residual and the regen, the stand is expected to have a mixture of pine, fir, aspen & oak. Follow-up with natural regen survey.</p> <p><u>Steps:</u></p>									
75	72001075-ccr	10.2	4130 - Aspen	High Density Pole	46	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves. Leave some xlog WP & RP. No additional retention due to small stand size and high amount of edge relative to area.</p> <p><u>Specs:</u></p> <p><u>Other</u> Upland aspen with poor-quality oak, mostly cull RM, clean-boled RP, and sapling-to-supercanopy WP. Stand's N edge up against the swamp picks up some black spruce. Balsam fir & WP poles/saps are filling in below. The BTA is concentrated in the stand's SW end. The aspen's regen event was not uniform; there are scattered older stems (second age from previous inventory).</p> <p><u>Comments:</u></p> <p><u>Next</u> Stand is expected to regenerate to aspen and mixed conifers; follow-up with natural regen survey.</p> <p><u>Steps:</u></p>									



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
77	72001077-ccr	5.1	4134 - Aspen, Spruce/Fir	Medium Density Pole	44	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription:</u> This stand's north edge borders Monument KW block 46 that is scheduled for planting entry in 2022. To meet that timeframe, the adjacent JP stand 59 will be set up for harvest in 2019 (October 1, 2018 start date). Incorporate this aspen stand into the KW harvest. Exclude the SW corner of the stand on the hillside where the OFS seeps start, maintaining the 150' Natural Rivers buffer; keep the south boundary on ground operable for tree-length equipment. Leave the xlog RP & WP. No additional retention due to small stand size. Apply hare specs along the swamp edge.</p> <p><u>Other Comments:</u> Quaking aspen on transition ground, starting on the dry upland and sloping down to the cedar swamp. Associates include balsam fir (filling in densely from below), poor quality NPO, & a few large RP & WP. Black spruce mixes in along the swamp edge. Aspen clone development varies widely, from 6" DBH poles to cull saw (losing volume to hypoxylon & heartrot).</p> <p><u>Next Steps:</u> Stand is expected to regenerate to aspen and mixed conifers; follow-up with natural regen survey.</p>									
83	72001083-thin	16.1	42110 - Planted Red Pine	High Density Pole	46	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Free thin to ~100-110 BA, removing suppressed/poor form poles first, then addressing crown spacing as BA allows. Cut all the JP, but leave the large naturally-established WP & RP. Mark to cut oak only as needed for operability. Note that the plantation extends onto private property on the W & E sides. See OFS points.</p> <p><u>Other Comments:</u> Property was acquired in 1980. RP was planted around scattered NPO (terrible quality) and small pockets of old JP (windthrowing) and supercanopy WP & RP. JP also recruited into the rows. This patchy plantation is dissected by two-tracks, with variable row direction (mostly N-S, some E-W). North polygon of the planting drops down onto poorer outwash soils and is less well-developed by all measures. Was third-row thinned in 2007 under 720310401. Continuing growth response to the release, but only on the order of ~2 mm annual radial increase vs. 1 mm pre-harvest. There are some snow-load bent poles. Given the stand's patchy nature to start with, the residual BA varies widely, with half landing below 140 sq. ft. & half above (range 110-160).</p> <p><u>Next Steps:</u></p>									
86	72001086-thin	11.7	42210 - Natural Red Pine	High Density Log	84	Harvest	Crown Thinning	42210 - Natural Red Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> On the top terrace portion of the stand, apply a variable density thinning: reduce competitive stress in the dense pine pockets (thin down to ~120 sq. ft. except avoid removing more than half the BA), while removing more of the overstory pine in areas where established regen is ready for release (overstory removal pockets). Don't mark supercanopy pine for removal. Also cut the RM, aspen, balsam fir & JP.</p> <p><u>Other Comments:</u> Naturally established red & white pine stand with minor components of aspen, RM & oak. The scattered supercanopy RP & WP that established the stand are being picked off by lightning & bark beetles. In 1984, there was a partial removal of merch JP, balsam fir, RM, aspen & oak under #162-83, along with a small amount of marked pine. WP, BF & RP regen are filling in the canopy gaps that separate the concentrated pockets of pine sawtimber. The harvest did not extend onto the far N, SW & S peninsulas of the stand. The N finger is a swale of slightly lower ground that extends into the RP plantation. Large cull aspen & RM occur mostly in the south peninsulas, where the stand drops down a terrace and wraps around the marsh. Just southeast of the marsh, the stand picks up an oxbow swale inclusion with roughly an acre of black & green ash, cedar, basswood, ironwood & muscledwood. The stand ends on a dry pine bluff overlooking the river. Adjacent private to east is marked for thinning.</p> <p><u>Next Steps:</u></p>									
94	72001094-thin	12.5	42110 - Planted Red Pine	High Density Pole	46	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Row thin. Leave 150' buffer along Sohn Creek, expanding to exclude cabin site. NE corner of stand touches property line.</p> <p><u>Other Comments:</u> Has not been thinned yet. Old cabin in SW is from a former Consumers Power lease.</p> <p><u>Next Steps:</u></p>									



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
100	72001100-ccr	19.7	4133 - Aspen, Mixed Pine	High Density Log	51	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest 2" & up except leave some xlog/supercanopy RP & WP. Leave a 150' buffer along Sohn Creek. No additional retention due to small stand size.</p> <p><u>Specs:</u></p> <p><u>Other</u> Stand is a real mix, with aspen ages ranging from 45-68. Red pine of all size classes, most ages in the late 50's, some 100+. Heavy WP pole-sapling understory E of pipeline. Illegal ORV trail created from private to the N.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Stand is expected to regenerate to aspen and mixed conifers; follow-up with natural regen survey.</p>									
116	72001116-ccr	15.1	4130 - Aspen	High Density Pole	52	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest to regen the aspen; converting to BF otherwise. Leave a 150' mimimun Natural Rivers buffer along the AuSable, Sohn Creek & Beaver Creek. From a functional standpoint, this means keeping the harvest east of Sohn Creek and west of Beaver Creek. Along the south boundary, exclude the small clumps of xlog pine that fall just outside of the AuSable's restricted cutting zone. No additional retention needed due to exluded buffers and small stand size.</p> <p><u>Specs:</u></p> <p><u>Other</u> A few narrow strips were cut into the stand W of the pipeline. BF filling in heavy below, with more WP understory E of the pipeline. Stand has lowland inclusions on the sideslopes down to the river, with ash, basswood & cedar.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Stand is expected to regenerate to aspen and mixed conifers; follow-up with natural regen survey.</p>									
123	72001123-ccr	14.7	42110 - Planted Red Pine	Medium Density Log	58	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Roughly half of the stand is at or near the desired residual BA, with stocking across the remainder meeting criteria for treatment. Free thin to ~100-110 BA concurrent with the nearby RP plantation stand 126 that is more densely stocked. If stand 126 is deferred, defer this stand also. Avoid marking the naturally-established RP for removal.</p> <p><u>Specs:</u></p> <p><u>Other</u> RP plantation with a handful of poor survival pockets and avoided clumps of oak & naturally established RP. Row thinned in 2006 under 720730401. RP showed some growth response to the release, but not great. BA's range widely, 90-180. Possible yard/spruce planting trespass by trailer.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u></p>									
126	72001126-ccr	18.2	42110 - Planted Red Pine	High Density Pole	52	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Free thin the NE, combined row & free-thin the rest. Reduce to ~100-110 sq. ft. of residual where possible without removing more than half of the starting BA. Set up the west end after the lease expires. Work with Mio 51 to determine extent of thinning needed in the campground area; want to avoid opening up new access points, but should thin to reduce competetive stress and maintain tree health around the campsites.</p> <p><u>Specs:</u></p> <p><u>Other</u> The NE third of the stand was row-thinned in 2006 under 720730401. The SE three acres contains sites within the Parmalee SFCG. The west half was not thinned; part of that is under former Consumers Power lease A-133, due to expire in February 2013.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u></p>									
132	72001132-ccr	11.8	4134 - Aspen, Spruce/Fir	High Density Pole	52	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: Leave a 150' Natural Rivers buffer along the south edge, also leave supercanopy-stature/xlog RP & WP. No additional retention due to small stand size and high amount of edge relative to area.</p> <p><u>Specs:</u></p> <p><u>Other</u> Quaking aspen with poor-quality NPO and patches of dense balsam fir & WP. As the aspen breaks up, balsam fir is filling in below. The stand is majority upland, with small tag alder pockets and low ground inclusions along the swamp edge, particularly in the NW peninsula. There is a trace of BTA, xlog RP, and musclemwood.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Stand is expected to regenerate to aspen and mixed conifers; follow-up with natural regen survey.</p>									

**Total Treatment
Acreage Proposed: 938.5**

Table 4 -- Treatments Prescribed with a Limiting Factor



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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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#Error

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2013



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:

**Total Treatment
Acreage Proposed: 0**



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
4	4130 - Aspen	Medium Density Pole	76.6	45	51-80	Quaking aspen with balsam fir on marginally dry ground, with low ground inclusions and extensive wetland interface. The QA clones are separated by patches of U/G, and in some cases L. The second age is from the #34-76 contract in which aspen was cut in 1977 on 18 acres of the stand's SW and 7 acres in its NW. There is a 3-acre swale of top-dying black ash, balsam poplar & a trace of cedar in the stand's NW where a seasonal drain flows, and two 2-acre Q inclusions with black spruce & tamarack in the stand's N-center bordering lowland brush stands. The snowmobile trail runs down a shallow ridge that links most of the clones together. Depending on proximity to the water table, some clones have moved farther into the pole class than others, and have varying amounts of hypoxylon and P. tremulae present.
11	4310 - Pine, Oak Mix	High Density Log	3.9	67	51-80	Small stand of JP & NPO bordered by pvt W & N, and lowland E & S.
13	42290 - Natural Mixed Pine	High Density Log	73.9	65	111-140	Variable mixed pine stand with QA & NPO, on dry ridge grading down to PARVCo near the surrounding wetlands. Species distribution varies across the stand. There is majority cover in RP, with significant QA, JP, NPO & WP components. Black spruce rims the adjacent wetland stands. OFS points are small non-forested wetland inclusions. The stand's NW & SW peninsulas are currently separated from the main stand by narrow low ground swales. The NW peninsula had aspen & JP removed under 34-76 in 1977. A low-volume harvest of mostly RP saw was completed across most of the stand in 1984 under 159-83.
14	6113 - Lowland Maple	Low Density Pole	6.3	44	1-50	Some JP & WP along west edge, changes quickly to spruce & red maple with some balsam poplar. Sphagnum moss groundcover.
15	4130 - Aspen	High Density Pole	77.2	44	111-140	Aspen 7-9" DBH, a few larger; starting to develop heartrot already. Stand has a few nice RO, and a small strip of RP on the NW edge.
18	42220 - Natural Jack Pine	High Density Pole	21.1	42	81-110	JP stand with significant mixed pine & NPO components, and QA mixing in along stand margins. Generally small-pole JP in early- to mid-40's, with poor-quality NPO saw, and RP & WP of all sizes. JP cover is densest in the stand's W 2/3rds. E1/3 has less JP and more WP/RP.
20	4133 - Aspen, Mixed Pine	High Density Pole	95.9	44	51-80	Quaking aspen stand with mixed pine, poor-quality oak, and considerable wetland interface. PARVHa/PVCd crossover in the interior and PARVCo along the outer margins. Low-ground inclusions with black spruce, balsam poplar and red maple rim the wetland edges. RP tends to be concentrated along the lowland edges, but also occurs as scattered individual stems in the interior. The stand did not have a uniform QA regen event; there are older stems mixed in, as well as pockets that were uncut due to access problems. The stand boundary picks up islands of aspen in the SW that are currently cut off by low ground tag alder swales. Hypoxylon and P. tremulae are weeding some of the driest site clones down to A5. WP has pockets of D. scrobiculata flagging.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4310 - Pine, Oak Mix	Low Density Log	15.6	83	1-50	Sparse stand of poor-quality NPO, JP & WP with a mosaic of U/G inclusions heavy to cherry brush. Open-grown form predominates. QA mixes in along the transition zone with the adjacent aspen stand. There are a few widely-scattered RP saw. JP ages range from immature to overmature, but are generally in the 40's. The stand's SW corner was an upland opening that is now filling in with JP & BC.
23	42290 - Natural Mixed Pine	Low Density Log	39.3	74	1-50	Cut in 2006 under 720740401, spec'd 2" & up, except for RP & WP marked to cut in the N end and marked to leave across the rest of the sale. Some orange-marked WP left. Stand is mostly on dry ridges, with fingers of lowland balsam fir. Large areas of zero BA where mostly regen cover. A lot of suppressed RP left.
26	6127 - Lowland Pine	Low Density Sapling	5.2	17		Was noted to have been a P-type, cut 2" and up in 1994 under 720219301. On low ground interlaced with dry ground and small non-forested wetlands (OFS pt). There is scattered small pole WP residual from the cut; post-harvest regen is primarily WP, along with lesser components of JP, RP & RM, and a trace of black spruce & paper birch.
28	42210 - Natural Red Pine	High Density Log	12.3	85	111-140	Fire-scarred super-canopy RP, WP and their progeny, on ground hemmed in by wetlands. The younger saw class represents the majority cover; stand age is set to that. The stand encompasses dry ridges and islands of pine that are separated by narrow tag alder swales. Branch flagging and mortality in the understory WP (OFS pt).
30	429 - Mixed Upland Conifers	Low Density Pole	20.2	38	1-50	Variable stand occupying narrow ridges and islands of high ground surrounded by beaver floodings and cut by beaver runs. Stand acreage fluctuates with changes in the level of surrounding beaver activity. Was within the 720219301 harvest area, spec'd to be cut 2" and up in 1994, but portions of it west of Sohn Creek were inaccessible and left uncut. Patchy WP, balsam fir & quaking aspen, with P/Q/E/L along the edges. Beaver is reducing the deciduous component, creating upland openings. The conifer cover is open-grown and stocky. Stand age is set to the majority WP cover, but there are older & younger age classes across all species as a result of the partially-applied harvest.
32	42220 - Natural Jack Pine	Medium Density Pole	189.5	45	51-80	Naturally-established JP stand that didn't result from one regen event. A majority of the JP is in its mid-40's, but there are immature and overmature components mixed in. Second age is on the overmature JP which occurs singly and in pockets throughout the stand. Top-kill and mortality is concentrated in that age class. The NPO is poor quality. DWD is building as the overmature JP & NPO break up. Stand has a trace of WP & QA, mostly along the margins. The stand's east-center peninsula picks up a couple acres of younger JP on ground close to the water table. The stand's NW peninsula is heavier to the overmature JP component.
36	4319 - Mixed Upland Forest	Low Density Sapling	22.7	17	1-50	Was within the east half of the 720219301 harvest area, spec'd to be cut 2" and up, cut in 1994. The aspen that was not inaccessible due to flooding was cut fairly uniformly, but the WP & balsam fir appears to have been cut merch & up, leaving dense patches of WP & BF alternating with small aspen sapling clones. The stand is primarily upland, but has low ground inclusions and extensive wetland interface. Stand has a trace of NPO & American Elm.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
37	42220 - Natural Jack Pine	High Density Pole	18.2	46	51-80	Burned? No groundcover/moss, almost no needles. Found a couple of large diameter RP. RP/WP mostly at the stand's NW & NE ends. First age on younger majority JP cover, second age on overmature JP component.
40	4319 - Mixed Upland Forest	Medium Density Pole	15.7	26	51-80	Part of a larger area cut merch & up in 1985. With increased beaver flooding, the stand area has shrunk considerably, consisting now of a narrow dry ground ridge to the west and islands within a large wetland to the east. Did not visit those islands. Quaking aspen cover with significant BF, WP & BS components. Stand age set to the harvest, with the second age on the older aspen component. That older aspen is concentrated along the private line, where some were caged with chickenwire to prevent beaver-felling. Beaver have been creating upland openings near the wetland.
41	42220 - Natural Jack Pine	Medium Density Pole	57.2	47	51-80	Naturally-established JP stand that didn't result from one regen event. A majority of the JP is in its mid-40's, but there are immature and overmature components mixed in. Second age is on the overmature JP which occurs singly and in pockets throughout the stand. Top-kill and mortality is concentrated in that age class. The mature NPO is poor quality, although there are some younger vigorous poles. Oak coverage increases to the stand's south. DWD is building as the overmature JP & NPO break up. WP sapling branch flagging and mortality along the south edge (OFS pt.)
46	4130 - Aspen	High Density Pole	40.9	40	51-80	Quaking aspen stand on upland ground and grading down to the surrounding wetlands. The stand is cut by lowland swales with seasonal &/or subsurface drainage, and its south edge borders a half mile of the Sohn Creek floodplain. There is a minor component of overmature QA & balsam poplar concentrated along the lowland & drainage edges. P. tremulae present on the overmature aspen and younger clones on the lower ground. RP & WP were left when the aspen was regenerated. The pine sawtimber (mostly RP) is scattered across the stand singly and in small pockets, with a concentrated 1-acre patch at the stand's far NW end that I did not get out to (second age, previous inventory on that RP).
48	42210 - Natural Red Pine	Medium Density Log	11.1	93	81-110	Thinned in 1993 under 720259301, marked RP/WP and all aspen/mixed hardwoods. Pine stand on an island of dry ground.
49	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	91.8	55	111-140	Heart rot in the aspen, range of ages. Flagging and dead tops on white pine, pocket of blister rust. More RP & WP north of grassy opening. Climbing a hill, more RP & WP regen and a few oak trees. Stand is dotted with small pockets of tag alder.
50	6121 - Tamarack	Low Density Pole	7.7	85	1-50	Small depression, with black spruce & red maple picking up more as you go west. Couple cedar trees. Small pockets of dense RP & WP regen.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
51	4133 - Aspen, Mixed Pine	High Density Pole	46.5	41	51-80	Long narrow stand bordering over 1.5 miles of the Sohn Creek, on the transition ground between the dry upland JP and the floodplain. The stand's two eastern polygons contain the creek valley itself, with a small amount of floodplain wetland inclusion. The aspen age ranges from the early 40's in the west end to mid-50's and overmature in the east end where the stand occupies a steep sideslope down to the creek. Black canker is impacting a few clones. JP, WP, and poor-quality NPO separate the aspen clones. RP & WP saw, including some xlog, are concentrated along the floodplain and in a pocket near the stand's west end (second age, previous inventory on that RP).
52	4136 - Aspen, Mixed Conifer	Medium Density Log	26.7	46	81-110	Stand is mostly QA & RM with a heavy WP & BF understory. Mix of ages present in the aspen. Scattered supercanopy RP & WP. NPO all in bad shape. Areas between aspen clones heavy to just BF & WP. A pocket of JP & roughly a half acre of grassy opening in the stand's NE, adjacent to former golf course on the private property.
53	42220 - Natural Jack Pine	Medium Density Pole	161.6	39	51-80	JP cut merch & up in 1972 under #53-71A. Blueberry, lichen, moss, bearberry groundcover. Trees cored ranged from 33-45 years old. Trace of aspen, NPO & WP along N edge.
55	4133 - Aspen, Mixed Pine	Medium Density Log	38.1	44	81-110	QA breaking apart. Stand blends into JP type to east, and also contains three half-acre patches of planted RP. Heart rot in most of the aspen. Aspen clones variable; some just pole sized, others overmature. Oak is concentrated in the SW (dying out) with the SC-WP.
60	6132 - Mixed Lowland Forest with Cedar	Medium Density Pole	17.0	115	81-110	Variable mixed lowland stand, ranging from areas with dense cedar cover to E/Q to P over tag alder. Except for the dense cedar pockets, the stand has a very heavy BF understory. Supercanopy RP & WP scattered across the stand.
61	42120 - Planted Jack Pine	Low Density Pole	25.6	39	1-50	Partial harvest & follow-up planting resulted in a 2-aged JP condition, with patchy pole cover above a dense sapling layer. Stand was in the 720239301 harvest area; only the 4" & up JP & aspen were removed. The residual JP is small-pole in size. JP was then interplanted by furrow-seeding in 1996; good germination & survivorship resulted in excessively-stocked rows.
63	42220 - Natural Jack Pine	Medium Density Log	58.5	62	51-80	Variable, naturally-established JP stand with two main age bands. Property was acquired in 1980. Fire plow lines & aerial image series from the 60's & 70's indicate that portions of the stand saw wildfire and partial salvage operations roughly 40 years ago. The JP that regenerated after those events averages 3 sticks and 6" in diameter (second age). The older JP is pole-log in stature (first age). The RP is mostly in the stand's S half.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
65	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	49.6	26	1-50	Aspen and mixed hardwoods & softwoods were cut merch & up in 1984 under #168-83. Two-thirds of the harvest area was then treated under FTP W707-141 in 1985, chain-saw felling the residual 2" & up. All RP & WP were left. The stand encompasses a jigsaw-puzzle mosaic of dry, intermediate, and wet ground, with extensive wetland and floodplain interface. As depth-to-water table shallows, the cover shifts from quaking aspen to Balsam poplar to Q over tag alder. The 26 year old aspen isn't fully transitioned into the pole class, and there are small pockets of older pole-log aspen along the lowland edges. The RP & WP occurs primarily in two 2-acre pockets that include super-canopy stems and W3 below; second age from previous inventory on that RP.
66	42121 - Planted Jack Pine, Mixed Deciduous	High Density Sapling	23.7	15		Stand was within the 720239301 harvest area in 1993, cut 2" & up, except in the east peninsula where only 4" & up JP & aspen were cut. That east end has more older residual and runs pole-sapling in size. The rest of the stand that was cut 2" & up has sapling JP & aspen, with most of the JP from a 1996 furrow-seeding.
67	42110 - Planted Red Pine	Medium Density Pole	8.4	46	111-140	RP plantation on more of a JP site. Was part of the 720239301 harvest area in 1993, but only JP & aspen 4" & up were cut. The species removal left small gaps between the intact planted RP portions. A few oak along the S boundary.
68	6120 - Lowland Cedar	Medium Density Log	14.2	117	51-80	Very soft ground. More RM, green & black ash along the river and WP seeding in.
69	42290 - Natural Mixed Pine	Medium Density Log	4.7	58	81-110	Terrain starts at hilltop, drops down steep slope and then levels out at the S end. Small stream flows through stand. Heavy WP & BF regen, with lots of dead & down WP saplings.
70	6115 - Lowland Ash	High Density Pole	2.6	89		Floodplain.
71	42220 - Natural Jack Pine	Medium Density Pole	27.4	46	1-50	Dry site, a lot of suppressed JP.
72	4122 - Oak, Pine	Medium Density Log	5.6	111	1-50	Upland NPO stand with mixed conifer and aspen. The poor-quality NPO is exhibiting increasing decline symptomatic of TLCB and armillaria. The amount of oak mortality is being masked by fuelwood cutting. The stand is close to dropping down a level to 25-50% canopy closure. The JP ranges from small poles to overmature saw. WP & balsam fir, and to a lesser extent RP & JP, are filling in below. Branch flagging symptomatic of <i>D. scrobiculata</i> is occurring in the WP.
74	6122 - Black Spruce	Medium Density Pole	14.2	69	51-80	Black spruce with aspen, RM & scattered super canopy pine. Balsam fir filling in heavy below. Aspen gets smaller in diameter as you go south. It appears they cut some of the aspen 40 years ago.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
75	4130 - Aspen	High Density Pole	10.2	46	81-110	Upland aspen with poor-quality oak, mostly cull RM, clean-boled RP, and sapling-to-supercanopy WP. Stand's N edge up against the swamp picks up some black spruce. Balsam fir & WP poles/saps are filling in below. The BTA is concentrated in the stand's SW end. The aspen's regen event was not uniform; there are scattered older stems (second age from previous inventory).
77	4134 - Aspen, Spruce/Fir	Medium Density Pole	6.1	44	51-80	Quaking aspen on transition ground, starting on the dry upland and sloping down to the cedar swamp. Associates include balsam fir (filling in densely from below), poor quality NPO, & a few large RP & WP. Black spruce mixes in along the swamp edge. Aspen clone development varies widely, from 6" DBH poles to cull saw (losing volume to hypoxylon & heartrot).
79	6132 - Mixed Lowland Forest with Cedar	High Density Log	5.2	85	81-110	The stand bounds an area that starts on high ground and slopes steeply down to the swamp. Cover changes quickly with slope position, starting with mid-40's aspen and poor-quality NPO on the ridgetop, shifting to very overmature aspen (first age from previous inventory) and supercanopy WP & RP on the steep sideslopes, and leveling out to cedar, aspen & red maple at the bottom. A spring seep flows out from the bottom of the hill in the cedar. Three covertypes in one small stand, encompassing both upland and lowland types, but combined for mapping purposes. See OFS
82	4133 - Aspen, Mixed Pine	High Density Pole	44.0	42	81-110	Aspen stand with patches of dense conifer cover, on high ground & transition zone down to Sohn Creek floodplain & wetland stands. The stand's SW has more of the WP; the NE has more RP. U-type openings are filling in with WP & BF. Lowland conifer inclusions rim the creek floodplain & interior wetland stand (black spruce, cedar & tamarack there). The QA is being impacted by hypoxylon, P. tremulae, & black canker.
83	42110 - Planted Red Pine	High Density Pole	16.1	46	111-140	Property was aquired in 1980. RP was planted around scattered NPO (terrible quality) and small pockets of old JP (windthrowing) and supercanopy WP & RP. JP also recruited into the rows. This patchy plantation is dissected by two-tracks, with variable row direction (mostly N-S, some E-W). North polygon of the planting drops down onto poorer outwash soils and is less well-developed by all measures. Was third-row thinned in 2007 under 720310401. Continuing growth response to the release, but only on the order of ~2 mm annual radial increase vs. 1 mm pre-harvest. There are some snow-load bent poles. Given the stand's patchy nature to start with, the residual BA varies widely, with half landing below 140 sq. ft. & half above (range 110-160).
84	6120 - Lowland Cedar	Medium Density Log	15.2	104	51-80	NWC on lowland sideslope down to the AuSable. Cedar on the driest ground has better growth & health; cedar on the saturated soils is spindly, with top-dieback & mortality common. BF & black spruce are filling in below. Numerous seeps originate on the hillside & flow south into the river.
85	6127 - Lowland Pine	High Density Pole	4.1	33	51-80	Was part of the #162-83 harvest in 1984, spec'd to be cut merch & up on the JP, balsam fir, aspen & mixed hardwoods. The stand starts on dry ground and gradually becomes wetter as it slopes down to the east, picking up a small patch of cedar on saturated muck soils. The majority cover is dense pole-sapling WP & BF with RM.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
86	42210 - Natural Red Pine	High Density Log	20.2	84	111-140	Naturally established red & white pine stand with minor components of aspen, RM & oak. The scattered supercanopy RP & WP that established the stand are being picked off by lightning & bark beetles. In 1984, there was a partial removal of merch JP, balsam fir, RM, aspen & oak under #162-83, along with a small amount of marked pine. WP, BF & RP regen are filling in the canopy gaps that separate the concentrated pockets of pine sawtimber. The harvest did not extend onto the far N, SW & S peninsulas of the stand. The N finger is a swale of slightly lower ground that extends into the RP plantation. Large cull aspen & RM occur mostly in the south peninsulas, where the stand drops down a terrace and wraps around the marsh. Just southeast of the marsh, the stand picks up an oxbow swale inclusion with roughly an acre of black & green ash, cedar, basswood, ironwood & musclewood. The stand ends on a dry pine bluff overlooking the river.
88	4311 - Pine, Aspen Mix	Medium Density Pole	11.7	84	51-80	JP & poor quality NPO, with a few pockets of large old QA and some supercanopy WP on the sideslope near the creek. Tag alder & balsam fir subcanopy at the S end near the swamp. Small grassy opening -- former landing from harvest to S.
89	6119 - Mixed Lowland Deciduous Forest	Medium Density Log	5.4	89	51-80	Floodplain E/P type with scattered Q. Mostly green ash & balsam poplar, with lesser amounts of basswood & black ash. Ash mortality not as far along as in the similar floodplain stands to the east. Open below except for a trace of tag alder, hawthorn & musclewood. Ostrich fern groundcover.
90	6124 - Lowland Spruce-Fir	Medium Density Pole	19.1	47	81-110	Variable spruce-fir stand with super-canopy WP and often cull RM & aspen components, mostly on PARVCo site with a mosaic of dryer & wetter ground. The black spruce has a minority older component (second age). NWC is concentrated near the pvt line to the W; with large WP to the E & N along the pvt boundary. SE edge of the stand was within the 720750401 harvest boundary, spec'd to be cut 2" & up, but the 2005 harvest left so much merch residual there that it fits better in this uncut type.
92	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	26.1	27	1-50	Was typed as a P4 when most of it was treated between 1983 & 1985 in 10-acre blocks under FTP W707-138, chainsaw felled 2" & up except cedar. This stand picks up patches of balsam poplar, quaking aspen & balsam fir that are scattered across a large L-type. The 27 year old aspen is not fully transitioned into the pole class, and there are narrow strips of older pole aspen that were left between the FTP's cutting blocks. Poorly-stocked areas with tag alder & scattered P/Q separate the aspen clones.
93	4130 - Aspen	High Density Sapling	21.8	6		Cut in 2005 under 720750401, spec'd to be harvested 2" and up. Aspen regen with pockets of older balsam fir & WP that were left uncut. The densest residual conifer along the harvest's west edge was included in the adjacent uncut stand. The east edge of this stand picks up a narrow strip of WP outside of the harvest boundary that wasn't killed when the rest of that type along Sohn Creek was beaver-flooded (second age).
94	42110 - Planted Red Pine	High Density Pole	12.9	46	141-170	Has not been thinned yet. Old cabin in SW.
97	6122 - Black Spruce	Medium Density Pole	14.4	86	51-80	Mostly pole-sized black spruce, with QA, WP & RP mixed in, and a trace of JP & BP. Mix of ages in the spruce. Areas with very saturated ground. A lot of deer hunting use, pruned-up trees.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
98	4310 - Pine, Oak Mix	Medium Density Log	5.0	68	111-140	Small stand on hilltop along the property line. Yard trespasses & illegal ORV trail. Supercanopy WP & RP, poor quality NPO, large cull RM & aspen. WP filling in heavy below, branch flagging.
99	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	61.9	33	51-80	Long stand on floodplain and first terrace above the AuSable. Lowland overall, PARVCo on the highest ground. Wide age disparity between the two canopy layers. The main canopy layer is relatively young, composed of pole-sapling balsam fir, WP, aspen & black spruce around 30 years old. Scattered above that is a low density, very overmature quaking aspen & balsam poplar layer. Previous inventory age on that cull saw aspen was 99, current core unreadable past 70 due to rot/stain. Strips along the stand's N edge were chainsaw felled 2" & up in 1984 under FTP W707-138; the dense WP-fir-aspen that regenerated there fits the age/species composition of the stand's main canopy layer.
100	4133 - Aspen, Mixed Pine	High Density Log	21.1	51	51-80	Stand is a real mix, with aspen ages ranging from 45-68. Red pine of all size classes, most ages in the late 50's, some 100+. Heavy WP pole-sapling understory E of pipeline. Illegal ORV trail created from private to the N.
103	6122 - Black Spruce	Low Density Pole	9.9	93	1-50	Stand is a mix of black spruce & balsam poplar, with balsam fir. On soft spongy ground, drier to N; heavy cover in spruce-fir regen on the drier ground. Lots of game trails & woodcock. Beaver creek divides the stand in half.
106	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	45.2	27	51-80	Was typed as a P4 when most of it was treated between 1983 & 1985 in 10-acre blocks under FTP W707-138, chainsaw felled 2" & up except cedar. The stand has patchy, variable cover in pole-sapling spruce, fir, aspen & WP, with poorly stocked tag alder inclusions. The 27 year old regen is not fully transitioned into the pole class, and there are narrow strips of larger aspen & spruce that were left between the FTP's cutting blocks. The older balsam poplar is breaking up.
109	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	15.5	27	1-50	Was typed as a P4 when most of it was treated between 1983 & 1985 in two 10-acre blocks under FTP W707-138, chainsaw felled 2" & up except cedar & hawthorn. The N end is on saturated ground, with P/Q still filling in over tag alder. Stand gets drier to S, but PARVCo at best. The balsam poplar clones are better developed there, along with dense patches of balsam fir. The 27 year old aspen is not fully transitioned into the pole class, and there are narrow N-S strips of older aspen that were left between the FTP's cutting blocks.
111	6124 - Lowland Spruce- Fir	High Density Pole	6.3	38	51-80	Relatively young spruce-fir stand with scattered older pine, aspen & tamarack. Lowland overall, grading up to a spot of dryer ground with open-grown JP, WP & RP.
113	6121 - Tamarack	High Density Pole	11.6	51	81-110	Small stand, three types in one. Starts on dry ground with a small patch of planted RP near the upland openings, then slopes down into a tamarack swamp, with inclusions of upland JP & balsam fir, and low ground tag alder and balsam poplar. Scattered WP saw along the floodplain edge.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
116	4130 - Aspen	High Density Pole	42.4	52	81-110	A few narrow strips were cut into the stand W of the pipeline. BF filling in heavy below, with more WP understory E of the pipeline. Stand has lowland inclusions on the sideslopes down to the river, with ash, basswood & cedar.
117	42200 - Natural White Pine	High Density Pole	10.8	32	51-80	Relatively young WP with significant spruce-fir components, pockets of QA, and a few supercanopy WP & RP. On a PARVCo site, grading down to adjacent wetlands & floodplain. Most of the stand was spec'd to be cut 2" & up, except pine saw, in 1994 under 720229301.
118	4319 - Mixed Upland Forest	Medium Density Log	20.3	93	51-80	Long narrow stand on hillside between the private property & the cedar swamp; just enough room to cut in the snowmobile trail. Far west end wraps around an upland opening and stops at the Beaver Creek floodplain. Very mixed stand: large WP & RP above saw-sized aspen, RM & NPO, and balsam fir & WP filling in below. Decadence & cull in the overmature components across all species.
119	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density	33.8	16		Was within the 720229301 harvest, spec'd to be cut 2" & up. The aspen was cut fairly close to spec's; the conifer was cut closer to merch & up, leaving pockets of older residual balsam fir, WP & spruce among the quaking aspen & balsam fir sapling clones. Lowland overall with pockets of dry ground.
120	42290 - Natural Mixed Pine	Medium Density Log	9.7	93	111-140	Small stand of naturally established RP & WP. Heavier to RP in the SW, more WP in the NE. The SW half was thinned in 2006 under 720730401.
121	4130 - Aspen	High Density Sapling	12.8	17		Quaking aspen regen from 1994 harvest 720730401, spec'd to be cut 2" & up except pine saw. Scattered residual pine over the sapling aspen.
122	6120 - Lowland Cedar	Medium Density Pole	62.4	108	111-140	Swamp stand where minor elevation differences have significant impact on the cedar. On the transition ground starting near the uplands and sloping down to the lowest ground, the cedar has better development & health, averaging log-pole, 75-100% cover, & with little balsam fir below. On the saturated lowest ground, the cedar is spindly & top-dying, with 25-50% cover & dense balsam fir filling in below. The stand's SE edge along the RP plantation is rimmed with lowland aspen. A spring seep originates in the stand's center (OFS pt).
123	42110 - Planted Red Pine	Medium Density Log	15.7	58	111-140	RP plantation with a handful of poor survival pockets and avoided clumps of oak & naturally established RP. Row thinned in 2006 under 720730401. RP showed some growth response to the release, but not great. BA's range widely, 90-180.
124	6119 - Mixed Lowland Deciduous Forest	Medium Density Pole	5.4	89	1-50	E type on river floodplain, patches of standing water. Ash being killed, likely EAB. Larger diameter stems going first, so most of the green ash is dead or dying, with mortality progressing in the smaller-diameter black ash.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
126	42110 - Planted Red Pine	High Density Pole	18.2	52	171-200	The NE third of the stand was row-thinned in 2006 under 720730401. The SE three acres contains sites within the Parmalee SFCG. The west half was not thinned; part of that is under former Consumers Power lease A-133, due to expire in February 2013.
128	6112 - Lowland Aspen	Medium Density Pole	8.6	93	51-80	Floodplain stand. Half of the black ash is dead. Heavier balsam fir and drier on south side of river; Parmalee Bridge canoe access site parking lot and vault toilet there.
130	4125 - Black, N. Pin Oak	Medium Density Log	6.8	83	51-80	Stand on riser and first terrace above the river. West of CR489 is more open (25-50% cover) and contains part of the Parmalee SFCG. East of CR489, the cover is 50-75% and includes a terminated former Consumers Power lease parcel and cabin. The NPO is poor-quality and breaking up. WP branch flagging (OFS pt.)
131	4125 - Black, N. Pin Oak	Low Density Log	12.0	83	1-50	Stand was spec'd to be harvested merch & up except oak in 1993 under 720249301. Yard trespass and waste on state land.
132	4134 - Aspen, Spruce/Fir	High Density Pole	11.8	52	81-110	Quaking aspen with poor-quality NPO and patches of dense balsam fir & WP. As the aspen breaks up, balsam fir is filling in below. The stand is majority upland, with small tag alder pockets and low ground inclusions along the swamp edge, particularly in the NW peninsula. There is a trace of BTA, xlog RP, and musclewood.
133	6120 - Lowland Cedar	Medium Density Pole	13.9	103	51-80	The cedar along the stand's N edge hillside has better growth and vigor, with little balsam fir understory. Numerous seeps originate on the hillside and flow south. Where the stand levels out onto the saturated ground, the cedar is spindly and top-dying, with heavy balsam fir regen below. The stand's west end has sparser cover, with more tamarack, black spruce and aspen than cedar.
134	6139 - Mixed Lowland Forest	Medium Density Pole	3.2	89	51-80	E/Q type on AuSable River floodplain. Black and green ash being killed by EAB, the larger diameter trees hit first, so the saw-sized green ash is almost all gone. The ash recorded in the subcanopy is basal-sprout in origin, produced by the borer-girdled stems. There are also basswood, cedar & aspen components, but the balsam fir is what is filling in as the ash drops out. Cleared powerline corridor cuts through the stand. Single stem of P. psycodes.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6220 - Alder/willow	2.6	No	Unspecified	Wetland with tall dense tag alder, likely a patch of N in the middle.
2	6220 - Alder/willow	1.6	No	Unspecified	Small wetland with tall tag alder, being colonized by Q.
3	6220 - Alder/willow	12.2	No	Unspecified	Dense tag alder with scattered low-density P/Q. Continuing top-kill and mortality in the spindly black ash and balsam poplar.
5	6220 - Alder/willow	1.9	No	Unspecified	Small wetland with tag alder and willow.
6	6239 - Mixed Emergent Wetland	3.4	No	Unspecified	Sedge/marsh grass, rimmed with salix.
7	6220 - Alder/willow	9.8	No	Unspecified	Tall tag alder, scattered P/Q, likely a patch of N near the private line.
8	6220 - Alder/willow	66.9	No	Unspecified	Large wetland with primarily tag alder & salix cover over sedge/marsh grass, with patches of cattail, water lilly, Z and N. Varying water levels, depending on amount of beaver activity.
9	6239 - Mixed Emergent Wetland	11.0	No	Unspecified	Beaver flooding, lodge. Emergent aquatics (water lilly) rimmed with N/ L.
10	6220 - Alder/willow	5.6	No	Unspecified	Tag alder & salix with scattered low-density P. Continuing top-kill and mortality in the black ash, beaver cutting the balsam poplar.
12	6224 - Treed Bog	2.6	No	Unspecified	Leatherleaf/sphagnum bog being colonized by black spruce, tamarack, WP, RP & JP.
16	6220 - Alder/willow	3.8	No	Unspecified	Tag alder & salix, recent beaver activity.
17	6224 - Treed Bog	3.7	No	Unspecified	Leatherleaf/sphagnum bog with black spruce, tamarack, WP & RP.
19	6220 - Alder/willow	1.3	No	Unspecified	Tag alder.
21	6225 - Bog	4.7	No	Unspecified	String of three small wetlands. Majority leatherleaf/sphagnum cover with a patch of N in SW and almost D in the NE (scattered black spruce, WP & JP).
24	6239 - Mixed Emergent Wetland	22.7	No	Unspecified	Sedge, marsh grass and tag alder cover with scattered P/Q, upstream up beaver flooding.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
25	50 - Water	9.3	No	Unspecified	Beaver flooding. Open water behind dam with emergent aquatic plants such as water lily. Lodge in SE.
27	6239 - Mixed Emergent Wetland	14.6	No	Unspecified	Wetland downstream of beaver dam. Sedge/marsh grass cover with patches of alder & willow filling in from the edges. Fluctuating water levels depending on beaver activity. Flood- and beaver-killed timber in NW.
29	6220 - Alder/willow	8.7	No	Unspecified	Salix & tag alder with scattered Q/P/E and patches of N. Sohn Creek flows through.
31	6233 - Wet Meadow	11.8	No	Unspecified	Beaver meadow: sedge/marsh grass cover, with patches of tag alder. Recent draw-down. Sohn Creek flows through.
33	3105 - Mixed Upland Herbaceous	2.2	Planted	Jack Pine	Area cut in trespass when the adjacent private was harvested. Scattered oak left. Monument KW block 46 is scheduled for planting entry in 2022. To meet that timeframe, set up the harvest in 2019 (October 1, 2018 start date).
34	6239 - Mixed Emergent Wetland	20.3	No	Unspecified	Large beaver meadow, Sohn Creek terraced with dams, some recent draw-down. Sedge/marsh grass with patches of Z, cattail, tag alder, scattered P (including American elm).
35	6233 - Wet Meadow	28.8	No	Unspecified	Large marsh with sedge, patches of cattail, and rimmed with alder/willow.
38	3105 - Mixed Upland Herbaceous	1.1	Planted	Jack Pine	Area cut in trespass when the adjacent private was harvested. A few JP & NPO left near the perimeter. Monument KW block 46 is scheduled for planting entry in 2022. To meet that timeframe, the harvest will be set up in 2019 (October 1, 2018 start date). Include this stand in the KW planting area.
39	11 - Low Intensity Urban	4.8	No	Unspecified	Cherry Creek Road corridor.
42	6239 - Mixed Emergent Wetland	13.6	No	Unspecified	Wetland with sedge, cattail & tag alder. Numerous flood-killed snags.
43	6220 - Alder/willow	1.0	No	Unspecified	Tag alder
44	6239 - Mixed Emergent Wetland	24.8	No	Unspecified	Large beaver flooding with varying cover in Z, floating aquatic plants (water lily), N, cattail, and tag alder.
45	6220 - Alder/willow	6.1	No	Unspecified	Based on aerial imagery and what was seen to the north, likely cover in alder/willow with scattered patches of P/Q and spots of N & cattail. Beaver dams along the N & S edges.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
47	6233 - Wet Meadow	2.9	No	Unspecified	Recent draw-down. Largely N, with a trace of Z, emergent aqautics, rimmed with tag alder.
54	6220 - Alder/willow	2.8	No	Unspecified	Tag alder & salix, with a spot of N in the middle.
56	6239 - Mixed Emergent Wetland	36.2	No	Unspecified	Sohn Creek floodplain, terraced with beaver dams, recent drawdown on most of them. Patches of Z near each dam, wet meadows above, and alder/willow below.
57	3303 - Mixed Low Density Trees	133.0	Planted	Jack Pine	KW management block. Final harvested in 2005 under 720210401. Trenched & planted to JP under FTP C72-526 in May 2007. Short skips/gaps in rows not uncommon. WP weevil damage this summer on the larger planted JP. Dense NPO stump sprout clumps, along with cherry brush. Some marginal necrosis in the oak (mostly in groundcover seedlings); appears to be drought/heat related. The stand's canopy closure is just under the forested benchmark since a portion of the planted JP is below the recordable height (3'), and the cherry sprouts (both black & choke cherry) are considered part of the shrub layer. As the JP fills out, the stand will move into the forested category before next YOE.
58	6233 - Wet Meadow	3.7	No	Unspecified	Goldenrod, Canada blue joint, wool grass. Drying out.
59	6233 - Wet Meadow	3.5	No	Unspecified	Beaver pond with recent draw-down. Largely N, with a patch of Z, rimmed with tag alder, salix.
62	6239 - Mixed Emergent Wetland	6.5	No	Unspecified	Beaver flooding with N, cattail, tag alder, flood-killed snags.
64	6220 - Alder/willow	1.6	No	Unspecified	Tag alder & salix.
73	6220 - Alder/willow	6.1	No	Unspecified	Tag alder & salix with patches of N, cattail, and encroaching P/Q.
76	11 - Low Intensity Urban	17.9	No	Unspecified	Cherry Creek Road & cleared utility corridor.
78	3105 - Mixed Upland Herbaceous	15.9	Planted	Jack Pine	Final harvested in 2007 under 720310401, with scattered trees marked to leave for visual. FTP C72-576 submitted for trenching and planting back to JP. Prescribed burn FTP C72-612 submitted to reduce slash load prior to planting. Burned in 2010 (except for the SE end) with most of the saplings and marked-to-leave sawtimber killed. Unburned SE end has scattered balsam fir & WP saps. Trenched, and on the 2011 planting list. A patch of rye growing south of the E-W two-track.
80	6220 - Alder/willow	1.3	No	Unspecified	Tag alder & willow in standing water, with black spruce & tamarack colonizing from the east.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
81	3102 - Grass	1.4	No	Unspecified	Small upland opening with two-track intersection. East side was trenched through in the mid-60's but not planted along with the rest of the RP to the south. A few RP & JP are scattered within the stand.
87	6233 - Wet Meadow	4.5	No	Unspecified	Marsh in an old oxbow swale. Sedge with patches of cattail and encroaching balsam poplar.
91	6239 - Mixed Emergent Wetland	1.8	No	Unspecified	Wetland along river's edge. Marsh grasses & sedge with patches of Joe-pye weed, cattail, tag alder and encroaching balsam poplar.
95	6220 - Alder/willow	2.2	No	Unspecified	Tall tag alder, scattered low-density P/Q. Likely a spot of N in the middle.
96	6233 - Wet Meadow	11.4	No	Unspecified	Two beaver dams recently flooded & killed WP along the W side. Some open water with a lodge, mostly marsh with patches of tag alder.
101	6220 - Alder/willow	24.2	No	Unspecified	Tall tag alder with scattered P/Q. Was typed as a P4 when most of it was treated between 1983 & 1985 under FTP W707-138, chainsaw felling 10-acre blocks 2" & up except cedar. This stand was separated out from the rest of the FTP area because its aspen/conifer is sparse and does not make the forested benchmark.
102	6220 - Alder/willow	7.7	No	Unspecified	Tag alder & willow. Small patch of dryer ground with little bluestem is all that's left of the former wildlife opening; was 6 acres, maintained annually under FTP W707-131 until 1987 (last completion record).
104	6220 - Alder/willow	1.9	No	Unspecified	Tag alder, salix, with a spot of N.
105	3102 - Grass	4.2	No	Unspecified	Former wellsite, recently mulched & seeded. Silt fence & port-a-johns still on site.
107	3102 - Grass	3.1	No	Unspecified	Grassy opening.
108	3102 - Grass	6.7	No	Unspecified	Cleared pipeline corridor, snowmobile trail runs down it. Mostly upland, but with low ground inclusions.
110	3102 - Grass	1.0	No	Unspecified	Small upland opening with grass & bracken fern.
112	6233 - Wet Meadow	5.0	No	Unspecified	Marsh grass/sedge along the river, rimmed with tag alder, willow, & balsam poplar.
114	6220 - Alder/willow	35.4	No	Unspecified	Tag alder, willow & spiraea with scattered balsam poplar & balsam fir, patches of marsh, cattail, and flood-killed snags.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
115	3102 - Grass	1.3	No	Unspecified	Small grassy opening with bracken fern & a clump of oak in the middle.
125	3102 - Grass	1.8	No	Unspecified	House, barn & lawn on former Consumers Power lease parcel A-133, due to expire in February of 2013.
127	11 - Low Intensity Urban	5.3	No	Unspecified	Cleared County Road 489 corridor, Parmalee Bridge canoe access site, and a narrow triangle of forested cover S of the river and E of the road.
129	50 - Water	2.2	No	Unspecified	AuSable River



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
multiple - see	Unique Site - SCA	72001_SCA	603.2	Put your comments here.



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.
SCA	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.
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.