



GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 257 ENTRY YEAR: 2014

GIS Compartment Acreage: 1175 County: Crawford

Revision Date: 08/27/2012

Stand Examiner: Craig Farrer

Legal Description: T27N R02W Sections 31, 32 & 33 and T26N R02W Section 06 of Grayling Township

Management Goals: This compartment is under long-term lease agreement (L-1479) with the Michigan Army National Guard to allow for usage by the military during their encampment with no permanent buildings or improvements to be erected. However, T26N R02W Section 6 is not under military lease. The primary objective for this compartment is to allow for military training. In addition we need to maintain forest health, productivity, sustainability, species diversification and structural diversity of the resources through out the compartment within the constraints of military training needs.

Soils and Topography: Grayling and Graycalm sands. The area is flat on the south to rolling hills on the north.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The land to the north and west is State land. This area is under the 1935 long-term lease agreement (L-1479 Act 154, P. A. 1935) with the Michigan Army National Guard, Michigan Department of Military Affairs. This agreement provides for use by the military during encampment, with no permanent buildings or improvements to be erected. Military needs take precedence over resource management needs on long-term lease lands. Some of the area is Military Board land. The Artillery Range is located just north of the Compartment.

The property to the south and east of the compartment is private. Much of the private property has been developed into subdivisions.

Unique, Natural Features: The Main Branch of the AuSable River traverses from one mile to ¼ mile south of the compartment. It is a designated Natural River.

Archeological, Historical, and Cultural Features: Stand 53 is an old dump location for the former Fred Bear Archery plant. The dump appears to have been closed during the late 1960's. There are monitor wells located around the area. Contamination of the groundwater is being monitored. The Department of Environmental Quality plan to abandon and plug these monitor wells in September 2012. The Michigan Army National Guard Artillery Range is located just north of the Compartment.

Special Management Designations or Considerations: The Compartment is part of the Michigan Army National Guard Military Reservation.

Watershed and Fisheries Considerations: The Main Branch of the AuSable River traverses from one mile to ¼ mile south of the Compartment. It is a designated Natural River. The river is considered a quality cold water fishing river.

Wildlife Habitat Considerations: The habitat condition is good. Continue regular treatments in the Compartment. There are no managed openings.

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 Marshall Sandstone, which was used as a building stone in the past. The nearest gravel pit is four miles to the south and potential appears to be good on the upland areas. Part of the compartment is State Military Leased land. There has been no drilling and there are no leases in this compartment. The closest production is the Conners Marsh Field five miles to the east. The field produces gas from the Ordovician Prairie du Chien.

Vehicle Access: Access to and in the compartment is adequate with an exception for state land located in section 6. A private trail road can be used to access the property but currently no county or state trail leads to this parcel. The “tank trail” west of Stephan Bridge Road has numerous spots in it that is loose sand and is limited to 4 X 4-vehicle traffic. There are eight gates that can be used by the Military to block access along the length of the tank trail when maneuvers are occurring on the Artillery Range. The Range itself is located just to the north of the Compartment. Any new trails created for timber sales will be closed upon completion of the sale. No other trails have been designated for closure.

Survey Needs: No survey needs are required at this time. All the needed corners have already been established.

Recreational Facilities and Opportunities: There is little potential for recreational opportunities due to the use of the area for Military maneuvers during a large part of the year.

Fire Protection: The compartment consists of jack pine plains to the south and oak/aspens/jack pine rolling hills to the north. This area has a history of Wildland fires. The most recent large fire was the Stephan Bridge Road Fire on May 08, 1990. Stand 23 is a J4 stand that was established in 1975 as a hazardous fuel break. This stand will be treated in the 2014 entry year. Access to the compartment is good. Some of the area is accessed by the “tank trail”. Because some of this trail consists of loose sand, it makes access by fire apparatus virtually impossible.

Additional Compartment Information: Need to follow up with DEQ as to the status of plugging the monitor wells installed around dump contamination area.

Need to investigate getting legal ingress/egress to state land located in section 6.

➤ **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**

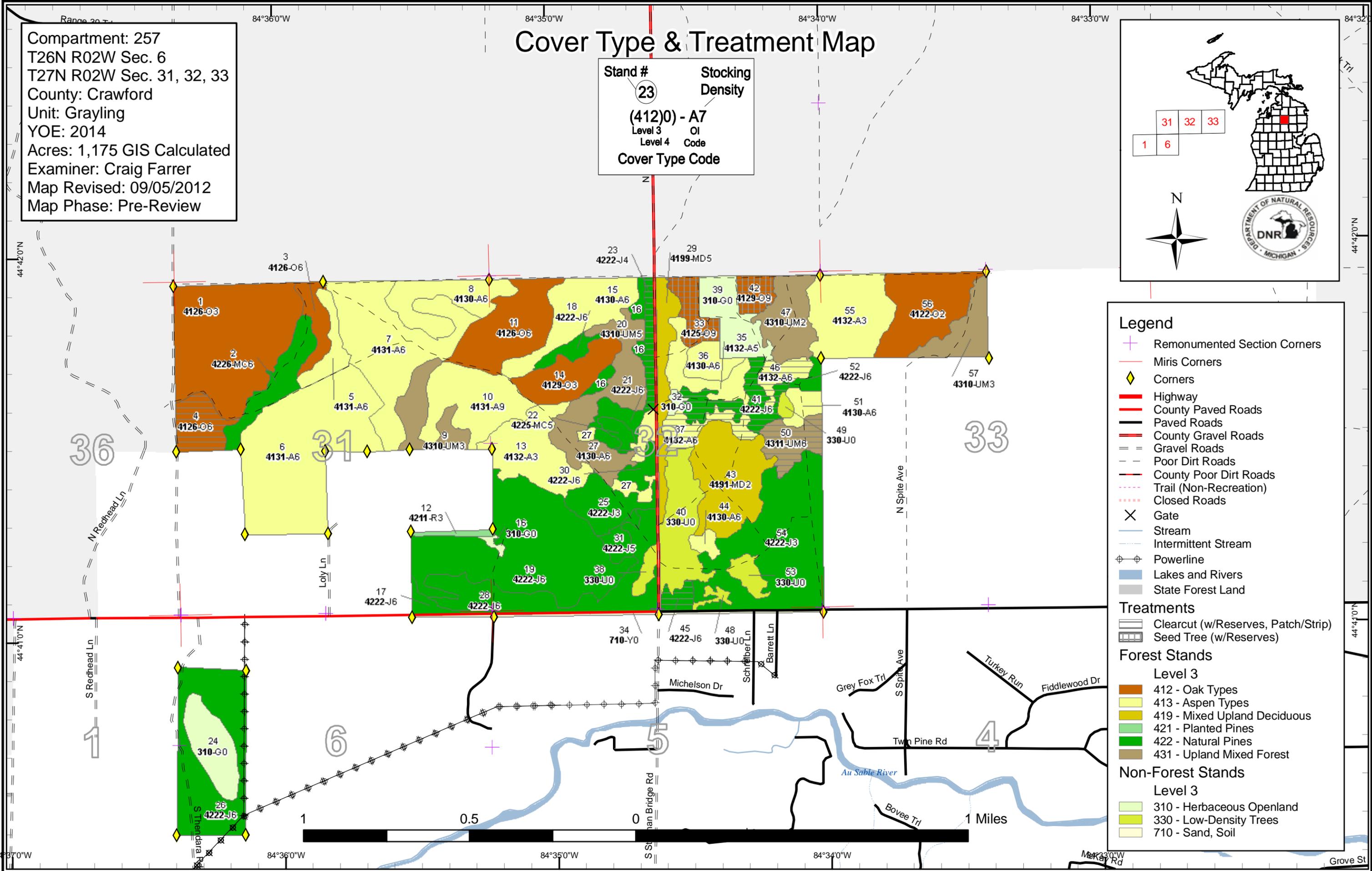
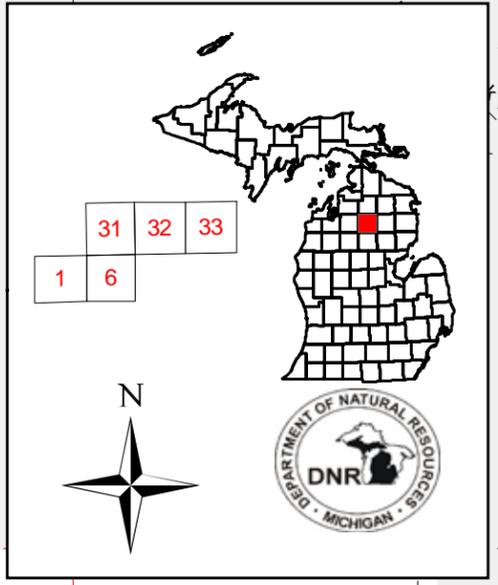
➤ **The following information is displayed, where pertinent, on the attached compartment maps:**

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

Cover Type & Treatment Map

Compartment: 257
 T26N R02W Sec. 6
 T27N R02W Sec. 31, 32, 33
 County: Crawford
 Unit: Grayling
 YOE: 2014
 Acres: 1,175 GIS Calculated
 Examiner: Craig Farrer
 Map Revised: 09/05/2012
 Map Phase: Pre-Review

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



Legend

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

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)

Forest Stands

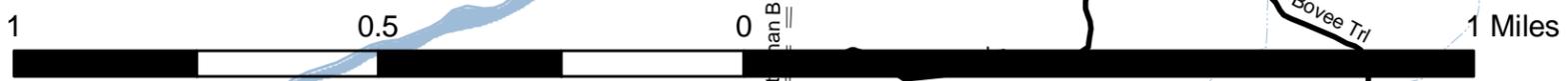
Level 3

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

Non-Forest Stands

Level 3

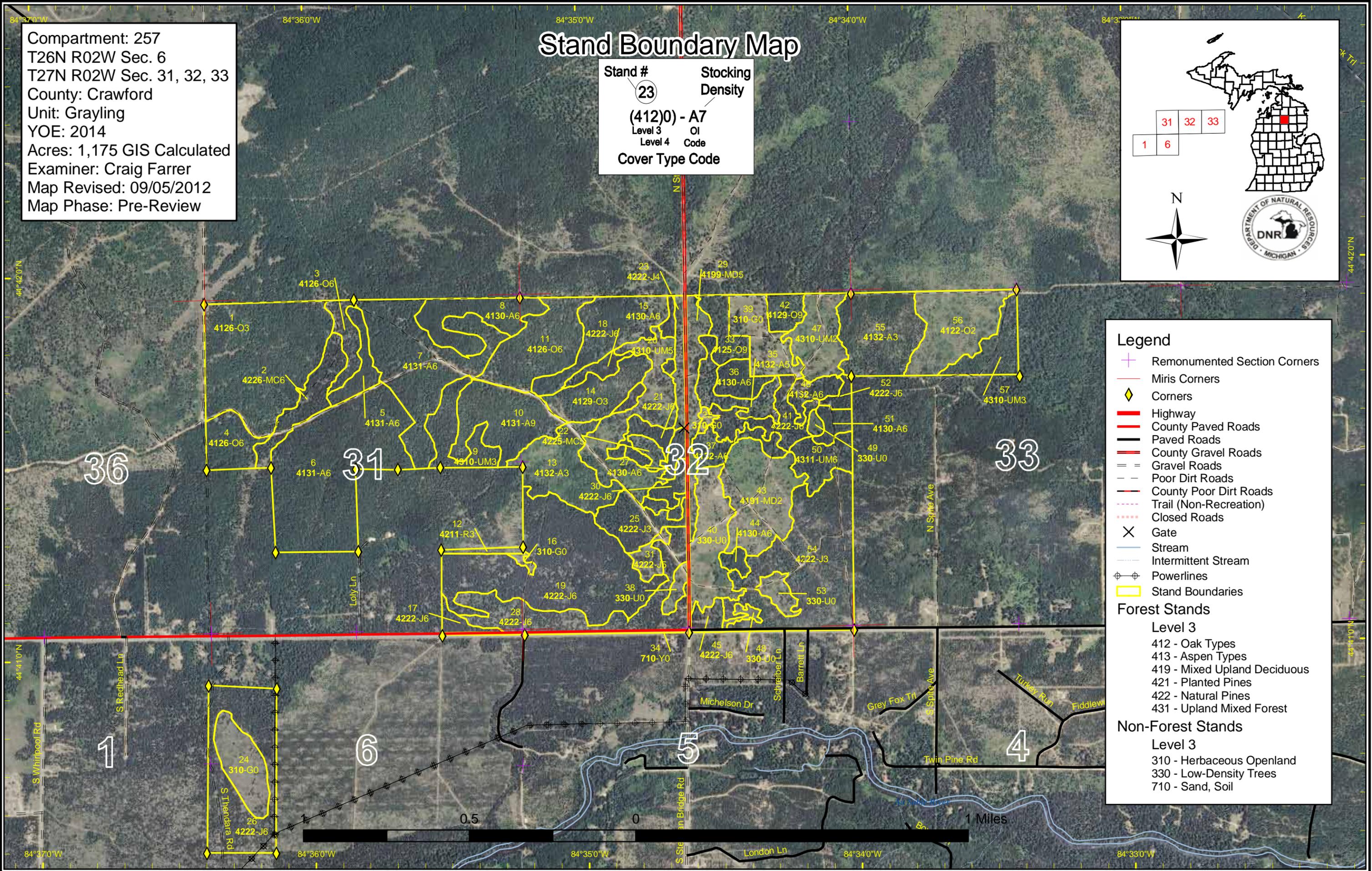
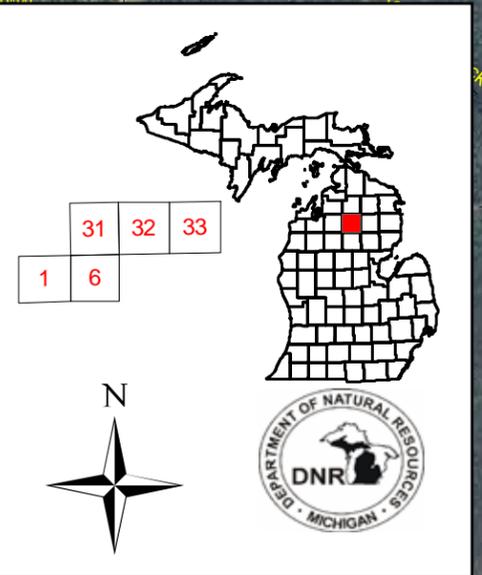
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 710 - Sand, Soil



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 T26N R02W Sec. 6
 T27N R02W Sec. 31, 32, 33
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Stand Boundary Map

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



Legend

- ⊕ Remonumented Section Corners
- Miris Corners
- ◆ Corners
- ▬ Highway
- ▬ County Paved Roads
- ▬ Paved Roads
- ▬ County Gravel Roads
- ▬ Gravel Roads
- ▬ Poor Dirt Roads
- ▬ County Poor Dirt Roads
- ▬ Trail (Non-Recreation)
- ▬ Closed Roads
- ⊗ Gate
- ▬ Stream
- ▬ Intermittent Stream
- ⊕ Powerlines
- ▬ Stand Boundaries

Forest Stands

Level 3

- 412 - Oak Types
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Non-Forest Stands

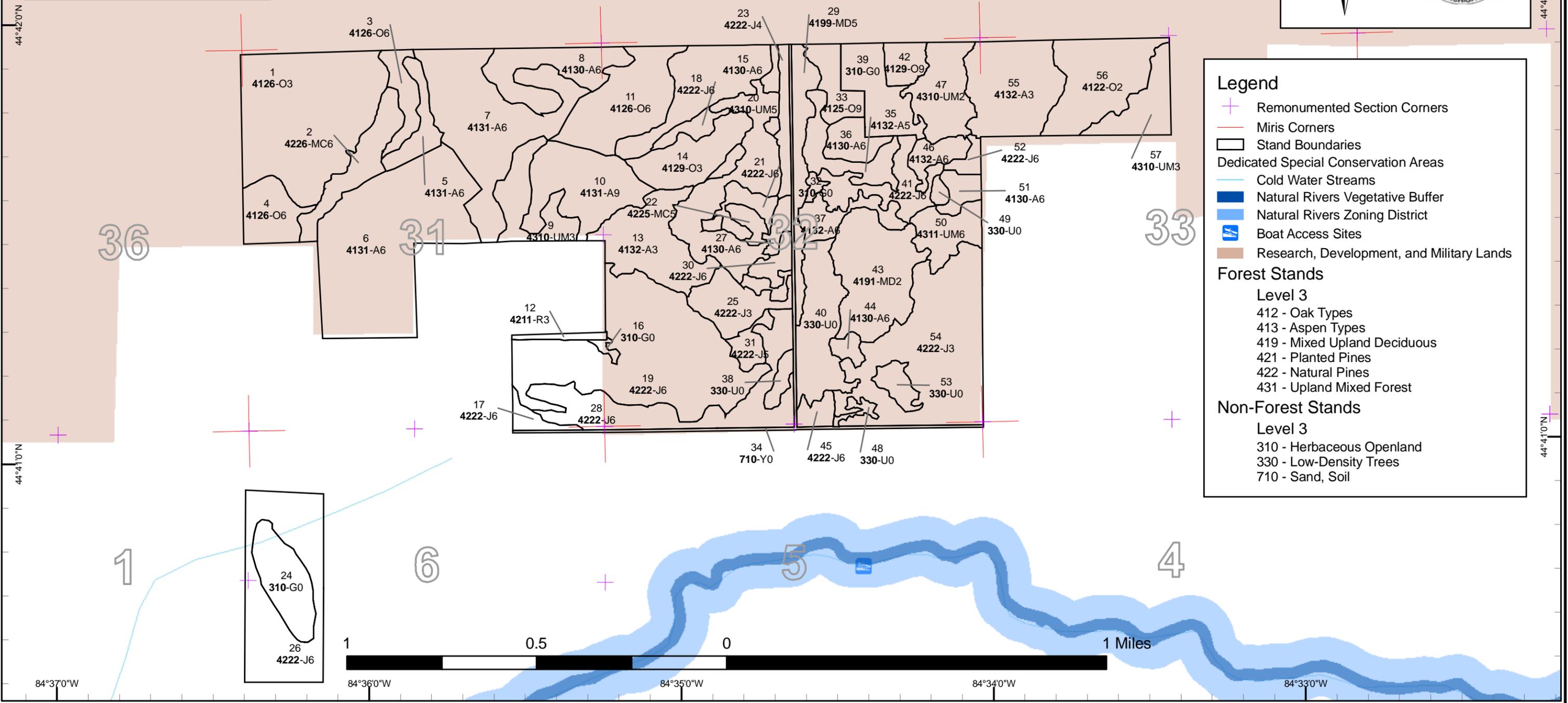
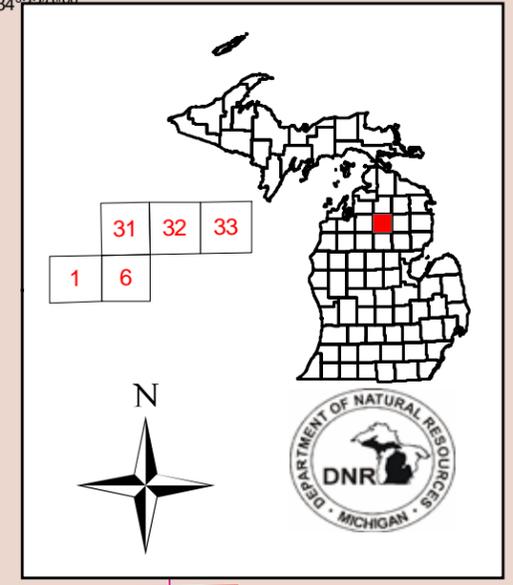
Level 3

- 310 - Herbaceous Openland
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- 710 - Sand, Soil

Dedicated & Proposed Special Conservation Area Map

Compartment: 257
 T26N R02W Sec. 6
 T27N R02W Sec. 31, 32, 33
 County: Crawford
 Unit: Grayling
 YOE: 2014
 Acres: 1,175 GIS Calculated
 Examiner: Craig Farrer
 Map Revised: 09/05/2012
 Map Phase: Pre-Review

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



Legend

- ✚ Remonumented Section Corners
- Miris Corners
- ▭ Stand Boundaries
- ▭ Dedicated Special Conservation Areas
- Cold Water Streams
- ▭ Natural Rivers Vegetative Buffer
- ▭ Natural Rivers Zoning District
- ▭ Boat Access Sites
- ▭ Research, Development, and Military Lands

Forest Stands

Level 3

- 412 - Oak Types
- 413 - Aspen Types
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Non-Forest Stands

Level 3

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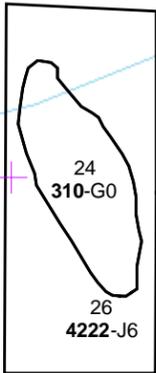


Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	
Aspen	0	67	3	246	0	7	10	33	0	0	0	0	0	0	367
Herbaceous Openland	42	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Jack Pine	0	0	79	218	3	0	26	0	0	0	0	0	0	0	326
Low-Density Trees	41	0	0	0	0	0	0	0	0	0	0	0	0	0	41
Mixed Upland Deciduous	38	0	16	0	0	0	0	0	0	0	0	0	0	0	54
Natural Mixed Pines	0	0	0	22	0	0	0	0	0	0	0	0	0	0	22
Oak	34	0	0	130	0	0	0	24	18	0	0	0	0	0	206
Red Pine	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Sand, Soil	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Upland Mixed Forest	21	0	52	17	0	0	14	0	0	0	0	0	0	0	105
Total	186	67	153	634	3	7	50	57	18	0	0	0	0	0	1175



Table 2 – Proposed Treatment Summaries

Grayling Mgt. Unit
Year of Entry 2014

Compartment 257
Total Compartment Acres: 1175

Acres by Treatment Type

Commercial Harvest - 93	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	18	0	0	0	0	0	0	18
Jack Pine	29	0	0	0	0	0	0	29
Oak	15	0	18	0	0	0	0	33
Upland Mixed Forest	14	0	0	0	0	0	0	14
Total	75	0	18	0	0	0	0	93



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
4	72257004-Cut	14.7	4126 - White, Black, N. Pin Oak	High Density Pole	78	81-110	Harvest	Clearcut with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal

Prescription Clearcut with reserves. Mark areas of reserve along tank trail to limit military traffic from leaving tank trail. Use military specifications and Oak wilt specifications in contract. Stand borders private property and blue private line will be needed.

Other Comments:

Next Steps: Will except a mix of natural regeneration following harvest of not only Oak, but Aspen and Red maple. Will accept and fully stocked stand of mixed Oak, Aspen and Red maple with some coifer.

Proposed Start Date: 10/01/2013

23	72257023-Cut	7.4	42220 - Natural Jack Pine	Low Density Pole	26		Harvest	Clearcut	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal
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Prescription This stand was part of a fuel break along Stephan Bridge Road that extended into compartment to the north and south through the rest of this compartment. Trees are reaching small pole size. If want to maintain this as a fuel break, I recommend a final harvest of this strip.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

33	72257033-Cut	10.8	4125 - Black, N. Pin Oak	High Density Log	82	81-110	Harvest	Seed Tree	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
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Prescription Mark to leave 10-20 BA of Oak throughout the stand. Also leave all Red Pine. Use Oak Wilt specifications and Military specifications.

Other Comments:

Next Steps: Expect to get Oak regen with a mix of Aspen, Red Maple and possible some conifer. Need a regen survey. Will except a moderate stocking of Oak, Aspen, Red maple and some conifer.

Proposed Start Date: 10/01/2013

37	72257037-Cut	10.5	4132 - Aspen, Jack Pine	High Density Pole	60	81-110	Harvest	Clearcut	4132 - Aspen, Jack Pine	Cmpt. Review Proposal
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Prescription Final harvest with no retention. Want to expand Aspen as much as possible. Use military specifications.

Other Comments:

Next Steps: Should get aspen regen back with possibly a mix of Jack Pine and some Oak.

Proposed Start Date: 10/01/2013



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
41	72257041-Cut	16.7	42220 - Natural Jack Pine	High Density Pole	60	81-110	Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal

Prescription Final harvest with retention. Leave 3 1 acre patches throughout stand. Leave all Red Pine within the stand. Use military specifications.

Specs:

Other

Comments:

Next Steps: Will accept a mix of regeneration of Jack Pine, Aspen and Oak.

Proposed

Start Date: 10/01/2013

42	72257042-Cut	7.4	4129 - Mixed Oak	High Density Log	82	111-140	Harvest	Seed Tree	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
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Prescription Recommend heavy seed tree cut. Mark to leave 10-20 BA of Oak throughout the stand. Leave all Red Pine within the stand. Use military specifications.

Specs:

Other

Comments:

Next Steps: Looking to get Oak regen, but will except a mix of species. Need regen survey. Will accept a moderately stock stand of Oak Aspen, Red maple and some conifer spieces.

Proposed

Start Date: 10/01/2013

45	72257045-Cut	4.7	42220 - Natural Jack Pine	High Density Pole	63	81-110	Harvest	Clearcut	42220 - Natural Jack Pine	Cmpt. Review Proposal
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Prescription Final harvest with no retention. Use military specifications. A narrow strip of this stand was planted next to North Down River Road.

Specs:

Other

Comments:

Next Steps: Hope to get some Jack Pine back.

Proposed

Start Date: 10/01/2013

46	72257046-Cut	7.4	4132 - Aspen, Jack Pine	High Density Pole	55	81-110	Harvest	Clearcut	4132 - Aspen, Jack Pine	Cmpt. Review Proposal
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Prescription Final harvest with no retention. Use military specifications.

Specs:

Other

Comments:

Next Steps: Will accept a mix of the same species as Aspen, Jack pine and Oak.

Proposed

Start Date: 10/01/2013

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



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
50 72257050-Cut	13.6	4311 - Pine, Aspen Mix	High Density Pole	60	81-110	Harvest	Clearcut with Reserves	4311 - Pine, Aspen Mix	Cmpt. Review Proposal

Prescription: Clear cut with reserves. Cut all Jack Pine, Aspen and Oak from stand. Leave large diameter Red and White Pine. Protect the young patch of White Pine and the patch of Jack pine. Use military specifications.

Other Comments:

Next Steps: Sould get a mixed stand of Aspen, Jack pine and Oak back. White Pine may even expand more into stand. Should regenerate to a fully stocked stand of mix species above

Proposed Start Date: 10/01/2013

**Total Treatment
Acreage Proposed: 93.1**

Table 4 -- Treatments Prescribed with a Limiting Factor



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

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Error

Limiting Factor and No
Treatment Reason

**Total Treatment
Acreage Proposed: 0**

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

Year of Entry: 2014



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

**Total Treatment
Acreage Proposed: 14.3**



Stand	Grayling Mgt. Unit			5 – Forested Stands		Compartment: 257 Year of Entry: 2014
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4126 - White, Black, N. Pin Oak	High Density Sapling	75.9	37	1-50	Young Oak/ Aspen stand. Some Oak and Aspen have reached pole size. The remaining is in saplings. (50/50 pole/saplings). West side and south side borders tank trail. Stand is under long term military lease. Recommend no treatment at this time. Additional info. Stand was burned in a fire in 1975. Regenerated due to fire naturally. Trees that did not burn in fire and were fire scarred were removed in an overstory cut in 1997.
2	42260 - Natural Pine, Mixed Deciduous	High Density Pole	17.7	37	51-80	Young pole size Jack pine stand mixed with some deciduous species and Red pine. Located in a valley. Stand is under long term military lease. South end of stand has tank trail traversing through it and also borders private. South end of stand has some large diameter Jack pine poles. Recommend no treatment..
3	4126 - White, Black, N. Pin Oak	High Density Pole	9.2	78	51-80	Oak/Jack pine pole stand with some Aspen, located in valley. Mostly White Oak and Jack pine. Oak is pole size and short with fire scars at the base of some. Some of the Oak is small diameter log size. Stand is under long term military lease. Somewhat sparse looking. Recommend no treatment. Stand was part of a 1975 fire.
4	4126 - White, Black, N. Pin Oak	High Density Pole	14.7	78	81-110	Mature Mixed Oak stand with some Bigtooth Aspen. Stand borders private to the west and south. Stand is under long term military lease. Recommend heavy seed tree cut (mark 10 BA to leave). This will be retention. Or, final harvest with no retention. Use military sale specs. North side of stand borders tank trail. Stand was in a 1975 fire.
5	4131 - Aspen, Oak	High Density Pole	9.5	37	51-80	Young Aspen pole stand mixed with Oak and Red maple. Stand was burnt in 1975 fire and Aspen and some Oak regenerated after fire. Stand is under long term military lease.
6	4131 - Aspen, Oak	High Density Pole	88.2	37	81-110	New stand added. Young Aspen /Oak stand. Fire established in 1975. Stand is under long term military lease. Recommend no treatment.
7	4131 - Aspen, Oak	High Density Pole	59.0	37	51-80	Young Aspen with Mature Oak in the canopy. Some young Aspen scattered throughout stand. Located on ridges and in valleys. Stand is under long term military lease. North end of stand borders two track and south end borders private. Recommend no treatment.
8	4130 - Aspen	High Density Pole	23.4	37	81-110	Young Aspen pole timber stand mixed with other deciduous species. Mostly Oak, but some Red maple. Stand is under long term military lease. Stand is somewhat similar to the north in compartment to the north. Recommend no treatment at this time. Hold another 10 to twenty years.
9	4310 - Pine, Oak Mix	High Density Sapling	17.4	37	1-50	Young Jack pine stand mixed with young Oak. Called in field sapling stand. Could possibly go either way(sap-pole/pole-sap). There is more larger size pole timber in the south part of the stand next to private, but lots of three inch tree in the overstory. Stand is under long term military lease. Stand is located in valley and side slopes of the valley. Recommend no treatment. Stand was part of a large 1975 fire.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
10	4131 - Aspen, Oak	High Density Log	32.9	78	51-80	New stand added. Mature Oak/Young Aspen or visa versa. Stand is two ages. Probably due to fire or the way it was harvested. Stand has mature Oak and some Aspen in the overstory along with younger pole size Aspen in the overstory. Stand is under long term military lease. Stand borders two track to the north and south and a two track traverses through the stand. Recommend no treatment this entry year. Let young pole size Aspen to mature at least another rotation.
11	4126 - White, Black, N. Pin Oak	High Density Pole	33.8	37	51-80	New stand added. Young Oak pole/sapling stand mixed with Aspen and pockets of Aspen. Lot of White Oak from sapling to small sawlogs. Scattered sawlogs throughout stand. Stand is under long term military lease. The north part of the stand borders a two track and the south end borders a two track. Stand is similar to the stand to the south. Recommend no treatment.
12	42110 - Planted Red Pine	High Density Sapling	2.5	22		Small young sapling size Red pine plantation. (3 inches avg.). May have been part of a trespass in past. (Possibly planted by private owner to the north because stand continues on private). Stand is under long term military lease. Recommend no treatment at this time. Check for a trespass or resolved trespass.
13	4132 - Aspen, Jack Pine	High Density Sapling	31.0	17		Immature Aspen/Jack pine stand with Oak also scattered throughout stand. Stand was harvested two entry yrs ago. Some young Aspen pole timber in pockets scattered within stand. Stand under long term military lease. West side of stand borders a portion of private and some portions to the east borders two track(tank)trail. Recommend no treatment.
14	4129 - Mixed Oak	High Density Sapling	20.8	37	1-50	Mixed Oak sapling pole stand mixed with Jack pine and Aspen. More Jack pine in north end of stand. Some Aspen patches in the south west part of the stand. Stand located on side slopes and ridge top. Stand is under long term military lease. Recommend no treatment. South west portion of stand borders two track(tank)trail.
15	4130 - Aspen	High Density Pole	29.2	37	81-110	Aspen stand mixed with Oak. Located on slope facing east. Believe this stand to be part of 1975 fire. Aspen regenerated after fire along with some Oak. Older Oak scattered throughout stand is of 1934 origin. Aspen denser than stand just to the west and was part of this stand previous inventory. Stand is under long term military lease. North and south end borders two tracks. Recommend no treatment. If want to spread Aspen age classes out with in the compartment I would recommend final harvesting this stand and use military specs and retention guidelines.
17	42220 - Natural Jack Pine	High Density Pole	4.3	62	81-110	Small mature pole size Jack pine stand. Stand escaped fire or past cuttings. Stand borders North Down River RD and private property to the west. Stand is under long term military lease. Can cut stand now or leave stand and treat with adjacent stands in 10-20 yrs.
18	42220 - Natural Jack Pine	High Density Pole	10.4	37	51-80	Young pole size natural Jack pine stand. Some deciduous species with in stand. Stand is under long term military lease. A couple of scattered pockets throughout the nw of section 32 of this type. Recommend no treatment.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	42220 - Natural Jack Pine	High Density Pole	88.0	37		Young Jack pine pole stand with other deciduous species. Scattered Oak and Aspen. Stand is under long term military lease. North west portion of the stand borders private 40. Private access through stand on two track that traverses through stand. Two track is block just east of private property. Stand looks healthy. Recommend no treatment. Hold another 10 to 20 years.
20	4310 - Pine, Oak Mix	Medium Density Pole	36.9	26	1-50	Mixed pole/sapling or sapling pole stand. Stand was last harvested in 2004. Everything over 5 inches and up was removed. Small pockets/patches/clumps of immature Jack pine were left throughout the stand. Some smaller Aspen and Oak were left too. Stand is regenerating to a mixed stand. There are Aspen, Oak and Jack pine regen scattered and in pockets throughout the stand. Stand is under long term military lease. Stand borders two track(tank)trail and Stephan Bridge Rd. No treatment recommended.
21	42220 - Natural Jack Pine	High Density Pole	7.2	37	81-110	Immature Jack pine pole stand. 1-2 stick trees. North west portion of the stand has a small bog. Stand is under long term military lease. Recommend no treatment.
22	42250 - Pine, Oak	Medium Density Pole	3.9	37	1-50	Young pole stand of Jack pine mixed with Oak. Stand was cut the same time stand 22 was cut, but stand less dense than stand 22. Stand is under long term military lease. Recommend no treatment.
23	42220 - Natural Jack Pine	Low Density Pole	7.4	26		Jack pine stand mixed with other deciduous species. Believe this stand was cut along Stephan Bridge Rd for a fuel break 25-30 years ago. If want to maintain it still as a fire break, it should be harvested again. This stand continues or at least continued into the stands to the south. Stand is under long term military lease.
25	42220 - Natural Jack Pine	High Density Sapling	16.1	37	51-80	Immature Jack pine stand mixed with Oak and some Aspen on the north end. Stand does have BA in Jack pine, Oak and Aspen. Stand is predominantly a Jack pine sapling stand just starting into pole size. Stand starting to thin itself, because there is a lot of 2-3 inch dead Jack pine that would be consider understory. Stand is under long term military lease. East side borders two track(tank)trail. Recommend no treatment.
26	42220 - Natural Jack Pine	High Density Pole	46.4	30	81-110	
27	4130 - Aspen	High Density Pole	8.4	32	81-110	Young Quaking Aspen stand mixed with some Jack pine. Stand is under long term military lease. West side borders two track(tank)trail and east side Stephan Bridge Rd. Recommend no treatment.
28	42220 - Natural Jack Pine	High Density Pole	38.6	37	1-50	Young Jack pine stand. Stand is same age as surrounding stand, but sparser. Stand borders North Down River Rd. Stand is under long term military lease. Private property to north is accessed by two track that traverses through stand. Recommend no treatment.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
29	4199 - Other Mixed Upland Deciduous	Medium Density Pole	15.9	26	1-50	Mixed pole/sapling or sapling pole stand. Stand was last harvested in 2004. Everything over 5 inches and up was removed. Small patches/pockets/clumps of immature Jack pine were left throughout the stand. Some smaller Aspen and Oak were left too. Stand is regenerating to a mixed stand. There are Aspen, Oak and Jack Pine regen scattered throughout the stand and in pockets. Stand is under long term military lease. West side of stand borders Stephan Bridge Road. No treatment recommended. Stand meets regen specifications.
30	42220 - Natural Jack Pine	High Density Pole	5.2	37	51-80	Young Jack pine pole/sapling stand mixed with some Oak and Aspen. Stand is under long term military lease. Recommend no treatment.
31	42220 - Natural Jack Pine	Medium Density Pole	5.8	37	1-50	Young pole size natural Jack pine stand in patches. Stand was harvested 8 years ago under contract 720040401. Large pole size Jack Pine removed from stand, leaving 4" and under. Recommend no treatment at this time. Stand is under long term military lease. Some natural Jack pine seeding in, but for the most part, areas where trees cut are still open. Failed to regenerate to Oak.
33	4125 - Black, N. Pin Oak	High Density Log	10.8	82	81-110	Maure Oak stand mixed with Aspen and some Jack pine. On rolling terrain and side slopes. Stand is filled with several two tracks throughout it due to past and present military activite and firewood cutters. Due to size and location of stand, recommend heavy seed tree cut or final harvest possibly with an acre or two of retention patches. Long term military leased land. Sale specs should address military specs and Oak wilt. Looking to regenerate Oak, but will except a mix of species.
35	4132 - Aspen, Jack Pine	Medium Density Pole	14.0	38	51-80	Stand is a mix of Aspen, Oak and Jack pine. Pole timber in patches and clumps. Kind of a transition zone between an Aspen std and a Jack pine std. Stand is under long term military lease. Northwest part of the stand is young pole size Jack pine and Oak with some scattered Oak timber throughout the patch. Some Aspen saw timber throughout the rest of the stand in a very small amount(1%). Dense in some areas of the stand and less dense in others. Small open ares of upland brush or grasses. Recommend no treatment.
36	4130 - Aspen	High Density Pole	8.8	37		Young Aspen pole stand(4-6 dbh). Some pole size Oak within stand. Stand is under long term military lease. Located on side slope and rolling terrain. Two track trail traverses through a portion of the stand. Recommend no treatment.
37	4132 - Aspen, Jack Pine	High Density Pole	10.5	60	81-110	Some what poor quality Quaking Aspen stand mixed wiith Jack pine. Stand is under long term military lease. Recommend final harvest with no retention. Want to expand Aspen as much as possible. Treat stand with 44.
41	42220 - Natural Jack Pine	High Density Pole	16.7	60	81-110	Mature Jack Pine pole timber stand mixed with other deciduous spieces and some Red pine. Stand is under long term military lease. Recommend final harvest with retentiion. Leave 3 1 acre patches throughout stand. Treat with stand 41. Use military specs in sale.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	4129 - Mixed Oak	High Density Log	7.4	82	111-140	Mature mixed Oak stand with Aspen and Red maple scattered throughout stand. South end and east side of stand has some Jack pine and Red pine within it. Some younger Aspen also in the south. Stand is under long term military lease. North end of stand borders two track along with west side. Rolling terrain sloping to the east. Recommend final harvest or heavy seed tree cut. Leave all Red pine. Manage for Oak, but will accept a mix of species.
43	4191 - Mixed Upland Deciduous with Conifer	Medium Density	38.5	8	1-50	Immature Oak/Jack pine and Aspen stand. Stand was final harvested in 2004 under contract 720040401. Every thing 4 inches and up was cut and chipped. Jack pine and Oak under 4 inches was not cut and is 3-4 inches in DBH now. This is scattered throughout stand. Aspen regen pockets in north end of stand and throughout stand. Oak and Jack pine regen scattered throughout stand. Stand is under long term military lease. Two track trails traverse through the stand and around the north west part of the stand. Recommend no treatment.
44	4130 - Aspen	High Density Pole	3.3	22	1-50	Small, young pole size Aspen stand. Some Oak and Jack pine within stand. Stand is under long term military lease. Recommend no treatment at this time.
45	42220 - Natural Jack Pine	High Density Pole	4.7	63	81-110	
46	4132 - Aspen, Jack Pine	High Density Pole	7.4	55	81-110	
47	4310 - Pine, Oak Mix	Medium Density	21.3	8	1-50	Immature Aspen/Oak/Jack pine stand. Harvested last entry yr. Stand is regenerating nicely, lots of saplings and seedlings of Aspen/Oak and Jack pine. Scattered pole timber throughout stand that was not cut in the above species (10 BA if standing in one of those spots). Stand is under long term military lease. Two track trail traverses through stand. Recmmend no treatment.
50	4311 - Pine, Aspen Mix	High Density Pole	13.6	60	81-110	Mature Aspen/Jack pine stand with scattered Red and White pine in overstory also. Pockets of Red/White pine; pockets of Jack pine; and pockets of Aspen (young stuff). Stand was part of the Stephan Bridge fire.
51	4130 - Aspen	High Density Pole	5.7	36	81-110	Aspen pole stand with some scattered Oak and Red pine in overstory(older trees). Understory consists of White and Red pine sapling/seedling of medium stocking. Stand is under long term military lease. East side of stand borders private. Recommend no treatment. Two track trail traverses through the stand. Stand was in the 1990 Stephan Bridge fire.
52	42221 - Natural Jack Pine, Mixed Deciduous	High Density Pole	3.4	41	81-110	Smal Jack pine pole stand mixed with Aspen and some other deciduous species. Stand borders private property and is under long term military lease. Two track traverses through stand into private with gate at private. Recommend no treatment. Same stand type continues on private. .



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
54	42221 - Natural Jack Pine, Mixed Deciduous	High Density Sapling	71.7	22	1-50	Immature Jack pine stand mixed with other deciduous species. Stand was part of the Stephan Bridge fire in 1990. Some mature/pole size Jack pine scattered throughout stand that fire missed. Stand is under long term military lease. Stand borders private to the east and North Down River Road to the south. Recommend no treatment. Level to slightly rolling terrain.
55	4132 - Aspen, Jack Pine	High Density Sapling	36.1	17		Young Aspen stand with Oak scattered throughout. Jack pine pocket located in center of stand stretching sw and ne in stand. This pocket has Aspen and Oak scattered through it. Stand was harvested two entry yrs ago. Stand is under long term military lease. Recommend no treatment. South end of stand borders private and north end borders two track(tank)trail.
56	4122 - Oak, Pine	Medium Density	33.6	8		Immature Oak/Jack pine stand. Regenerating nicely to an Oak/Jack pine stand. Lots of natural Oak regen with a fair amount of Jack pine regen. (Sapling/seedling stand with some scattered residual in Oak and pine - mostly 1 stick stuff that was not cut in singles and clumps 10 - 20 BA if stand in that spot). Stand is under long term military lease. Stand was harvested last entry yr under contract 720040401. Recommend no treatment. South end of stand borders private and north end two track(tank)trail.
57	4310 - Pine, Oak Mix	High Density Sapling	15.6	22	1-50	Immature Jack pine/Oak stand. Just starting to reach pole size. Some small pockets of Aspen. Stand has some BA. Mostly in the Aspen pockets and the scattered pole and saw timber in the canopy above the main canopy. Some of these BAs along east side of two track traversing through the stand. East and south side of stand borders private. Stand is under long term military lease. Recommend no treatment. Stand was in the 1990 Stephan Bridge Fire.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
16	3105 - Mixed Upland Herbaceous	1.3	No	Low (NonForested)	Small herbacious opening located just south of private property where private gate exists and access two track traverses through stand. Small patch of exposed soil exits with stand. Stand is under long term military lease.
24	3105 - Mixed Upland Herbaceous	19.2	No	Unspecified	Opening as a result of a fire. Some scattered tree speices within the opening, but mostly on the surrounding edges. No legal access to the stand.
32	3105 - Mixed Upland Herbaceous	1.6	No	Low (NonForested)	
34	710 - Sand, Soil	9.9	No	Low (NonForested)	Stephan Road.
38	3303 - Mixed Low Density Trees	3.8	No	Low (NonForested)	
39	310 - Herbaceous Openland	19.9	N/A	Unspecified	
40	3303 - Mixed Low Density Trees	27.2	No	Low (NonForested)	Large herbacious opening with scattered trees throughout opening. Mostly Jack pine, but some Oak and Aspen. South west side borders Stephan Bridge Rd. Stand is under long term military lease. Several two track trails traverse through stand.
48	3303 - Mixed Low Density Trees	2.1	No	Low (NonForested)	
49	3303 - Mixed Low Density Trees	1.8	No	Low (NonForested)	
53	3303 - Mixed Low Density Trees	5.8	No	Low (NonForested)	Old Fred Bear dump site. Sparse amount of mixed tree spieces. Dominarely grasses and sedges.



7 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

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

Stand	SCA Type	SCA Name	Acres	Comments



8 – DEDICATED CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
HCVA	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.
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.