



GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 268 ENTRY YEAR: 2014

GIS Compartment Acreage: 1551 County: Crawford

Revision Date: August 23, 2012

Stand Examiner: Joan Charlebois

Legal Description: T28N R2W Sections 10, 11, 12
Lovells Township - northwest part

Management Goals: To provide an area that allows for National Guard training while maintaining forest health, productivity, sustainability, species diversification and structural diversity throughout the compartment.

Soils and Topography: The compartment's rolling to steep terrain is on Graycalm-Klacking and Graycalm-Grayling complexes. The outwash plains are on Grayling sands. The river floodplain is comprised of Tawas-Leafriver mucks.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The entire area is under the 1935 long-term lease agreement L-1479 (Act 154 P.A. 1935) with the Michigan National Guard, Department of Military Affairs. The agreement provides for use by the military during their encampment, with no permanent buildings or improvements to be erected. Military needs take precedence over resource management needs on long-term lease lands. The DNR will coordinate all prescribed activities with the National Guard to ensure that they are compatible with military training needs. The west edge of the compartment is within the fenced Range 40 Complex. Several Military Firing Point openings are located within the compartment.

Unique, Natural Features: The North Branch of the AuSable is part of a designated Natural River system. There is the potential for rare wetland plants and reptiles to occur along the riparian corridor. There is also the potential for rare dry prairie plants, insects and birds to occur in upland grassy openings.

Archeological, Historical, and Cultural Features: The compartment's east side is two miles north of Lovells and was within that community's early homesteading and farming influence zone.

Special Management Designations or Considerations: The AuSable River system is a High Conservation Value Area (HCVA). The Military training lands are classified as a Special Conservation Area (SCA).

Watershed and Fisheries Considerations: The North Branch of the AuSable River is a quality trout stream. There is a walk-in fishing access site on the east side of the river, with an informal parking spot off of Twin Bridge Road.

Wildlife Habitat Considerations: The compartment's aspen, oak and upland brush cover types provide good habitat for grouse, deer and turkey. The lowland aspen on the river floodplain has good potential for woodcock management.

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 800 feet. Beneath the glacial drift is the Coldwater Shale that does not have a current economic use. The nearest gravel pit is located one and a half miles to the south, and potential is thought to be good in the upland areas. The compartment is State Military Leased land. None of the compartment is leased for mineral development. The Antrim Shale has been developed for gas production to the east.

Vehicle Access: County roads that provide access to the compartment include Twin Bridge, Ski Hill, Lint and Lonesome Lake Roads. A network of two-track roads provide access to the upland interior.

Survey Needs: The survey monument for the southwest corner of section twelve was destroyed, apparently during road work at the intersection of Ski Hill Road and KP Truck Trail. One of four witness trees remains standing, and the monument itself is in a pile of dirt ~20 feet northwest of the original location.

Recreational Facilities and Opportunities: The North Branch of the AuSable River is used mainly for fly fishing, but there is also some canoe and kayak traffic. Fisheries Division has an informal walk-in fishing access site along the river. Hunting is the main form of dispersed use in the upland interior.

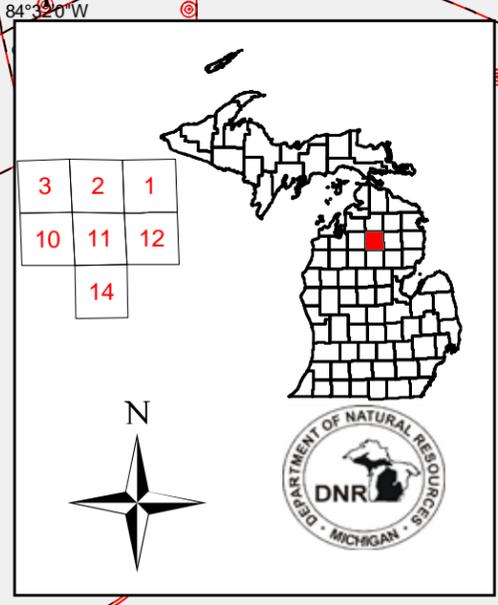
Fire Protection: The compartment has mainly upland deciduous cover, with reasonable access. The AuSable River and nearby lakes are potential water points.

Additional Compartment Information:

- **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**

Compartment: 268
 T28N R02W Sec. 10, 11, 12
 County: Crawford
 Unit: Grayling
 YOE: 2014
 Acres: 1,551 GIS Calculated
 Examiner: Joan Charlebois
 Map Revised: 09/05/2012
 Map Phase: Pre-Review



Cover*Type & Treatment Map

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

Legend

- Remonumented Section Corners
- Corners
- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Fishing Access Site
- Camp Grayling Fence
- Camp Grayling Firing Point
- Camp Grayling Safety Marker
- Camp Grayling Land Navigation Marker
- Camp Grayling Observation Point
- Camp Grayling Monitoring Wells
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- 72269 Out of YOE

Forest Stands

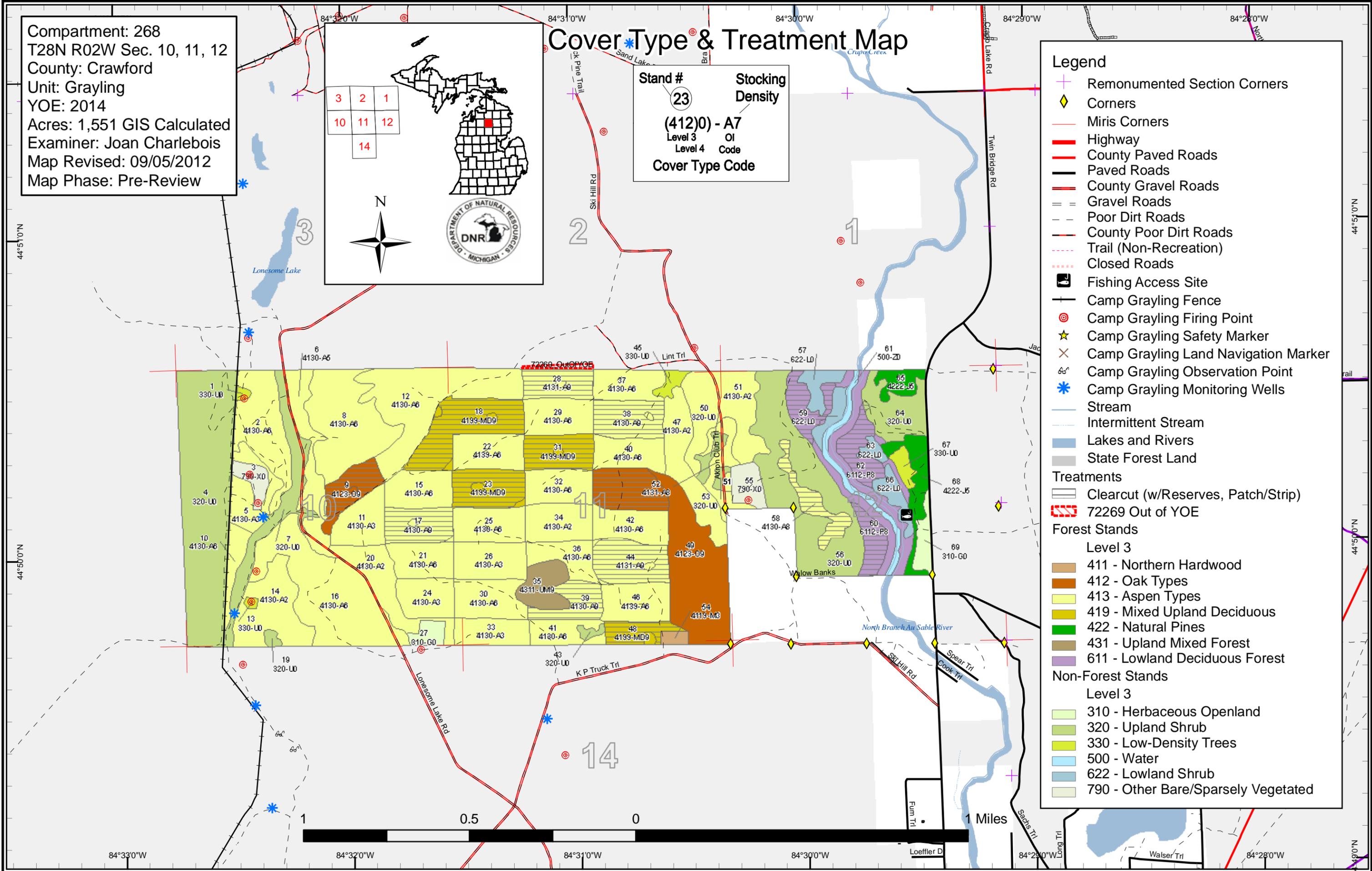
Level 3

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

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 790 - Other Bare/Sparsely Vegetated



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Stand Boundary Map

Stand #
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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
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- Camp Grayling Land Navigation Marker
- Camp Grayling Observation Point
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- Stream
- Intermittent Stream
- Stand Boundaries

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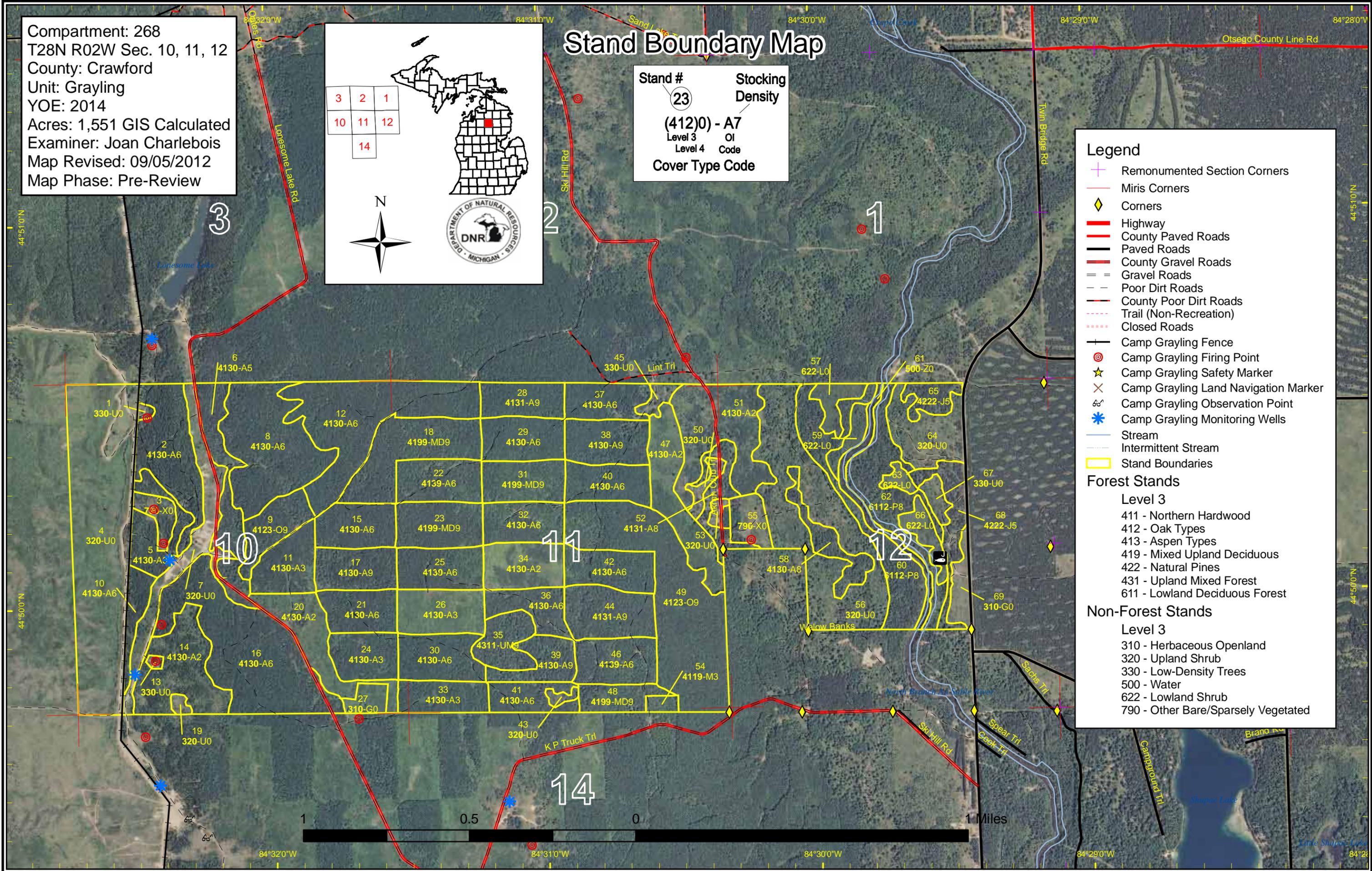


Table 1 – Total Acres by Cover Type and Age Class



	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 +		Uneten Age
Aspen	100	153	405	9	83	14	49	64	0	0	0	0	0	22	899
Bare/Sparsely Vegetated	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Herbaceous Openland	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Jack Pine	0	0	0	0	26	0	0	0	0	0	0	0	0	0	26
Low-Density Trees	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Lowland Aspen/Balsam Poplar	0	0	0	0	35	37	0	0	0	0	0	0	0	0	72
Lowland Shrub	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Mixed Upland Deciduous	0	0	0	0	0	0	12	80	0	0	0	0	0	0	92
Northern Hardwood	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Oak	0	0	0	0	0	0	0	103	0	0	0	0	0	0	103
Upland Mixed Forest	0	0	0	0	16	0	0	0	0	0	0	0	0	0	16
Upland Shrub	258	0	0	0	0	0	0	0	0	0	0	0	0	0	258
Water	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Total	440	156	405	9	160	51	61	247	0	0	0	0	0	22	1551



Table 2 – Proposed Treatment Summaries

Grayling Mgt. Unit
Year of Entry 2014

Compartment 268
Total Compartment Acres: 1551

Acres by Treatment Type

Commercial Harvest - 278	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

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Aspen	111	0	0	0	0	0	111
Lowland Aspen/Balsam Poplar	41	0	0	0	0	0	41
Mixed Upland Deciduous	88	0	0	0	0	0	88
Oak	39	0	0	0	0	0	39
Total	278	0	0	0	0	0	278



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
9 72268009-ccr	15.1	4123 - Red Oak	High Density Log	77	81-110	Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: leave the few pine, exclude the SW peninsula that is cut off by the road, and leave a sub-acre interior retention island (see proposed treatment boundary as a general guide).</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is a mix of oak, aspen and maple. If natural regen needs supplementing to meet stocking standards, plant RP.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									

17 72268017-ccr	19.1	4130 - Aspen	High Density Log	68	81-110	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: leave any conifers, leave an approximately half-acre interior retention island, and boundary-line exclude roughly a third-acre in the stand's southeast corner (see proposed treatment boundary as a general guide).</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Natural regen survey. The natural regen goal is an aspen-dominated deciduous mix.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									

18 72268018-ccr	35.7	4199 - Other Mixed Upland Deciduous	High Density Log	75	111-140	Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: leave the pine & beech, along with three roughly half-acre retention islands (through boundary exclusion and interior placement; see proposed treatment boundary as a general guide).</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> The small amount of pole-sap-log beech will be left for mast and future snag material.</p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is a mix of oak, aspen & hardwoods. If natural regen needs supplementing to meet stocking standards, plant RP.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									

23 72268023-ccr	21.7	4199 - Other Mixed Upland Deciduous	High Density Log	76	81-110	Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: leave the beech, ash, any pine, and two roughly half-acre retention islands, one interior and one in the stand's southeast corner through boundary exclusion (see proposed treatment boundary as a general guide).</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> The small amount of pole-sap-log beech and ash will be left for mast and future snag material.</p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is a mix of oak, aspen & hardwoods. If natural regen needs supplementing to meet stocking standards, plant RP.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									

28 72268028-ccr	16.4	4131 - Aspen, Oak	High Density Log	74	111-140	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: leave the beech, ash, any conifers, and a roughly half-acre interior retention island (see proposed treatment boundary as a general guide). Two acres of this type land within 2015 YOE comp 269 and should be managed concurrent with this stand.</p> <p><u>Specs:</u></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>									



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
31	72268031-ccr	19.3	4199 - Other Mixed Upland Deciduous	High Density Log	79	81-110	Harvest	Clearcut with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest with reserves: leave the few pine, the beech, some xlog oak wildlife trees (open-grown, wolfy), and create a roughly half-acre interior retention island (see proposed treatment boundary as a general guide).</p> <p><u>Other Comments:</u> The small amount of pole-sap-log beech will be left for mast and future snag material.</p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is upland mixed deciduous with oak. Lower stocking between pockets of dense regen is acceptable.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
38	72268038-ccr	21.1	4130 - Aspen	High Density Log	75	81-110	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest with reserves: leave the pine, white oak, xlog red oak wildlife trees (basal cavities, open-grown), and create a roughly half-acre retention island around the pocket of WP regen along the 2-track (see proposed treatment boundary as a general guide).</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is a mix of aspen & oak.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
39	72268039-cc	15.7	4130 - Aspen	High Density Log	68	81-110	Harvest	Clearcut	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest, leaving the scattered pine, white oak & beech.. No additional retention specified because the adjacent pine-aspen type (stand 35, created 2014 YOE) captures part of this originally 20-acre aspen stand. That being said, do not chase aspen into the adjacent stand 35; use the proposed treatment boundary as a guide.</p> <p><u>Other Comments:</u> The small amount of beech will be left for mast and future snag material.</p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is aspen with a mixed deciduous component.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
44	72268044-ccr	24.6	4131 - Aspen, Oak	High Density Log	71	81-110	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest with reserves: leave the pine, beech, white ash, and xlog oak wildlife trees (open-grown, hollow, etc), create a roughly half-acre retention island around the pocket of RP along the two-track, and create two roughly quarter-acre retention islands through boundary exclusion in the stand's NW & SW corners (approximated by the proposed treatment boundary).</p> <p><u>Other Comments:</u> The small amount of pole-sap-log beech and ash will be left for mast and future snag material.</p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is aspen and oak with a mixed deciduous component. If natural regen needs supplementing to meet stocking standards, plant RP.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
48	72268048-ccr	11.0	4199 - Other Mixed Upland Deciduous	High Density Log	69	111-140	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest with reserves: leave the pine, beech, some xlog oak wildlife trees (open-grown, wolfy), and create a retention island through boundary exclusion around the informal campsite in the stand's SE (proposed treatment boundary approximates that retention area).</p> <p><u>Other Comments:</u> The small amount of pole-sap-log beech will be left for mast and future snag material.</p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is aspen, oak and mixed deciduous. If natural regen needs supplementing to meet stocking standards, plant RP.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
49 72268049-ccr	23.5	4123 - Red Oak	High Density Log	76	81-110	Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves the stand's NW peninsula on the rolling terrain, excluding the steep east-aspect slope. This portion of the stand is where more of the northern hardwood component occurs, and the oak is larger diameter. Leave the pine, beech, white ash, and some xlog oak wildlife trees (open-grown, hollow, etc.)</p> <p><u>Specs:</u></p> <p><u>Other</u> The small amount of pole-sap-log beech and ash will be left for mast and future snag material.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is oak and aspen with mixed hardwoods. If natural regen needs supplementing to meet stocking standards, plant RP.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									

58 72268058-cc	13.8	4130 - Aspen	Medium Density Log	52	51-80	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest, leaving the scattered conifers. No additional retention specified due to the stand's high amount amount of edge relative to area, and the presence of aspen, oak and maple components in the surrounding low-density tree stand. The treatment boundary picks up small aspen clones that are separated by U/G inclusions.</p> <p><u>Specs:</u></p> <p><u>Other</u></p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is a mosaic of aspen and upland brush cover.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									

60 72268060-ccr	25.6	6112 - Lowland Aspen	Medium Density Log	52	51-80	Harvest	Clearcut with Reserves	6112 - Lowland Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: leave all conifers, the few elm, and create a retention area through boundary exclusion that leaves the 150' Natural Rivers buffer. Run the treatment's west boundary up onto and along the upland ground, picking up the concentrated oak, red maple and aspen bordering the upland brush/low-density tree stand 56. The proposed treatment boundary approximates those exclusions/inclusions.</p> <p><u>Specs:</u></p> <p><u>Other</u> Low ground-pressure harvesting equipment is indicated.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Additional regeneration within the proposed treatment boundary may be achieved through a Wildlife Division FTP; evaluate the need post-harvest. Natural regen survey. Natural regen goal is lowland aspen and shrub cover on the floodplain, with oak-aspen-mixed deciduous on the transition zone and upland edge.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									

62 72268062-ccr	15.0	6112 - Lowland Aspen	Medium Density Log	45	1-50	Harvest	Clearcut with Reserves	6112 - Lowland Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with reserves: leave all conifers, create a retention area through boundary exclusion that leaves the 150' Natural Rivers buffer, and exclude the transition ground bordering the Sheep Ranch site. Run the treatment's NE boundary up onto the dry ground, for a landing area. The proposed treatment boundary approximates those exclusions/inclusions. Do not site the landing within or haul through the adjacent 3I polygon (see SC layer).</p> <p><u>Specs:</u></p> <p><u>Other</u> Low ground-pressure harvesting equipment is indicated.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Additional regeneration within the proposed treatment boundary may be achieved through a Wildlife Division FTP; evaluate the need post-harvest. Natural regen survey. Natural regen goal is lowland aspen and shrub cover on the floodplain, with mixed upland deciduous on the transition zone and upland edge.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									

**Total Treatment
Acreage Proposed: 277.5**

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**



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4130 - Aspen	High Density Pole	37.1	27	1-50	Cut merch & up by early 1985 under 72-039-84-01, except for an uncut buffer left around Firing Point 505 in the stand's NW and a steep hillside at the stand's far south end. Aspen, RM & oak regen from the cut is transitioning into the pole class. Residual from the cut is already well into the pole class. The residual was heaviest along the stand's west side, which is dominated by small-pole QA and WP. The stand's east half had less residual. A majority of stems there are still saplings, but there is enough canopy representation in pole-sized stems that the stand is classified pole overall by IFMAP rules. Hilly terrain. BTA, RM & oak are concentrated on the ridgetop, switching to QA on the lower slopes. Less than recordable amounts of RP saw/poles & paper birch. At the stand's far S peninsula there is an acre inclusion of mature oak that was left uncut at the top of a steep hill. Several hill-climb 2-tracks cut through that area, recorded as an RDR.
5	4130 - Aspen	High Density Sapling	17.3	17		Cut 2" & up in late 1994 under 72-024-94-01. On rolling-steep terrain. BTA, RM & oak concentrated on hilltop, switching to mostly QA on the lower slopes. Hypoxylon present in the QA, mostly on the lower terrain. Occasional RP, WP & paper birch saplings. In addition to the listed subcanopy species, there were non-recordable amounts of witchhazel, beaked hazelnut & dogwood. Previous YOE aspen SI 57.
6	4130 - Aspen	Medium Density Pole	27.6	43	1-50	Patchy, variable QA pole stand with U/G inclusions. Mostly in a valley, with a couple deep frost pocket depressions. In-growth resulted in a another age/size class of large saplings intermediate in the canopy (second age), and there are also scattered older cull saw aspen stems. Hypoxylon & black canker present. BTA mixes in along this stand's east side where it transitions onto better ground. Hawthorn concentrated along the road edges.
8	4130 - Aspen	High Density Pole	55.5	44	81-110	Previous OI indicated a 1972 year of origin. Rolling terrain dissected with shallow valleys. BTA, NRO, & RM on the higher ground, QA on the lower terrain. Vigorous stump-origin oak clumps are generally weeded down to 1-3 clean poles, some pushing the small saw class, with co-dominant to dominant crown position. Oak residual from the regen cut are 12-16" DBH, scattered across stand as individual stems and in small patches. The harvest was likely spec'd merch & up, making for a slightly older residual class in the aspen, too. Occasional WP saps from the trace supercanopy WP seed source.
9	4123 - Red Oak	High Density Log	17.0	77	81-110	Nice small-med NRO saw with WO, RM, QA & overmature BTA. Stand's east end picks up a 5-chain wide swath of predominantly QA. There's a strip of younger aspen along the stand's S edge bordering the 2-track. Oak is wolfier S of the 2-track.
10	4130 - Aspen	High Density Pole	9.4	34	51-80	Q aspen stand bordering the Range 40 fence. Most of the aspen stems have transitioned into the pole class, but there is swath of younger sapling/pole aspen (roughly a chain wide) included along the range fence, and large cull aspen widely scattered across the stand. Oak regen filling in below. Small wetland inclusion at S end (OFS point); ground close to water table at that end of the stand.
11	4130 - Aspen	High Density Sapling	19.7	17		Cut 2" & up in late 1994 under 72-023-94-01. Dense aspen, RM & oak sprout regen from the cut, interspersed with small U inclusions. Maple-leaf viburnum concentrated on the better ground with the BTA.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
12	4130 - Aspen	High Density Pole	64.1	27	51-80	Cut merch & up by early 1985 under 72-039-84-01, and the east 20 acres under 72-255-84-01. Diffuse boundary between this stand and the adjacent to the west; the '84 harvest fingers into that stand and there was more residual left there. Aspen stand (mostly bigtooth) with red maple and oak components. There are traces of beech, hard maple & ironwood (concentrated in the east) and red pine (concentrated in the south). The residual from the cut is now large pole to small saw in size, while the majority regen from the cut is transitioning into the pole class. The red oak is generally vigorous, clean-boled and ahead of the aspen in diameter growth.
14	4130 - Aspen	Medium Density	36.3	17		Cut 2" & up in late 1994 under 72-024-94-01, except for an uncut buffer left around Firing Point 501. Q aspen sapling clones separated by U/G inclusions, on rolling terrain with small frost pocket depressions. QA clones have varying vigor; both hypoxylon & black canker present, particularly along clone margins and on lower terrain position. Black cherry mixed in throughout, along with a trace of NP oak & RM regen from the cut. The FP 501 opening is flagged for clearing that will expand it into this stand, likely to be done this year.
15	4130 - Aspen	High Density Pole	20.0	27	1-50	Cut merch & up in 1985 under 72-255-84-01. Aspen stand transitioning into the pole class. Mostly BTA, with QA, RM & NRO components and some paper birch. While not a large component, the oak is vigorous, with stump clumps continuing to weed down to fewer stems.
16	4130 - Aspen	High Density Pole	75.7	27	1-50	Cut merch & up in late 1984 under 72-040-84-01, except for an uncut buffer left around FP 502 in the stand's far SW peninsula. FP 502 is flagged for clearing & expansion that will create an acre-plus opening, taking most of the mature aspen from the old uncut buffer. Aspen transitioning into the pole class; enough there to make pole overall. Oak farther ahead; clumps weeding down nicely.
17	4130 - Aspen	High Density Log	19.9	68	81-110	Overmature BTA, cull RM, PB with a lot of mortality, and quality NRO saw. DWD from breaking up aspen & paper birch. QA to W1/3, breaking up. Start to see HM poles, beech & ironwood saplings at the stand's east end.
18	4199 - Other Mixed Upland Deciduous	High Density Log	37.5	75	111-140	Oak and aspen, with red maple and paper birch components and minor representation in northern hardwoods. The NRO and BTA dominate the canopy to a varying extent across the stand. The RM & PB are suppressed to intermediate in the canopy, with the PB progressively dropping out. The northern hardwoods are heaviest to the NE, the BTA to the SW. The NRO is a mix of good quality small saw and suppressed poles.
20	4130 - Aspen	Medium Density	25.7	6		Cut merch & up in late 2005 under 72-062-04-01, except for a sub-acre retention pocket that has mostly mixed oak saw. Areas of the stand that were sparse to start with along the road saw some in-growth but are still largely U/G. Small pockets where the mature aspen had succumbed to fungal disease and broke up before harvest have sparse to no aspen suckering. Overall though, the stand does meet minimum acceptable regen standards. The merch & up cutting spec left a scattering of large sap/small pole aspen & oak. Heavy preferential deer browse on the RM & oak stump sprouts in the stand's NW, but not in the SE.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4130 - Aspen	High Density Pole	18.3	27	51-80	Cut merch & up in 1985 under 72-255-84-01. Still transitioning into the pole class. Stand has dense aspen clones with minor RM & RO components, separated by RM, RO & paper birch dominated areas with only minor aspen representation. Oak stems vigorous; some approaching small saw size. Start to see small amount of HM, beech & ironwood in the stand's east end.
22	4139 - Aspen, Mixed Deciduous	High Density Pole	21.1	27	1-50	Cut merch & up in 1985 under 72-255-84-01. Aspen, red maple and oak with a mixed hardwood component. The stand is transitioning into the pole class, with much of the hardwood cover still sapling-sized. The aspen (mostly quaking) and oak are farthest into the pole category, with the red oak being the real stand-out in terms of growth & vigor. The hard maple & beech occur mostly in high stem density, stagnating stump clumps. There are small openings within the stand and scattered RP & WP.
23	4199 - Other Mixed Upland Deciduous	High Density Log	23.0	76	81-110	Oak, aspen, RM & paper birch with a northern hardwoods component (hard maple and small amounts of beech, white ash, basswood & ironwood). The site is high-end for oak and aspen, but is growing low-end northern hardwoods. The NRO is good quality, the BTA overmature, and the paper birch dying out. The canopy coverage in each species varies across the stand.
24	4130 - Aspen	High Density Sapling	18.2	17		Cut 2" & up in late 1994 under 72-029-94-01. West aspect, shallow slope leveling out. BTA & QA with RM & vigorous oak stump sprouts. A couple of U/G inclusions within the stand.
25	4130 - Aspen	High Density Pole	21.0	27	1-50	Cut merch & up in 1985 under 72-255-84-01. Sprout/root-sucker origin stems transitioning into the pole class. BTA & QA with RM, HM, PB & clean-boled NRO. The oak is vigorous, & stump clumps are weeding down nicely. Stand's east third transitions into less aspen & more low-end hardwoods. HM & beech not growing as vigorous as the rest. Basswood & white ash primarily on the east half.
26	4130 - Aspen	High Density Sapling	22.3	6		Cut merch & up in early 2006 under 72-062-04-01. High-end aspen site; predominantly BTA with RM, QA, oak, and a northern hardwood component. Light browse, majority of stems punched past the browse line. Oak growth impressive; dominant stems in clumps are over 8 feet tall; above the aspen in places.
28	4131 - Aspen, Oak	High Density Log	16.9	74	111-140	Overmature BTA (conks, burls, cavities forming) with quality RO, suppressed-intermediate RM, and small amounts of hard maple, paper birch, beech & white ash. Terrain is a series of shallow ridges and valleys. BTA SI 75.
29	4130 - Aspen	High Density Pole	20.9	27	1-50	Cut merch & up in 1985 under 72-255-84-01. Aspen (mostly bigtooth), with vigorous oak, the usual RM, and poor-quality northern hardwoods. The hard maple and small amounts of paper birch, basswood, white ash and beech tend toward high stem densities and small diameters. On rolling terrain. Staghorn sumac concentrated along the two-track.
30	4130 - Aspen	High Density Pole	22.1	Uneven Age	1-50	Cut merch & up in 1986 under 72-255-84-01. Rolling terrain. Better ground, start seeing beech, sugar maple, ironwood. Aspen, RM & oak transitioning into the pole class. Oak stump sprouts vigorous, co-dominant to dominant in the canopy.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	4199 - Other Mixed Upland Deciduous	High Density Log	19.9	79	81-110	Large diameter, wide-crowned red oak with relatively small diameter northern hardwoods filled in between. Occasional larger basswood saw clumps, but generally most of the hardwood component is 10" DBH and under. First age: 14" DBH oak, 79 years (SI 68). Second age: 7" DBH hard maple, 66 years (SI 50). Third age: 8" DBH white ash, 56 years. The stand's NE has less of the northern hardwoods, and more oak (log-pole sized) and aspen. The understory has little in the way of shrubs.
32	4130 - Aspen	High Density Pole	19.2	27	1-50	Cut merch & up in 1985 under 72-255-84-01. Still transitioning into the pole class, with the aspen and oak farther along than the northern hardwoods component. The hardwoods (sugar maple with small amounts of white ash, paper birch, ironwood, basswood & beech) tend toward high stem densities and small diameters. The real stand-out in terms of growth and vigor is the red oak. Within the stand, the oak form is the best where it is growing in association with the aspen (vs. the northern hardwoods); the aspen trains it to grow straighter, taller and cleaner-boled.
33	4130 - Aspen	High Density Sapling	16.6	17		Cut 2" & up in late 1994 under 72-029-94-01. Rolling terrain. Aspen (mostly BTA) with RM, oak & a trace of PB. Oak stump sprouts are vigorous and co-dominant to dominant in the canopy.
34	4130 - Aspen	Medium Density	21.2	6		Cut merch & up in early 2006 under 72-062-04-01. Aspen (mostly quaking) with red maple and a northern hardwoods component. The stand's NW is heavy to low-end hardwoods & blackberry, with vigorous oak stump sprouts well above the browse line. There is light browse overall, with the exception of the low hill in the stand's SE, where the sparse oak stump clumps have been heavily browsed. Regen in the stand's SE is not as dense or tall as the rest, but continues to fill in. The QA clones are expanding into the lower-coverage hardwood areas of the stand.
35	4311 - Pine, Aspen Mix	High Density Log	15.9	47	51-80	White Pine with significant deciduous component (aspen, RM, PB & oak, with off-site HM, beech & ironwood). Seven acres that landed in the adjacent 20-acre grouse blocks were cut merch & up in 1985 under 72-255-84-01 and are pole/sapling in size and intermediate in the canopy (second age). A lot of cull in the mature-overmature aspen & PB. Saw oak wolfy.
36	4130 - Aspen	High Density Pole	15.9	27	51-80	Cut merch & up in 1985 under 72-255-84-01. Still transitioning into the pole class. Aspen with good quality oak and low-end hardwoods, including a trace of basswood & white ash. The oak is clean-boled & vigorous. A few white pine present.
37	4130 - Aspen	High Density Pole	17.2	27	1-50	Cut merch & up in 1985 under 72-255-84-01. Aspen stand still transitioning into the pole class. BTA with vigorous NRO, and the usual red maple. Stand is on shallow ridge/valley terrain sloping down to the east. The quaking aspen is mostly in the stand's east on the flats where the cover is patchier. Some WP also occurs in the stand's NE. The better ground is in the west, with traces of hard maple, paper birch, and beech.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	4130 - Aspen	High Density Log	21.5	75	81-110	Overmature BTA with quality NRO mixed in. RM is suppressed-intermediate in the canopy. There is an older xlog oak component, very open-grown, many with basal cavities from old fire scarring. The stand's NE is sparser, with cull RM stump clumps, more quaking aspen, and U/G inclusions. There are a few WP, RP & white oak saw, and WP saplings/poles localized around the seed source. BTA SI 72
39	4130 - Aspen	High Density Log	15.7	68	81-110	Overmature BTA with RM, off-site HM, QA, and vigorous red/black oak. Occasional WP, PB, beech & WO in the canopy. Aspen with conks, rot, HM poor quality, most all sprout/stump origin.
40	4130 - Aspen	High Density Pole	18.6	27	1-50	Cut merch & up in 1985 under 72-255-84-01. Aspen stand still transitioning into the pole class, with some clones farther along than others. The maple, beech and paper birch tend toward high stem densities and low diameters. The RO is vigorous and weeding down to fewer stems per clump.
41	4130 - Aspen	High Density Pole	13.7	26	51-80	Cut merch & up in 1986 under 72-255-84-01. Rolling terrain. Aspen transitioning into the pole class. Highest ground with predominantly BTA, switching to QA on lower slopes. RM & oak stump-origin associates. Oak vigorous & weeding down to fewer stems. A trace of beech, sugar maple & ironwood on the higher ground.
42	4130 - Aspen	High Density Pole	20.2	27	1-50	Cut merch & up in 1985 under 72-255-84-01. Aspen-maple-oak stand still transitioning into the pole class, with the BTA and RO farthest along. The mixed hardwoods (red and sugar maple, with small amounts of beech, ironwood, paper birch, white ash & basswood) are still solidly in the sapling class. The RO is vigorous and is weeding down the # stems/stump clump faster than the maple.
44	4131 - Aspen, Oak	High Density Log	25.6	71	81-110	Comparable coverage in aspen and oak, swapping dominance across the stand, with an intermediate-suppressed mixed hardwoods component. The hardwoods are mostly red and sugar maple, with small amounts of paper birch, beech, white ash & basswood. There is a sub-acre pocket of RP saw along the two-track. The birch is dying out. The oak is mostly log-pole in size, but there are also scattered xlog specimens. BTA SI 57
46	4139 - Aspen, Mixed Deciduous	High Density Pole	21.8	26	1-50	Cut merch & up in 1986 under 72-255-84-01. Still transitioning into the pole class, east half of the stand not as far along as the west half. Cover varies from dense aspen clones with maple & oak mixed in, to maple & oak dominated areas with aspen mixed in. The hard maple & beech tend to be small-diameter with high stem densities. The oak stems are the real stand-out: vigorous & clean-boled, jumping ahead of the maple. Occasional PB, WP & white ash saplings.
47	4130 - Aspen	Medium Density	30.7	7		Cut merch & up in 2005 under 72-062-04-01. Mostly BTA, along with RM, oak, quaking aspen and cherry. The stand's south half has dense aspen cover but the north half is patchier, bringing the overall canopy closure down to 50-75%. The aspen in the north half is not a well-developed, with sub-acre pockets that had sparse sprouting and heavy browse. The oak that has recruited is 8' tall and vigorous.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
48	4199 - Other Mixed Upland Deciduous	High Density Log	12.2	69	111-140	Variable stand with roughly equal parts oak, aspen, and northern hardwoods. Only species of quality is the NRO. Very good form in the small saw class. Xlog oak wolfy. The oak is densest to the east, aspen dominant to the west. Significant but poor-quality hardwood component (RM, HM, paper birch, beech, ironwood). Paper birch dropping out of the stand. BTA & QA very overmature, with increasing rot & breakage. A few basswood, RP & white ash.
49	4123 - Red Oak	High Density Log	86.0	76	81-110	On rolling to steep terrain. Most of the stand occupies the east aspect of a 100-foot tall ridge, with that sideslope dissected by numerous valleys. The cover is predominantly NRO, with suppressed-intermediate RM, poor quality mixed hardwoods, and pockets of BTA. There are widely-scattered RP & white oak across the stand, and small amounts of white ash, basswood & beech (mostly in the stand's NW on slightly better ground). The oak is heavy to large-pole/small-saw stems, most of them 9-11" DBH with shallow, compact crowns (8-10' diam). NRO SI 55.
51	4130 - Aspen	Medium Density	44.9	17		Cut 2" & up in late 1994 under 72-025-94-01, except for widely scattered wolfy xlog oak. Multipoly: 1-acre patch cut ~300' south of the main sale polygon. Aspen stand on the flats, with clones separated by upland brush. Health and vigor varies between clones. The BTA (mostly west of the road) is better developed. The QA has a higher incidence of hypoxylon and black canker. OFS point is an alder-willow wetland inclusion.
52	4131 - Aspen, Oak	Medium Density Log	13.3	66	1-50	Marginal, catch-all stand that incorporates patches of red maple, aspen and oak that were left when the adjacent harvests were set up and when FP123 was expanded. The RM is generally in oversized pulp stump clumps, the oak tends to be open-grown (especially the xlog stems), and the aspen clones vary from immature to overmature. There isn't a lot separating this stand from the upland shrub/low density tree stands that it encompasses. The stand saw heavy impact in the past from tracked vehicle traffic.
54	4119 - Mixed Northern Hardwoods	High Density Sapling	3.1	17		Cut 2" & up in late 1994 under 72-003-95-02, noted for a future gravel pit. Most of the harvest was in comp 267. Heavy to red maple, with sugar maple and red oak, and small amounts of aspen, ironwood, beech and paperbirch. The dense sprout-origin regen tend to be small diameter, except for the oak which has the best height & diameter growth and is weeding down to fewer stems.
58	4130 - Aspen	Medium Density Log	13.8	52	51-80	Stand boundary picks up several small aspen clones that are separated by upland brush. Mostly quaking aspen, with small amounts of big tooth aspen, red maple, and hybridized oak. Some break-up occurring within the clones. The west edge of the stand has aspen regen from a Nov 2000 wildfire (Crawford #20) that started on private. The stand just barely makes the threshold for overall size log. QA SI 59
60	6112 - Lowland Aspen	Medium Density Log	37.2	52	51-80	Floodplain aspen stand, including riser up to the first terrace. Quaking aspen, with balsam poplar mostly concentrated along the river, and small amounts of American elm, black ash and willow. The aspen has mature and overmature components; the oldest aspen is breaking up. The included transition zone from the lowland to the uplands is where most of the red maple, oak & widely-scattered red & white pine occur. Numerous slough drains originate within the Natural Rivers vegetative buffer and trickle into the river. A few cedar occur along that edge.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
62	6112 - Lowland Aspen	Medium Density Log	35.1	45	1-50	Floodplain aspen stand, including riser up to the first terrace. Mostly quaking aspen with balsam poplar and scattered paper birch. On the transition ground to the uplands, there are small amounts of pine, oak and red maple, including a sketchy row of planted red pine. Along the river's edge there are small patches of willow and northern white cedar. The aspen is generally mature to overmature. As the older component continues to break up, this stand is close to dropping to 25-50% canopy closure. There is a minor immature aspen component trying to fill in the stand's opener areas. The understory has large patches of dense highbush cranberry cover, particularly in the N1/2. A walk-in fishing access site is located along the river.
65	42220 - Natural Jack Pine	Medium Density Pole	8.7	43	51-80	Patchy JP stand, generally poles in their mid-40's with scattered overmature JP that were the seed source. There are small patches of aspen, and small amounts of RP and mixed oak. The canopy is sparser along the west edge.
68	42220 - Natural Jack Pine	Medium Density Pole	17.0	45	51-80	Patchy JP stand with small upland openings, including the loop parking area for a walk-in fishing access site. Cover includes naturally-established and planted JP & RP, a handful of super-canopy WP in the NW, and small amounts of xlog oak and struggling quaking aspen. The naturally-established JP is in the mid-40's, seeded in from scattered overmature JP "orchard" trees. The planted JP is near the center of the stand, and was established at a very wide spacing. Open-grown form is common in the JP. The planted RP is mixed in with the planted JP and also occurs in a patch at the north end and in a single sketchy row down on the floodplain. Second age is on the planted JP & RP. See OFS point and red compt folder.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	3301 - Low Density Deciduous Tree	1.3	Yes	Unspecified	Military Firing Point 505 opening. Not currently flagged for clearing. Has scattered aspen poles and patches of A3, along with upland brush (prairie willow, black cherry).
3	790 - Other Bare/Sparsely Vegetate	7.5	Yes	Unspecified	Military Firing Points 503 & 504. Cleared and expanded into one larger opening in 2011. New stand boundary not visible on the available imagery.
4	3205 - Mixed Upland Shrub	111.1	No	Unspecified	Within Military's fenced air-to-ground bombing Range 40 Complex. Burns regularly. Portion of stand visible along the fence has upland brush with repeatedly set-back aspen, oak and red maple sprout regen, as well as widely-scattered oak saw. The steep hillside in the stand's far NE corner has a sub-acre pocket of mature oak.
7	3205 - Mixed Upland Shrub	31.0	No	Unspecified	Cleared corridor along Lonesome Lake Road. Heavy to sweetfern, with patches of blackberry, cherry brush, prairie willow, hawthorn and aspen. Several sandy two-tracks cross through the corridor, including hill-climb runs associated with a documented RDR. Spotted knapweed is common in the degraded areas.
13	3301 - Low Density Deciduous Tree	1.1	Yes	Unspecified	Military Firing Point 501 opening. Scattered aspen poles & regen, with cherry brush & serviceberry. Part of the Military's firing point clearing project; planned expansion boundary flagged but not yet cleared. Likely to happen this summer.
19	3204 - Mast Producing Shrub	1.9	No	Unspecified	Dry upland opening; prominently cherry brush, along with serviceberry & encroaching aspen.
27	3105 - Mixed Upland Herbaceous	6.2	Yes	Unspecified	Military Firing Point 221 opening. East side cleared & expanded in 2011. Uncleared west side has cherry & willow brush. New stand boundary not visible on the available imagery.
43	3204 - Mast Producing Shrub	2.1	No	Unspecified	Valley opening. Serviceberry, hawthorn, cherry & staghorn sumac with encroaching maple & aspen.
45	3301 - Low Density Deciduous Tree	4.2	No	Unspecified	On the flats; low density trees with mast producing shrubs. Mostly hybridized black/red oak with open-grown form (large-diameter, heavy limbs, low forks). Similar stature oak cut in the adjacent stand to the south were 120+ years old with interior cavities, and they did not stump sprout. Occasional red maple, white oak and aspen. Sweet fern and bracken fern visible above the snow.
50	3205 - Mixed Upland Shrub	4.4	No	Unspecified	Upland brush with scattered trees. Stand contains a former landing west of the road.
53	3205 - Mixed Upland Shrub	2.1	No	Unspecified	Upland brush with scattered trees. Includes two former landings on either side of the road, and healed-over ruts from past tracked vehicle traffic.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
55	790 - Other Bare/Sparsely Vegetate	10.5	Yes	Unspecified	Military Firing Point 123. Firing point clearing project done in 2011. Stumped & brush-hogged. Visible where the snow had melted: grass & a lot of bare ground. A few stump piles and tree-length aspen bundles.
56	3205 - Mixed Upland Shrub	81.2	No	Unspecified	Large upland brush/low-density tree type on an old pine stumpfield. Predominantly serviceberry, black cherry and prairie willow with scattered poor-quality red maple, open-grown oak and sub-acre aspen clones. The tree cover is more concentrated along the perimeter and is very widely scattered in the interior. Roughly 10 acres in the stand's SW burned in a Nov 2000 wildfire (Crawford #20) that started on private. Some aspen sprouted in the fire area. OFS points are small wetland inclusions.
57	6220 - Alder/willow	8.2	No	Unspecified	Salix with spiraea & dogwood. Widely scattered quaking aspen. Slough drain starts in it and flows out to the river.
59	6220 - Alder/willow	6.2	No	Unspecified	Salix and Spiraea, with widely scattered aspen, and a few cedar along the river.
61	50 - Water	11.3	No	Unspecified	North Branch of the AuSable, a designated Natural River system.
63	6229 - Mixed lowland shrub	3.4	No	Unspecified	Lowland brush: spiraea with a perimeter of salix.
64	3205 - Mixed Upland Shrub	24.7	No	Unspecified	Dry upland opening with open-grown JP scattered & in sub-acre patches like a pine barrens. The shrub cover includes serviceberry, prairie willow, cherry, hawthorn, and sweetfern. There are traces of RP, oak, WP, red maple and aspen, generally concentrated along the west edge near the floodplain. Three acres of JP in the stand's NW & NE peninsulas were cut merch & up in 1994 under 72-020-94-02.
66	6220 - Alder/willow	8.8	No	Unspecified	Alder-willow on the floodplain with widely-scattered aspen and black willow. A footpath crosses through it to the fishing access site on the AuSable.
67	3303 - Mixed Low Density Trees	4.6	No	Unspecified	Roughly three acres were cut merch & up in 1994 under 72-020-94-02. Widely scattered overstory RP, paper birch and JP were left. Regen includes WP (seeded in from the supercanopy WP just north of the stand), JP, RP, oak and black cherry. Discounting the cherry brush, the stand doesn't meet the forested benchmark, but continued in-growth of WP & JP is likely.
69	3102 - Grass	8.5	No	Unspecified	Grassy opening with widely scattered cherry brush, hawthorn, serviceberry and pine saplings. See OFS points.



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
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8 – DEDICATED CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.
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.