

CADILLAC FOREST MANAGEMENT UNIT



COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 86 ENTRY YEAR: 2007

Compartment Acreage (GIS Acres): 2570 County: Missaukee

Revision Date: 10/27/2005 9:10 AM

Stand Examiner: Steven Eisele, Forest Technician.

Legal Description: T24N, R6W, Sec. 1,2,3,10,12

RMU: Habitat/Vegetative, Wildlife Intensive

Management Goals: Habitat/vegetative compartment. Cannon Creek Waterfowl Flooding area in sections 1 and 2. Planted areas for deer and grouse. Maintain age class diversity in aspen and oak.

Soil and Topography: Montcalm-Graycalm, Rubicon sands.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Block of state land with a few isolated 40 acre parcels. Full time cabins and residence around Horseshoe Lake. Limited fishing in flooding area. Hunting and use of ORV and snowmobile trails. 40 acre parcel in SWSW of section 1 and NENE of section 10 would be desirable for acquisition. 80 acre parcel in south east of section 2 contains cannon creek and would also be a desirable piece.

Unique, Natural Features (include only non-site specific and non-sensitive information): Massasauga and wood turtle listed near cannon flooding. Potential for great blue heron rookery, osprey, eagle, goshawk, red-shouldered, box turtle and Blandings turtle.

Archeological, Historical, and Cultural Features : Woodland Mounds and Late Woodland camp listed within compartment.

Special Management Designations or Considerations: Continue to maintain age class diversity. Monitor and enhance oak regeneration where possible.

Watershed and Fisheries Considerations: Big Cannon Creek is a designated stream under the Upper Manistee River State Natural Rivers Zoning. Under the Upper Manistee River Natural River Plan, Big Cannon Creek has special protection (see page 41 of the plan), where no cutting may be done closer than 100 feet from the river's edge, subject to seasonal, wetland, and topographic restrictions.

Wildlife Habitat Considerations: This compartment is one of three in the original RMU agreement. They contain the Cannon #1 and #2 Waterfowl Flooding and that part of the sharptail area in Missaukee County. The original agreement of converting a small part of the aspen acreage to grass and upland brush, primarily hawthorn and cherry, have been basically met. Numerous reptiles, amphibians, various waterfowl, and other bird species are associated with the floodings and associated wetlands. Uplands provide valuable year

around deer habitat. Bear, bobcat, beaver, ruffed grouse, woodcock, and turkeys utilize this area. The goal of maintaining various timber types and age classes, maintaining the impoundments, and manipulating the blueberry and shrub component associated with the grassland and upland brush type will continue to benefit a wide variety of game and non-game species.(L.Smith, 7/20/05)

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 200 and 600 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan Formation is quarried for gypsum in other areas of the State. A gravel pit is located to the north and gravel potential appears to be good on the uplands. East Norwich Field is located three miles to the east. The field has produced over 15.9 million BO and 15.7 Bcf gas from the Devonian Richfield Formation. It is in secondary recovery operations currently. There are no State lands currently leased in the Compartment

Vehicle Access: A forest road access plan is detailed on the compartment map. Identified are state and county roads as well as forest roads and trails under the jurisdiction of the DNR. Also indicated are forest roads and trails under the jurisdiction of the DNR that are proposed for abandonment. These roads were determined to be in excess of the access needs in the area, are a threat to the resources, or are a concern environmentally. Proposed new roads or roads recommended for substantial improvement are noted below:

Survey Needs: Survey corners are established through out the compartment. The actual private lines will need to be run for sale set up.

Recreational Facilities and Opportunities: The ORV trail, and snowmobile trail both are located in this compartment. The area also has some Wildlife Flooding areas, which provide hunting and fishing opportunities. There is also dispersed camping in the area.

Fire Protection: There is some private land in the compartment, which provide Urban Interface problems. There are some low areas, which could cause difficult access for suppression equipment. There are some small pine areas, with mixed hardwoods.



Stage 1 Acres Summary By Level 3 Cover Type By Age

Compartment: 63086

Date: 10/26/2005

	0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89	Uneven Age	Grand Total
Aspen Types	0	112.9	277.4	0	29.9	242.6	0	8.6	58.2	0	0	122.1	851.7
Cropland	2.4	0	0	0	0	0	0	0	0	0	0	0	2.4
Emergent Wetland	7.7	0	0	0	0	0	0	0	0	0	0	0	7.7
Herbaceous Openland	6.2	0	0	0	0	0	0	0	0	0	0	0	6.2
Low-Density Trees	69.8	0	0	0	0	0	0	0	0	0	0	0	69.8
Lowland Coniferous Forest	0	0	0	0	0	0	0	0	17.8	5	16.6	77.9	117.3
Lowland Deciduous Forest	0	0	0	0	0	0	0	0	0	0	0	23	23
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	43.2	43.2
Lowland Shrub	82.3	0	0	0	0	0	0	0	0	0	0	0	82.3
Mixed Upland Deciduous	0	0	31.2	0	0	17.3	0	46.1	0	68	0	143.9	306.5
Natural Pines	0	0	0	0	0	13.4	0	41.8	0	0	0	19.8	75
Northern Hardwood	0	0	0	0	38.9	123.1	0	0	0	15.1	0	0	177.1
Oak Types	0	0	0	0	0	0	0	0	32.8	223	35.3	396.7	687.8
Other Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	13.8	13.8
Planted Pines	0	0	0	0	0	0	0	0	0	0	0	7.9	7.9
Upland Shrub	46.8	0	0	0	0	0	0	0	0	0	0	0	46.8
Water	51.3	0	0	0	0	0	0	0	0	0	0	0	51.3
Grand Total	266.5	112.9	308.6	0	68.8	396.4	0	96.5	108.8	311.1	51.9	848.3	2569.8

**PROPOSED TREATMENTS
NO LIMITING FACTORS**

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	Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Follow Up Activities After Treatment	Pg. 1
6	63086006-Cut	124.3	Red Oak	9	85	0	Shelterwood	Regeneration	Red with White Oak	Monitor regeneration, optimum will be a mix of red oak and white oak with aspen. If oak regen levels are not achieved within time limits then use of cultural methods will be scarification or trenching to achieve oak regen levels. Red maple and cherry brush mix will be acceptable as back up species after cultural activities. Look at overstory removal when regen levels are accomplished.	
<u>Rev</u>	Mark to cut red and white oak , leave mast trees, basal area of residual 40 to 60. In aspen areas, cut all aspen and oak to expand the aspen cut to 2										
<u>Spec:</u>	tinch diameter. Spec cut all white pine and aspen, leave some single stem red maple if needed to obtain basal area.										
<u>Rev</u>	Oak mast should be present within AOI in the future.										
<u>Cmnt:</u>											
7	63086007-Other	324.5	Red Oak	7	80	2	Other	Regeneration		Continue to monitor.	
<u>Rev</u>	Conduct regeneration monitoring.										
<u>Spec:</u>											
<u>Rev</u>	This stand was treated 10 years ago. This regeneration monitoring is not being done to satisfy the regen requirements of a recent harvest, but for the										
<u>Cmnt:</u>	purpose of monitoring how past regeneration harvests of this type progress.										
9	63086009-Cut	8.6	Aspen	6	60	0	Clearcut	Regeneration	Aspen	Monitor for natural regen. Low density trees with a combination of cherry brush and oak will be acceptable.	
<u>Rev</u>											
<u>Spec:</u>											
<u>Rev</u>	Area of solid aspen. Final harvest to promote aspen regen.										
<u>Cmnt:</u>											
38	63086038-Cut	49.1	White, Black, N. Pin Oak	9	85	0	Systematic Thinning	Salvage	White, Black, N. Pin Oak		
<u>Rev</u>	Residual BA will be highly variable, 20sqft-80sqft, depending upon relative health and stand quality. Goal is not regeneration at this time, but salvage of										
<u>Spec:</u>	dead and dying oak. Leave 3-5 dead/high risk oak per acre for stand-level diversity concerns.										
<u>Rev</u>	Salvage dead and dying oak, low quality.										
<u>Cmnt:</u>											
46	63086046-Cut	10.4	Aspen	6	45	0	Clearcut	Regeneration	Aspen		
<u>Rev</u>											
<u>Spec:</u>											
<u>Rev</u>	Final harvest aspen.										
<u>Cmnt:</u>											
50	63086050-Cut	93.4	White, Black, N. Pin Oak	9	80	108	Shelterwood	Regeneration	Red with White Oak	Monitor for regeneration of oak. Lower density basal area with a mix of aspen sprouts, red maple and black cherry will be acceptable.	
<u>Rev</u>	Target residual of 30-60 sq.ft. of good candidates for oak seed trees.										
<u>Spec:</u>											
<u>Rev</u>	Thin the red and white oak. Remove the aspen and red maple.										
<u>Cmnt:</u>											

**PROPOSED TREATMENTS
NO LIMITING FACTORS**

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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Follow Up Activities After Treatment	Pg. 2
65 63086065-Cut	58.2	Aspen, Mixed Deciduous	6	73	0	Shelterwood	Regeneration	Aspen, Mixed Deciduous	Monitor aspen regen. Mix of oak, aspen, and maple is acceptable.	
<p><u>Rev</u> Remove aspen. Thin oak and red maple, leaving best quality stems of each for future sawlogs. Target a residual BA of 50-80, placing openings and clearing up around aspen clones.</p> <p><u>Spec:</u></p> <p><u>Rev</u> Goal is a two-aged stand with oak & red maple in the canopy, and a mix of aspen, maple, and oak in the sub-canopy. Move treatment boundary outside of AOI to include aspen in stand 67 if consensus is reached with WLD to leave pine in stand 67 for stand level biodiversity concerns.</p> <p><u>Cmnt:</u></p>										
73 63086073-Cut	40.6	Natural White Pine	6	61	0	Systematic Thinning	Intermediate Cut	Natural White Pine	Remove poles in future entry	
<p><u>Rev</u> Thin 1/3rd of the White pine and red pine BA in dense areas. Leave all oak. Spec all merchantable jack pine and aspen and red maple for removal.</p> <p><u>Spec:</u> Leave all standing snags/dead.</p> <p><u>Rev</u></p> <p><u>Cmnt:</u></p>										
77 63086077-Cut	46.1	Other Mixed Upland Deciduous	9	61	0	Shelterwood	Regeneration	Aspen, Mixed Deciduous	A mix of regeneration of all species is acceptable.	
<p><u>Rev</u> Spec cut all aspen and red maple. thin the oak and pine. Target residual BA is 50-70 BA of oak/pine. Leave 3-5 snags per acre (where present) for additional stand level biodiversity concerns.</p> <p><u>Spec:</u></p> <p><u>Rev</u> Apen , oak, red maple and pine mix. Goal is a two-aged stand of oak/pine canopy with aspen and maple dominated subcanopy (oak and pine components of subcanopy acceptable).</p> <p><u>Cmnt:</u></p>										
81 63086081-Cut	68.0	Other Mixed Upland Deciduous	9	80	0	Shelterwood	Regeneration	Other Mixed Upland Deciduous	Monitor regen. A mix of species and low densities acceptable.	
<p><u>Rev</u> Spec cut aspen and maple. Target residual on oak and pine is 50-80 sq.ft.</p> <p><u>Spec:</u></p> <p><u>Rev</u> Remove aspen, red maple. Thin oak and pine. Goal is a two-aged stand of oak/pine canopy, w/aspen&maple subcanopy.</p> <p><u>Cmnt:</u></p>										
84 86_084-multi-part_cut	44.4	Aspen	6	47	47	Clearcut	Regeneration	Aspen	Monitor for aspen regeneration. If less than sufficient stocking (per guidelines for aspen) returns, supplement with planting of jack pine.	
<p><u>Rev</u> Clearcut, 2" spec. Leave any oak present. Strongly consider dormant season harvest (10/1-4/1) to increase sprouting vigor.</p> <p><u>Spec:</u></p> <p><u>Rev</u> There are four portions of this AOI that post stage 2 analysis deemed were ready for harvest.</p> <p><u>Cmnt:</u></p>										
<p>Total Treatment Acreage Proposed: 867.7</p>										

**PROPOSED TREATMENTS
WITH LIMITING FACTORS**

S t a n d	Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Follow Up Activities After Treatment	Pg. 1
34	63086034-Cut	6.5	Mixed Upland Deciduous with Conifer	6	57	0	Clearcut with Reserves	Regeneration	Aspen	Monitor regen to see what comes back..	

Limiting Factor 2F: Too wet

and Comment: Commercial harvest if accessible, habitat cut if not.

Rev Leave cedar and hemlock. Optimum regen is aspen but will accept a mix of lowland hardwood types, with a conifer mix.

Spec:

Rev Post stage 2 survey determined this can be done commercially during frozen conditions. If not done for some reason, can still habitat cut it necessary.

Cmnt:

39	63086039-Cut	13.6	Aspen	9	61	0	Clearcut	Regeneration	Aspen	Monitor regen low density acceptable.	
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Limiting Factor 2G: Blocked by physical obstacle

and Comment: May not be accessible, hab. cut if not.

Rev

Spec:

Rev Final Harvest commercial if accessible

Cmnt:

97	63086097- Prep	39.4	Mixed N. Hardwood - Aspen	4	49	0	Scarification	Regeneration			
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Limiting Factor 4C: Low volume (stocking/diameter)

and Comment:

Rev

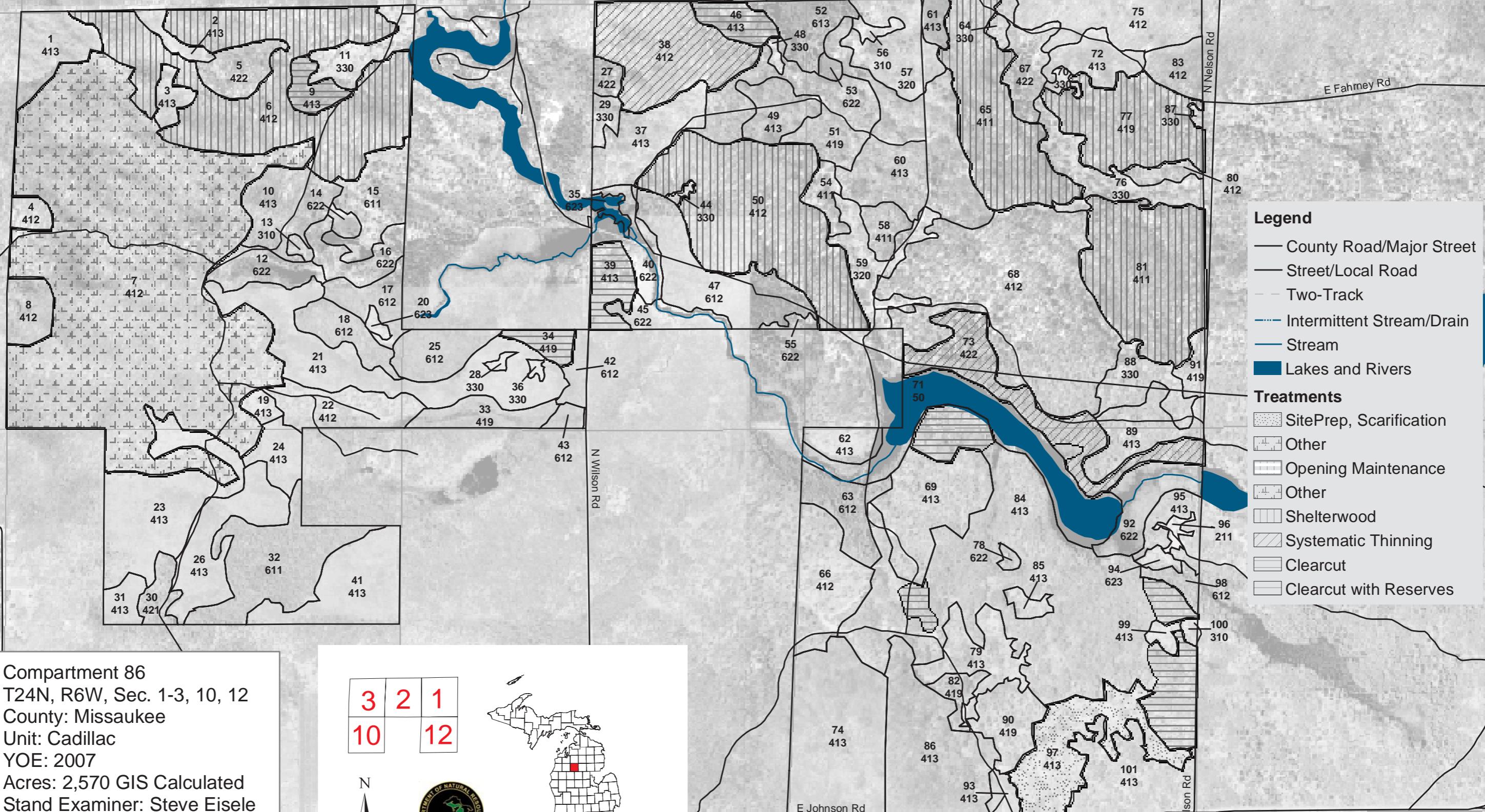
Spec:

Rev Look at scarification or planting to introduce some mixed species.

Cmnt:

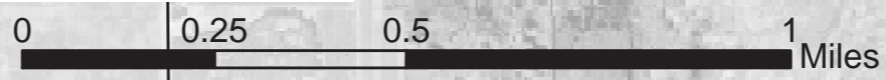
**Total Treatment
Acreage Proposed: 59.4**

Field Map

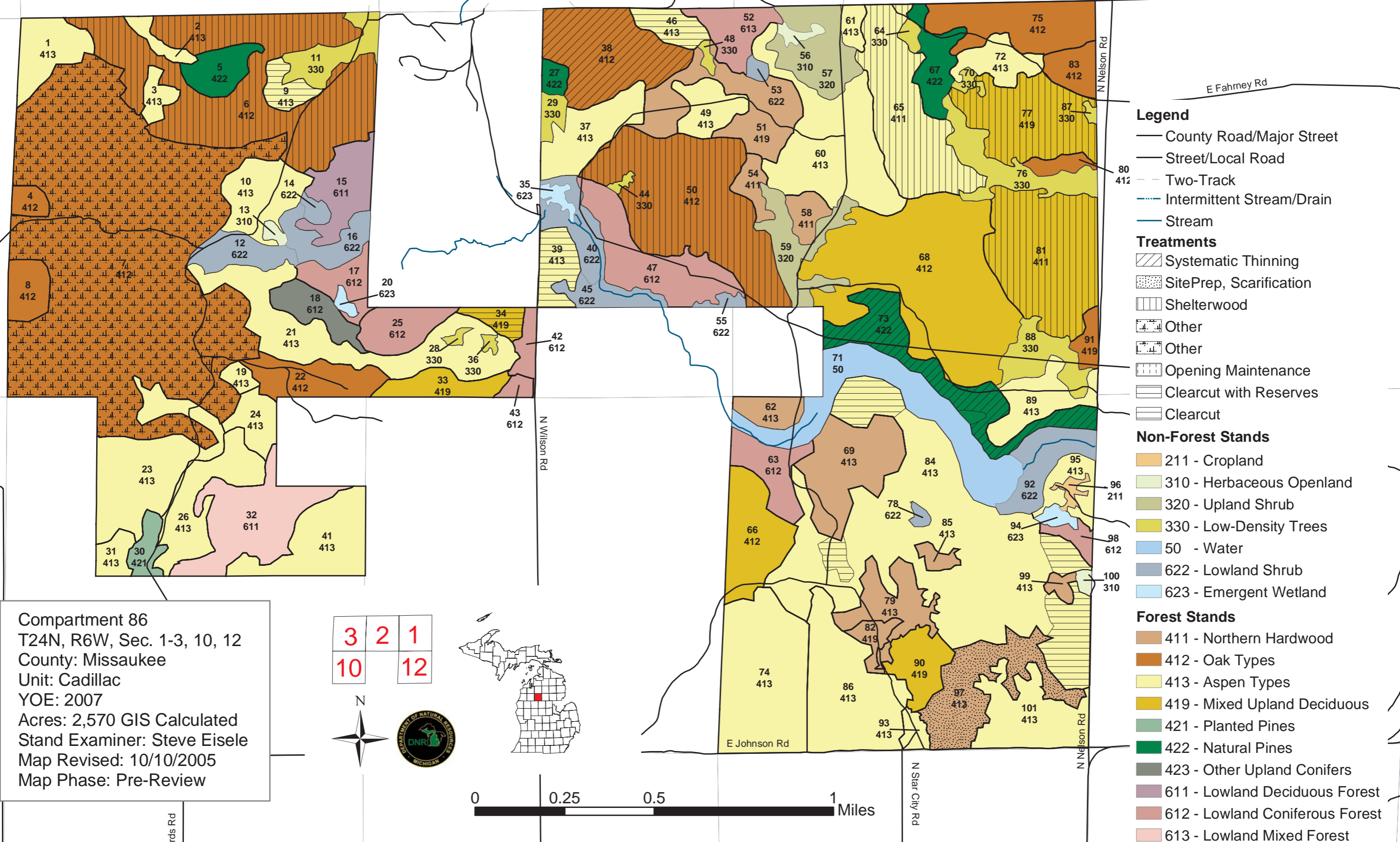


Compartment 86
 T24N, R6W, Sec. 1-3, 10, 12
 County: Missaukee
 Unit: Cadillac
 YOE: 2007
 Acres: 2,570 GIS Calculated
 Stand Examiner: Steve Eisele
 Map Revised: 10/10/2005
 Map Phase: Pre-Review

3	2	1
10		12



Cover Type & Treatment



- Legend**
- County Road/Major Street
 - Street/Local Road
 - Two-Track
 - Intermittent Stream/Drain
 - Stream
- Treatments**
- Systematic Thinning
 - SitePrep, Scarification
 - Shelterwood
 - Other
 - Other
 - Opening Maintenance
 - Clearcut with Reserves
 - Clearcut
- Non-Forest Stands**
- 211 - Cropland
 - 310 - Herbaceous Openland
 - 320 - Upland Shrub
 - 330 - Low-Density Trees
 - 50 - Water
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland
- Forest Stands**
- 411 - Northern Hardwood
 - 412 - Oak Types
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest

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3	2	1
10		12

