

CADILLAC FOREST MANAGEMENT UNIT**COMPARTMENT REVIEW PRESENTATION****COMPARTMENT # 120 ENTRY YEAR: 2010****Compartment Acreage (GIS Acres): 2,879 County: Missaukee**

Revision Date: 12/01/2008 11:43 AM**Stand Examiner:** David Fisher, Forester, Manton Field Office**Legal Description:** T24N, R8W, Secs. 3, 10, 11, 14, 15**RMU (if applicable):** 231. Habitat Vegetative- timber intensive**Management Goals:** Maintain cover types and age class diversity.**Soil and Topography:** Mainly Rubicon sand with Tawas mucky peat and Roscommon mucky sand in the low areas.**Ownership Patterns, Development, and Land Use in and Around the Compartment:** The entire compartment is state owned except for 40 acres in section 10 and the east and south 1/4 of section 14. Most of the area surrounding the compartment to the east and west is state owned. To the north of the compartment is Kalkaska County and to the south is private property. Most of the private property is used for farming, christmas trees and hunting.**Unique, Natural Features (include only non-site specific and non-sensitive information):** Wood turtle documented along the Manistee River to the nw. Potential for ebony boghaunter and secretive locust in bogs. Potential for wood turtle, Blanding's turtle, and eastern Massasauga along drainages. Potential for eagle, osprey, and great blue heron rookeries.**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** None listed**Special Management Designations or Considerations:** None.**Watershed and Fisheries Considerations:** Ham Creek and several small tributaries to Ham Creek flow through Compartment 120. All are Designated Trout Streams, and Ham Creek is also under Natural Rivers jurisdiction in the Upper Manistee River Natural Rivers plan. A Fisheries Division survey in 2003 showed Ham Creek in Compartment 120 (at the Lanning Road crossing) supports a population of naturally reproducing brook trout. However, further downstream (in Section 4), Ham Creek has been severely degraded by beaver damming. In the 2003 survey, no trout were found at the Section 4 site, despite the fact that trout have been found there in the past. The excessive beaver damming of the stream have led to degraded habitat and elevated water temperatures that make the stream not conducive to the survival of salmonids. If lower Ham Creek is ever going to recover to the point where it can again support trout, the riparian zone of Ham Creek must be managed for species other than young successional aspen. Instead, the riparian zone of Ham Creek should be managed for coniferous species. For the proposed aspen clearcutting in Stand 52, please maintain at least a 300' buffer from Ham Creek to discourage aspen regeneration in that

area adjacent to the stream. Hopefully this will discourage further beaver colonization and over time the downstream reaches of Ham Creek can recover.

Wildlife Habitat Considerations: Priority wildlife species are deer, ruffed grouse, and woodcock. There are four compartments in RMU 231. Agreements called for a slight increase in the aspen acreage with slight losses in northern hardwoods, jack pine, and red pine/white pine. Major management objectives are to maintain a variety of cover types and age classes which favor a variety of game and non-game species. (L. Smith, 9/19/08)

Mineral Resource and Development Concerns and/or Restrictions:

COMPARTMENT 120 Sections 3, 10, 11, 14 & 15, T24N-R8W, Missaukee Co.

Surface sediments consist of 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 one mile to the east and potential is good. The nearest production is the Guelph (Niagaran) reef trend eleven miles to the northwest. Most of the Compartment has been nominated for the Oct. 2008 lease auction.

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: None.

Recreational Facilities and Opportunities: Miss-Kal Snowmobile Trail, North Missaukee ORV Trail and ORV Route.

Fire Protection: Some areas in the compartment, on both state & private land, would have the potential for fast moving, large fire growth. Areas of recreational opportunities & urban interface increase the potential for human caused fires. Most areas would have good access for fire equipment.

Additional Compartment Information:

The following parcels are recommended for acquisition if they become available for sale:

The following 5 reports from the Operations Inventory System (OIPC) are attached:

- ◆ **Cover Type by Age Class**
- ◆ **Cover Type by Management Objective**
- ◆ **Compartment Volume Summary**
- ◆ **Proposed Treatments – No Limiting Factors**
- ◆ **Proposed Treatments – With Limiting Factors**

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

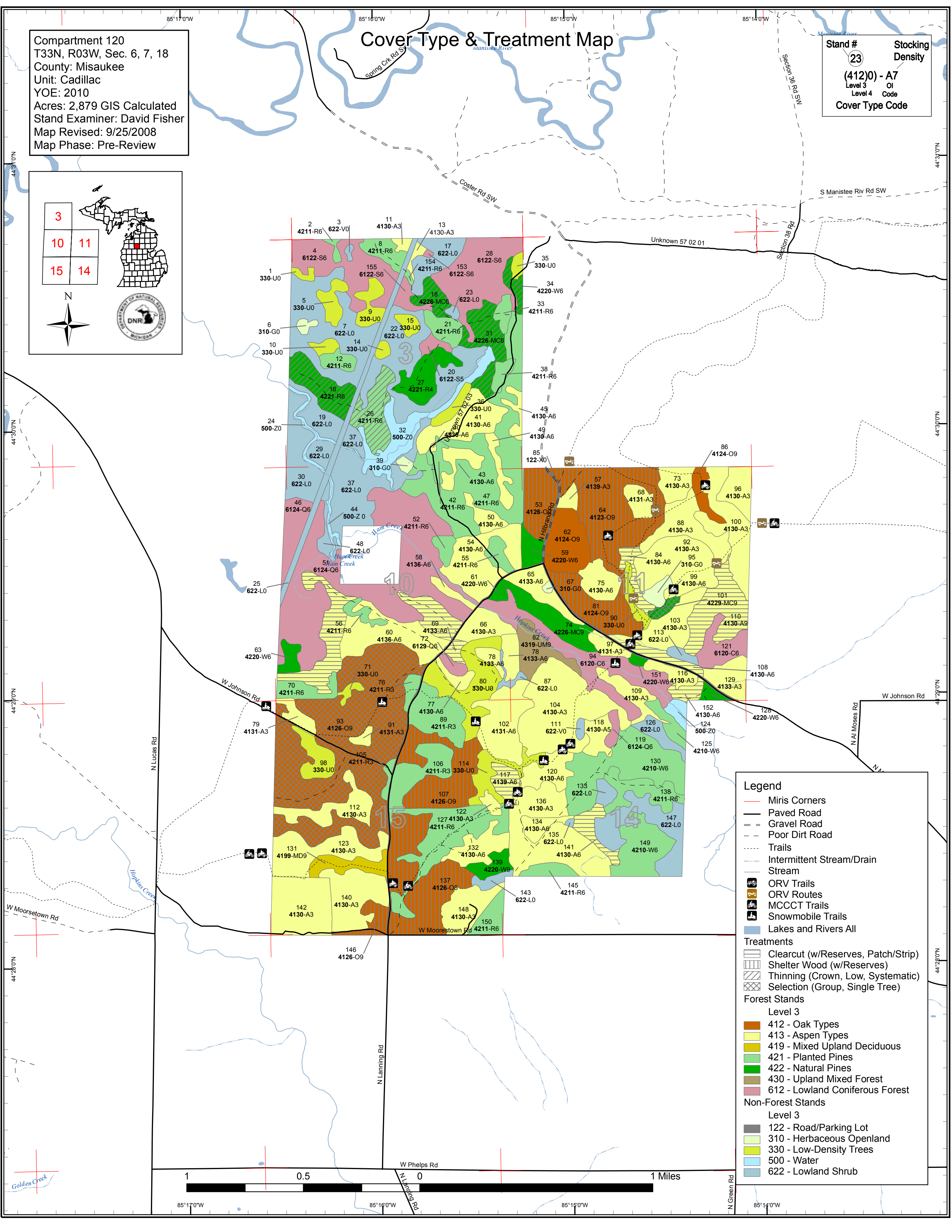
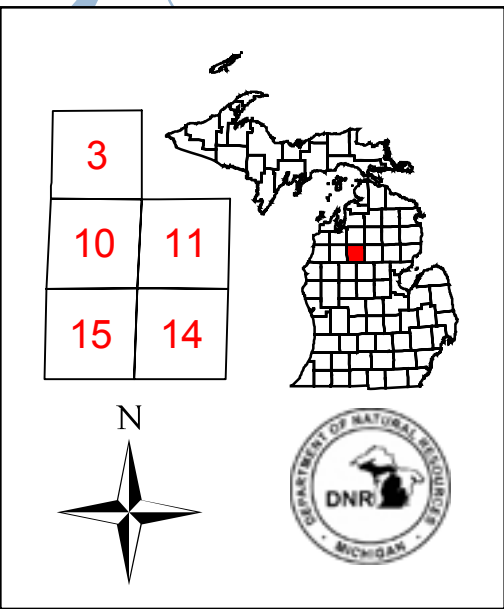
- ◆ **Base feature information, stand numbers, cover types**

- ◆ **Proposed treatments**
- ◆ **Proposed road access system**
- ◆ **Suggested potential old growth**

Cover Type & Treatment Map

Compartment 120
 T33N, R03W, Sec. 6, 7, 18
 County: Misaukee
 Unit: Cadillac
 YOE: 2010
 Acres: 2,879 GIS Calculated
 Stand Examiner: David Fisher
 Map Revised: 9/25/2008
 Map Phase: Pre-Review

Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



Legend

- Miris Corners
- Paved Road
- Gravel Road
- Poor Dirt Road
- Trails
- Intermittent Stream/Drain
- Stream
- ORV Trails
- ORV Routes
- MCCCT Trails
- Snowmobile Trails
- Lakes and Rivers All

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Shelter Wood (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)

Forest Stands

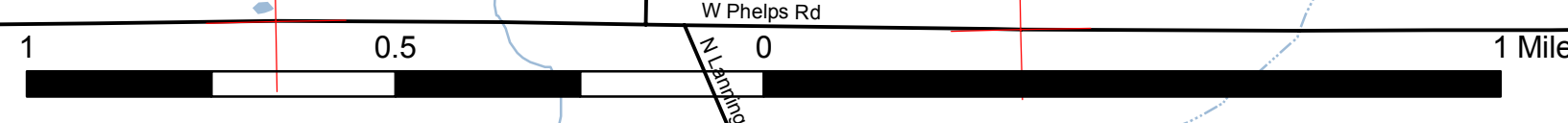
Level 3

- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

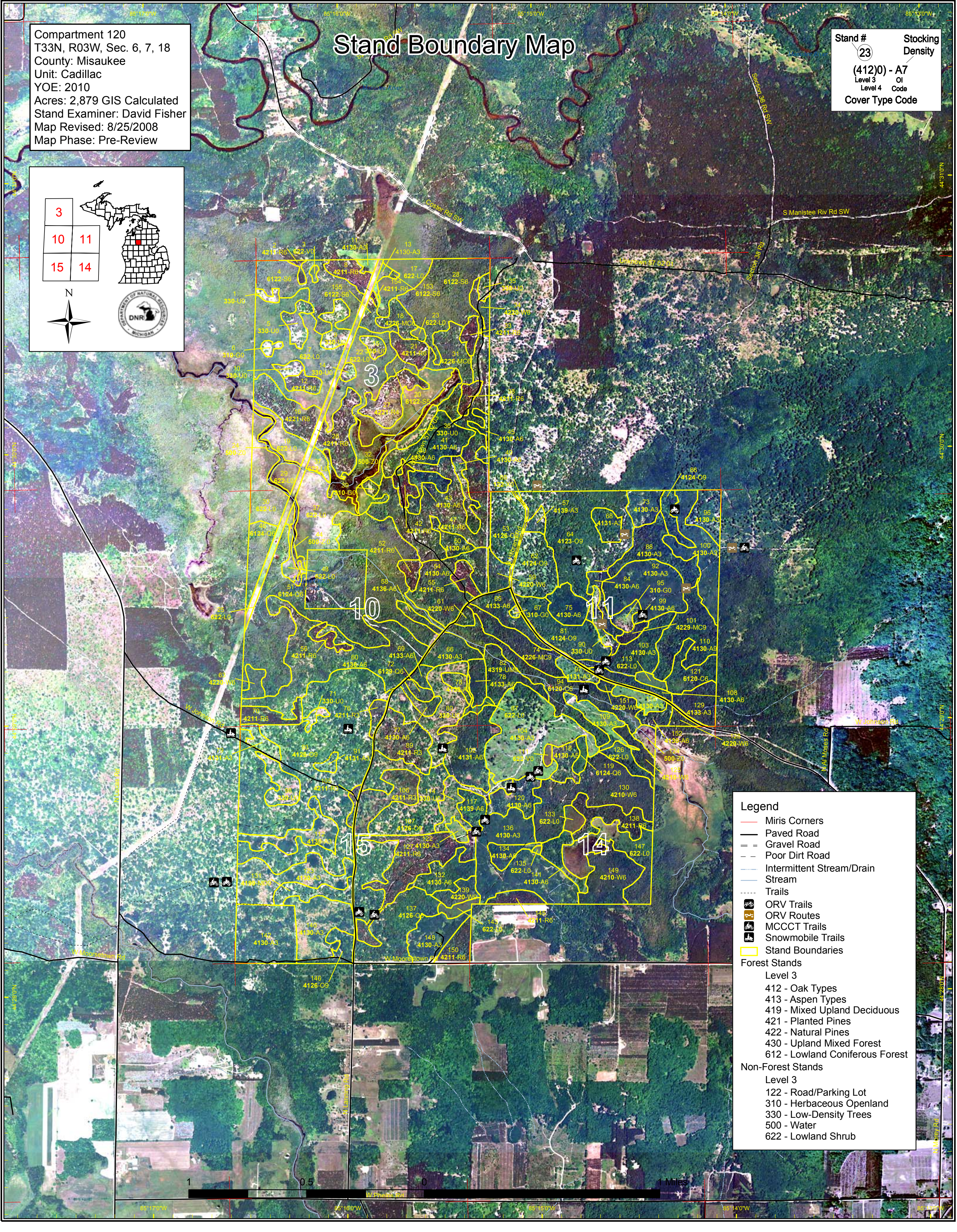
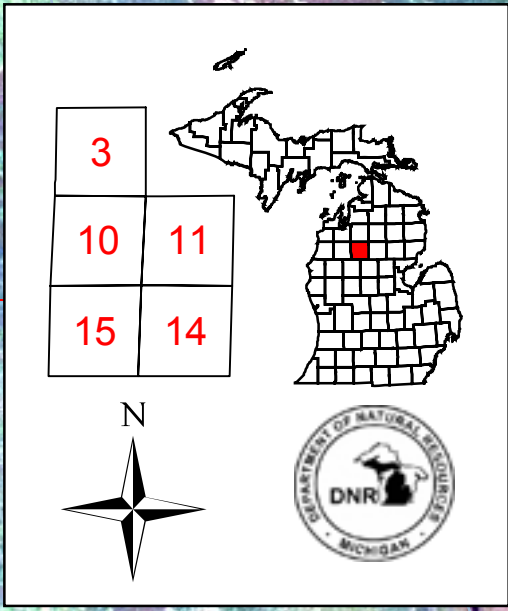
- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub



Compartment 120
 T33N, R03W, Sec. 6, 7, 18
 County: Misaukee
 Unit: Cadillac
 YOE: 2010
 Acres: 2,879 GIS Calculated
 Stand Examiner: David Fisher
 Map Revised: 8/25/2008
 Map Phase: Pre-Review

Stand Boundary Map

Stand #
 23
 (4120) - A7
 Level 3 OI
 Level 4 Code
 Cover Type Code



Legend

- Miris Corners
- Paved Road
- Gravel Road
- Poor Dirt Road
- Intermittent Stream/Drain
- Stream
- Trails
- ORV Trails
- ORV Routes
- MCCCT Trails
- Snowmobile Trails
- Stand Boundaries

Forest Stands

Level 3

- 412 - Oak Types
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Non-Forest Stands

Level 3

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Cadillac Mgt. Unit

Covertime, Acres, and Age summary
(Level 3 Cover Type)

Compartment 120 Year of Entry 2010

Report Date: 09/25/2008



	Age Class															Total
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	
Aspen Types	0	217.4	258.1	93.0	75.5	128.8	113.3	11.7	35.9	0	0	0	0	0	0	933.6
Herbaceous Openland	11.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11.7
Low-Density Trees	116.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116.9
Lowland Coniferous Forest	0	0	0	0	0	0	0	63.7	0	0	0	16.8	67.3	194.2	0	341.9
Lowland Shrub	327.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	327.3
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	13.3	0	0	0	13.3
Natural Pines	0	0	3.0	0	0	0	87.9	3.8	41.3	0	0	0	0	0	3.2	139.1
Oak Types	0	0	0	0	0	0	0	0	0	0	45.1	245.4	189.8	0	0	480.3
Planted Pines	0	0	0	53.1	96.9	142.5	92.7	19.6	29.8	0	0	0	0	0	0	434.6
Road/Parking Lot	15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15.0
Upland Mixed Forest	0	0	0	0	0	0	0	18.7	0	0	0	0	0	0	0	18.7
Water	46.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46.2
Total	517.3	217.4	261.0	146.1	172.4	271.2	293.9	117.6	107.0	0	45.1	275.5	257.1	194.2	3.2	2879.0



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
16 63120016-Cut	23.2	42210 - Natural Red Pine	High Density Pole	72	Harvest	Low Thinning	Natural Red Pine

Rev Appears to be a natural stand. Mix of pole and log sized trees. Some pockets of red pine regen. Stand is surrounded by L type on three sides.
Cmnt: Powerline / Pipeline runs on east side of stand. Pipeline company will need to be notified before stand is harvested.

Rev Thin. BA varies throughout stand. Thin to 120 in dense areas. Release red pine and white pine regen were found. Manage for a mix of red and white pine.
Spec:

Next
Steps:

18 63120018-Cut	9.4	42260 - Natural Pine, Mixed Deciduous	High Density Pole	72	Harvest	Low Thinning	Natural Pine, Mixed Deciduous
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Rev
Cmnt: Mix of red pine, white pine, red maple, bta and black oak. Some of the red pine appears to have been planted.

Rev Thin. Remove aspen and red maple. Mark red and white pine to cut. Target 100 BA. Remove defect and mark for access.
Spec:

Next
Steps:

26 63120026-Cut	23.2	42110 - Planted Red Pine	High Density Pole	72	Harvest	Low Thinning	Planted Red Pine
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Rev May be a natural stand. No noticeable rows. This stand is located on old consumers power land.
Cmnt:

Rev Thin to 120 BA.
Spec:

Next
Steps:

31 63120031-Cut	23.4	42260 - Natural Pine, Mixed Deciduous	High Density Pole	55	Harvest	Low Thinning	Natural Pine, Mixed Deciduous
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Rev
Cmnt: Mix of natural white pine, aspen and red maple.

Rev Thin. Remove all aspen and red maple. Do not cut oak Thin white pine. Target 70 BA in the portions of the stand heavy to white pine. Mark some cherry to leave.
Spec:

Next
Steps:

34 63120034-Cut1	6.1	42200 - Natural White Pine	High Density Pole	55	Harvest	Low Thinning	Natural White Pine
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Rev
Cmnt: Thin. Remove aspen and red maple. Thin pine. Mark pine to remove. Mark for access and remove defect. Do not cut oak.
Spec:

Next
Steps:

53 63120053-Cut	23.5	4126 - White, Black, N. Pin Oak	High Density Log	101	Harvest	Shelterwood	White, Black, N. Pin Oak
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Rev Flat ground. Oak regen is low to moderate throughout stand.
Cmnt:

Rev Remove all aspen and red maple. Mark oak to cut. Target 30-50 BA. Do not cut pine. Manage for a mix of oak, aspen, maple and pine.
Spec:

Next
Steps:

**PROPOSED TREATMENTS
NO LIMITING FACTORS**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
60 63120060-Cut_small	47.2	4136 - Aspen, Mixed Conifer	High Density Pole	50	Harvest	Clearcut with Reserves	Aspen

Rev Low quality quaking aspen. 40-50 years old.
Cmnt:

Rev Final harvest all or at least half of stand. Harvest all red maple, aspen and balsim fir. Leave all oak, cherry and red pine. Mark sawlog sized white pine
Spec: to cut.

Next
Steps:

64 63120064-Cut	78.0	4123 - Red Oak	High Density Log	101	Harvest	Shelterwood	Red Oak
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Rev Mix of red and white oak. Most of stand is on a ridge. North Missaukee ORV trail runs through stand.
Cmnt:

Rev Harvest all aspen and red maple. Mark oak to cut. Mark to 50% crown cover. Do not cut pine. Manage for a mix of oak, aspen, red maple and pine.
Spec:

Next Burn to setback red maple regen if needed. If regen is unsuccessful, trench and plant red pine in areas that do not regenerate.
Steps:

69 63120069-Cut	3.9	4133 - Aspen, Mixed Pine	High Density Pole	67	Harvest	Clearcut with Reserves	Aspen
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Rev
Cmnt:

Rev Final harvest. Do not cut oak or red pine. Heavy wp understory in the 10-20' range. Will have to be removed with harvest to allow good sprouting. SI
Spec: for aspen is 65.

Next
Steps:

81 63120081-Cut	31.5	4124 - Red with White Oak	High Density Log	101	Harvest	Shelterwood	Red with White Oak
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Rev Stand is on hill north of Morey Road.
Cmnt:

Rev Harvest all aspen. Mark red maple and oak to cut. Target 50 BA. Do not cut pine. Manage for a mix of oak, red maple, aspen and pine.
Spec:

Next
Steps:

84 63120084-Cut	8.3	4130 - Aspen	High Density Pole	56	Harvest	Clearcut with Reserves	Aspen
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Rev Stand borders the Miss-Kal snowmobile trail.
Cmnt:

Rev Final harvest. Do not cut pine or oak.
Spec:

Next
Steps:

93 63120093-Cut	189.8	4126 - White, Black, N. Pin Oak	High Density Log	110	Harvest	Single Tree Selection	White, Black, N. Pin Oak
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Rev Heavy white oak regen in spots. Stand is mature white oak, very limby, low quality. Some aspen clones found throughout stand.
Cmnt:

Rev Harvest aspen clones were found. Mark red maple and white oak to release white oak regen. Do not cut pine. Manage for a mix of oak, aspen, pine
Spec: and red maple.

Next
Steps:



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
101 63120101-Cut	3.8	42290 - Natural Mixed Pine	High Density Log	67	Harvest	Single Tree Selection	Natural Mixed Pine

Rev Cmnt: Natural stand of mostly red pine, white pine, jack pine and quaking aspen. Orv route runs through stand.

Rev Spec: Thin. Remove quaking aspen and jack pine. Mark pine to cut. Remove defect and utilitie poles in the red pine portions of the stand. Mark for access in the white pine portion of the stand. Target 100-120BA

Next Steps:

107 63120107-Cut	45.1	4126 - White, Black, N. Pin Oak	High Density Log	94	Harvest	Shelterwood	White, Black, N. Pin Oak
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Rev Cmnt: Stand is a mix of white oak, black oak, red maple and big tooth aspen. WO regen is light to moderate throughout stand.

Rev Spec: Manage for mix of oak, red maple and aspen. Harvest all red maple and aspen. Mark oak to cut. Release advanced oak regen were found.

Next Steps:

108 63120108-Cut	7.8	4130 - Aspen	High Density Pole	60	Harvest	Clearcut with Reserves	Aspen
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Rev Cmnt: Narrow strip of aspen between swamp and Morey Road.

Rev Spec: Final harvest manage for aspen. Do not cut pine or oak.

Next Steps:

110 63120110-Cut	35.9	4130 - Aspen	High Density Log	70	Harvest	Clearcut with Reserves	Aspen
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Rev Cmnt: Stand is a mix of quaking and big toothed aspen. Prescribed last YOE.. did not get treated. Stand is wet in spots.

Rev Spec: Final harvest. Do not cut pine or oak (if found). Manage for a mix of aspen and pine.

Next Steps:

117 63120117-Cut	9.5	4139 - Aspen, Mixed Deciduous	High Density Pole	57	Harvest	Clearcut	Aspen
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Rev Cmnt:

Rev Spec: Final harvest. Do not cut oak.

Next Steps:

137 63120137-Cut	66.9	4126 - White, Black, N. Pin Oak	Medium Density Log	100	Harvest	Shelterwood	White, Black, N. Pin Oak
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Rev Cmnt: 100 year old white oak. Moderate to heavy oak regen throughout stand.

Rev Spec: Remove red maple and aspen to release oak regen. Mark oak to cut in areas heavy to oak. Target 30-50 BA. Do not cut pine.

Next Steps:

**PROPOSED TREATMENTS
NO LIMITING FACTORS**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
141 63120141-Cut	10.4	4130 - Aspen	High Density Pole	46	Harvest	Clearcut	Aspen

Rev Portions of stand are wet. Need to harvest during dry or frozen conditions.
Cmnt:

Rev Final harvest. Do not cut cherry, white pine and oak.
Spec:

Next
Steps:

146 63120146-Cut	9.6	4126 - White, Black, N. Pin Oak	High Density Log	101	Harvest	Shelterwood	Oak
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Rev Mix of black, red oak, white oak and pine. Heavy to moderate white oak in understory. White pine is moderate to heavy in understory.
Cmnt:

Rev Remove red maple. Thin oak to release white oak regen. Do not cut pine. Manage stand for a mix of oak and pine
Spec:

Next
Steps:

152 63120152-Cut	5.8	4130 - Aspen	High Density Pole	56	Harvest	Clearcut with Reserves	Aspen
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Rev Small aspen stand. Morey road is on the north side of the stand.
Cmnt:

Rev Final harvest. Do not cut oak, wp (under 6 inches) and red pine.
Spec:

Next
Steps:

**Total Treatment
Acreage Proposed: 662.5**

**PROPOSED TREATMENTS
WITH LIMITING FACTORS**



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Treatment Name	Acres	Stage1 Cover Type	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Page 1 of 1
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Limiting Factor
and Comment:

Rev
Cmnt:

Rev
Spec:

Next
Steps:

No Treatment
Reason

**Total Treatment
Acreage Proposed: 0**



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.

Inventory Method: IFMAP

Stand	SCA Name	Acres	Comments



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
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	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
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.