



Compartment Review Presentation

Cadillac Forest Management Unit

Compartment 63150

Entry Year 2022

Acreage: 1,650

County Wexford

Management Area: Manistee River Valley

Revision Date: 2020-04-02

Stand Examiner: Joe Ventimiglia

Legal Description:

T24N, R10W, Sections 1-3,10-12.

Identified Planning Goals:

Vegetation management in the Manistee River Valley Management Area will provide timber products; maintain or enhance wildlife habitat; protect areas of unique character including the Manistee River and its tributaries, a designated natural river; threatened, endangered and special concern

Soil and topography:

Rubicon-Montcalm-Graycalm, Nester-Kawkawlin-Manistee and Tawas-Croswell-Lupton. Generally flat and poorly drained with perched water tables in spots. Local sharp relief around the Manistee River and the many tributaries flowing into it.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

The "Retreat Subdivision", a private development of approximately 5 seasonal and year-round homes overlooking the Manistee is located in S1/2SWNE of section 10. A large pipeline corridor and a separate electric corridor traverse sections 11 & 12. A small private parcel on the south bank of the Manistee River located in the NW corner of section 10. This parcel has a legal easement over an existing two-tract road that crosses the Silver Creek on an abandoned bridge. The owner is currently planning on developing a home site on this property. Consumers' Energy owns timber rights on all of the significant red pine plantations within the compartment.

Unique Natural Features:

Natural Features Inventory lists Wood Turtles along the Manistee River.

Archeological, Historical, and Cultural Features:

Several listed in the Archeological Features list Secretary Of State, Historical Division.

Special Management Designations or Considerations:

Preserve water quality by using BMPs. The Manistee is being nominated for Natural River Status and management plans should follow the guidelines set for the River.

Watershed and Fisheries Considerations:

The Manistee River, Buttermilk Creek, and Silver Creek are located within this compartment. The Manistee River has been recommended for designation as a Natural River under Part 305 of Act 451. Therefore, according to the Natural Rivers Management Plan draft (page 70), no cutting should take place within 175 feet of the Manistee River. No cutting should take place within 75 feet of Buttermilk Creek, and no cutting should occur within 50 feet of Silver Creek or any of the other small tributaries in this area. Shade, limiting sediment input, and woody debris recruitment are crucial to trout streams. Restricting cutting to outside the appropriate buffers will help to maintain the temperatures and habitat required to maintain the health of these streams, and the watershed in general. Also, no active management for aspen regeneration should take place within 100 yards of the smaller streams like Silver Creek, Buttermilk Creek, and other tributaries. Young aspen is a prime source of food for beavers, and beavers have the potential to devastate trout streams.
Mark Tonello

Wildlife Habitat Considerations:

Featured wildlife species in this Management Area are diverse reflecting the wide range of habitat types present. Featured Species of wildlife include american bittern, american woodcock, beaver, black bear, eastern massasuga rattlesnake, golden-winged warbler, mallard, pileated woodpecker, ruffed grouse, snowshoe hare, white-tailed deer, and wood duck. Most of these species benefit from young forest and open types while some require some old trees for foraging and nest/den sites. Maintaining the opening types and balancing harvests with a diverse assortment of age classes in the timber types will meet the goals for these species.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. Glacial drift thickness varies between 200 and 400 feet. There is over 80 feet of relief within the compartment. Beneath the Glacial Drift are the Mississippian Coldwater Shale and the Marshall Sandstone. The Marshall was previously used as a building stone. A gravel pit is located three miles to the north. Gravel potential is considered to be limited. This area lies six miles south of the prolific Silurian Niagaran reef trend. There does not appear to be any potential for Niagaran reefs in this area. This area is not currently leased for oil and gas and potential is limited. The compartment is mostly surface only.

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.

Survey Needs:

There are no survey needs in this compartment

Recreational Facilities and Opportunities:

Baxter Bridge State Forest Campground is located to the west of this compartment and provides over 24 camping sites and access to the Manistee River for fishing and canoeing opportunities. In addition there are several road end camping sites located on the Manistee River that provide semi wilderness camping experience. Both the Silver and Buttermilk Creeks also provide excellent fishing challenges. Hunting opportunities in the compartment are excellent.

Fire Protection:

To be completed by fire.

Additional Compartment Information:

The following reports from the Inventory are attached:

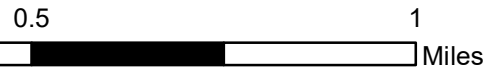
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

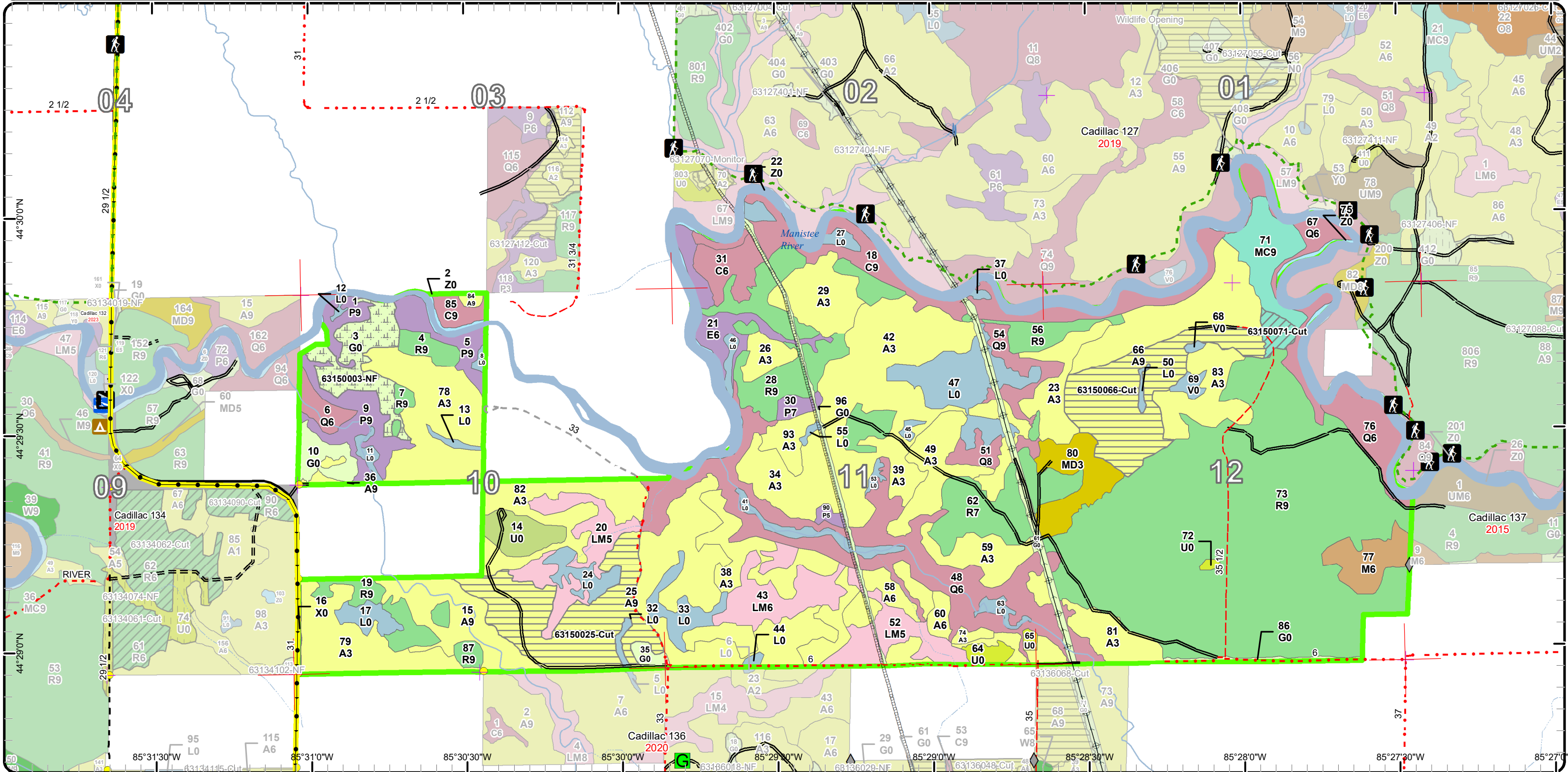
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 150
 T24N R10W, Sec. 1-3, 10-12
 County: Wexford
 Unit: Cadillac
 Mgmt Area: Manistee River Valley
 YOE: 2022
 Acres: 1,650 GIS Calculated
 Examiner: Joe Ventimiglia
 Map Revised: 6/15/2020
 Map Phase: Web-Post



- Miris Corners
- ✚ Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- == DNR - Secondary Forest Road
- == DNR - Forest Access Route
- Federal / State / County - Paved Road
- - Federal / State - Dirt / Gravel Road
- . . County - Gravel Road
- - - County - Dirt Road (Seasonal)
- - - Private - Dirt / Gravel Road
- 🚶 Hiking Trails
- Designated Hiking Trails
- ORV License
- Michigan Cross Country Cycle Trail (MCCCT)
- 🚽 Toilet
- 🚤 Boating Access Site
- 🚧 Culvert
- 🏕 Campground
- Intermittent Stream
- Perennial River
- Lakes and Rivers
- Pipeline
- ⚡ Powerline
- 🏠 Other Treatment - See Comments
- ☐ Clearcut (w/Reserves)
- ☐ Thinning (Crown, Low, Systematic)
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 429 - Mixed Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub



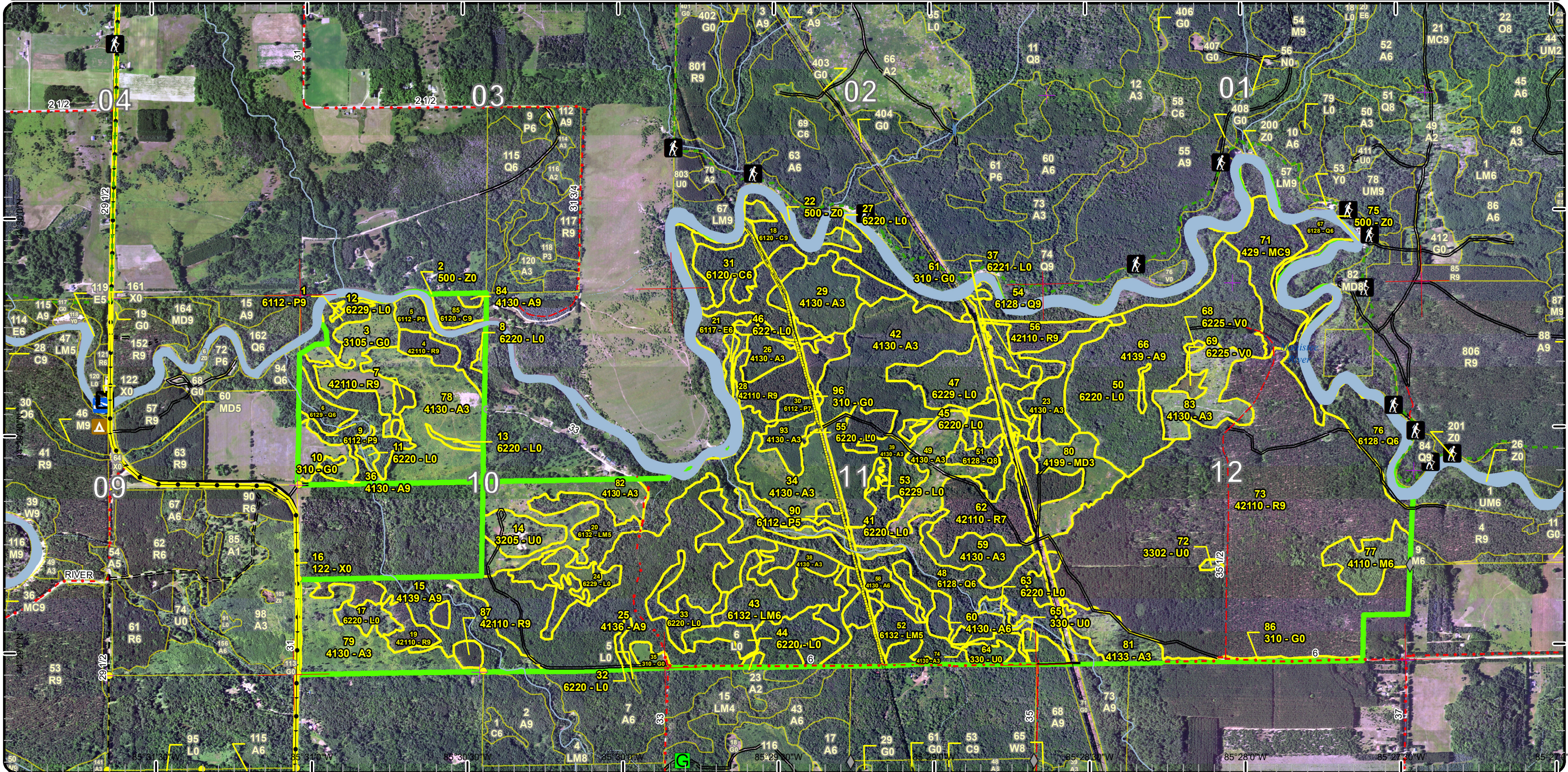
Stand Boundary Map

Compartment: 150
 T24N R10W, Sec. 1-3, 10-12
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- Counties
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- 🏕️ Campground
- Intermittent Stream
- Perennial River
- Lakes and Rivers
- Pipeline
- ⚡ Powerline
- Compartment Boundary
- Stand Boundaries

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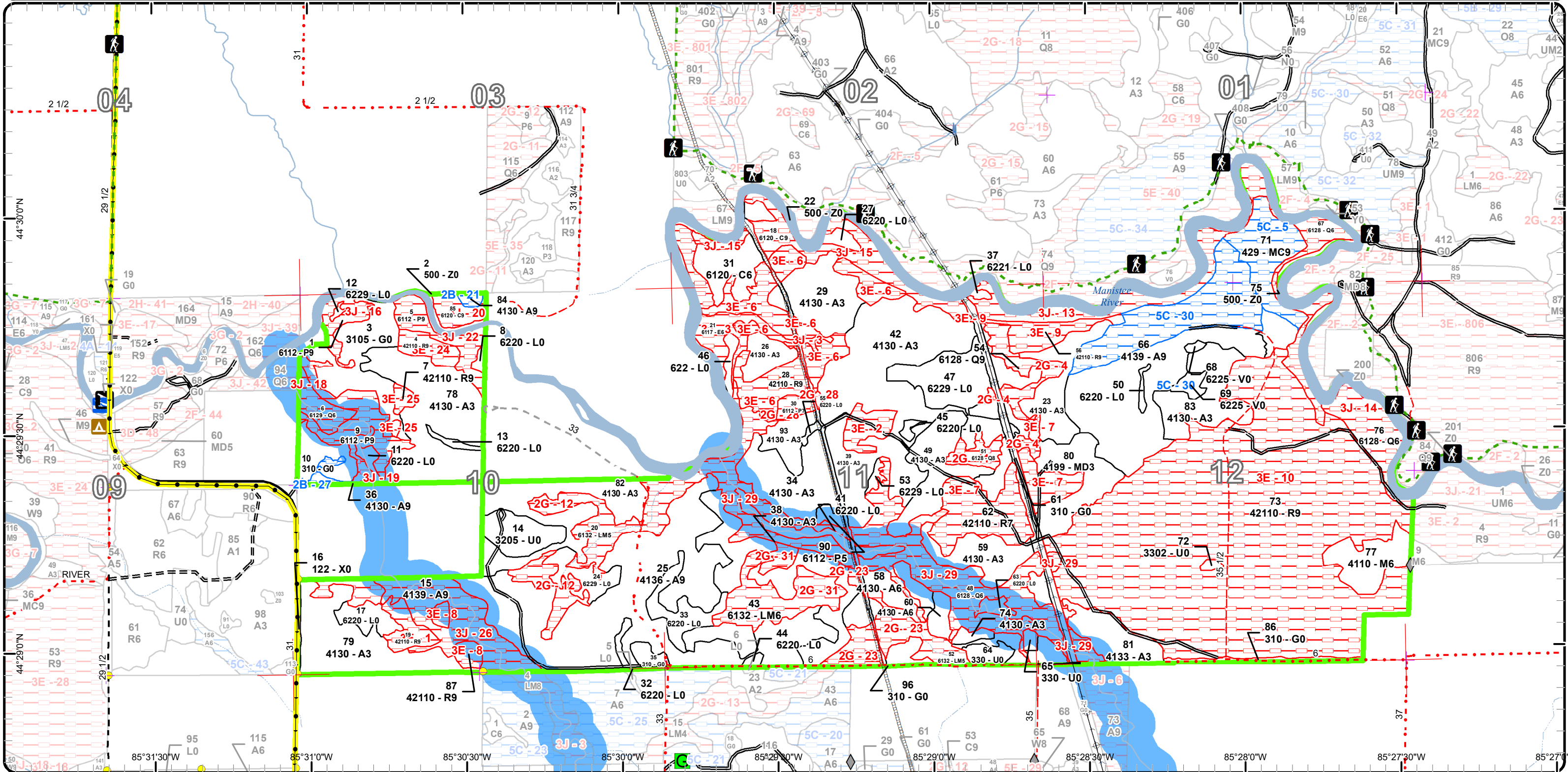


Special Conservation Areas

Compartment: 150
 T24N R10W, Sec. 1-3, 10-12
 County: Wexford
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- Culvert
- Campground
- Intermittent Stream
- Perennial River
- Lakes and Rivers
- Pipeline
- Powerline
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 3E: Easement / lease, non-military (e.g. Consumers Power red pine, etc)
- 3J: Water quality / BMPs (stream, river, or lake)
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer





Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	188	130	66	0	24	200	32	0	0	0	0	0	0	0	0	0	0	640
Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Cedar	0	0	0	0	0	0	0	0	0	6	0	37	0	0	0	0	0	0	43
Herbaceous Openland	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
Low-Density Trees	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Lowland Aspen/Balsam Poplar	0	0	0	2	0	0	0	30	0	0	0	0	0	0	0	0	0	11	43
Lowland Conifers	0	0	0	0	0	0	0	7	0	0	0	12	0	0	0	0	0	145	163
Lowland Deciduous	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	16
Lowland Mixed Forest	0	0	0	0	0	0	24	0	23	0	0	20	0	0	0	0	0	0	67
Lowland Shrub	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81
Mixed Upland Deciduous	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Northern Hardwood	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	15
Red Pine	0	0	0	0	0	0	0	75	342	0	0	0	0	0	0	0	0	0	417
Upland Conifers	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	25
Upland Shrub	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Urban	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Water	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
Total	203	208	130	68	0	24	224	159	406	6	0	69	0	0	0	0	0	156	1652



Report 2 – Treatment Summary

Cadillac Mgt. Unit

Year of Entry: 2022

Acres of Harvest

Compartment 150
Total Compartment Acres: 1,650

Commercial Harvest - 113
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	108	0	0	0	0	0	0	0	0	108
Upland Conifers	0	0	0	0	5	0	0	0	0	5
Total	108	0	0	0	5	0	0	0	0	113

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	113	0	0	0	0	0	0	24	0	136
Next Step	0	0	0	0	0	108	0	0	0	108
Total	113	0	0	0	0	108	0	24	0	244



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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Proposed Treatments:

3	63150003-NF	23.7	3105 - Mixed Upland Herbaceous	Nonstocked		Unspecified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		No
<p><u>Prescription</u> Keep open. <u>Specs:</u></p> <p><u>Next Step</u> <u>Treatments:</u></p> <p><u>Acceptable</u> <u>Regen:</u></p> <p><u>Other</u> <u>Comment:</u></p> <p><u>Site Condition</u> Proposed Start Date: 10/1 /2021</p>											
25	63150025-Cut	56.1	4136 - Aspen, Mixed Conifer	Sawtimber Well	54	81-110	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	No
<p><u>Prescription</u> Final Harvest leave retention 3 to 5 percent of total acreage. Leave any white pine over 20 inches in diameter. Leave any cedar or hemlock if present. <u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u></p> <p><u>Acceptable</u> Aspen primarily with mix of fir, red maple and white pine. <u>Regen:</u></p> <p><u>Other</u> Map retention in MIFI. Frozen or dry summer condition harvest. Push into south end of stand 43 as much as upland conditions allow. (may not be much) Only portion of stand cut as a result of MA plan calling for less acres. <u>Comment:</u></p> <p><u>Site Condition</u> Proposed Start Date: 10/1 /2021</p>											
66	63150066-Cut	51.6	4139 - Aspen, Mixed Deciduous	Sawtimber Well	58	81-110	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	No
<p><u>Prescription</u> Final Harvest leave all cedar and hemlock. As well leave retention island 3 to 5 percent of total acreage. Protect the few legacy white pine by leaving all white pine over 20 inches in diameter. <u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u></p> <p><u>Acceptable</u> Aspen and red maple with mix of white pine. <u>Regen:</u></p> <p><u>Other</u> Map retention in MIFI. Winter or dry season harvest only. Protect drainages or small wet pockets as needed, consider including in retention island. Broke stand roughly in half. Use two track as north border of stand to break up age class. <u>Comment:</u></p> <p><u>Site Condition</u> Proposed Start Date: 10/1 /2021</p>											



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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71	63150071-Cut	5.0	429 - Mixed Upland Conifers	Sawtimber Well	75	141-170	Harvest	Low Thinning	429 - Mixed Upland Conifers	Even-Aged	No
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Prescription Perform low thinning on red pine and white pine rows. Leave residual BA of 60 to 100. Cut all spruce by spec.

Specs:

Next Step

Treatments:

Acceptable Not regen harvest but slowly push stand to mixed pine regen.

Regen:

Other Green mark or orange mark pine based on forester preference to get to BA residual. Keep in mind any BMP concerns along river and with
Comment: small step down to river. Just cut this portion of stand 71 at this time, rest of stand will be thinned when north side of stand 66 is cut.

Site Condition

Proposed Start Date: 1 /29/2020

Total Treatment Acreage Proposed: 136.4

Report 4 – Site Conditions

Cadillac Mgt. Unit
Joe Ventimiglia : Examiner

Compartment: 150
Year of Entry: 2022

Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available	Dominant Site Conditions	Dominant Site Conditions				
		With Condition				2B	5C	2G	3E	3J
638	570	40		28	Aspen	4	36			28
3	3	0		0	Bog					
42	13	0		30	Cedar	0				30
60	60	0		0	Herbaceous Openland		0			
6	6	0		0	Low-Density Trees					
42	2	0		40	Lowland Aspen/Balsam Poplar			4		37
163	0	0		163	Lowland Conifers			18		145
16	0	0		16	Lowland Deciduous					16
67	0	0		67	Lowland Mixed Forest			67		
81	81	0		0	Lowland Shrub					
20	20	0		0	Mixed Upland Deciduous					
15	15	0		0	Northern Hardwood					
417	0	0		417	Red Pine				417	
25	5	20		0	Upland Conifers		20			
12	12	0		0	Upland Shrub					
1	1	0		0	Urban					
40	40	0		0	Water					
1,650	829	60		760	Total Forested Acres	4	56	88	417	256
	50%	4%		46%	Relative Percent					

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Consumers red pine.							

Report 4 – Site Conditions

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Year of Entry: 2022

2	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	16	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Very difficult access with step down bluff and BMP considerations around river. Sale has been sold in past and burned back to State with access concerns. None the less it is still feasible to thin this stand, although this will be best accomplished when the north side of stand 66 adjacent is cut next YOE. At that time in dry or frozen conditions it would be possible to thin the rest of this stand.							
6	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	41	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Consumers lease.							

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7	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	33	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Consumers pine lease.							
8	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Consumers Pine lease.							
10	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	301	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

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12	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	23	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	38	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							
14	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	17	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							
15	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	24	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							
16	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments: Combination of BMP with river and too wet. Not to mention every difficult access through private Retreat subdivision.							
18	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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19	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	19	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							
20	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
21	Available	2B: Unknown if access through adjacent landowner(s) is possible	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
23	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	20	2F: Too steep	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified
Comments: Combination of too wet and drainages through stand.							
24	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Consumers Red Pine							

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25	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Consumers Red Pine							
26	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	28	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments: Combination of BMP concerns around creek and steepness of terrain.							
27	Available	2B: Unknown if access through adjacent landowner(s) is possible	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Too small to be commercial timber sale, technically need to cross private to access.							
28	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
29	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	83	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							
30	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	36	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Breaking up stand cut this portion of stand next YOE.							

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31	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	24	Unspecified	Unspecified	Unspecified	Unspecified
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Comments:
By in large too wet for commercial operation, was looked at in very wet year. Potential for portions to be cut in very dry year? Look at again next inventory cycle.

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 5 – 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.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

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

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																	
1	6112 - Lowland Aspen	Sawtimber Well	6.7	63	81-110	N/A	Mostly lowland BAM and aspen along river buffer, occasional cedar and hardwood along river edge. Drainage flows into middle of stand with somewhat steep banks on south end.																																																																	
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2	500 - Water	Nonstocked	5.0		Unspecified	No	Manistee River																																																																	
3	3105 - Mixed Upland Herbaceous	Nonstocked	23.7		Unspecified	No	Hawthorns planted throughout. Difficult foot access only opening not actively managed, slowly filling in. Also filling in with scattered pines, good wildlife value.																																																																	
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5	6112 - Lowland Aspen	Sawtimber Well	11.2	76	81-110	N/A	Some Cedar adjacent to river, but mostly Aspen/Fir/Maple stand. Heavy deer browse. Northern Hardwoods regenerating on hillside. Most of stand is off the bluff of the river valley.																																																																	
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6	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	6.8	65	81-110	N/A	Lowland conifer stagnant swamp along silver creek. Old road leads down to failed old steel bridge.																																																																	
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9	6112 - Lowland Aspen	Sawtimber Well	18.9	68	81-110	N/A	Lowland drainage along Silver creek, considerable variability. Lowland alder and cedar along creek, with aspen along the top and sides of the bluff. All this area is not suitable for management as a result of BMP concerns along creek and steepness of terrain. Aspen will slowly fall out and be replaced by longer lived tree species.																																																																																																		
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14	3205 - Mixed Upland Shrub	Nonstocked	11.7		Unspecified	No	Autumn Olive was planted, filling in with trees in spots with sandy pit in middle of stand. Old opening slowly filling in, autumn olive heavy in stand.																																																																																																		
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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15	4139 - Aspen, Mixed Deciduous	Sawtimber Well	27.9	67	81-110	N/A	
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Sensitive area along creek. Most of stand is off the steep bluff of the creek, with steep drainages running throughout stand. Stand is hardwood and aspen with some cedar and fir along the edges of the creek. Western edge is heavier to hardwood although aspen more prominent in center and east edge.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	40	Log/Pole	11	85	Sugar Maple	Low	Variable	Sapling
American Elm	2	Pole/Log	8		Ironwood	Low	Variable	Sapling
Paper Birch	3	Pole	8		Musclewood/Hornbeam	Medium	5 - 10 feet	Tall Shrub
Quaking Aspen	40	Log	12	67	Hawthorn (spp.)	Low	5 - 10 feet	Tall Shrub
Northern White Cedar	3	Log	16		Hemlock	Trace	>20 feet	Pole
Balsam Fir	5	Pole/Log	8		Balsam Fir	Low	< 5 feet	Sapling
Basswood	4	Log	12					
White Pine	2	Log/Pole	12					
Black Cherry	1	Log/Pole	10					

16	122 - Road/Parking Lot	Nonstocked	1.4	0	Unspecified	No	Road
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17	6220 - Alder/willow	Nonstocked	6.1		Unspecified	No	Mostly alder a few aspen and pine scattered in wet.
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18	6120 - Lowland Cedar	Sawtimber Well	23.9	106	81-110	N/A	
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Lowland off the bluff of Manistee river combination of lowland conifer and pocket of lowland hardwood/aspen in center of stand.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	8	Pole	8		Red Maple	Medium	Variable	Sapling
Northern White Cedar	50	Log/Pole	10	106	Tag Alder	Low	5 - 10 feet	Tall Shrub
Hemlock	8	Log/Pole	10		Prickly Ash	Low	< 5 feet	Tall Shrub
Quaking Aspen	15	Log/XLog	15		Balsam Fir	Medium	Variable	Sapling
Red Maple	8	Log/Pole	12					
Paper Birch	5	Log/Pole	11					
White Pine	1	Log/Pole	15					
Basswood	5	Log	15					

19	42110 - Planted Red Pine	Sawtimber Well	11.8	68	111-140	N/A	
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Consumer's Red Pine stand. This stand unlike stand 87 has been actively managed, understory beginning to develop in stand.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Pine	100	Log	12	68	White Pine	Low	< 5 feet	Sapling
					Beech	Low	< 5 feet	Sapling



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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20 6132 - Mixed Lowland Forest with Cedar Poletimber Medium 22.7 75 51-80 N/A Mixed lowland aspen, red maple, fir with cedar. Large drainage through middle of stand. Broken into two pockets, remnants of ash, but all standing dead at this point. Open areas created where ash died out and stand flooded out.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
American Elm	5	Pole/Log/Sap	8		Red Maple	Low	Variable	Sapling
Red Maple	10	Pole/Sap/Log	8		Balsam Fir	High	Variable	Sapling
Quaking Aspen	25	Pole/Log	8	75	Northern White Cedar	Medium	>20 feet	Pole
Balsam Fir	20	Pole/Sapling	7		Tag Alder	Medium	5 - 10 feet	Tall Shrub
Northern White Cedar	20	Pole/Log	9		Hawthorn (spp.)	Low	5 - 10 feet	Tall Shrub
Hemlock	10	Pole	7					
Paper Birch	5	Pole/Log	8					

21 6117 - Lowland Deciduous, Mixed Coniferous Poletimber Well 16.3 78 51-80 N/A Lowland stand along river flat, stand includes two drainages that run into river as well. Was primarily ash in spots but this have sense all fallen out of stand.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
American Elm	5	Pole	8		Red Maple	Low	Variable	Sapling
Red Maple	20	Pole/Log	8		Black Ash	Medium	Variable	Sapling
Basswood	10	Pole/Log	9		Hawthorn (spp.)	Medium	5 - 10 feet	Tall Shrub
Quaking Aspen	30	Pole/Log	9	78	Tag Alder	Medium	5 - 10 feet	Tall Shrub
Northern White Cedar	15	Pole/Log	9					
Paper Birch	13	Pole/Log/Sap	8					
White Pine	2	Log/Pole	12					

22 500 - Water Nonstocked 25.5 Unspecified No Manistee River

23 4130 - Aspen Sapling Well 16.7 16 Immature N/A Stand was final harvested in 2004, sale comments note wet nature of sale. A few cedar left. Upland overall with wet seeps and seasonal drainages.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	10	Sapling	2	
Quaking Aspen	73	Sapling	3	16
Balsam Fir	5	Sapling	2	
Red Maple	8	Sapling	2	
White Oak	2	Sapling	1	
Northern White Cedar	2	Pole	7	

24 6229 - Mixed lowland shrub Nonstocked 7.7 0 Unspecified No Lowland shrub, a few trees scattered standing water.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments			
25	4136 - Aspen, Mixed Conifer	Sawtimber Well	111.6	54	81-110	N/A	Stand was cut in 1964. Large aspen stand mostly upland although some definite wet pockets found along the edges. Quality of aspen varies significantly with heavy mix of white pine, red maple and balsam fir. Some larger super canopy white pine found in stand. Stand just into log class overall, not best quality.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Maple		14	Log/Pole	10		Red Maple		Medium	Variable	Sapling
Quaking Aspen		55	Log/Pole	10	54	Balsam Fir		High	Variable	Sapling
Balsam Fir		18	Pole/Log	8		Common Blackberry		Low	< 5 feet	Tall Shrub
White Pine		10	Log/Pole/XLog	13		Alder		Low	5 - 10 feet	Tall Shrub
Red Pine		1	Log	15		Musclewood/Hornbeam		Low	5 - 10 feet	Tall Shrub
Paper Birch		2	Pole/Log	8		White Pine		Medium	Variable	Sapling
26	4130 - Aspen	Sapling Well	7.3	16	Immature	N/A		Stand was final harvested in 2004. Notes from timber sale notes wet nature of sale.		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height
Red Maple		20	Sapling	2		Tag Alder	Low		5 - 10 feet	Tall Shrub
Paper Birch		5	Sapling	2		Musclewood/Hornbeam	Low		< 5 feet	Tall Shrub
Quaking Aspen		65	Sapling	2	16					
White Pine		5	Sapling	2						
Black Cherry		5	Sapling	2						
27	6220 - Alder/willow	Nonstocked	4.4		Unspecified	No	Tag Alder pockets along Manistee River, flooded timber along edges.			
Sub-Canopy Species		Density	Avg. Height	Size						
Alder		Full					Tall Shrub			
28	42110 - Planted Red Pine	Sawtimber Well	40.6	75	171-200	N/A	Consumers Red Pine stand. Difficult access, appears to have not been cut in a while. Filling in with hardwood in spots in understory.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Pine		90	Log	12	75	Red Maple		Medium	Variable	Sapling
White Pine		10	Log	12		Black Ash	Low	Variable	Sapling	
29	4130 - Aspen	Sapling Well	21.0	16	Immature	N/A	Stand was final harvested in 2004. Notes from timber sale notes wet nature of sale. A handful of cedar was left in north edge of stand.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Maple		20	Sapling	2	16	Balsam Fir		Low	5 - 10 feet	Sapling
Paper Birch		5	Sapling	2	16	Common Blackberry		Low	< 5 feet	Tall Shrub
Quaking Aspen		70	Sapling	2	16	Musclewood/Hornbeam		Low	5 - 10 feet	Tall Shrub
Northern White Cedar		5	Pole/Log	8						
30	6112 - Lowland Aspen	Sawtimber Poor	3.7	65	1-50	N/A	Wet. Drainage through middle. Tag Alder and Willow throughout. Very wet falling apart flooded aspen, too wet for commercial management, lots of blowdown.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Paper Birch		10	Pole/Log	8		Black Ash		Medium	Variable	Sapling
Quaking Aspen		88	Log	11	65	Tag Alder		High	5 - 10 feet	Tall Shrub
Red Maple		2	Log/Pole	10		Musclewood/Hornbeam		Medium	5 - 10 feet	Tall Shrub
						Hawthorn (spp.)		Low	5 - 10 feet	Tall Shrub
						Willow spp.	Low	5 - 10 feet	Tall Shrub	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
31	6120 - Lowland Cedar	Poletimber Well	12.7	106	51-80	N/A	Stand was cut in 1998, harvested leaving some cedar. Adequate regen of aspen and maple underneath canopy of Cedar, Hemlock, Fir. Appears producer in 1998 just cut small swaths through stand. Cedar still relatively small, not much log diameter in cedar left from 1998 cut.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Balsam Fir		10	Pole	7		Red Maple		
Northern White Cedar		77	Pole/Log	9	106	Quaking Aspen		
Hemlock		4	Pole/Log	8		Tag Alder		
Quaking Aspen		9	Log/Pole	11		Prickly Ash		
						Beech		
32	6220 - Alder/willow	Nonstocked	1.6		Unspecified	No	Tag alder armoring drainage.	
						Sub-Canopy Species		
						Alder		
33	6220 - Alder/willow	Nonstocked	10.1		Unspecified	No	Mostly tag alder and lowland shrub. Scattered aspen fir and maples found in the lowland shrub stand, not practical to chase after into low area like this.	
						Sub-Canopy Species		
						Alder		
34	4130 - Aspen	Sapling Well	23.8	7	Immature	N/A	Stand was final harvested in January of 2014. Small drainage through middle armored by Cedars. Came back well to aspen, seasonally wet area at times.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Maple		5	Sapling	1	7	Tag Alder		
Quaking Aspen		88	Sapling	1	7			
White Pine		5	Pole/Log	8				
Northern White Cedar		2	Pole/Log	8				
35	310 - Herbaceous Openland	Nonstocked	3.1		Unspecified	No	Opening slowly filling in with trees. Good landing location.	
						Sub-Canopy Species		
						Bracken Fern		
36	4130 - Aspen	Sawtimber Well	2.3	68	Unspecified	N/A	Small island of mature aspen in opening, split out as upland unlike rest of stand 9 off the bluff. Some seasonal wet nature appears.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Maple		2	Log	12		Ironwood		
White Pine		2	Log	12		Black Cherry		
Quaking Aspen		96	Log	13	68	Balsam Fir		
37	6221 - Fen	Nonstocked	1.1	0	Unspecified	No		
38	4130 - Aspen	Sapling Well	35.5	16	Immature	N/A	Stand was final harvested in 2004. Notes from timber sale notes wet nature of sale. Difficult access, stand broken up into 4 blocks.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Maple		21	Sapling	3	16	Tag Alder		
Quaking Aspen		60	Sapling	3	16			
Balsam Fir		17	Sapling	2	16			
White Pine		2	Sapling	2				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																			
39	4130 - Aspen	Sapling Well	21.8	16	Immature	N/A	Stand was final harvested in 2004. Notes from timber sale notes wet nature of sale. A pocket of cedar left in northwest corner as well as a few standing mature aspen that appears were too wet to cut. A few area flooded out to tag but overall upland.																																																			
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41	6220 - Alder/willow	Nonstocked	6.9		Unspecified	No	Tag alder and grass along buttermilk creek.																																																			
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42	4130 - Aspen	Sapling Well	61.6	25	Immature	N/A	Large aspen stand that was final harvested in 1994. Old skid trails have flooded out slightly as seen on imagery. Aspen regenerating well. Almost pole stand but still sapling overall.																																																			
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43	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	23.5	58	81-110	N/A	Variable mostly lowland mix of aspen, fir, red maple with cedar found throughout. A few upland pockets although stand is largely too wet to operate in without BMP rutting concerns. Some legacy white pine in stand.																																																			
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44	6220 - Alder/willow	Nonstocked	1.0		Unspecified	No																																																				
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45	6220 - Alder/willow	Nonstocked	1.1		Unspecified	No	tag alder pocket																																																			
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46	622 - Lowland Shrub	Nonstocked	2.2	0	Unspecified	No																																																				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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47 6229 - Mixed lowland shrub Nonstocked 27.4 Unspecified No Wet. Sapling Birch and Tamarack present. Lowland shrub overall some sapling trees attempting to get started but too wet.

Sub-Canopy Species	Density	Avg. Height	Size
Alder	Full		Tall Shrub
Willow spp.	Medium		Tall Shrub

48 6128 - Lowland Coniferous, Mixed Deciduous Poletimber Well 83.4 95 111-140 N/A Buffer zone along Buttermilk Creek. Trees located on sidehills and drainages. Large complex with significant variability, although topography and sensitive nature of trout stream buffer ties stand together. Some legacy white pine scattered. Largely conifer although aspen and maple upland in small portions along hillside.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	10	Pole/Sapling	9		Red Maple	Medium	Variable	Sapling
Paper Birch	10	Pole	6		Balsam Fir	Medium	Variable	Sapling
Quaking Aspen	20	Log/Pole	10		White Pine	Low	Variable	Sapling
Balsam Fir	10	Pole/Sapling	6		Black Ash	Low	Variable	Sapling
Northern White Cedar	26	Pole/Log	8	95	Tag Alder	Low	5 - 10 feet	Tall Shrub
White Pine	10	Log/Pole	10	73	Musclewood/Hornbeam	Low	5 - 10 feet	Tall Shrub
Hemlock	5	Pole	6					
Tamarack	5	Pole/Log	9					

49 4130 - Aspen Sapling Well 19.6 7 Immature N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Sapling	1	7
Quaking Aspen	80	Sapling	1	7
White Pine	10	Sapling	1	7
Balsam Fir	5	Sapling	1	

Stand was mixed spruce and white pine plantation with thick aspen understory. White Pine was very poor quality. Some wet on edges. STAND WAS FINAL HARVESTED IN 2014. Aspen and maple regen expected.

50 6220 - Alder/willow Nonstocked 1.1 0 Unspecified No

51 6128 - Lowland Coniferous, Mixed Deciduous Sawtimber Medium 5.5 97 81-110 N/A Wet. Mostly Cedar with some aspen mixed throughout.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	5	Log/Pole	10		Balsam Fir	Low	Variable	Sapling
Paper Birch	5	Pole	6		Tag Alder	Medium	5 - 10 feet	Tall Shrub
Quaking Aspen	30	Log/Pole	12		Musclewood/Hornbeam	Low	5 - 10 feet	Tall Shrub
Balsam Fir	15	Pole/Sapling	6		Dogwood (spp.)	Low	< 5 feet	Tall Shrub
Northern White Cedar	45	Log/Pole	10	97				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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52	6132 - Mixed Lowland Forest with Cedar	Poletimber Medium	20.4	102	51-80	N/A	Lowland hardwood and conifer mix. Drainage found though stand with portions of stand being completed flooded.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
American Elm	2	Pole	6		American Elm	Low	Variable	Sapling
Red Maple	15	Pole/Log/Sap	8		Red Maple	Low	5 - 10 feet	Sapling
Paper Birch	8	Pole	8		Balsam Fir	High	10 - 20 feet	Sapling
Balsam Fir	15	Pole	7		Alder	Medium	5 - 10 feet	Tall Shrub
Northern White Cedar	30	Pole/Log	9	102	Musclewood/Hornbeam	Low	5 - 10 feet	Tall Shrub
White Pine	5	Log/Pole	11					
Hemlock	5	Pole	8					
Quaking Aspen	20	Pole/Log	9					

53	6229 - Mixed lowland shrub	Nonstocked	1.3	0	Unspecified	No	
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54	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	12.2	106	51-80	N/A	Wet mixed cedar with other lowland conifer/lowland hardwood. Variable stand with pockets where cedar is well put together, and other pockets very wet with heavy blowdown and tag alder.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	10	Pole	8		Red Maple	Medium	Variable	Sapling
Quaking Aspen	15	Log	14		Balsam Fir	Low	< 5 feet	Sapling
Balsam Fir	10	Pole/Sapling	6		White Pine	Low	Variable	Sapling
Northern White Cedar	40	Log/Pole	11	106	Tag Alder	Medium	5 - 10 feet	Tall Shrub
Red Maple	15	Log/Pole	12					
Tamarack	8	Log/Pole	12					

55	6220 - Alder/willow	Nonstocked	0.8		Unspecified	No	Mostly Tag Alder with Willow and Cattails.
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Sub-Canopy Species	Density	Avg. Height	Size
Cattail spp.	Low		Non-Wood
Willow spp.	Low		Tall Shrub
Tag Alder	Medium		Tall Shrub

56	42110 - Planted Red Pine	Sawtimber Well	9.7	65	171-200	N/A	Consumer's Red Pine stand. Very difficult access, appears to have been thinned at least once in past.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	100	Log/Pole	12	65



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																								
58	4130 - Aspen	Poletimber Well	23.6	46	81-110	N/A	Aspen stand split up by various drainages. Very difficult access to northern portion of stand, southern blocks have easy access.																																																								
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59	4130 - Aspen	Sapling Well	17.2	16	Immature	N/A	Stand was final harvested in 2004, with cedar being left. . Notes from timber sale notes wet nature of sale. Came back well with exception of southern edge which flooded out to alder more or less.																																																								
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60	4130 - Aspen	Poletimber Well	3.9	25	Immature	N/A	Stand was final harvested in 1994. Came back well, just into pole class , almost still sapling size in spots.																																																								
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61	310 - Herbaceous Openland	Nonstocked	13.0		Unspecified	Managed Opening	Powerline. Is a mix of upland and lowland. Mostly lowland.																																																								
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62	42110 - Planted Red Pine	Sawtimber Poor	39.7	66	1-50	N/A	Consumers red pine that was seed tree cut in 2017. Remaining timber is still owned by consumers lease.																																																								
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63	6220 - Alder/willow	Nonstocked	2.8		Unspecified	No	Tag Alder and grass along Buttermilk Creek.																																																								
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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64	330 - Low-Density Trees	Nonstocked	3.9		Unspecified	No	Trees starting to fill in. Mix of pine and cherry trees.
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65	330 - Low-Density Trees	Nonstocked	1.3		Unspecified	No	Pine and Cherry starting to creep in from sides.
		Sub-Canopy Species		Density	Avg. Height	Size	
		Bracken Fern		High		Non-Wood	

66	4139 - Aspen, Mixed Deciduous	Sawtimber Well	87.9	58	81-110	N/A	Relative large block of primarily aspen and red maple although stand contains scattered cedar, white pine and balsam fir. Drainages/ seeps throughout most appear to be seasonal. A few scattered legacy white pine noted. South of road same stand although red maple falls off and balsam picks up.
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Canopy Species					% Cover	Size Class	DBH	Age	Sub-Canopy Species				Density	Avg. Height	Size
Red Maple		30	Log/Pole	10					Red Maple		Medium	Variable	Sapling		
Paper Birch		3	Log/Pole	11					Paper Birch		Low	Variable	Sapling		
Quaking Aspen		48	Log/Pole	11	58				Balsam Fir		Medium	Variable	Sapling		
Balsam Fir		7	Pole/Sap/Log	7					Tag Alder		Low	5 - 10 feet	Tall Shrub		
Northern White Cedar		4	Log/Pole	10					Musclewood/Hornbeam		Low	5 - 10 feet	Tall Shrub		
White Pine		6	Log/XLog	14					White Pine		High	Variable	Sapling		
Red Pine		1	Log	12											
Hemlock		1	Pole	8											

67	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	37.8	104	81-110	N/A	Mixed lowland conifer with pockets of lowland flooded hardwood/aspen off the bluff of the Manistee river. Variable complex but all tied together being within the protected buffer of the Manistee river. Upland character along some of the side slopes but overall lowland along river bottom. Old ash pockets have all fallen out from EAB and are slowly filling back in.
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Canopy Species					% Cover	Size Class	DBH	Age	Sub-Canopy Species				Density	Avg. Height	Size
Red Maple		10	Pole/Log	9					Red Maple		Medium	Variable	Sapling		
Paper Birch		5	Pole	6					White Ash		Low	Variable	Sapling		
Quaking Aspen		15	Pole/Log	9					Tag Alder		Medium	5 - 10 feet	Tall Shrub		
Balsam Fir		15	Pole	7					Musclewood/Hornbeam		Low	5 - 10 feet	Tall Shrub		
Northern White Cedar		35	Pole/Log	9	104				Hawthorn (spp.)		Medium	5 - 10 feet	Tall Shrub		
Hemlock		14	Pole/Log	9					Balsam Fir		Medium	Variable	Sapling		
Basswood		2	Log/Pole	11											
Red Oak		2	Pole/Log	8											

68	6225 - Bog	Nonstocked	0.7		Unspecified	No	
		Sub-Canopy Species		Density	Avg. Height	Size	
		Leatherleaf		Full		Tall Shrub	

69	6225 - Bog	Nonstocked	2.6		Unspecified	No	Bog
		Sub-Canopy Species		Density	Avg. Height	Size	
		Labrador Tea		Full		Tall Shrub	
		Leatherleaf		Full		Tall Shrub	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																													
71	429 - Mixed Upland Conifers	Sawtimber Well	25.1	75	141-170	N/A	Planted White Spruce, White Pine and Red Pine stand growing on steps down to Manistee River. White pine and spruce in poor quality. Never successfully harvest to date. Setup and sold sale, was returned to State in 2007 by producer that couldn't cut as a result of access issues. Some oak and dead ash scattered in stand. Spruce is stagnant in much of stand particularly under these oaks and dead ash.																																													
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72	3302 - Low Density Conifer Trees	Nonstocked	0.9		Unspecified	No	Landing for Red Pine stand. Red Pine regen.																																													
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73	42110 - Planted Red Pine	Sawtimber Well	301.3	70	141-170	N/A	Large consumers red pine stand. Stand is actively managed by consumers, some small die back pockets and some understory forming in these pockets.																																													
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Red Maple	5	Log/Pole	10		Red Maple	Low	Variable	Sapling																																												
74	4130 - Aspen	Sapling Well	2.1	16	Immature	N/A	Was a cedar final harvest done by wildlife division in 2003. Small sale with portable sawmill brought on site. Came back to mostly aspen.																																													
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75	500 - Water	Nonstocked	9.6		Unspecified	No	Manistee River.																																													



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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76 6128 - Lowland Coniferous, Mixed Deciduous Poletimber Well 17.3 108 111-140 N/A Cedar/Fir stand along Manistee River. Sidehill growing Northern Hardwoods. Very steep slope. All of stand off bluff of river.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	8	Pole	6		Red Maple	Medium	Variable	Sapling
Red Maple	8	Pole/Sapling	6		Balsam Fir	Medium	Variable	Sapling
Basswood	2	Log	12		White Pine	Low	Variable	Sapling
Red Oak	2	Log/Pole	8		Tag Alder	Low	5 - 10 feet	Tall Shrub
Paper Birch	5	Pole/Log	8		Hawthorn (spp.)	Low	5 - 10 feet	Tall Shrub
Quaking Aspen	10	Pole/Log	9		White Oak	Low	Variable	Sapling
Balsam Fir	10	Pole	8					
Northern White Cedar	40	Pole/Log	9	108				
White Pine	10	Log/Pole	10					
Hemlock	5	Pole	6					

77 4110 - Sugar Maple Association Poletimber Well 15.1 66 51-80 N/A Pole hardwood stand with slight rolling terrain. Lower to medium quality appears to be stump sprout origin. A few pine mixed in from adjacent consumers red pine stand.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	74	Pole	8	66	Beech	Low	Variable	Sapling
Basswood	8	Pole	8		Ironwood	Medium	Variable	Sapling
Beech	8	Pole/Log	8					
Bigtooth Aspen	8	Log/XLog	17					
Black Cherry	2	Pole	7					

78 4130 - Aspen Sapling Well 46.0 7 Immature N/A Stand was final harvested in summer of 2013. Chipping operation. Producer worked with private subdivision to east to gain access. Stand was cut during a dry period so rutting was avoided. Any cedar, hemlock and oak was left. Seasonally wet in pockets.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Sapling	1	7
Quaking Aspen	85	Sapling	1	7
White Oak	2	Pole	7	
Northern White Cedar	2	Pole/Log	8	
Balsam Fir	1	Sapling	1	

79 4130 - Aspen Sapling Well 32.8 7 Immature N/A Stand was final harvested in Dec of 2013. Shortwood operation. All white pine, cedar, and oak was left. Very wet ground with wet seeps running in spots. Was cut in a very cold snowy winter.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Sapling	1	
Red Oak	5	Pole/Sapling	6	
Quaking Aspen	70	Sapling	1	7
White Pine	8	Pole/Log/Sap	9	
Northern White Cedar	2	Pole	8	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																															
80	4199 - Other Mixed Upland Deciduous	Sapling Well	20.1	7	Immature	N/A	Stand was final harvested in March of 2014. Was very heavy to red maple, with aspen. (Still snow on the ground) Shortwood operation with all cedar and hemlock left where present. Upland although lowland character in spots.																																																															
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81	4133 - Aspen, Mixed Pine	Sapling Well	14.4	7	Immature	N/A	Stand was final harvest in summer of 2014, all cedar and white pine were left. Wet ground. Shortwood operation. White pine focused in overstory in one main pocket otherwise sprouting well to aspen/maple. A few small pockets flooded out to tag alder.																																																															
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82	4130 - Aspen	Sapling Well	30.9	7	Unspecified	N/A	Stand was final harvested in summer 2014. Shortwood operation. Cedar, hemlock, oak and white pine left. Mostly upland although some wet on edges.																																																															
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83	4130 - Aspen	Sapling Well	20.9	7	Unspecified	N/A	Stand was final harvested in 2014, short wood operation. Any red pine and oak were left. was part of larger stand to east, broken up to break up age class. Some wet on edges. Came back well to aspen and red maple with some pine mixed in regen.																																																															
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84	4130 - Aspen	Sawtimber Well	1.3	62	51-80	N/A	Small stand, no access through State. Just a small upland portion of state with no access except from river.																																																															
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																										
85	6120 - Lowland Cedar	Sawtimber Well	5.7	87	Unspecified	N/A	Land and river locked lowland conifer stand along Manistee River.																																										
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86	310 - Herbaceous Openland	Nonstocked	3.6	0	Unspecified	No	Road																																										
87	42110 - Planted Red Pine	Sawtimber Well	4.7	65	201+	N/A	Consumer's Red Pine stand. Two islands to East never thinned. Very difficult access for two small stands not even totaling 5 acres.																																										
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90	6112 - Lowland Aspen	Poletimber Medium	1.9	25	Immature	N/A	Stand was final harvested in 1994. Very wet conditions with beaver activity, aspen came back patchy and low quality.																																										
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93	4130 - Aspen	Sapling Well	8.0	16	Immature	N/A	Stand was final harvested in 2004. Notes from timber sale notes wet nature of sale. A few cedar were left scattered. A few mature aspen were left along edge where stand got too wet.																																										
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96	310 - Herbaceous Openland	Nonstocked	7.2	0	Unspecified	Managed Opening	Underground gas pipeline. Managed by gas company very wet and limited access through much of this stretch.																																										