



# Compartment Review Presentation

## Grayling Forest Management Unit

Compartment 72249

Entry Year 2026

Acreage: 1,863

County Crawford

Management Area: Camp Grayling

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**Stand Examiner:** Jake Halabut

### Legal Description:

T28N R2W Sections 19, 20, & 21 Northwest Lovell's Township, Crawford County

### Identified Planning 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.

### Soil and topography:

Upland is mainly Grayling/Rubicon sand and the lowland is Tawas Lupton muck.

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

The entire compartment is under a long-term lease agreement with the Michigan National Guard, DMA (Act 154 P.A. 1935). This 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 leased lands.

There are private residences to the south near KP Lake. Range 40 is located to the north.

### Unique Natural Features:

No Unique Natural Features known.

### Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

### Special Management Designations or Considerations:

Area is used for Military training.

### Watershed and Fisheries Considerations:

The East Branch of the AuSable River is a designated natural river. Clear Lake has limited fishing opportunities due to winter kill situations.

### Wildlife Habitat Considerations:

Outwash plain and ice contact ridges explain ecotype potential – river corridor with hemlock and white pine historically to west; red and white pine with red oak mix to east. This area makes for some nice aspen.

### 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 600 and 800 feet. Beneath the glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. A gravel pit is located in Section 21 and potential is good in the upland areas. None of the compartment is leased for oil and gas, as it is within the Military area. The Antrim Shale has been developed for gas production three miles to the north.

### Vehicle Access:

County Road 612 (paved), Kinney Road, and Briggs Road (poor dirt roads) are county roads. The sandy conditions of trail roads, heavy military use, and hilly terrain make vehicle access very difficult on trail roads throughout the compartment.

### Survey Needs:

None needed at this time.

### Recreational Facilities and Opportunities:

No designated recreational trails or facilities occur in the compartment.

### Fire Protection:

Due to the hilly terrain and the sandy conditions of the roads and trails in the compartment, access is difficult for fire

suppression equipment. Some areas may not be accessible by 4-wheel drive equipment.

**Additional Compartment Information:**

A wooden military observation tower is located in section 20 along the tank trail.

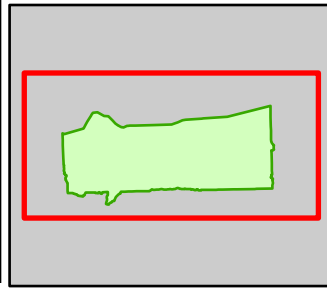
**The following reports from the Inventory are attached:**

- 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**

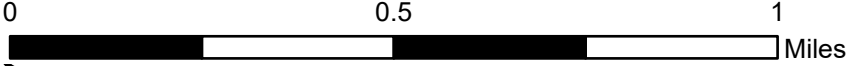
**The following information is displayed, where pertinent, on the attached compartment maps:**

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

Cover Type & Treatments Map

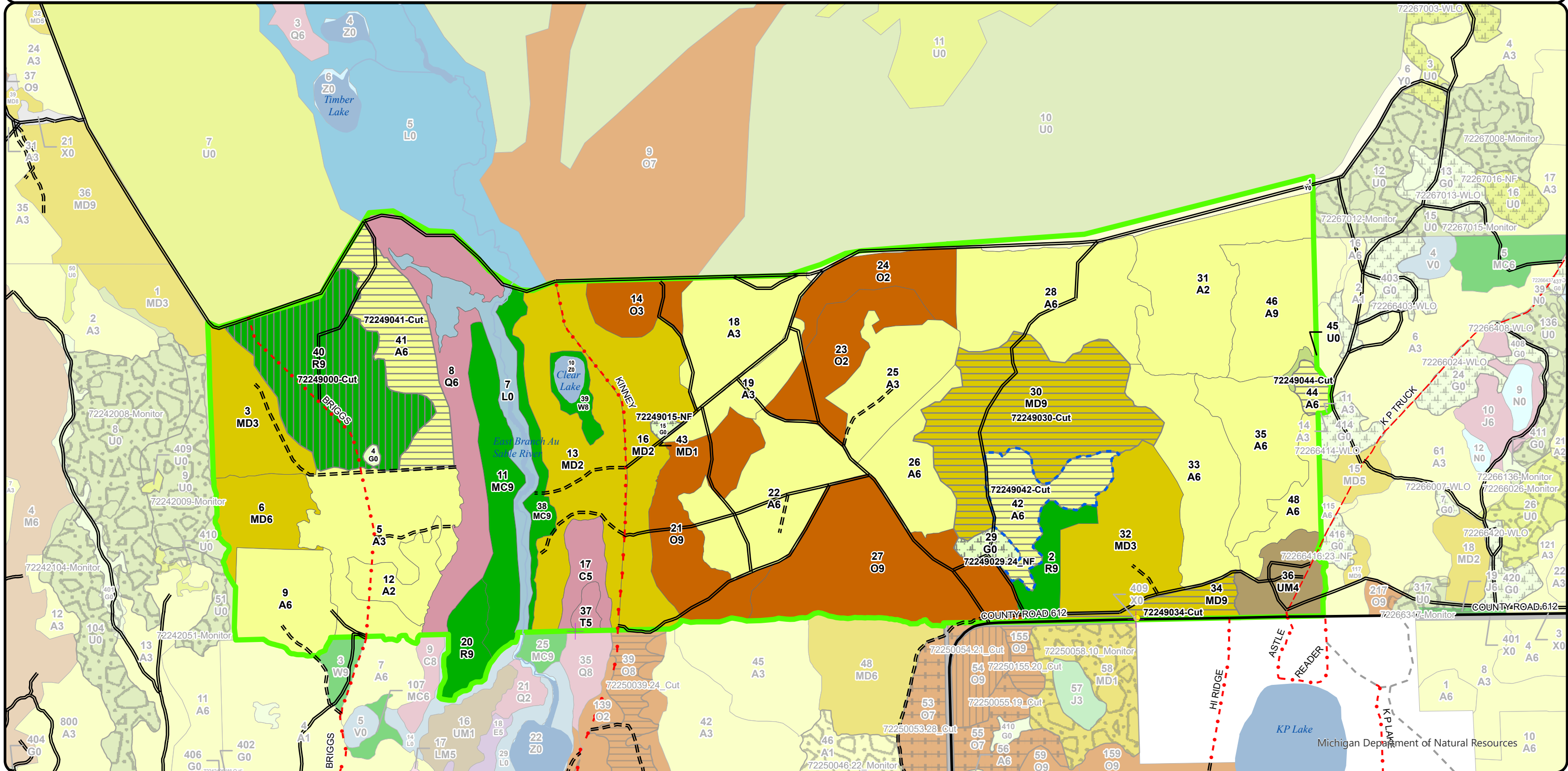


Compartment: 72249  
 T28N, R2W, Sec: 16, 18-21  
 County: Crawford  
 Unit: Grayling  
 Mgmt Area: Camp Grayling  
 YOE: 2026  
 Acres: 1863.1 GIS Calculated  
 Examiner: Jake Halabut  
 Map Revised: 07/11/2024  
 Map Phase: Web-Post

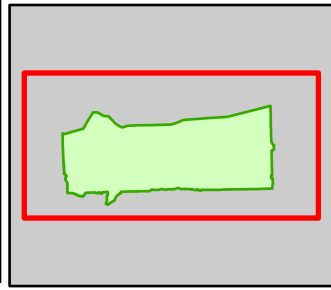


- Survey Grade Corners
- + Remonumented Section Corners
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Intermittent Pond
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Compartment Boundary
- Counties
- Treatments with Site Conditions
- Other Treatment - See Comments

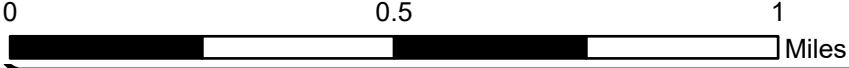
- Clearcut (w/Reserves)
- Shelter Wood (w/Reserves)
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 500 - Water
- 622 - Lowland Shrub
- 710 - Sand/Soil



Stand Boundary Map

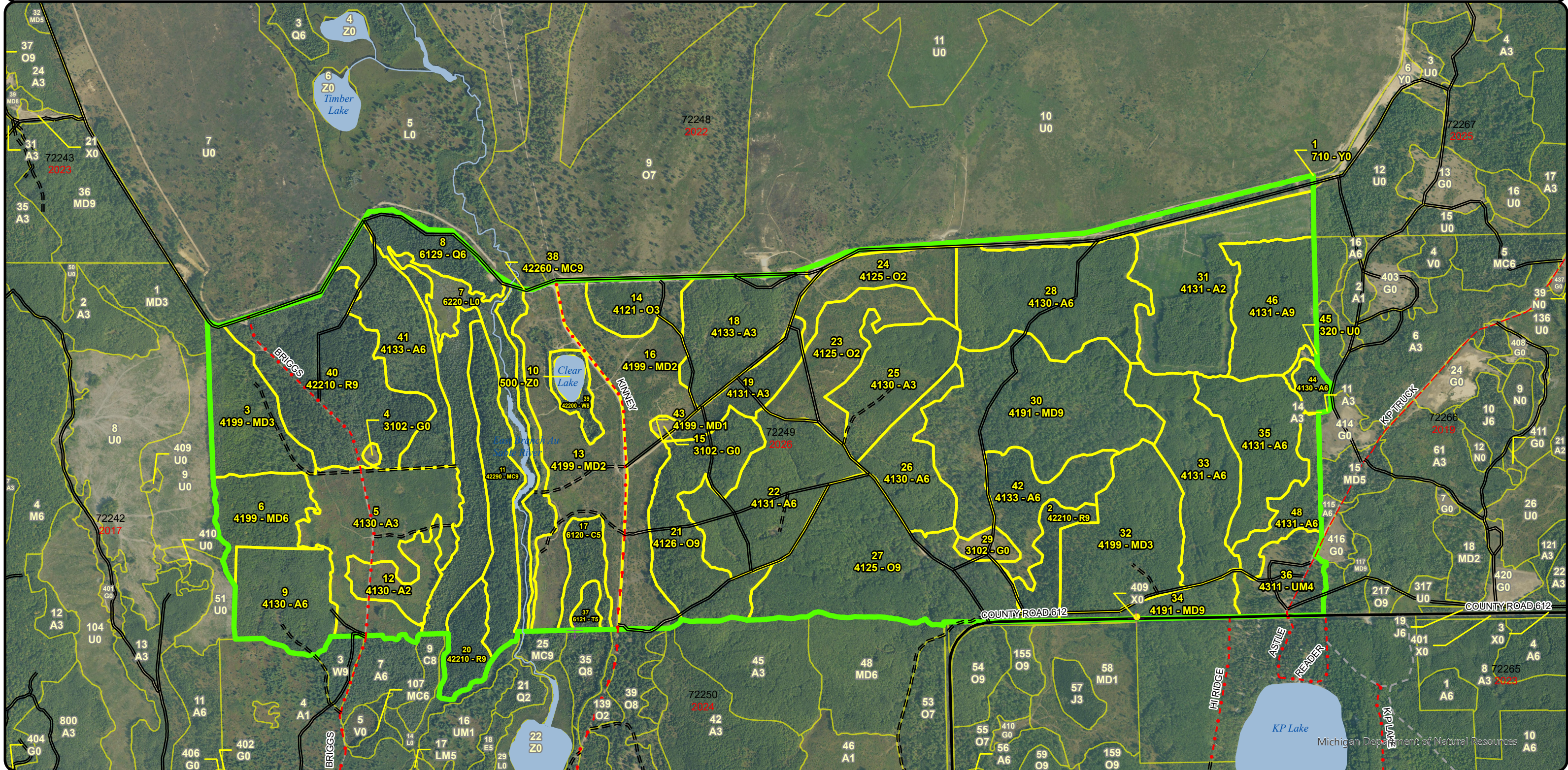


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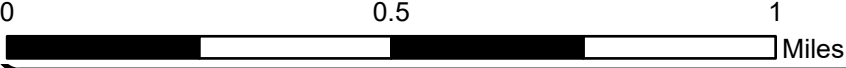
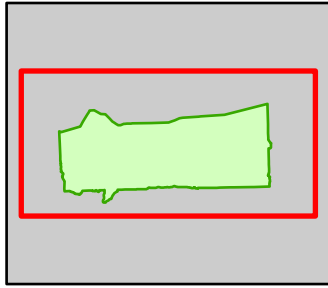
- Survey Grade Corners
- ✚ Remonumented Section Corners
- == DNR - Secondary Forest Road
- === DNR - Forest Access Route
- Federal / State / County - Paved Road
- - - County - Gravel Road
- - - County - Dirt Road (Seasonal)
- - - Private - Dirt / Gravel Road
- Intermittent Pond
- Lake/Pond
- Perennial River
- Lakes and Rivers
- ▭ Compartment Boundary
- ▭ Counties

- ▭ Stand Boundaries
- 310 - Herbaceous Openland
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- 710 - Sand/Soil
- ▭ State Forests



**Special Conservation Areas  
& Site Conditions Map**

Compartment: 72249  
 T28N, R2W, Sec: 16, 18-21  
 County: Crawford  
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 YOE: 2026  
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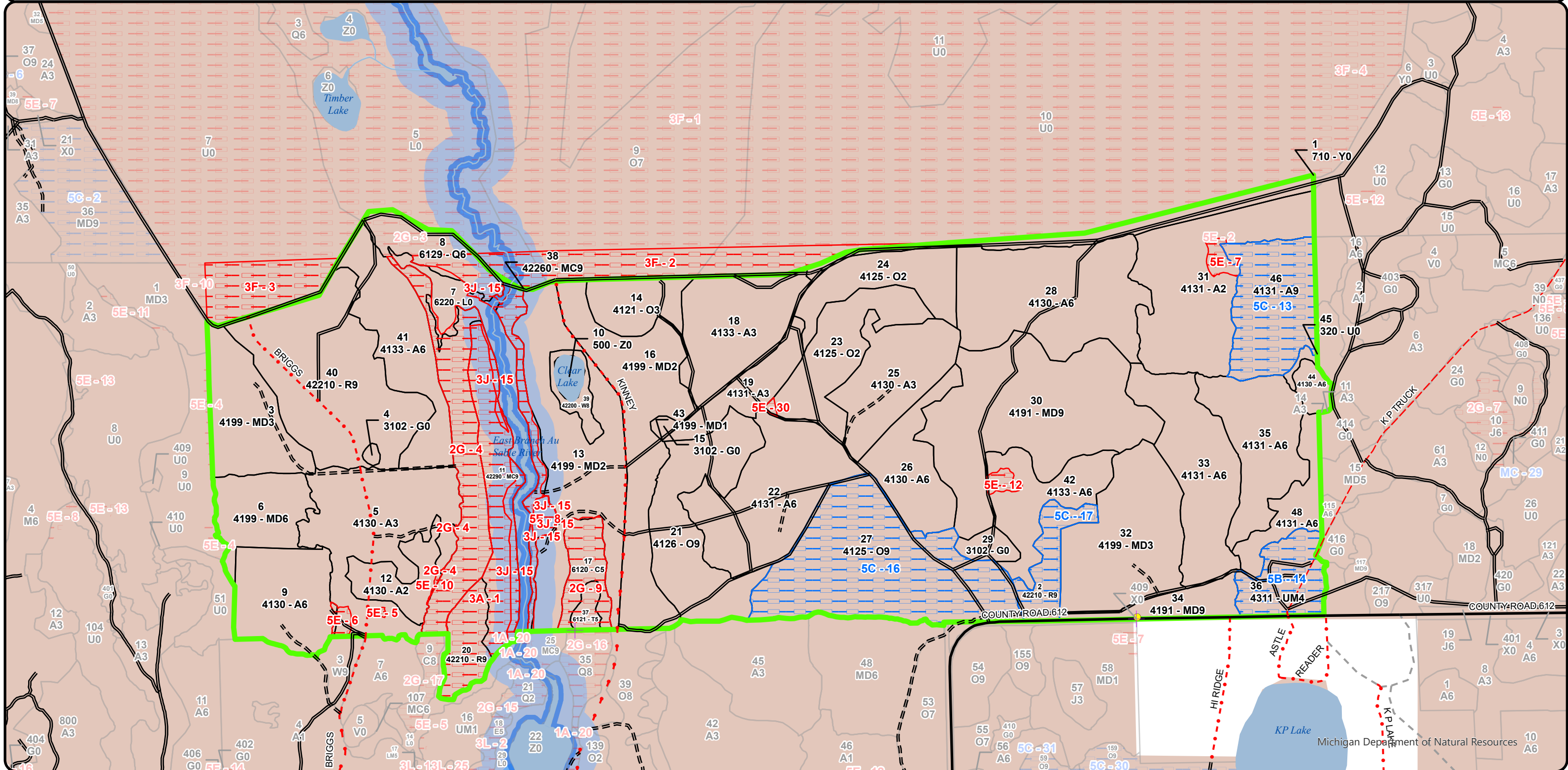


- Survey Grade Corners
- + Remonumented Section Corners
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Intermittent Pond
- Lake/Pond

- Perennial River
- Lakes and Rivers
- Compartment Boundary
- Counties
- Available w/ Constraints
- Unavailable

- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Conservation Values incompatible with harvest at this time

- 3F: Military easement / lease
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams
- High Priority Trout Stream Buffer
- Research, Development, and Military Lands



Report 1 – Total Acres by Cover Type and Age Class



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+	Unseen-Aged	Total
Aspen	0	173	66	128	275	98	43	0	0	0	0	0	0	0	0	0	0	0	783
Cedar	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	16
Herbaceous Openland	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Conifers	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	70
Lowland Shrub	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
Mixed Upland Deciduous	0	156	111	0	0	0	31	0	0	17	113	0	0	0	0	0	0	0	428
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	18	42	0	0	0	0	0	0	0	60
Oak	0	75	0	22	0	0	0	0	60	0	106	0	0	0	0	0	0	0	263
Red Pine	0	0	0	0	0	0	0	95	0	0	36	0	0	0	0	0	0	0	131
Sand, Soil	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Tamarack	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	0	26
Upland Shrub	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Water	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
White Pine	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	7
<b>Total</b>	<b>77</b>	<b>404</b>	<b>177</b>	<b>150</b>	<b>275</b>	<b>98</b>	<b>74</b>	<b>95</b>	<b>60</b>	<b>133</b>	<b>324</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1866</b>



## Report 2 – Treatment Summary

Grayling Mgt. Unit

Compartment 249

Year of Entry: 2026

Acres of Harvest

Total Compartment Acres: 1,863

Commercial Harvest - 281  
 Harvests with Site Condition - 36  
 Next Step Harvest - 0  
 Habitat Cut - 0

### Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Oversyory Removal	Salvage	Other	Total Acres
Aspen	92	0	0	0	0	0	0	0	0	92
Mixed Upland Deciduous	130	0	0	0	0	0	0	0	0	130
Red Pine	0	0	0	0	95	0	0	0	0	95
<b>Total</b>	<b>222</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>95</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>317</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	317	0	0	0	0	0	0	0	9	326
Next Step	0	0	0	0	0	0	317	0	0	317
<b>Total</b>	<b>317</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>317</b>	<b>0</b>	<b>9</b>	<b>643</b>



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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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**Proposed Treatments:**

<b>40</b>	<b>72249000-Cut</b>	95.4	42210 - Natural Red Pine	Sawtimber Well	60	81-110	Harvest	Shelterwood	4221 - Natural Red Pine	Two-Aged	No
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Prescription Clear cut with retention. Cut all species 2" and larger except for oak, and red and white pine.. In the dense pockets of pine thin to ~80 sq ft, or 1/3" of basal area (whichever is the higher residual) of mixed pine (red, white) to maintain the mature pine component while attempting to expand aspen. Try and protect sub merchantable oak within the stand in hopes of increasing oak composition.

Next Step Monitoring, Natural Regen (Intermediate)  
Treatments:

Acceptable Regen: A moderate to full stocking of mixed pine, oak, aspen, and red maple will be acceptable.

Other Add military spec  
Comment: Mark to leave drumming logs.  
This will be a Variable Retention Shelterwood

Add raptor spec, what i believe to be a sharp shinned hawk nest was found at (44.810920, -84.598826). Area retention may be used to protect this and any other potential nesting sites.

Site Condition

Proposed Start Date: 10/1 /2025

<b>15</b>	<b>72249015-NF</b>	2.0	3102 - Grass	Nonstocked	0	Immature	NonForestMgt	Other - Specify	310 - Herbaceous Openland		No
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Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, native tree/shrub planting, mowing, brushing, burning and herbicide application.

Next Step  
Treatments:

Acceptable Regen:

Other This opening is FP 204 and is part of the DNR/NWTF WHG project.  
Comment:

Site Condition

Proposed Start Date: 10/1 /2025

<b>29</b>	<b>72249029.24_NF</b>	6.9	3102 - Grass	Nonstocked		Immature	NonForestMgt	Other - Specify	310 - Herbaceous Openland		No
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Prescription Periodic opening maintenance as needed, that may include disking, chisel plowing, stump excavation, fertilizing, food plot seeding, no-till prairie grass seeding, mowing, and herbicide application. Also could include tree and shrub planting along the perimeter.

Next Step  
Treatments:

Acceptable Regen:

Other This opening is FP 214 and is part of the DNR/NWTF WHG project.  
Comment:

Site Condition

Proposed Start Date: 10/1 /2025





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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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<b>30</b>	<b>72249030-Cut</b>	113.0	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	91	51-80	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	No
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Prescription Clear cut with retention. Cut all stems 2" and greater. Focus retention primarily on basal area to maximize regenerating acres. Mark or spec out to retain all super canopy red or white pine. If present, mark any mature white oak as a seed/mast source in groups or 2-3 trees to reduce shock.

Retained basal area should not exceed 10 sq ft on average for the stand.

Next Step Monitoring, Natural Regen (Intermediate)  
Treatments:

Acceptable Regen: Moderate stocking of any mix of Aspen, Oak, Maple, and Pine

Other Comment: Add military specs.  
Add Drumming log spec  
Add Oak wilt spec

Site Condition

Proposed Start Date: 10/1 /2025

<b>34</b>	<b>72249034-Cut</b>	16.7	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	81	51-80	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	No
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Prescription Clearcut with retention. Focus retention on basal area: mark to leave a mix of oak (preferably in clumps of 2-3 trees) as well as leave all red and white pine. This will be to provide structure/age diversity as well as to help with aesthetics along Co. Rd. 621. Residual basal area of oak should not exceed 10 sq ft per acre.

Next Step Monitoring, Natural Regen (Intermediate)  
Treatments:

Acceptable Regen: A moderate stocking of a mix of oak, aspen, pine, and red maple.

Other Comment: Add military spec.  
Add Oak wilt spec

Site Condition

Proposed Start Date: 10/1 /2025

<b>41</b>	<b>72249041-Cut</b>	49.2	4133 - Aspen, Mixed Pine	Poletimber Well	47	1-50	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	No
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Prescription Clearcut with standard retention. Focus retention where residual super canopy pine is more dense.

Specs: Mark to leave other existing super canopy pine throughout stand. Residual shouldn't exceed 10 sq ft/acre. Cut all merchantable stems and try to protect existing mixed oak advanced regen.

Next Step Monitoring, Natural Regen (Intermediate)  
Treatments:

Acceptable Regen: Moderate stocking of any mixture of aspen, oak, pine, and maple will be acceptable.

Other Comment: Add military specs  
Mark to leave drumming logs

Site Condition

Proposed Start Date: 10/1 /2025



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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
<b>42 72249042-Cut</b>	36.0	4133 - Aspen, Mixed Pine	Poletimber Well	55	51-80	Harvest	Clearcut with Retention	4133 - Aspen, Mixed Pine	Even-Aged	No
<p><u>Prescription</u> Clearcut with retention, cut all stems 2" and larger. Utilize area retention in the pocket of pine in the NW of the stand. Mark to retain super canopy red or white pine present in the stand. Retained pine should not exceed 15 sq ft of Basal Area.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Intermediate)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Moderate stock of a mix of aspen and pine as major components, and maple and oak as minor components.</p> <p><u>Other Comment:</u> Estimated retention island drawn in MiFi but can change as painted in.</p> <p>Add military specs. Add drumming logs spec</p> <p><u>Site Condition</u> Long-Term Retention</p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										
<b>44 72249044-Cut</b>	6.7	4130 - Aspen	Poletimber Well	55	51-80	Harvest	Clearcut	4139 - Aspen, Mixed Deciduous	Even-Aged	No
<p><u>Prescription</u> Clearcut without retention due to the small acreage being cut. Cut all stems 2" and larger.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Intermediate)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Moderate stocking of a mixture of aspen, oak, red maple, and pine will be acceptable.</p> <p><u>Other Comment:</u> Add military spec.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										

**Total Treatment Acreage Proposed: 325.9**

## Report 4 – Site Conditions

Grayling Mgt. Unit  
Jake Halabut : Examiner

Compartment: 249  
Year of Entry: 2026

### Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available	Dominant Site Conditions									
		With Condition			5B	5C	1A	2G	3A	3F	3J	5E	ed	
769	711	<b>48</b>		9	Aspen		<b>48</b>		0		0		9	0
16	0	<b>0</b>		16	Cedar				16					
10	10	<b>0</b>		0	Herbaceous Openland									
70	1	<b>0</b>		69	Lowland Conifers				60			9	0	
36	33	<b>0</b>		2	Lowland Shrub				2			1		
428	427	<b>0</b>		0	Mixed Upland Deciduous				0			0	0	
60	1	<b>0</b>		59	Natural Mixed Pines			0	0	33		21	4	
263	156	<b>106</b>		1	Oak		<b>106</b>						1	
131	95	<b>18</b>		18	Red Pine		<b>18</b>			18				
24	24	<b>0</b>		0	Sand, Soil						0			
5	0	<b>0</b>		5	Tamarack				5					
27	0	<b>27</b>		0	Upland Mixed Forest	<b>27</b>								
2	2	<b>0</b>		0	Upland Shrub									
5	5	<b>0</b>		0	Water									
7	7	<b>0</b>		0	White Pine									
1,850	1,472	<b>199</b>		178	Total Forested Acres	<b>27</b>	<b>173</b>	0	83	51	0	31	13	0
	80%	<b>11%</b>		10%	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	3A: Conservation Values incompatible with harvest at this time	51	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
2	Unavailable	3F: Military easement / lease	46	1A: Federal/State/Local Law	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Range 40 air to ground range, no access.							

## Report 4 – Site Conditions

Grayling Mgt. Unit  
Jake Halabut : Examiner

Compartment: 249  
Year of Entry: 2026

3	<b>Unavailable</b>	<b>3F: Military easement / lease</b>	27	1A: Federal/State/Local Law	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Range 40 air to ground range, no access.							
4	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	48	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
<b>Comments:</b> This stand is located along a portion of the au sable river. Natural river setbacks will remove a fair portion of this stand for treatment in the north end. There is also only 10% of the stand occupied by spruce species. It is not necessary to attempt salvage for this stand.							
5	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	0	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
6	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	2	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
7	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	4	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
8	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	4	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Retention around dispersed camping site.							
9	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	21	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

Report 4 – Site Conditions

Grayling Mgt. Unit  
 Jake Halabut : Examiner

Compartment: 249  
 Year of Entry: 2026

10	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unspecified	Unspecified	0				
Comments:							
12	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	48	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
14	Available	5B: Maintain for regeneration purposes	27	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
15	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	31	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Ausable River, Natural River buffer.							
16	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	106	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

# Report 4 – Site Conditions

Grayling Mgt. Unit  
Jake Halabut : Examiner

Compartment: 249  
Year of Entry: 2026

17	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	18	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
30	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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

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**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	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.
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.





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
1	710 - Sand, Soil	Nonstocked	23.5	0	Immature	No	Road and open area adjacent to range 40. Sporadic clumps of poor quality aspen seedlings/saplings can be found dispersed within the stand.
		<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>	
		Quaking Aspen		Low	>20 feet	Sapling	
		Bigtooth Aspen		Low	>20 feet	Sapling	
		Paper Birch		Low	>20 feet	Sapling	
		Mixed Grasses		High	Unspecified	Non-Wood	
		Sweet Fern		High	5 - 10 feet	Tall Shrub	
		Black Cherry		Low	5 - 10 feet	Sapling	
		Spotted Knapweed		Medium	Unspecified	Non-Wood	
		Red Maple		Trace	< 5 feet	Sapling	
2	42210 - Natural Red Pine	Sawtimber Well	18.2	91	51-80	N/A	This stand appears to have previously been treated with a species removal, where all pine and some oak was retained. No cutting records have been found to get an exact age or treatment. Quaking aspen quality is low and basal area in the dense aspen pockets is sparse. The pine pockets have quaking aspen scattered throughout, and mortality of the aspen is moderate throughout the stand. Good advanced oak regen throughout the aspen dominated pockets, whereas it was mostly shaded out under the pine. Some large diameter pine, including legacy potential red pine are scattered throughout (20"+).
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Jack Pine		5	Pole	5		Northern Pin Oak	
Quaking Aspen		25	Pole/Log	8	55	Red Maple	
Red Pine		60	Log/Pole/XLog	12	91	Quaking Aspen	
Northern Pin Oak		5	Log/Pole	10	91	Jack Pine	
White Pine		5	Pole	6		White Pine	
						Density	
						Avg. Height	
						Size	
3	4199 - Other Mixed Upland Deciduous	Sapling Well	43.1	14	1-50	N/A	PARVHA. Stand was cut in 2009, 72-625-06-01. Stand has decent regen coming in the understory. Some steep terrain throughout the stand.  Records indicate this was supposed to be a final harvest but was then switched to having minor retention in the form of approximately ten basil area of oak as a seed tree. This retention is not consistent throughout the stand and is primarily along some of the slopes and consist of the nicer formed oak that existed in the parent stand. There are some evidence of oak seating in as well as expected, stump sprouting of red maple and oak.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Red Oak		5	Log	13	78	Northern Pin Oak	
Red Maple		35	Sapling/Pole	3	14	Red Maple	
Black/Red (Hybrid) Oak		45	Sapling	2	14		
Paper Birch		10	Pole	6			
Beech		5	Sapling	2			
4	3102 - Grass	Nonstocked	1.3		Immature	No	grassy opening. Military Firing Point
		<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>	
		Jack Pine		Trace		Sapling	
		Sweet Fern		Medium	< 5 feet	Tall Shrub	
		Black Cherry		Low	>20 feet	Pole	
		Mixed Grasses		Full	Unspecified	Non-Wood	
5	4130 - Aspen	Sapling Well	75.0	5	Immature	N/A	Stand was harvested under 72-630-16 Briggs Mix TS. Stand is looking really good, regen is vigorous and well over head height. Continue monitoring to see how the stand progresses. Previous comment: (PARVHA.)
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>		
Bigtooth Aspen		80	Sapling	1	5		
Northern Pin Oak		10	Sapling	1	5		
Red Maple		10	Sapling	1	5		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																														
6	4199 - Other Mixed Upland Deciduous	Poletimber Well	31.0	50	51-80	N/A	Old Comment: (PARVVB/AFO Soils)																																																														
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7	6220 - Alder/willow	Nonstocked	35.5		Unspecified	No	Tag alder stand that also encompasses the East Brand of the Au Sable River. Density varies throughout stand, with dense mixed conifer along the edges. An old, decrepit bridge or crossing of some sort, has fallen into the river and is no longer present. Though it is visible within the river, river corridor.																																																														
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8	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	69.7	86	51-80	N/A	Lots of balsam fir, tag alder is mixed throughout stand as well. Excellent wildlife value in this stand. Cedar is patchy throughout stand, balsma is pretty uniformly spread throughout. Standing water is appears through most of the stand.																																																														
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9	4130 - Aspen	Poletimber Well	42.7	33	1-50	N/A	Stand was cut in 1987. Stand is a mix of bigtooth and quaking aspen, primarily being bigtooth. Overall, the stand is doing fairly well, though there is variability in terms of quality and diameter. They stand as a whole is just beginning to reach merchantability. Reassess next inventory cycle but likely won't be ready till the following.																																																														
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10	500 - Water	Nonstocked	4.6		Unspecified	No	Clear Lake. Appears to be an access point with a dispersed campsite on the ESE side of the lake.																																																														



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11	42290 - Natural Mixed Pine	Sawtimber Well	42.1	99	111-140	N/A	Old comments from Scott McClarren: QD cruise implemented during 2024 YOE inventory with adjacent stand 15 of comp 250 to the south. Stand is isolated by the Ausable River and a lowland cedar swamp surrounding.																																																																											
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12	4130 - Aspen	Sapling Medium	19.9	5	Immature	N/A	Stand was harvested under 72-630-16 Briggs Mix. Stand is regenerating well, not as much pine has seeded in yet but there is evidence of some regenerating. Aspen is looking pretty good although slightly more spotty than adjacent stand 5. Otherwise, oak and maple are also starting to fill in. Consider merging this stand into stand 5 if both progress similarly; leaving separately for now.																																																																											
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13	4199 - Other Mixed Upland Deciduous	Sapling Medium	82.7	5	Immature	N/A	Stand harvested under contract 72-624-15, Air to Ground Oak. Boundary excluded retention around wet areas. Although red maple was not included in the list of acceptable regeneration for this stand, since the objective cover type was Mixed Upland Deciduous, i did decide to include it as 'acceptable'. Regen is looking good. The western leg down to the south is lacking some regen, and is bare in spots. This is likely due to the added cover provided to deer for increased browse activity.																																																																											
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14	4121 - Oak, Aspen	Sapling Well	21.6	28	Immature	N/A	Quite a bit of variability in the diameter diameter in the stand. Predominantly still roughly 2 to 3 inches for all stems. However, there are trace Pole sized oak and Aspen, and not sure if those were left as retention. Otherwise the stand is progressing well saw reaching roughly that twenty foot mark for height and looks to be dense.																																																																											
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15	3102 - Grass	Nonstocked	2.0	0	Immature	No	Appears to be an old landing.																																																																											
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16	4199 - Other Mixed Upland Deciduous	Sapling Medium	73.1	5	Immature	N/A	Stand harvested under contract 72-624-15, Air to Ground Oak. Oak is stump sprouting well, while aspen is regenerating equally. Although, the aspen component is more prominent in the northern portions of the stand. Where it is more oak/red maple composition to the south. Could have been a product of the parent stand composition prior to harvest. Previous note prior to harvest: (PARVHA. Similar stand as 13, just does not have the lowland conifer component. Poor quality and old aged oak. It is starting to decline.)																																													
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17	6120 - Lowland Cedar	Poletimber Medium	16.0	83	51-80	N/A	Lowland conifer stand. Good mix of cedar, spruce, fir, aspen, and red maple. A few larger diameter supercanopy white and red pine exist, primarily along the upland edges of the stand. Excellent wildlife value. Stand appears to be wet most of the year, as evidence by the presence of black spruce and the abundance of tag alder in the understory. Lots of snowshoe hare sign. Cedar is dense in some areas (~100 ba).																																													
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18	4133 - Aspen, Mixed Pine	Sapling Well	50.3	28	Immature	N/A	Stand was cut in 1996. Stand is looking pretty good, dense with regen and most of the stems are exceeding the 20 foot mark. Stems still require diameter in order to meet merchantability. However, there are some Pole sized red pine along the northern edge. Not sure if these were left as retention or not.  Old comments: Research area located in the north part of the stand. University of Michigan established three plots during the summer of 1997. A wooden military observation tower is located in the stand. I do not believe that the research area is still active.																																													
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19	4131 - Aspen, Oak	Sapling Well	21.6	16	Immature	N/A	Stand was harvested under tsale contract #726020601. Sale was completed in 2008. has since regenerated nicely. Lots of oak regen working its way past the browse line. Few residual larger white and red pine potentially left from the previous timber sale; the size of these residual are pole/log.																																													
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
<b>20</b>	42210 - Natural Red Pine	Sawtimber Well	17.8	99	111-140	N/A	Stand was previously included in adjacent southern compartment 72250. Was inventoried by Scott McClarren in 2022 using QD plots, along with stand 11. Due to the geographic location of the stand in conjunction with stand 11, there is high likelihood these two stands are treated together if they are ever treated. However, access issues will still play a key role in the management of these two stands. Old evidence and aerial imagery indicates this was harvested at one point, but no records indicate when. There are old skid trails present in both stands and remnants of an old bridge crossing in Stand 11 over the Au Sable river to the east.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Jack Pine		3	Log	12		Hemlock		Low	>20 feet	Log	
Red Pine		60	Log/Pole/XLog	12	99	Red Maple		Medium	Variable	Sapling	
White Pine		20	Log/Pole/XLog	12		Balsam Fir		High	Variable	Sapling	
Balsam Fir		4	Pole	6		Black Spruce		Trace	Variable	Sapling	
Red Maple		8	Log/Pole	11		White Pine		Low	Variable	Sapling	
Quaking Aspen		5	Log/Pole	10		Hemlock		Low	>20 feet	Pole	
						Hemlock		Low	Variable	Sapling	
<b>21</b>	4126 - White, Black, N. Pin Oak	Sawtimber Well	59.9	74	51-80	N/A		Stand is doing pretty well overall and the oak is still holding on fairly well at this point. There are some pockets of aspen mortality found along the midslope of this stand; as it spans along a North/South ridge with smaller fingers of ridges running East/West. Pockets of pine can be found on the smaller E/W ridges. 18 plots were recorded for an average of 58 sq ft/acre of basal area. Old Notes: PARVHA. Decent quality oak. It is up on a hill so the soils must be a bit better. Very little in the understory. Steep terrain throughout stand.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height	Size
Bigtooth Aspen		17	Pole/Log	8		Northern Pin Oak			Low	Variable	Sapling
White Pine		3	Pole	5		Red Pine			Low	Variable	Sapling
Black/Red (Hybrid) Oak		40	Log	11	74	White Pine			Low	Variable	Sapling
White Oak		30	Log/Pole	10	71						
<b>22</b>	4131 - Aspen, Oak	Poletimber Well	67.4	33	1-50	N/A	Old Comment: (PARVHA. Stand was cut in 1987). Stand is doing well and is progressing nicely. It is just beginning to develop into a pole stand with still a lot of variability in terms of diameter and basal area distribution. That said it's looking good. There is even some oak advanced region persisting in the understory, although there is still a fair amount below browse height.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
White Pine		5	Sapling	3		White Pine		Low	Variable	Sapling	
White Oak		10	Pole/Sapling	5		Serviceberry (Juneberry)		Low	5 - 10 feet	Sapling	
Red Maple		10	Pole/Sapling	5		Red Maple		Medium	5 - 10 feet	Sapling	
Bigtooth Aspen		60	Pole/Sapling	6	33	Witch Hazel		Medium	5 - 10 feet	Tall Shrub	
Northern Pin Oak		15	Pole/Sapling	6		White Oak		Medium	Variable	Sapling	
						Oak (spp.)		Medium	Variable	Sapling	
<b>23</b>	4125 - Black, N. Pin Oak	Sapling Medium	42.1	5	Immature	N/A	There is still some stunted growth in the area where the wildfire burned through a portion of the stand, but is rebounding nicely. There are some steeper hills in this stand.  Old Comments: (Stand harvested under contract 72-624-15, Air to Ground Oak. Portion of this stand was burn in May of 2018 from a wildfire, area burned has a site condition on it.) Stand is progressing nicely.				
Canopy Species		% Cover	Size Class	DBH	Age						
Bigtooth Aspen		20	Sapling	1	5						
Northern Pin Oak		60	Sapling	1	5						
Red Maple		20	Sapling	1	5						
<b>24</b>	4125 - Black, N. Pin Oak	Sapling Medium	32.6	5	Immature	N/A	Stand harvested under contract 72-624-15, Air to Ground Oak. Stand is looking pretty good, with fairly vigorous stump sprouting occurring between the oak and red maple. Red maple was not included in the acceptable regenerating species; however, due to the target cover type (Mixed Upland Deciduous) I am including it. Aspen regen is also coming in really well, in some areas better than others. Overall, stand is progressing well.  Old Comment: (stand has some steep terrain, borders range 40).				
Canopy Species		% Cover	Size Class	DBH	Age						
Northern Pin Oak		60	Sapling	1	5						
Bigtooth Aspen		20	Sapling	1							
Red Maple		20	Sapling	1							



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																						
25	4130 - Aspen	Sapling Well	44.3	15	Immature	N/A	Stand was harvested under tsale contract #726020601. Sale was completed in 2008. Stand is progressing nicely. Some oak is still struggling to get above browse height in certain areas of the stand but this is primarily the portion of the stand that burnt over.																																																																						
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26	4130 - Aspen	Poletimber Well	33.7	36	1-50	N/A	Stand was cut in 1987. Regen is good quality. Filling in nicely. Stand is just reaching merchandability, but it's still quite variable. In terms of size and basal area; continue holding and reassess in another ten years.																																																																						
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27	4125 - Black, N. Pin Oak	Sawtimber Well	106.4	92	81-110	N/A	Timber sale 72-010-96-01, Oak Regeneration Block cut by Georgia-Pacific in Winter 1996/1997. Per timber sale records, aspen and red maple species removal was prescribed.																																																																						
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28	4130 - Aspen	Poletimber Well	83.4	36	1-50	N/A	PARVVB. Aspen regen, decent quality. Some oak growing up with it.  Aspen is looking progressing well. Could benefit from another 10 years of putting on diameter. Red Maple advanced origin has significantly outcompeted oak which is still persisting some in the midstory. Any oak that is having success can be found along edges of the stand, where paper Birch is also found in trace amounts. Basal area and diameter are still variable throughout the stand.																																																																						
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29	3102 - Grass	Nonstocked	6.9		Immature	Managed Opening	Firing Point 214. scrubby black cherry sprouts are slowly beginning to encroach and fill in the stand.				
								Sub-Canopy Species	Density	Avg. Height	Size
								Black Cherry	Medium	< 5 feet	Sapling
								White Pine	Trace	>20 feet	Log
								Sweet Fern	Medium	< 5 feet	Tall Shrub
								Mixed Grasses	Full	Unspecified	Non-Wood
								Quaking Aspen	Trace	>20 feet	Pole
								Northern Pin Oak	Trace	10 - 20 feet	Sapling
Spotted Knapweed	Medium	Unspecified	Non-Wood								

30	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	113.0	91	51-80	N/A	Very mixed stand. Looks like at one point in time a species removal may have been done but cannot locate any cutting record. Vast areas of mixed oak that has veins of aspen scattered throughout. A good amount of stump sprouted red maple and oak can be found in the mid-understory. There are some very nice large diameter Red Pine scattered throughout the stand. Aspen varies in quality/size/diamtere throughout stand. Understory is fairly dense between regen and witch hazel.  Due to the fair amount of decline among the aspen and oak, coupled with the impact of the Air to Ground Fire in 2018, the basal areas recorded for this stand are low. In some areas of this stand, snags and blow down are overwhelming. ~50-60 sq ft of basal area.									
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
								Paper Birch	3	Pole	5		Witch Hazel	High	5 - 10 feet	Tall Shrub
								Quaking Aspen	29	Log/Pole	10		Red Pine	Low	>20 feet	Sapling
								White Pine	5	Pole	6		Northern Pin Oak	Full	Variable	Sapling
								Jack Pine	5	Pole	5		Jack Pine	Low	Variable	Sapling
								Balsam Fir	3	Sapling/Pole	4		Quaking Aspen	Medium	Variable	Sapling
								Northern Pin Oak	45	Log	10	91	White Pine	Low	Variable	Sapling

31	4131 - Aspen, Oak	Sapling Medium	78.2	2	Immature	N/A	Stand cut 2022, KP Trail Mix #72-629-16.  Stand is coming back pretty well. There are dense pockets where the aspen is regenerating really well, and others where red maple is dominating. Oak is evenly spread out throughout and is lagging behind the other species. Would like to see the aspen more consistent throughout the stand but overall happy with the progress of the stand two years post harvest.					
								Canopy Species	% Cover	Size Class	DBH	Age
								Northern Pin Oak	20	Sapling	1	2
								Bigtooth Aspen	50	Sapling	1	2
								White Pine	5	Sapling	1	2
Red Maple	25	Sapling	1	2								

32	4199 - Other Mixed Upland Deciduous	Sapling Well	68.0	15	Immature	N/A	Stand history: Tsale #726020601 Wounded Knee Aspen/Oak. Completed 1-12-2009.  Stand is looking good and filling in nicely. There are some larger pine found in the stand, cutting record indicate they were retention left. Overall stand is progressing well.  PARVVB Soils.					
								Canopy Species	% Cover	Size Class	DBH	Age
								Quaking Aspen	30	Sapling	3	15
								Northern Pin Oak	35	Sapling	3	15
								Red Maple	20	Sapling	3	15
								Red Pine	5	Pole/Log	8	
White Pine	10	Pole	5									



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<b>33</b>	4131 - Aspen, Oak	Poletimber Well	57.0	27	1-50	N/A	Stand clear cut in 1996. Stand is looking pretty good as about half of the stems are just reaching merchantability. The stand alternates between denser pockets of either Aspen or oak with red maple scattered throughout the stand.																																																							
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<b>34</b>	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	16.7	81	51-80	N/A	Small stand right along CR 612, was probably left when stand to the north was cut for visual along the road. Stand is just getting into log class. Quality is decent, has some white oak in the stand so the site must be a little better than normal.																																																							
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<b>35</b>	4131 - Aspen, Oak	Poletimber Well	47.6	38	1-50	N/A	Previous comment: (PARVHA). This stand was harvested in 86-87 as part of Spencer's Folly Block Timber Sale. Aspen and oak are doing well, as the stems are mostly just becoming merchantable. Continue to monitor the stand and reassess again next inventory cycle.																																																							
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<b>36</b>	4311 - Pine, Aspen Mix	Poletimber Poor	26.5	90	1-50	N/A	Stand harvested in 2017, KP Trail Mix, #72-629-16.																																																							
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							All red pine was retained during this treatment. Which lead to a considerable amount of retention. Aspen, pine, and oak are coming in nicely where seedlings are free to grow. Regeneration is slightly less in areas where pine is more concentrated. Red pine is only considered the dominant species until the aspen fills in more.																																																							





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**37** 6121 - Tamarack Poletimber Medium 4.7 83 51-80 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Black Spruce	5	Pole/Log	9		Balsam Fir	High	Variable	Sapling
Tamarack	90	Pole/Log	9	83	Black Spruce	Medium	Variable	Sapling
Balsam Fir	5	Pole/Sapling	6		Tamarack	Low	Variable	Sapling
					Tag Alder	Medium	Variable	Tall Shrub
					Red Maple	Low	Variable	Sapling

There is a pocket of tamarack in the southern portion of the stand. roughly 40-60 BA with dense tag/BF understory. ~4.5ac in size. This stand was previously part of stand 17 but was large enough and of pure tamarack to be delineated.

**38** 42260 - Natural Pine, Mixed Deciduous Sawtimber Well 17.6 80 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Log/Pole	10	5
White Pine	35	Log/Pole/XLog	10	80
Balsam Fir	5	Pole/Sap/Log	7	
Red Pine	25	Log/Pole/XLog	12	80
Northern Pin Oak	5	Log/Pole	10	5
Quaking Aspen	20	Log/Pole	10	55

Adjacent stand harvested under contract 72-624-15, Air to Ground Oak. Boundary excluded retention around wet areas. This is the BMP retention left to protect the East Branch of the Ausable River. The northern extent falls into the river valley a little more, introducing more balsam and spruce into the stand. Also, there is an old dilapidated crossing of the East Branch of the Ausable River that once existed, where the main road comes through off Kinney Rd to this stand.

Old Notes: (Stand has a lot of older oak that is starting to decline. Also has a fair amount of nice larger red pine mixed throughout stand. Some of the large red pine aged out over 100 years. Stand gets lower as you get closer to the river and the balsam density increases.)

**39** 42200 - Natural White Pine Sawtimber Medium 7.4 85 51-80 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
White Pine	65	Log/Pole	10	85	White Pine	Medium	Variable	Sapling
Jack Pine	5	Pole/Log	8		Balsam Fir	Low	Variable	Sapling
Red Pine	10	Log/Pole	10					
Tamarack	3	Pole	8					
White Spruce	15	Pole/Log	8	85				
Northern Pin Oak	2	Log/XLog	15	85				

This is the retention buffer left around Clear Lake as a result of Timber Sale: 72-624-15, Air to Ground Oak.

Mixture of log and pulp sized white surrounding Clear Lake, while there is more structure in the area left south of Clear Lake. It appears to be low, like a depression, but doesn't appear to be wet. As there is a mix of spruce and jack pine also present there. There is a dispersed campground found on the East side of the lake with access off Kinney Road.

**40** 42210 - Natural Red Pine Sawtimber Well 95.4 60 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	20	Pole/Sap/Log	6	47	Jack Pine	Low	Variable	Sapling
Northern Pin Oak	5	Log	12		White Pine	Low	Variable	Sapling
Jack Pine	5	Pole	7		Red Pine	Low	Variable	Sapling
White Pine	10	Pole/Log	8		Red Maple	Medium	Variable	Sapling
Red Pine	60	Log/Pole/XLog	10	60	White Oak	Medium	Variable	Sapling
					Northern Pin Oak	Medium	Variable	Sapling

Stand is a mixture of dense areas of predominately red pine with pockets of quaking aspen found throughout. Red pine appears to be natural, is of pretty decent quality, and is dense in areas (>120 sq ft/acre). Log sized pin oak are found throughout as well.

11 plots were recorded for an average of 87 sq ft/acre.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																						
<b>41</b>	4133 - Aspen, Mixed Pine	Poletimber Well	49.2	47	1-50	N/A	Stand was harvested under 72-630-16. Stand is comprised of poor quality and stocking of primarily quaking aspen with scattered mixed pine (jack/red/white). There is advanced regen of pin oak scattered throughout the stand as well as mixed red and white pine. The Aspen is extremely variable in regard to diameter as there are pockets of 3 to 5 inch and pockets of 7 to 8 inch diameter trees. While the quality is poor the stand does appear to be holding on at this time despite some mortality.  old comments: PARVHA. Poor quality aspen. Good access to stand.																																																						
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<b>42</b>	4133 - Aspen, Mixed Pine	Poletimber Well	36.0	55	51-80	N/A	This stand appears to have previously been treated with a species removal, where all pine and some oak was retained. No cutting records have been found to get an exact age or treatment. Quaking aspen quality is low and basal area in the dense aspen pockets is sparse. The pine pockets have quaking aspen scattered throughout, and mortality of the aspen is moderate throughout the stand. Good advanced oak regen throughout the aspen dominated pockets, whereas it was mostly shaded out under the pine. Some large diameter pine, including legacy potential red pine are scattered throughout (20"+).																																																						
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<b>43</b>	4199 - Other Mixed Upland Deciduous	Sapling Poor	0.0	5	Immature	N/A	Stand harvested under contract 72-624-15, Air to Ground Oak. Oak is stump sprouting well, while aspen is regenerating equally. Although, the aspen component is more prominent in the northern portions of the stand. Where it is more oak/red maple composition to the south. Could have been a product of the parent stand composition prior to harvest. Previous note prior to harvest: (PARVHA. Similar stand as 13, just does not have the lowland conifer component. Poor quality and old aged oak. It is starting to decline.)																																																						
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<b>44</b>	4130 - Aspen	Poletimber Well	6.7	55	51-80	N/A	Stand was initially lumped in with S35. This is an older quaking/big tooth aspen stand that has had quite a bit of mortality involved with it. Aspen should have been cut likely last inventory cycle, but since it was lumped in with the larger stand that was not ready for treatment, this one went untouched. Estimated age via increment bore of two separate quaking aspen is 55-60 years of age and old aerial imagery aligns with this estimate.  6 plots were taken with an average basal area of 68 sq ft.																																																						
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<b>45</b>	320 - Upland Shrub	Nonstocked	1.8	0		No	This stand consists of an old gravel pit in the northern portion of the stand. The rest of it is slowly filling in with some aspen and shrubby black cherry/oak from adjacent stands. This is likely an area that just hasn't filled in potentially due to recreational use in conjunction with the gravel pit. Wonder if potentially harvesting adjacent stand(s) would spur aspen to further fill in this opening.																																																						
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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<b>46</b>	4131 - Aspen, Oak	Sawtimber Well	48.3	48	51-80	N/A	Stand was cut in the Mid 70s with adjacent S31 as part of a larger block. Stand looks pretty good. Some of the aspen is reaching saw size, while the oak has likely been saw sized since last inventory cycle. Red maple has also made its way into the overstory, with tons of stump sprouted advanced regen in the mid story. Some terrain does exist as a N/S ridge runs along the western portion of this stand. Previous inventory comments categorized this stand as: PARVHA.  13 Plots were taken for an average of 65 sq ft of basal area.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
	Quaking Aspen	7	Pole	7			Black/Red (Hybrid) Oak	Low	>20 feet	Sapling
	Bigtooth Aspen	43	Pole/Log	8	48		Quaking Aspen	Low	< 5 feet	Seeding
	Northern Pin Oak	30	Log/Pole	10	48		Witch Hazel	High	5 - 10 feet	Tall Shrub
	Red Maple	20	Pole/Log	8			Red Maple	Medium	>20 feet	Sapling
							Northern Pin Oak	Medium	Variable	Sapling
							Red Maple	Medium	< 5 feet	Seeding

<b>48</b>	4131 - Aspen, Oak	Poletimber Well	20.5	27	1-50	N/A	Stand clear cut in 1996. Stand is looking pretty good as about half of the stems are just reaching merchantability, but the overall quality of the stand gets better in the southern part. The norther portion sort of falls along a ridge, with poorly stocked and poor quality quaking aspen stems mostly found here. Here you'll find a lot of variability in the stem diameters due to the stocking. The southern part is where you'll find a small inclusion of bigtooth aspen.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
	Red Maple	15	Pole/Sapling	5			Northern Pin Oak	Medium	5 - 10 feet	Sapling
	White Pine	5	Pole/Sapling	6			Red Maple	Medium	5 - 10 feet	Sapling
	Northern Pin Oak	25	Pole/Sapling	5			Black Cherry	Medium	5 - 10 feet	Sapling
	Quaking Aspen	45	Pole/Sap/Log	5	27					
	Bigtooth Aspen	10	Pole/Sapling	5	27					