



# Compartment Review Presentation

## Grayling Forest Management Unit

Compartment 72018

Entry Year 2020

Acreage: 2,064

County Oscoda

Management Area: AuSable Outwash

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**Revision Date:** 2018-07-23

**Stand Examiner:** Kevin Ehlert

**Legal Description:**

T28N R2E Sections 16, 17, 18, 19, 20, 21 & 29, Oscoda County

**Identified Planning Goals:**

To maintain forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment while providing for multiple use and visual management.

**Soil and topography:**

The terrain is flat to gently-rolling, except for in the southeast portion where ice-contact kettle holes - some of them very steep and hitting the water table - can be found. Soils are primarily Grayling, Graycalm, Roselawn & Rubicon Sands.

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

The compartment encompasses state land spread across seven sections, with a significant amount of private property interface. The compartment's south half has the most fractionalized ownership, in 40 to 120-acre blocks. Three forties have no legal access. Adjacent property development is largely seasonal/recreational, although there are some year-round residences.

**Unique Natural Features:**

Ice-contact kettle holes provide unique micro-climates in this largely flat, outwash plain area.

**Archeological, Historical, and Cultural Features:**

Old railroad grades cross through the compartment and large, turn-of-the century logging era pine stumps are common.

**Special Management Designations or Considerations:**

If access across private property for management purposes cannot be obtained, consider for disposal the SENE of section 19 and the W1/2SW of section 20. To provide more direct access to state land in the W1/2SW section 29, consider pursuing for acquisition the narrow strip of private property separating that block of state land from Farrington Road.

**Watershed and Fisheries Considerations:**

Remnants of LaBelle Lake (stands 100) occurs within stand 1.

**Wildlife Habitat Considerations:**

The compartment's jack pine, aspen, oak, upland brush and grass cover types provide potential habitat for a variety of game and non-game wildlife species, including deer, grouse and opening-dependent songbirds.

**Mineral Resource and Development Concerns and/or Restrictions**

Active sand/gravel pits are not located in the area, but sand & gravel potential appears to be good within the compartment. The compartment has mostly been developed for Antrim Shale gas. The majority of the wells have been plugged and abandoned. However, there is still one active well in Section 17 with associated active leases. There is no known metallic mineral potential in this part of the state.

**Vehicle Access:**

Most of the compartment is accessible by county roads, including Town Line, Pennsylvania Crossing, Oak Lake, and Farrington Roads, and also by a network of two-tracks and gas well access roads. The W1/2SW of section 29 is not directly accessible off Farrington Road (there is a narrow strip of intervening private) but the block can be reached through compartment 19 to the west. Two blocks should be considered for disposal (SENE section 19 and W1/2SW section 20) because the State has no legal access to them.

**Survey Needs:**

None at this time.

**Recreational Facilities and Opportunities:**

There are no designated trails or facilities exist within the compartment. However, good road access offers areas for dispersed hunting interests. The mixed upland tree cover type provide ample forage for small game and deer attracting hunters to the compartment.(A.2018)

**Fire Protection:**

The compartment has relatively large stands of jack pine, ranging from young plantations to mature poletimber. Gas wells and buried pipelines occur within the compartment, although none were identified as hydrogen sulfide hazards. Several nearby water sources (Oak, Perry, Rudd & Indian Lakes) are all surrounded by private property.

**Additional Compartment Information:**

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

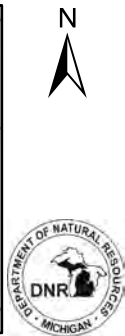
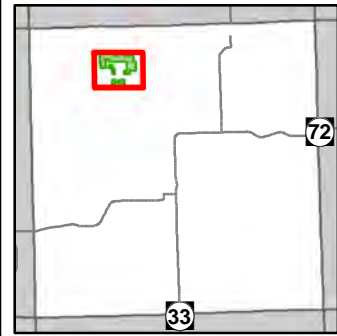
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

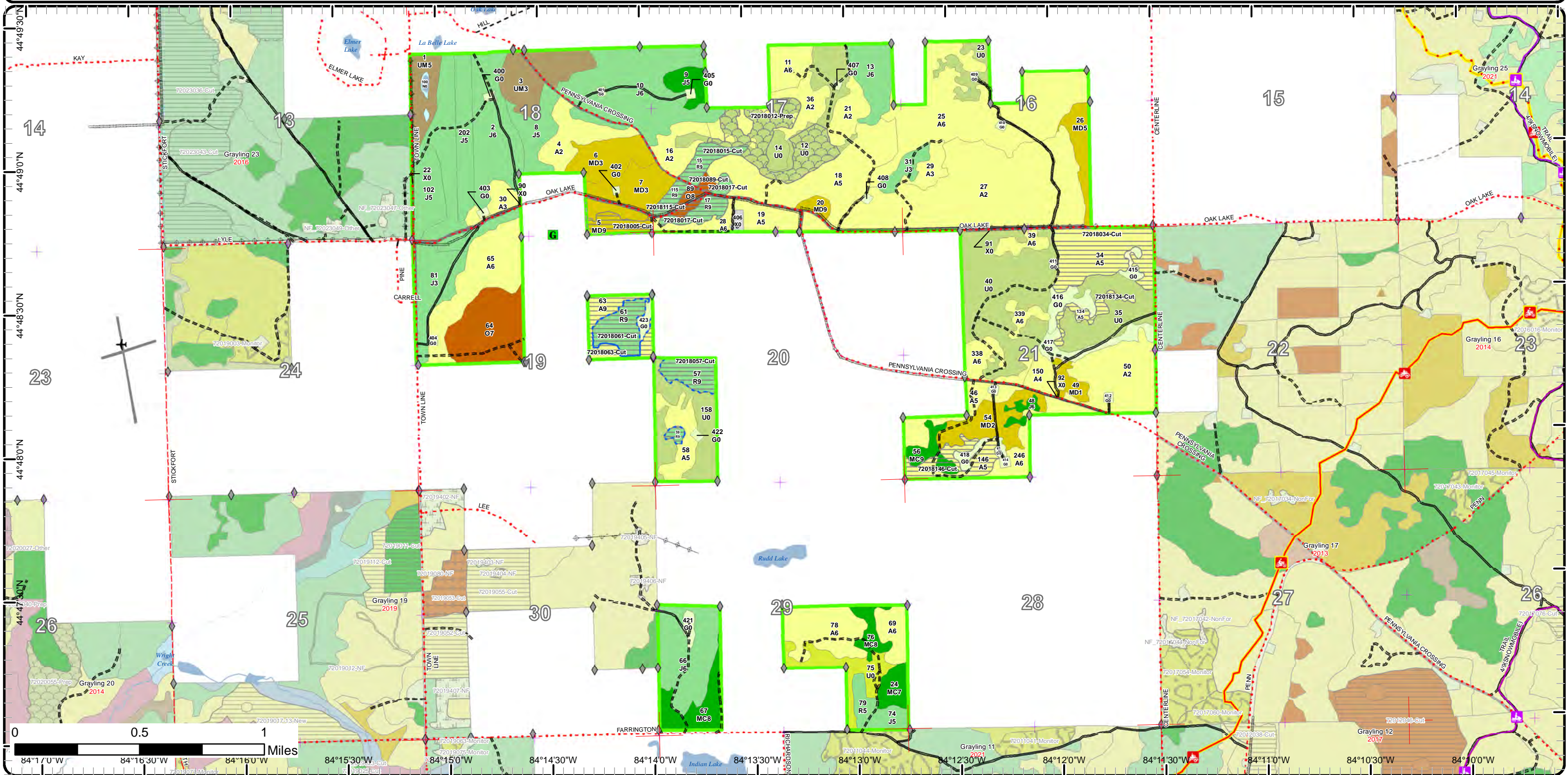
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatments Map

Compartment: 18  
 T28N, R02E, Sec. 16-21, 29  
 County: Oscoda  
 Unit: Grayling  
 Mgmt Area: AuSable Outwash  
 YOE: 2020  
 Acres: 2,064 GIS Calculated  
 Examiner: Kevin Ehler  
 Map Revised: 1/17/2019  
 Map Phase: Post-Review

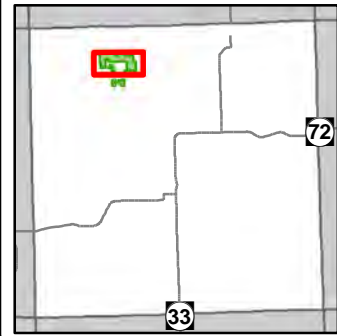


- Miris Corners
- + Remonumented Section Corners
- ◆ Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
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- Private - Dirt / Gravel Road
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- ORV Trails
- Designated ATV
- Michigan Cross Country Cycle Trail (MCCCT)
- ▲ Berms
- G Gate
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All
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- Powerline
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- Clearcut (w/Reserves)
- Site Prep
- 412 - Oak Types
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 110 - Low Intensity Urban
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 623 - Emergent Wetland
- Lakes

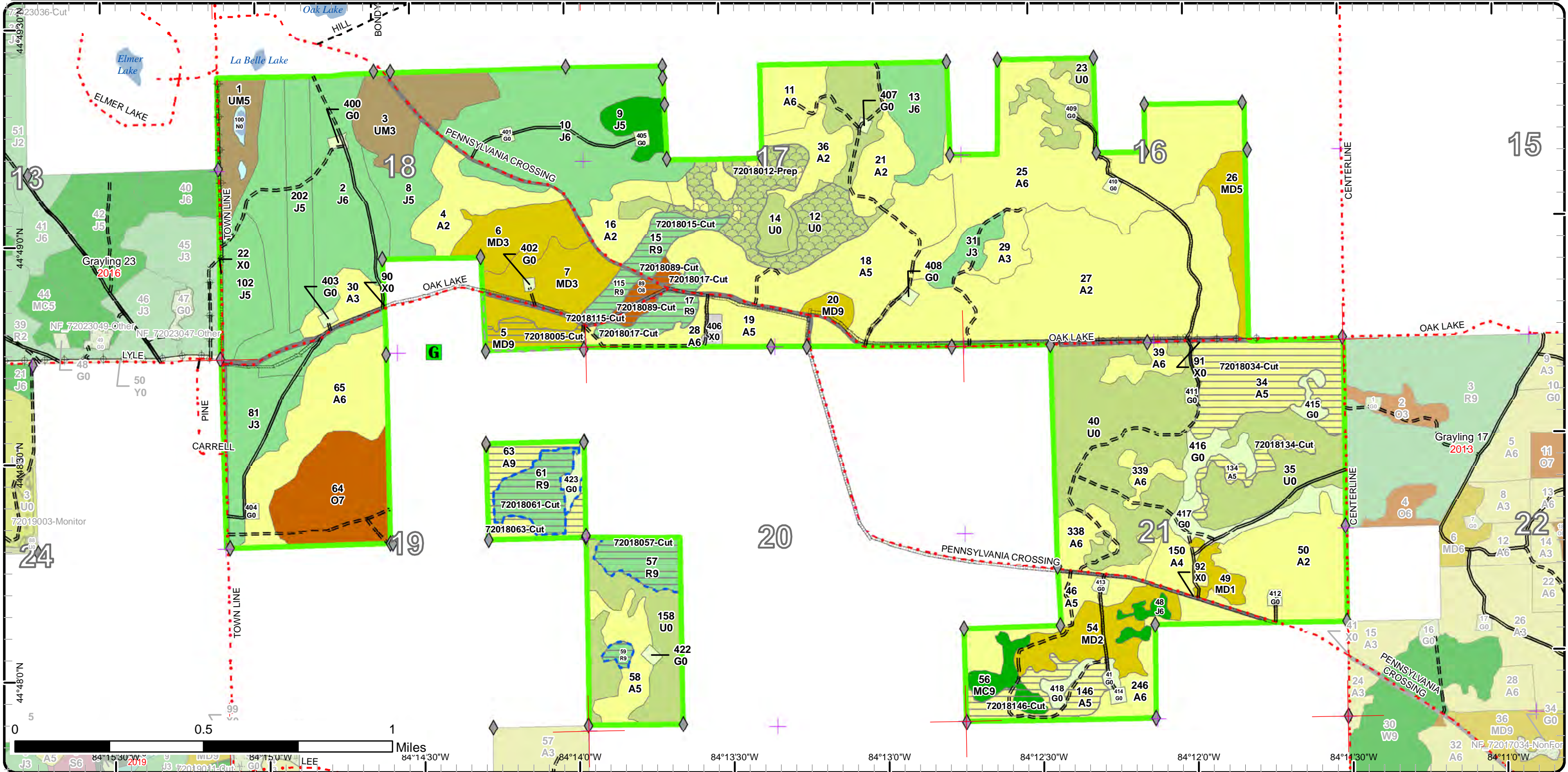


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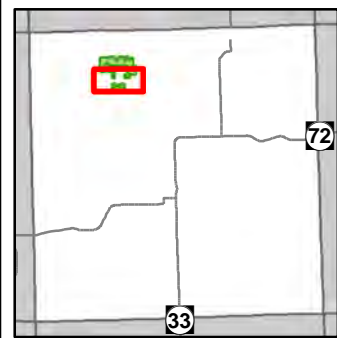
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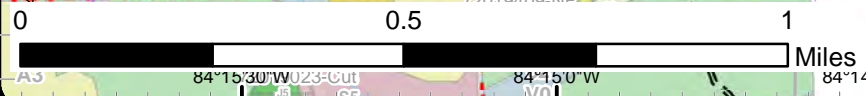
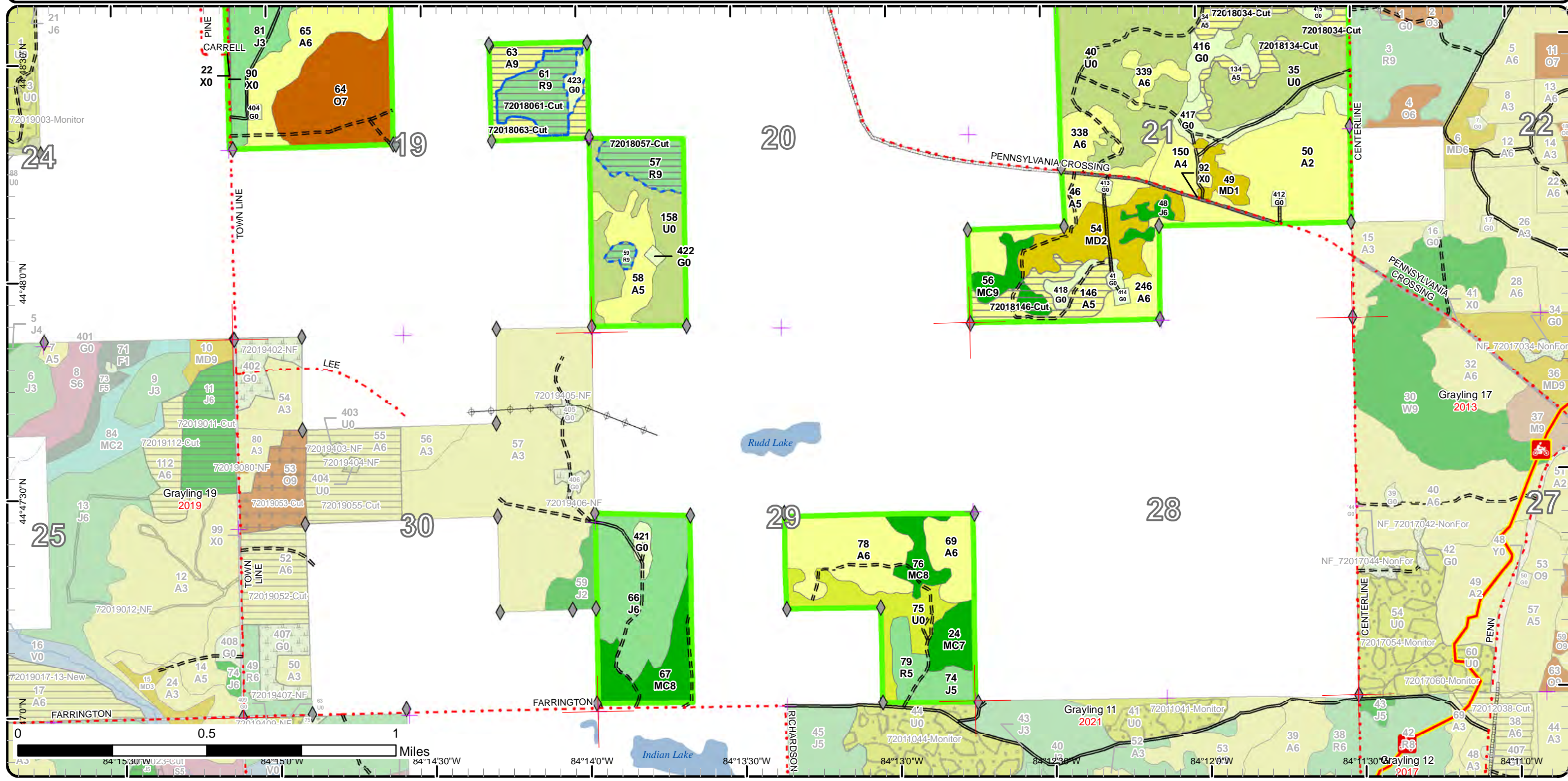


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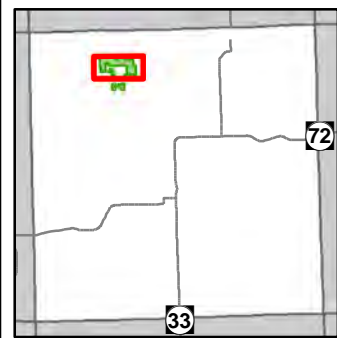
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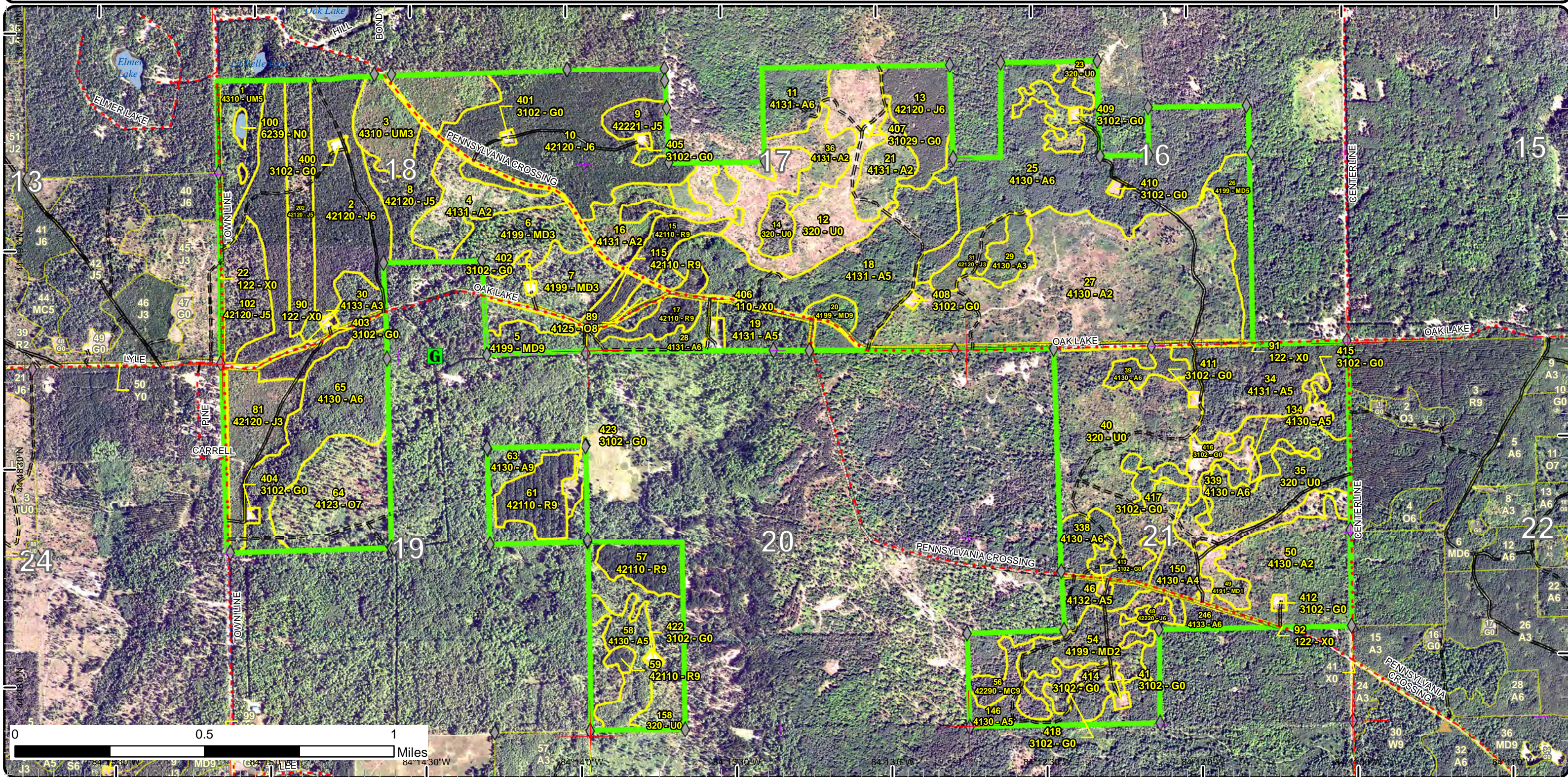


# Stand Boundary Map

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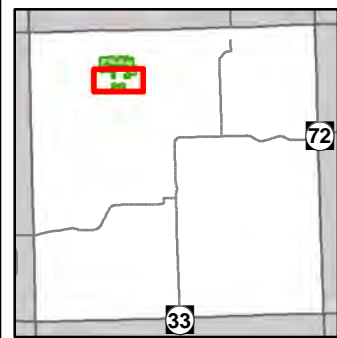


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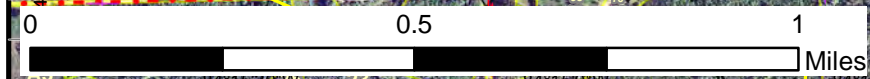
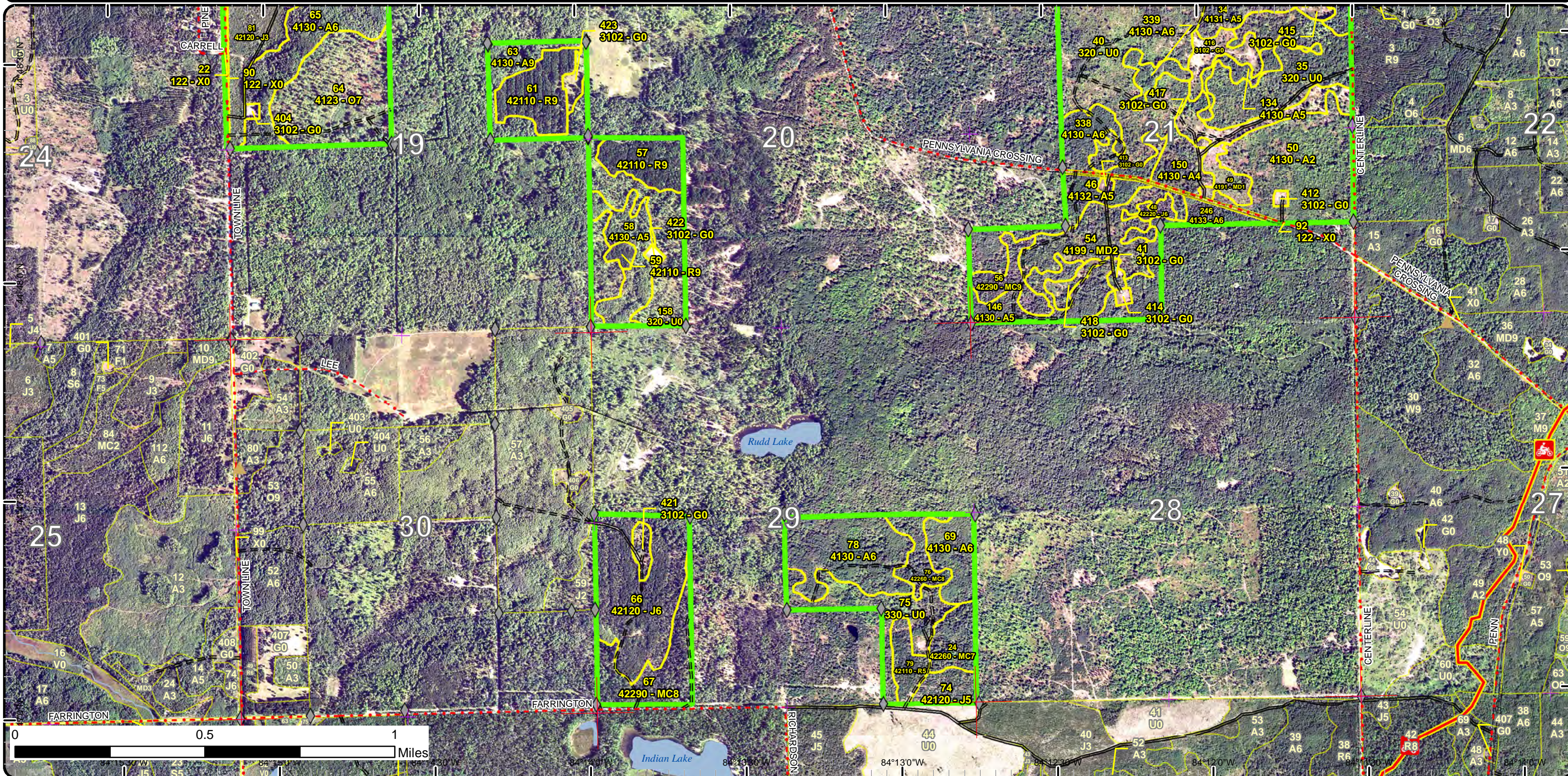


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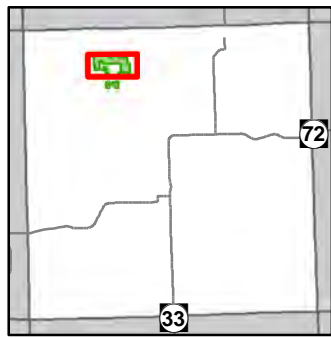
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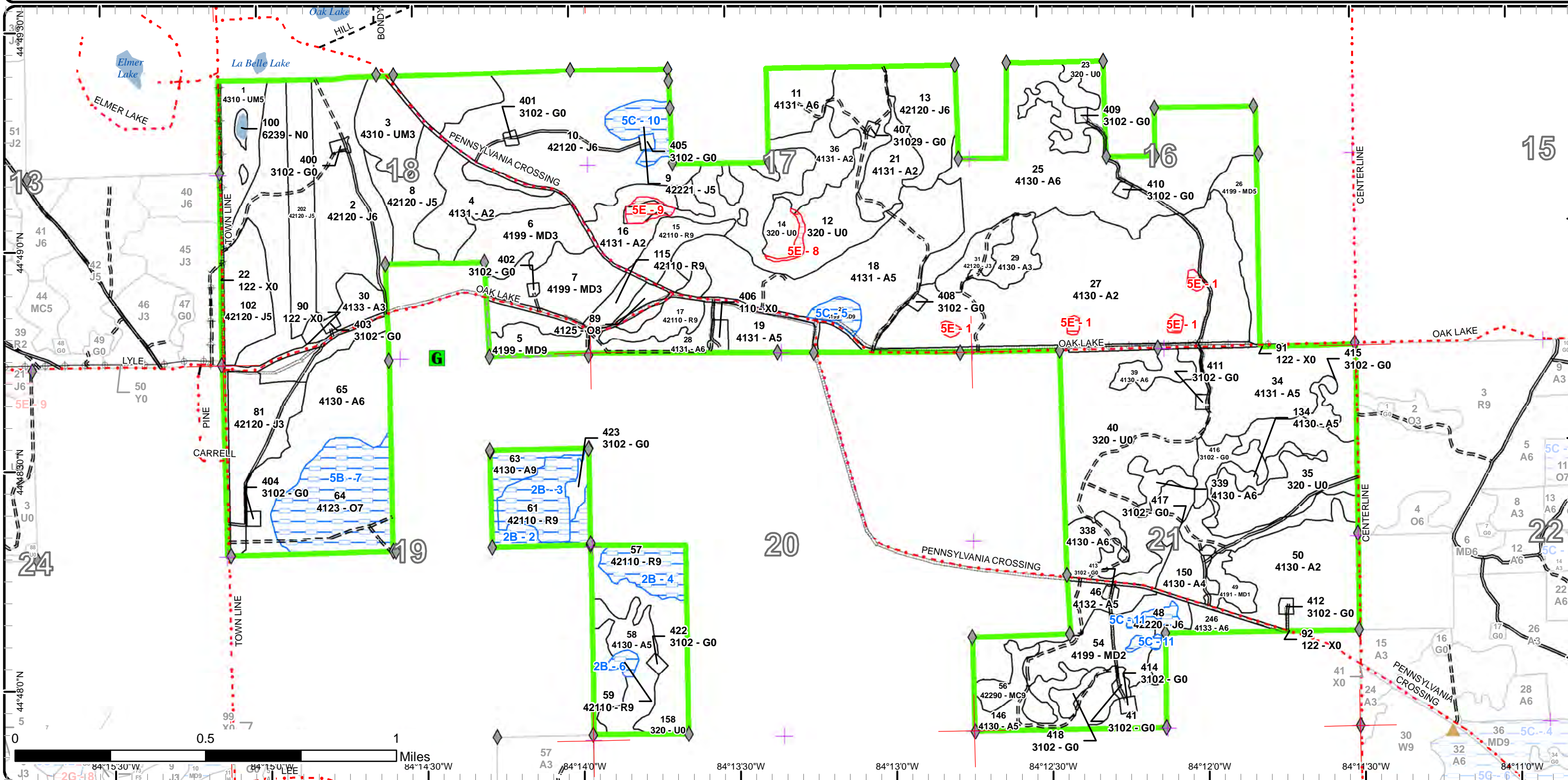
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# Special Conservation Areas & Site Conditions Map

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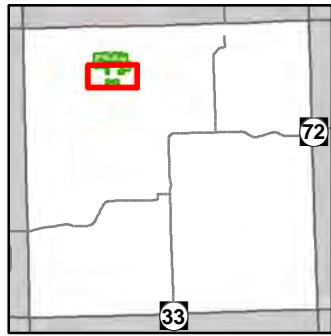
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- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 5E: Long-Term Retention
- Stand Boundaries
- Cold Water Streams



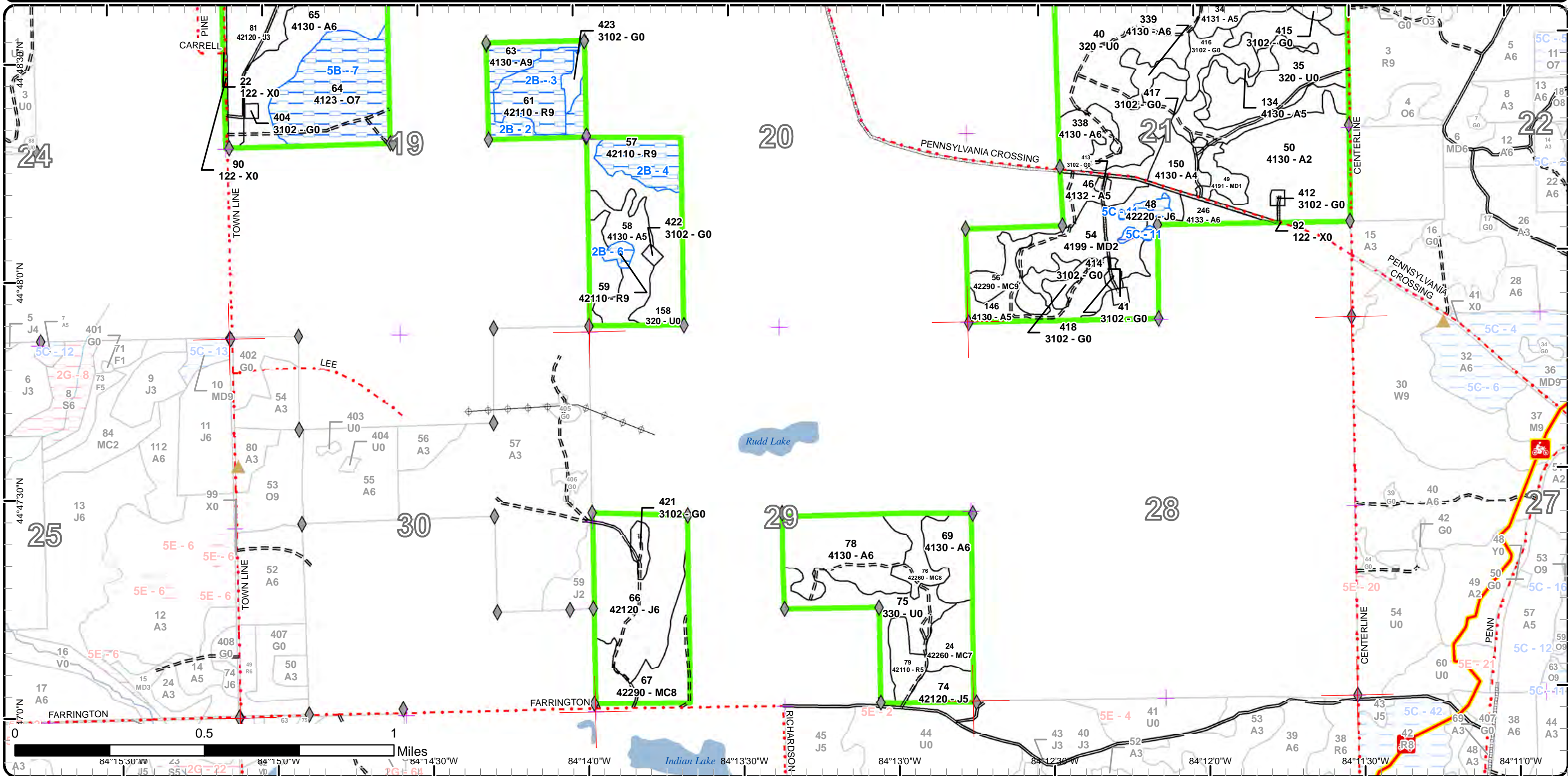


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Report 1 – Total Acres by Cover Type and Age Class



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+	Uneven-Aged	Total
Aspen	0	294	11	0	239	305	0	0	0	0	19	0	0	0	0	0	0	0	867
Herbaceous Openland	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
Jack Pine	0	0	41	0	361	0	0	17	0	0	0	0	0	0	0	0	0	0	419
Low-Density Trees	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Marsh	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Mixed Upland Deciduous	0	69	0	18	29	0	0	0	0	0	0	16	0	0	0	0	0	0	132
Natural Mixed Pines	0	0	0	0	0	0	0	0	58	0	0	0	0	0	0	0	0	0	58
Oak	0	0	0	0	0	0	0	0	0	0	0	7	50	0	0	0	0	0	57
Red Pine	0	0	0	0	9	20	49	0	0	0	0	0	0	0	0	0	0	0	78
Upland Mixed Forest	0	0	38	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	58
Upland Shrub	277	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	277
Urban	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
<b>Total</b>	<b>398</b>	<b>363</b>	<b>90</b>	<b>18</b>	<b>638</b>	<b>345</b>	<b>49</b>	<b>17</b>	<b>58</b>	<b>0</b>	<b>19</b>	<b>23</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2067</b>



## Report 2 – Treatment Summary

Grayling Mgt. Unit

Year of Entry: 2020

Acres of Harvest

Compartment 18

Total Compartment Acres: 2,064

Commercial Harvest - 130  
 Harvests with Site Condition - 57  
 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	100	0	0	0	0	0	0	0	0	100
Mixed Upland Deciduous	11	0	0	0	0	0	0	0	0	11
Oak	7	0	0	0	0	0	0	0	0	7
Red Pine	69	0	0	0	0	0	0	0	0	69
<b>Total</b>	<b>187</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>187</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	187	50	0	0	0	0	0	0	0	237
Next Step	0	126	88	0	0	88	325	0	0	626
<b>Total</b>	<b>187</b>	<b>176</b>	<b>88</b>	<b>0</b>	<b>0</b>	<b>88</b>	<b>325</b>	<b>0</b>	<b>0</b>	<b>863</b>



Standard

Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
5 72018005-Cut	10.7	4199 - Other Mixed Upland Deciduous	Sawtimber Well	101	81-110	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription Final harvest all species. Follow standard retention guidelines. Use island retention, targeting healthier oak that is likely to remain alive through the next rotation. Protect areas of good advanced oak regeneration.

Next Step Monitoring, Natural Regen (Re-Inventory)  
Treatments:

Acceptable Regen: Mixed deciduous containing northern pin oak, red oak, red maple, and aspen, meeting minimum acceptable stocking levels. Supplemental plant jack pine if natural regeneration fails.

Other Comment: PVT line needed.

Proposed Start Date: 10/1 /2019

12 72018012-Prep	50.0	320 - Upland Shrub	Nonstocked	0	Unspecified	SitePrep	Roller Chopping	42110 - Planted Red Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Roller chop to set back undesirable regeneration. Where feasible, exclude areas of desirable oak regeneration.

Next Step Pesticide, Skidder - Site Prep; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr); SitePrep, Trenching  
Treatments:

Acceptable Regen: Fully stocked stand of planted red pine.

Other Comment: Percent to Treat = 100%

Proposed Start Date: 10/1 /2018

15 72018015-Cut	11.5	42110 - Planted Red Pine	Sawtimber Well	55	111-140	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Final harvest all species. Retain 3-10% of stand using area based retention on edge to facilitate artificial regeneration operations. Low stump spec.

Next Step SitePrep, Trenching; SitePrep, Roller Chopping; Pesticide, (Inactive)Aerial; Planting, Initial Plant; Monitoring, Artificial Regen(1yr);  
Treatments: Monitoring, Artificial Regen(3yr)

Acceptable Regen: A fully stocked stand of planted red pine.

Other Comment:

Proposed Start Date: 10/1 /2019

17 72018017-Cut	12.9	42110 - Planted Red Pine	Sawtimber Well	55	111-140	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Final harvest all species. Retain 3-10% of stand using area based retention on edge to facilitate artificial regeneration operations. Low stump spec.

Next Step SitePrep, Trenching; SitePrep, Roller Chopping; Pesticide, (Inactive)Aerial; Planting, Initial Plant; Monitoring, Artificial Regen(1yr);  
Treatments: Monitoring, Artificial Regen(3yr)

Acceptable Regen: A fully stocked stand of planted red pine.

Other Comment:

Proposed Start Date: 10/1 /2019



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
34	72018034-Cut	51.0	4131 - Aspen, Oak	Poletimber Medium	46	1-50	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription Final harvest all species. Follow standard retention guidelines. Focus retention in areas with good advanced regeneration of oak. Add  
Specs: drumming log spec.

Next Step Monitoring, Natural Regen (Re-Inventory)  
Treatments:

Acceptable Regen: Aspen with a mixture of oak, maple and cherry. Expect low stocking levels in areas with poor pre harvest stocking.

Other Comment:

Proposed Start Date: 10/1 /2019

57	72018057-Cut	16.2	42110 - Planted Red Pine	Sawtimber Well	55	201+	Harvest	Clearcut with Retention	4191 - Mixed Upland Deciduous with Conifer	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition: Unknown Access**

Prescription Final harvest stand. Follow standard retention guidelines. Focus retention on area of larger log size stems. Thin the retention islands to  
Specs: 100sqft/acre, leaving the most dominant, wind firm stems.

Next Step Monitoring, Natural Regen (Re-Inventory)  
Treatments:

Acceptable Regen: Low density mixed deciduous with a small component of red pine. Will include areas of upland brush and grass.

Other Comment: PVT line needed

Proposed Start Date: 1 /1 /2019

59	72018059-Cut	2.4	42110 - Planted Red Pine	Sawtimber Well	55	201+	Harvest	Clearcut	4191 - Mixed Upland Deciduous with Conifer	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition: Unknown Access**

Prescription Final harvest all species. No retention due to small stand size.  
Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)  
Treatments:

Acceptable Regen: Low density mixed deciduous with a small component of red pine. Will include areas of upland brush and grass.

Other Comment:

Proposed Start Date: 1 /1 /2019

61	72018061-Cut	20.0	42110 - Planted Red Pine	Sawtimber Well	48	171-200	Harvest	Clearcut with Retention	4191 - Mixed Upland Deciduous with Conifer	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition: Unknown Access**

Prescription Final harvest stand. Follow standard retention guidelines. Retention should be two islands. Focus retention on area of larger log size stems.  
Specs: Thin the retention islands to 100sqft/acre, leaving the most dominant, wind firm stems.

Next Step Monitoring, Natural Regen (Re-Inventory)  
Treatments:

Acceptable Regen: Low density mixed deciduous with a small component of red pine. Will include areas of upland brush and grass.

Other Comment:

Proposed Start Date: 1 /1 /2019



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
63	72018063-Cut	18.6	4130 - Aspen	Sawtimber Well	94	141-170	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

**Habitat Cut:** No      **Site Condition:** Unknown Access

Prescription Final harvest all species following standard retention guidelines. Use area based retention. Target larger diameter hardwoods in the Northwest corner of the stand. Also leave all red and white pine greater than 20" DBH (<10sqft/acre). Add drumming log spec.

Next Step Monitoring, Natural Regen (Re-Inventory)  
Treatments:

Acceptable Regen: Aspen stand with other associated mixed deciduous including maple, oak, and birch ranging from fully stocked to minimum stocking in areas that were initially low stocking.

Other Comment:

Proposed Start Date: 1 /1 /2019

89	72018089-Cut	7.3	4125 - Black, N. Pin Oak	Sawtimber Medium	108	1-50	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut:** No      **Site Condition:**

Prescription Final harvest all species. No retention due to small stand broken up by county roads. Low stump spec to facilitate artificial regeneration.

Next Step SitePrep, Trenching; SitePrep, Roller Chopping; Pesticide, (Inactive)Aerial; Planting, Initial Plant; Monitoring, Artificial Regen(1yr);  
Treatments: Monitoring, Artificial Regen(3yr)

Acceptable Regen: A fully stocked stand of planted red pine.

Other Comment:

Proposed Start Date: 10/1 /2019

115	72018115-Cut	6.1	42110 - Planted Red Pine	Sawtimber Well	55	141-170	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut:** No      **Site Condition:**

Prescription Final harvest all species. No retention due to small stand size. Low stump spec.

Next Step SitePrep, Trenching; SitePrep, Roller Chopping; Pesticide, (Inactive)Aerial; Planting, Initial Plant; Monitoring, Artificial Regen(1yr);  
Treatments: Monitoring, Artificial Regen(3yr)

Acceptable Regen: A fully stocked stand of planted red pine.

Other Comment:

Proposed Start Date: 10/1 /2019

134	72018134-Cut	7.6	4130 - Aspen	Poletimber Medium	46	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	Draft Field Boundary
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**Habitat Cut:** No      **Site Condition:**

Prescription Final harvest all species. No retention due to small stand size. Objective is to expand aspen as much as possible. Add drumming log spec.

Next Step Monitoring, Natural Regen (Re-Inventory)  
Treatments:

Acceptable Regen: Aspen with a mixture of oak, maple and cherry. Expect low stocking levels in areas with poor pre harvest stocking.

Other Comment:

Proposed Start Date: 10/1 /2019



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
146	72018146-Cut	22.9	4130 - Aspen	Poletimber Medium	46	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription Final harvest all species except retain red pine >12" DBH. Add drumming log spec. Include Southeast portion of stand 56 with treatment.  
Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)  
Treatments:

Acceptable Aspen with a mix of red maple and pin oak.  
Regen:

Other No other retention to maximize potential for successful aspen regeneration in an where natural regeneration has been difficult in the past.  
Comment:

Proposed Start Date: 10/1 /2019

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**Total Treatment  
Acreage Proposed: 237.2**

## Report 4 – Site Conditions

Grayling Mgt. Unit  
Kevin Ehlert : Examiner

Compartment: 18  
Year of Entry: 2020

### Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions			
		With Condition	Not Available		2B	5B	5C	5E
866	843	19	5	Aspen	19	0	0	5
55	55	0	0	Herbaceous Openland	0		0	
418	402	16	0	Jack Pine			16	
25	25	0	0	Low-Density Trees				
2	2	0	0	Marsh				
131	126	5	0	Mixed Upland Deciduous			5	
57	57	0	0	Natural Mixed Pines				
57	7	50	0	Oak		50		
78	40	39	0	Red Pine	39			
57	57	0	0	Upland Mixed Forest				
277	272	0	5	Upland Shrub	0			5
38	38	0	0	Urban			0	
2,064	1,925	129	10	Total Forested Acres	57	50	22	10
	93%	6%	0%	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	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Island retention left in 72-004-11-01 harvest area.							
2	Available	2B: Unknown if access through adjacent landowner(s) is possible	19	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							



## Report 4 – Site Conditions

Grayling Mgt. Unit  
Kevin Ehlert : Examiner

Compartment: 18  
Year of Entry: 2020

3	<b>Available</b>	<b>2B: Unknown if access through adjacent landowner(s) is possible</b>	20	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
4	<b>Available</b>	<b>2B: Unknown if access through adjacent landowner(s) is possible</b>	16	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
5	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Was left as a no cut area when stand 18 was harvested. Leave as an island of mature timber among a lot of earlier successional stands.							
6	<b>Available</b>	<b>2B: Unknown if access through adjacent landowner(s) is possible</b>	2	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
7	<b>Available</b>	<b>5B: Maintain for regeneration purposes</b>	50	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Shelterwood cut done in fall of 2014, evaluate to see if ready for overstory removal in 2030 YOY.							
8	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	2	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Long Term Retention for Sale #72-001-11-01.							

## Report 4 – Site Conditions

Grayling Mgt. Unit  
Kevin Ehlert : Examiner

Compartment: 18  
Year of Entry: 2020

9	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	4	Unspecified	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> Long Term Retention for sale #72-001-11-01</p>							
10	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	12	Unspecified	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> Treat in future with stand 10. Due to small size and low merchantable volume.</p>							
11	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	5	Unspecified	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> Treat in future YOE with adjacent stand 246.</p>							

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

<b>Conservation Area</b>	<b>Type</b>	<b>Description</b>
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4310 - Pine, Oak Mix	Poletimber Medium	19.5	41	1-50	Stand is a long, narrow depression, with two small wetlands (Stand 100) in the bottom. The stand had merchantable JP, NPO and aspen cut in 1977-78 under #1-77A. The stand is dominated by a mix of natural regeneration: JP, NPO and aspen. There are both seed- and stump-origin oak saps. Pole-sized JP, aspen, NPO & RP are scattered throughout, with RP saw concentrated on the stand's east side on steep slope between stand 2 and stand 100 (all residual from '77 cut).
2	42120 - Planted Jack Pine	Poletimber Well	104.2	36	51-80	Planted jack pine, good stocking and health, planted in 1983 under FTP# C72-51 with stock from Wyman Nursery. Planted jack pine is transitioning into pole class. Some residual saw size red pine from previous harvest. Established at same time as stands 102 & 202 (planted with S. Mich Nursery stock that had poor survival rates). Potential for rough fescue.
3	4310 - Pine, Oak Mix	Sapling Well	37.8	13	Immature	Jack pine planted around areas of successful aspen and oak regeneration. Planted jack pine is approximately 10' tall. The stand was cut under timbersale # 72-053-02-01 Oak Lake Road Jack Pine in 2004. The sale had been prepared through a marking contract and the blue line location was incorrect, resulting in a trespass (approximately 1 acre in size) onto private property to the north (Rich Brogan, owner). FTP# C72-523 was submitted in Oct '05 for planting poorly-stocked areas to JP. Portions of the stand were trenched and planted to JP in May of 2006, including part of the trespass area on the Brogan property. Areas with aspen regen (particularly to the stand's east side) were not planted within. Oak stump sprouts and oak seedlings/saps are scattered throughout.
4	4131 - Aspen, Oak	Sapling Medium	26.4	7	Immature	Mixed stand of regeneration including mixed aspen, pin oak, and cherry. Was cut in late 2012 (72-041-10-01) Oak Regen Release, by S. Muma, merch & up on the JP & A, except stems marked with green paint. All oak, WP, RP, RM, PB, cherry & balsam fir were also left, in an effort to address adjacent landowners visual concerns. Goal was a mix of natural regeneration: oak, aspen and pine. Post-harvest update: Stated cruised residual: 3 sq. ft. oak, 1 sq. ft. RM, 2 sq. ft. cherry.
5	4199 - Other Mixed Upland Deciduous	Sawtimber Well	10.7	101	81-110	Mixed oak stand, with NPO to the west (and a pocket of windthrow) and better quality RO to the E & S (on slightly higher ground) with paper birch. Decent-health oak on the higher ground. Pin oak is breaking up. Illegal ORV use, looks like firewood collection. Mix of oak and red maple in sub canopy. Pole size Red maple mixed in throughout.
6	4199 - Other Mixed Upland Deciduous	Sapling Well	26.5	7	1-50	Stand was cut in late 2012 (72-041-10-01) Oak Regen Release, by S. Muma. Cut all merchantable aspen and jack pine, and pin oak >8" DBH, except stems marked with green paint. All white oak, WP, RP, RM, PB, cherry & balsam fir were also left, in an effort to address adjacent landowners visual concerns. Stated cruised residual BA: 14 oak, 1 JP, 1 aspen, 4 RM, 1 WP/RP, 1 cherry.
7	4199 - Other Mixed Upland Deciduous	Sapling Well	34.1	7	Immature	Minor component of NPO saw residual from 2012 harvest. Nice advanced oak regen, Post-harvest update: Cut in late 2012 (72-041-10-01) Oak Regen Release, by S. Muma, merch & up on the JP & A, except stems marked with green paint. All oak, WP, RP, RM, PB, cherry & balsam fir were also left, in an effort to address adjacent landowners visual concerns. Stated cruised residual: 14 sq. ft. oak, 1 sq. ft. cherry, 1 sq. ft. RM/RP.

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## Grayling Mgt. Unit

## Report 7 – Forested Stands

Compartment: 18  
Year of Entry: 2020

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
8	42120 - Planted Jack Pine	Poletimber Medium	23.1	36	1-50	Stand 8 was cut at the same time as 102 & 202, and planted under C-72-51, it is very similar in structure and composition to those two stands. It contains poorly stocked jack pine poles. Some residual log size stems are scattered throughout.
9	42221 - Natural Jack Pine, Mixed Deciduous	Poletimber Medium	11.8	63	1-50	Variable size/age/stocking jack pine stand with a 2.5 acre inclusion of quaking aspen at the south end. Jack pine quality varies throughout. Some over mature. Stand has some nice pockets of J6, and some poorly stocked areas. The aspen inclusion has a mixture of mature aspen and a second age class starting to come up in the sub canopy. Old RR grade also crosses through. Due to smaller stand size and low volume in many areas of the stand, delay treatment until adjacent stand 10 is treated.
10	42120 - Planted Jack Pine	Poletimber Well	95.2	32	51-80	Planted jack pine. Just reaching pole size class on average. Most of the stand is north of Pennsylvania Crossing Rd, but there is an approximately 4 acre part which is South of the road. Was a mixed JP, NPO, aspen stand cut in '85, taking all merchantable stems. North half of stand planted under FTP# C-0707-181 in 1987; the FTP indicates that the south half of the stand was planted later. Areas regenerating to oak/aspen were avoided in planting; there is a couple-acre inclusion of that regen in the stand's south center.
11	4131 - Aspen, Oak	Poletimber Well	17.8	34	1-50	Was cut in '84, all merchantable aspen, JP & oak. Aspen stand moving into the pole class. Many of the stems are just below pole class. Inclusion of O2 stump sprouts to south center, small pockets of RP saw and J3, and U inclusions common separating the individual clones.
13	42120 - Planted Jack Pine	Poletimber Well	26.6	32	51-80	Stand was planted 1987. Jack pine transitioning into pole size class. Scattered RP residual. G inclusion at NW corner.
15	42110 - Planted Red Pine	Sawtimber Well	11.5	55	111-140	Stand was affected by windthrow and bending trees after a snow storm shortly after previous harvest. Some areas below 110sqft per acre. Stand was cut in late 2012 (72-001-11-01) Penn Crossing JP, by S. Muma, designated rows plus orange-marked RP in adjacent rows, and JP, A, O, RM & BC across all rows except for green-marked oak. The free-thinned plantation unit 1 (stand 17) withstood the snowstorm better.
16	4131 - Aspen, Oak	Sapling Medium	17.1	7	Immature	Stand harvested in 2012. Currently a mixture of aspen, oak and red maple regen with scattered black cherry. There is some advanced regen of oak from prior to harvest approaching pole size, but majority is sapling stump sprouts. A few scattered red pine saw residual from 2012 harvest. Some areas have lower stocking, but appear to be filling in with a combination of oak, aspen and cherry. Passes regen check.  Post-harvest update: was cut in late 2012 (72-001-11-01) Penn Crossing JP, by S. Muma, cut merchantable & up on the O, JP, RM & BC, 2" & up on the aspen, and 12" DBH & under on the RP.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	42110 - Planted Red Pine	Sawtimber Well	12.9	55	111-140	Planted in 1964 (per old records). Was planted around JP, NPO and old pine stumps. More oak residual to the north. Was cut in late 2012 (72-001-11-01) Penn Crossing JP, by S. Muma, orange-marked RP & oak, and all A, JP, RM & BC. The blizzard following harvest completion resulted in a small amount of windthrown & snowload-leaning RP. The decision had been made during field prep to free thin instead of row thin because the rows had been planted around so much residual: there was a lot of winding and weaving, with non-stocked stretches under the oak crowns. The suppressed poles were targeted for removal. The free-thinned plantation came through the pre-Christmas blizzard in much better shape than the row-thinned plantation.
18	4131 - Aspen, Oak	Poletimber Medium	76.4	36	51-80	Cut in '82 under #80-81A, cut all merchantable aspen, JP, RM & oak. Mostly quaking aspen poles with areas of bigtooth aspen which is growing better. Stand has scattered red pine residual from the harvest. U/G inclusions with low-density aspen occur throughout the stand and - including pockets of oak saps and large stump sprouts - comprise ~20% of the stand area in an interlocking mosaic pattern.
19	4131 - Aspen, Oak	Poletimber Medium	19.6	36	51-80	Cut in '82 under #80-81A, cut all merchantable aspen, JP, RM & oak. Mostly quaking aspen poles with areas of bigtooth aspen which is growing better. Stand has scattered red pine residual from the harvest. U/G inclusions with low-density aspen occur throughout the stand and - including pockets of oak saps and large stump sprouts - comprise ~20% of the stand area in an interlocking mosaic pattern.
20	4199 - Other Mixed Upland Deciduous	Sawtimber Well	5.2	108	81-110	Designated as a no cut area in 1982 harvest of stand 18 (#80-81A). A little bit of everything in a small area: super-canopy RP & WP, oak saw, WP poles and saps, BTA, RM and paper birch.
21	4131 - Aspen, Oak	Sapling Medium	17.0	7	Immature	Stand was cut in late 2012 (72-001-11-01) Penn Crossing JP, by S. Muma, 2" & up on the JP, A, RM & BC, merch & up on the oak, and 12" DBH & under on the RP. Retention was two islands, one at the West end and one adjacent to stand 14. Regeneration is a mixture of quaking aspen, red maple, pin oak, jack pine, and cherry. The regen is patchy with many open patches throughout. Jack pine is colonizing some open areas and currently under 4' tall, other species are 10-20' tall. Much of the original stand did not regenerate, and is now mapped labeled as stand 12, which is upland brush, mostly cherry, with small pockets of aspen, pin oak, and traces of jack pine seeding in.
24	42260 - Natural Pine, Mixed Deciduous	Sawtimber Poor	11.8	75	51-80	The 120-acre block this stand is located within was cut between '81 and the end of '83 under #2-81A, all merchantable stems except WP & RP. Marked RP and WP saw were removed in '85 under #62-84-1. A couple small pockets of mixed age/size-class RP and WP which were in the 100-140 sqft/acre range with a mixture of open brush and young aspen filling in openings as a result the previous harvest. Due to small stand size, treat with when adjacent stands are treated in the future.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
25	4130 - Aspen	Poletimber Well	123.1	40	1-50	Aspen moving into the pole class, with U inclusions and areas of O2 common. Types as A6 but still has a lot of sub merchantable stems. Was cut under #22-77-1 between 1977 and 1982, with most of the area cut over by 1979. Portions of the stand north of sec 16's E-W centerline were cut last. The contractor didn't cut an area completely before moving on and was noted to be "hopping around the sale leaving merchantable trees", resulting in variable age/size aspen, with pockets of older residual aspen scattered within the regenerating stand. Contains three ice contact holes with vernal ponds in SW end of stand.
26	4199 - Other Mixed Upland Deciduous	Poletimber Medium	17.7	29	1-50	Cut in '91 under #014-90-1, all trees 2" and up. O2 over half of the stand, with U3 inclusions to the north and A3 to the south. Oak regen includes nice stump sprouts and seed-origin saps.
27	4130 - Aspen	Sapling Medium	155.3	4	Immature	Old notes indicate that the oak was cut during 1967 to 1971 and mast trees were left. This cut resulted in some areas of oak and aspen regen, with upland brush areas mixed in throughout. Recent prescription was to cut all oak greater than 6" DBH, and all merchantable JP, aspen and RM. Leave the few RP & WP (<5BA). The goal was to salvage the mature-overmature trees, release the advanced oak regen and maintain aspen as a component within the stand. Retention includes residual oak and pine, and four 1-acre islands (three on an E-W line through the stand's S1/2 and one in the stand's N1/2. See locked comments. Post-harvest update: west 20 acres were cut in 2012, the rest by Feb 2015 (72-004-11-01), cutting A-RM 3"+ DBH, merch JP-BC, and oak >6" DBH. All RP-WP and a couple apple trees were left, in addition to 4 retention islands.
28	4131 - Aspen, Oak	Poletimber Well	9.9	36	51-80	Cut in '82 under #80-81A, cut all merchantable aspen, JP, RM & oak. Mostly quaking aspen poles with areas of bigtooth aspen which is growing better. Stand has scattered red pine residual from the harvest. U/G inclusions with low-density aspen occur throughout the stand and - including pockets of oak saps and large stump sprouts - comprise ~20% of the stand area in an interlocking mosaic pattern.
29	4130 - Aspen	Sapling Well	10.8	15	Immature	Cut in 2004 under #720530201 Oak Lake Road Jack Pine by Larry Baynham for Northern Timberlands. Portions of the stand not regenerating to aspen were planted to jack pine in May of 2006 under FTP C72-523(split off to stand 31). Oak stump sprouts and cherry are mixed in with the aspen. Area planted to jack pine split off as stand 31.
30	4133 - Aspen, Mixed Pine	Sapling Well	10.9	36	51-80	Pocket of quaking aspen that overtopped planted jack pine. Stand was originally a part of stand 2, but converted to an aspen dominated stand. Planted in 1983 under FTP# C72-51 with stock from Wyman Nursery. Planted jack pine is transitioning into pole class. Some residual saw size red pine from previous harvest. (planted with S. Mich Nursery stock that had poor survival rates). Potential for rough fescue.
31	42120 - Planted Jack Pine	Sapling Well	9.9	13	Immature	Cut in 2004 under #720530201 Oak Lake Road Jack Pine by Larry Baynham for Northern Timberlands. Portions of the stand not regenerating to aspen were planted to jack pine in May of 2006 under FTP C72-523.





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
34	4131 - Aspen, Oak	Poletimber Medium	51.0	46	1-50	Old notes indicate that most of the stand was clearcut and then treated by FTP, with a stand year of origin of 1973. Mostly quaking aspen clones separated by U or sapling size pin oak, with 1-acre U inclusions common in the form of ice-contact kettle holes (some steep) especially in E half, and a pocket of WP & RP and small saw along Centerline Road. Pin oak regen average age is 31. The south half of the same treatment area contained more U acreage (split out as stand 35) and stand 134's boundary picks up most of the small TA clones scattered across that U type.
36	4131 - Aspen, Oak	Sapling Medium	25.3	7	Immature	Stand was cut in late 2012 (72-001-11-01) Penn Crossing JP, by S. Muma, 2" & up on the JP, A, RM & BC, merch & up on the oak, and 12" DBH & under on the RP. Retention was two islands, one at the West end and one adjacent to stand 14. Regeneration is a mixture of quaking aspen, red maple, pin oak, jack pine, and cherry. The regen is patchy with many open patches throughout. Jack pine is colonizing some open areas and currently under 4' tall, other species are 10-20' tall. Much of the original stand did not regenerate, and is now mapped labeled as stand 12, which is upland brush, mostly cherry, with small pockets of aspen, pin oak, and traces of jack pine seeding in.
39	4130 - Aspen	Poletimber Well	8.0	37	111-140	Pole size bigtooth aspen clone resulting from prior harvest that meets mapping standards. Was cut in '81 under #1-81A, all merchantable aspen, RM, JP and oak, leaving all RP & WP. Was low-density cover to start with, with <10 cords to the acre removed. There are nice oak saplings below; in the more unthrifty clones, the oak will become the dominant stems.
46	4132 - Aspen, Jack Pine	Poletimber Medium	19.4	46	1-50	Scattered clones of quaking aspen mixed with pockets of pin oak, jack pine and black cherry. Many areas with little to no canopy cover containing grass, shrubs or saplings. Old notes indicate that all aspen, red maple, paper birch, pin oak, and JP >9" DBH were clear cut south of Penn Crossing Road in '72 under #34-72. Stand 46 has variable stocking in TA, with some dense clones but patchy coverage overall, with U/G inclusions (including a deep kettle hole along Penn Crossing Rd), small JP pole inclusions, and areas of nice oak saps. Re-evaluate for final harvest in 2030 YOE. When harvested, also harvest remaining portion of stand 56.
48	42220 - Natural Jack Pine	Poletimber Well	4.6	63	111-140	Small pockets of mature jack pine that were residual from previous harvest in 1972. Nice oak saps below. Located in a glacial kettle hole. Due to small stand size and difficult access, would recommend harvesting in a future YOE with adjacent stand 246. Old notes indicate that all aspen, red maple, paper birch, pin oak, and JP >9" DBH were clear cut south of Penn Crossing Road in '72 under #34-72.
49	4191 - Mixed Upland Deciduous with Conifer	Sapling Poor	7.8	7	Immature	Patches of regenerated aspen, oak, and red maple. Also noted jack pine seeding in throughout the stand which will probably continue to colonize and increase in density. Was cut in late 2012 (72-042-10-01) Centerline Aspen, by S. Muma, everything but the oak, RP, WP, and retention island. While the YOEO approved treatment did not provide comments on acceptable regen beyond the coded JP management objective, this stand is expected to regenerate to a pine/oak mix with some expansion of the aspen & RM from the east.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
50	4130 - Aspen	Sapling Medium	52.5	7	Immature	Quaking aspen has regenerated after the 2012 harvest. There is also some pin oak and red maple, especially more in the west end where the aspen was not as vigorous. Some browse is present. Aspen regeneration is heaviest in the East half of the stand, but the west end appears to be filling in. There are a few super canopy pin oak and conifers that were left as part of the retention. Was cut in late 2012 (72-042-10-01) Centerline Aspen, by S. Muma, everything but the oak, RP, WP, paper birch, retention islands, and green-marked aspen, cherry & RM (in the stand's SE, by the private cabin) . Stated cruised residual of 5 sq. ft. oak, 1 sq. ft. RP/WP.
54	4199 - Other Mixed Upland Deciduous	Sapling Medium	28.8	31	Immature	Mix of pin oak and cherry (some 1+ sticks, but gnarly), inclusions of JP and aspen, over sweetfern groundcover. Also low density pole size aspen and red maple.
56	42290 - Natural Mixed Pine	Sawtimber Well	11.0	73	81-110	Mixed stand of RP, JP and WP, left when the adjacent aspen stands were cut in '72. Majority of the conifer trees are in the 70-80 age class, with scattered super-canopy red pine and white pine. Unique stand for compared to surrounding area adding good structural diversity at this time. Evaluate for final harvest in 2030YOE with adjacent stand 46.
57	42110 - Planted Red Pine	Sawtimber Well	16.2	55	201+	Old notes indicate stand was planted in 1964. Some defect (porky, weevil, doubles) but nowhere near stand 61's level. Some areas with very high stocking level. Basal area swings ranged from 220-340 sqft/acre. Third-row thin was prescribed last two YOE but not treated due to access issues - - is in a block of state land surrounded by private. If access for managing the W1/2SW of section 20 cannot be obtained, recommend disposal of the parcel and stand is declared surplus, and should be exchanged.
58	4130 - Aspen	Poletimber Medium	20.2	33	51-80	Stand of quaking aspen that has recently transitioned from sapling to pole class. All merchantable aspen, JP and oak in the 80-acre block of state land were cut between '84 and '86 under #107-84-1. Was low-medium stocking to start with and included U/G. Split out most of the U type as stands 158, but stand 58's A6 has U inclusions throughout, separating individual clones. There are some older aspen stems present, residual from the harvest. If access for managing the W1/2SW of section 20 cannot be obtained, recommend disposal of the parcel and stand is declared surplus, and should be exchanged.
59	42110 - Planted Red Pine	Sawtimber Well	2.4	55	201+	Old notes indicate planted in 1964. Some defect (porky, weevil, doubles) but nowhere near stand 61's level. Some areas with very high stocking level. Basal area swings ranged from 220-340 sqft/acre. Third-row thin. Was prescribed last two YOE but not treated due to access issues - - is in a block of state land surrounded by private. If access for managing the W1/2SW of section 20 cannot be obtained, recommend disposal of the parcel and stand is declared surplus, and should be exchanged. This stand is basically the same as stand 57, but does not qualify as a multi-poly stand due to distance > .1 mile from edge



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
61	42110 - Planted Red Pine	Sawtimber Well	20.0	48	171-200	Red pine plantation with atypical configuration: One and a half chain wide strips were planted (10 rows with ~10' wide spacing between rows), alternating with half-chain wide strips of grass. Old notes indicate that this was an experimental planting or, more specifically, an "Erbe Special" established in 1971. The inherent site quality itself is okay (64), but the lower planting density and tremendous amount of edge resulted in poor height growth, high taper, heavy persistent lower branches, and high weevil incidence. This lower stocking allowed stems to progress more quickly into the saw class, but the quality is poor; easily 1 in 4 trees have defect (doubles, forked, crook, etc.). Stocking is poorer to the east. The G-type to the east that grades into this stand has big and little blue stem and is contiguous with another larger opening with similar cover on the adjacent private. This is in an area with large, old, heavily-burned pine stumps and old railroad grades. If access for managing the SENE of section 19 cannot be obtained, recommend disposal of the parcel, recommend disposal of the parcel and stand is declared surplus, and should be exchanged.
63	4130 - Aspen	Sawtimber Well	18.6	94	141-170	Highly variable stand. Common thread is mature-overmature aspen with the older component of large cull stems moving into the snag class. Mixed in is a little bit of everything else: a few massive oak to the NW, sugar maple, ironwood, RM & paper birch to the SW, and small clumps of RP & WP saw and poles. The stand was not cut in '86 when stand 58 was cut, even though permission to cross private was obtained and the haul access went through this stand. If access is granted, harvest the aspen and RM, but leave the other species. If access for managing the SENE of section 19 cannot be obtained, recommend disposal of the parcel and stand is declared surplus, and should be exchanged.
64	4123 - Red Oak	Sawtimber Poor	50.1	110	1-50	Decent-quality RO saw with ~10 BA each of WO saw, RO poles, BTA, and NPO. The stand's perimeter on the flats has lower-quality and lower-BA oak, while the central higher ground has the denser, nicer oak. All RM, PB, TA and pine were cut in '90-'91 under #013-90-1, all oak were left. The harvest area -- except ~13 acres south of the E-W two-track -- was Rx burned in '99 under FTP C72-412 and in 2000 under FTP C72-429, both with the goal of reducing the RM competition. The understory within the burn area is much more open, averaging Mr1 versus the unburned area's Mr3+. The stand area was heavily worked-over by deer digging through the snow down to the leaf litter. The stand should have a regen cut applied before the benefits of the Rx burning are lost. Per August 21, 2008 field review, additional prescribed burning is not needed; apply a shelterwood cut, aiming for 50% crown closure, and create two 90-foot diameter regen gaps per acre. Post-harvest update: Was shelterwood-seed harvested fall 2014 (72-018-13-01), cutting merch stems except green-marked and RP-WP. Was originally set up under 72-043-10-01 but closed uncut due to timber theft investigation. Original cruised residual of 23 sq. ft. was reduced by the theft. Evaluate in 2030YOE for overstory removal.
65	4130 - Aspen	Poletimber Well	54.1	46	81-110	Old notes indicate that the stand was cut in '73, with some merchantable residual. Aspen (TA & BTA) with most of the stems moved into the pole class. Oak and RM stump-origin poles are at +/- the same height as the aspen. Stand also has scattered super-canopy RP, large older RM, and NPO saw.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
66	42120 - Planted Jack Pine	Poletimber Well	52.0	36	81-110	Planted in 1983 under FTP# C-7020-109, using S. Michigan nursery planting stock noted as being dry and large, with poor root systems. Areas of J4-J5 on the E & W edges, particularly where planted under residual JP and RP on the E side. Quaking aspen pockets not meeting minimum mapping standards that are the same age class present in Southwest and Northeast corners of stand. Some gall rust present. Note that there is a narrow strip of private property between Farrington Road and the state land in the W1/2SW section 29. This block of state land can be accessed through compt 19 to the west.
67	42290 - Natural Mixed Pine	Sawtimber Medium	24.0	75	81-110	Variable density mixed pine and oak stand on poor soils. Red pine was residual from prior harvest, jack pine was planted with stand 66 in 1983 with poor quality stock. Small upland shrub/grass inclusions. Note that there is a narrow strip of private property between Farrington Road and the state land in the W1/2SW section 29. This block of state land can be accessed through compt 19 to the west, but consideration should be given to acquiring the intervening strip of private property along Farrington Road for more direct access.
69	4130 - Aspen	Poletimber Well	15.4	36	51-80	The 120-acre block this stand is located within was cut between '81 and the end of '83 under #2-81A, all merchantable stems except WP & RP. Marked RP and WP saw were removed in '85 under #62-84-1. Scattered clones of quaking aspen moving into the pole class with a lot of just sub-merchantable stems, and scattered residual from the cut. U inclusions separate clones. Some red pine sawtimber along east edge. Stand grades into the adjacent RP/WP stand 76.
74	42120 - Planted Jack Pine	Poletimber Medium	8.6	36	1-50	Planted under FTP# C-7020-104 in 1983, completion notes indicate the S. Michigan nursery planting stock was in poor shape, with large dry trees. Long gaps in rows, poor form jack pine due to low stocking/open grown. Scattered RP saw residual from previous harvest.
76	42260 - Natural Pine, Mixed Deciduous	Sawtimber Medium	10.6	78	51-80	The 120-acre block this stand is located within was cut between '81 and the end of '83 under #2-81A, all merchantable stems except WP & RP. Marked RP and WP saw were removed in '85 under #62-84-1. Mixed RP and WP stand with high amount of defect (weevil, porcky). Aspen from adjacent stands grade into it. Stand has small ice-contact depressions. Red pine density is highest in the South section of the stand. Further north is lower density pine with more aspen and pin oak which resulted from prior harvest. Could be treated in the future with adjacent stands to East and West.
78	4130 - Aspen	Poletimber Well	37.4	36	51-80	The 120-acre block this stand is located within was cut between '81 and the end of '83 under #2-81A, all merchantable stems except WP & RP. Most of this stand was cut at the end of '83. Marked RP and WP saw were removed in '85 under #62-84-1. Most of the stems are just reaching pole size. Hypoxylon is present in most of the clones. U inclusions are common between clones, particularly in the NW. There are pockets of good oak regen, and also scattered RP, WP and a little JP (residual from harvest). Stand contains a couple deep kettle holes. Isolated small aspen clones that couldn't practicably be picked up by this stand's boundary were included in the adjacent U-type stand 75.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
79	42110 - Planted Red Pine	Poletimber Medium	9.0	36	111-140	Red pine planted under FTP C7020-104. Poor survival. Stocking variable, West part of planted area converted to U0. Successful part is and 4 to 8" in diameter with the larger diameter trees mostly in areas that had higher mortality resulting in open grown conditions for surviving trees. Some older RP residual from the '82 harvest. U inclusions are common along the west side.
81	42120 - Planted Jack Pine	Sapling Well	31.2	13	Immature	Cut in 2004 under 720530201 Oak Lake Road Jack Pine. Prescription was to cut all trees 2" and up. The sale administrator noted that several adjacent residents on the west side of Townline Road complained about the sale. Trenched and planted to JP in 2006 under FTP# C72-523. Planted jack pine is mostly 10-20' tall. Oak regen scattered throughout, a little aspen regen to the south end.
89	4125 - Black, N. Pin Oak	Sawtimber Medium	7.3	108	1-50	Sparse, fragmented stand of poor-quality, declining pin oak, split into 3 small blocks by Oak Lake Rd and Penn Crossing Rd. There are pockets of nice oak saps, but the understorey is generally RM and U. Stand has a few JP and aspen stems. Low volume and quality. Final harvest when adjacent red pine plantations are treated again.
102	42120 - Planted Jack Pine	Poletimber Medium	23.1	36	1-50	Jack pine with U/G inclusions common. Planted in 1983 under FTP# 72-51 at same time as stands 2, 202, and 8, but with S. Michigan Nursery stock that was noted as being large, dry and in poor condition. Survivorship was low compared to stands 2 which was planted with Wyman Nursery stock. There are scattered JP (mostly at the N end) that were residual from the '77 cut. Potential for rough fescue. Old notes indicate historic KW use.
115	42110 - Planted Red Pine	Sawtimber Well	6.1	55	141-170	Stand was cut in late 2012 (72-041-10-01) Oak Regen Release, by S. Muma. All trees within designated (orange-painted) plantation rows were cut. The subsequent late December snowstorm resulted in some windthrown/snowload-bent RP, but damage was worse in stands 15 and 17.
134	4130 - Aspen	Poletimber Medium	7.6	46	51-80	Old notes indicate that most of the stand was clearcut and then treated by FTP, with a stand year of origin of 1973. Stand 134's boundary picks up several pockets of quaking aspen clones within the surrounding U type that resulted from the 1973 harvest. Would be beneficial to pick up these pockets for treatment with stand 34 to help in expanding aspen to areas that originally failed to regenerate.
146	4130 - Aspen	Poletimber Medium	19.8	46	51-80	Variable density throughout, ranging from under 50 to 140 sq ft per acre. Also some sparse super canopy red pine. Old notes indicate that all aspen, red maple, paper birch, pin oak, and JP >9" DBH were clear cut south of Penn Crossing Road in '72 under #34-72. Stand could be final harvested but will hold.
150	4130 - Aspen	Poletimber Poor	11.2	46	1-50	Old notes indicate that this stand was in the same treatment area as stands 34 & 134, with '73 as the year of origin. Larger cherry and isolated small aspen clones present along with lower and non-stocked areas. Pin oak saw occurs at low densities.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
202	42120 - Planted Jack Pine	Poletimber Medium	28.1	36	1-50	Jack pine with U/G inclusions common. Pin oak and black cherry Scattered in some of the open areas. At the low end of 51-80 BA Range in areas of highest survival. Planted in 1983 under FTP# 72-51 at same time as stands 2 & 8, but with S. Michigan Nursery stock that was noted as being large, dry and in poor condition. Survivorship was low compared to stand 2 that was planted with Wyman Nursery stock. There are scattered JP (mostly at the N end) that were residual from the '77 cut. Potential for rough fescue. Old notes indicate historic KW use.
246	4133 - Aspen, Mixed Pine	Poletimber Well	18.6	46	51-80	Quaking aspen stand with pockets of poor quality white, red, and jack pine. Old notes indicate that all aspen, red maple, paper birch, pin oak, and JP >9" DBH were clear cut south of Penn Crossing Road in '72 under #34-72. Stand 246 has fair-health TA with a U-inclusion and a inclusions of RP & WP saw. Pine inclusions have slightly higher basal area than aspen.
338	4130 - Aspen	Poletimber Well	16.4	37	51-80	Was cut in '81 under #1-81A, all merchantable aspen, RM, JP and oak, leaving all RP & WP. Was low-density cover to start with, with <10 cords to the acre removed. Stand is one of a few areas that regenerated after previous harvest. Quaking aspen is currently transitioning into pole size class, with some still in sapling range.
339	4130 - Aspen	Poletimber Well	6.7	37	51-80	Was cut in '81 under #1-81A, all merchantable aspen, RM, JP and oak, leaving all RP & WP. Was low-density cover to start with, with <10 cords to the acre removed. Growth and vigor influenced by the amount of residual stems from the '81 cut and the presence of hypoxylon. There is some oak regen in the sub canopy. Used the previous SI; SI taken on this young aspen seemed unrepresentatively high.



Stand	Cover Type	Acres	Managed Site	General Comments:
12	320 - Upland Shrub	73.8		Stand was cut in late 2012 (72-001-11-01) Penn Crossing JP, by S. Muma, 2" & up on the JP, A, RM & BC, merch & up on the oak, and 12" DBH & under on the RP. Retention was two islands, one at the West end and one adjacent to stand 14. Regeneration is a sparse mixture of quaking aspen, red maple, pin oak, jack pine, and cherry. The areas of the harvest that successfully regenerated to aspen/oak were split out. This section has some small pockets of regeneration that do not meet mapping standards, but natural regen failed through most of it. Jack pine is colonizing some open areas and currently under 5' tall.
14	320 - Upland Shrub	7.3	No	Cut in '84 with stand 11, leaving a few scattered JP poles and RP saw. Short brushy JP filling in over sweetfern/grass.
22	122 - Road/Parking Lot	4.4	No	Townline Road
23	320 - Upland Shrub	15.0	No	Harvested with stand 25 in 1982, this area did not regenerate successfully. Stand is mostly a mixture of upland shrubs (black cherry, hawthorn, serviceberry) with grassy open areas. Some quaking aspen, jack pine and pin oak has established in low densities with open grown form.
35	320 - Upland Shrub	42.7	No	Was in the same treatment area as stands 34, 134, 50 & 150. Primarily cherry brush with pockets of O3 in large saps (especially to the E edge). Very low density pole/log red maple, jack pine and birch. Also includes <1-acre TA clones that couldn't practicably be picked up by stand 134's boundary. Stand has NPO saw scattered along its margins. Contains historical site:20OD135.
40	320 - Upland Shrub	99.3	No	Was cut in '81 under #1-81A, all merchantable aspen, RM, JP and oak, leaving all RP & WP. Was low-density cover to start with, with <10 cords to the acre removed. Current stand is primarily cherry brush, but some salix, amelanchier (more to S), small pockets of northern pin oak saps, scattered quaking aspen clones less than 1 acre in size, and RP saw (<10 BA). NOTE: Along the stand's West edge against private is a long narrow uncut triangle with scattered NPO, RP and mature aspen, left as a result of the timbersale boundary being run to what was later found to be an incorrect marker in the stand's SW corner. A pin was set to the west by a private surveyor (JFO 19840), with a 5' tall pipe nearby.
41	3102 - Grass	1.6	No	Grassy opening with hairgrass and sweetfern cover, being colonized by the adjacent aspen stands. Part of this opening will become forested, possibly by next YOE. In the far NW corner is a small depression with L3.
75	330 - Low-Density Trees	25.4	No	Most of the stand was planted under FTP# C-7020-104 in 1983, completion notes indicate that the S. Michigan nursery planting stock was in poor shape, with large trees dry. Short remnant JP row segments are visible across this U-type with cherry, pin oak regen, and red pine residual from the '82 cut. Isolated small clones of quaking aspen that couldn't practicably be incorporated into stand 78 or 69's boundaries are inclusions.
90	122 - Road/Parking Lot	5.9	No	County Road R.O.W.
91	122 - Road/Parking Lot	22.0	No	Cleared county road ROW's.
92	122 - Road/Parking Lot	3.1	No	Cleared county road ROW for Pennsylvania Crossing Rd.



Stand	Cover Type	Acres	Managed Site	General Comments:
100	6239 - Mixed Emergent Wetland	2.1	No	Marsh with emergent grasses. These two small wetlands and one on private property to the North were once identified as one body, La Belle Lake. Noted as discrete ponds 20 years ago, the water bodies have, over time, been filling in with wetland vegetation.
158	320 - Upland Shrub	38.7	No	All merchantable aspen, JP and oak in the 80-acre block of state land were cut between '84 and '86 under #107-84-1. Was low-medium stocking to start with and included U/G. Split out most of the U/G type as stand 158. Stand 158 includes small pockets of TA that couldn't practicably be included in stand 58's boundary, along with scattered residual from the cut (RP, JP & WP). If access for managing the W1/2SW of section 20 cannot be obtained, recommend disposal of the parcel and stand is declared surplus, and should be exchanged.
400	3102 - Grass	1.0	No	Old well site. Grass and Spotted knapweed cover.
401	3102 - Grass	0.8	No	Old well site. Grass and Spotted knapweed cover.
402	3102 - Grass	0.6	No	Old well site. Grass/ spotted knapweed cover.
403	3102 - Grass	1.0	No	old well site. Grass and Spotted knapweed cover.
404	3102 - Grass	0.9	No	Old well site. Grass and spotted knapweed cover.
405	3102 - Grass	1.0	No	Old well site. Grass and Spotted knapweed cover.
406	110 - Low Intensity Urban	2.6	No	Well site to north, oil & gas facility to south with storage tanks, buildings, etc.
407	31029 - Grass (OI)	0.7	No	Old well site. Grass and spotted knapweed cover.
408	3102 - Grass	0.9	No	Well site with plumbing. Spotted knapweed cover. Delta oil company. State, Elmer, D4-17. NE, SE,SE, Sec 17. Oscoda County. P/N 48181 MPSC 7618. R C S service haha Oil. (989) 732-7999, (630) 573-1717.
409	3102 - Grass	0.8	No	Well site with plumbing. Grass/spotted knapweed cover. Delta Oil Co. State, Elmer, B2 -16, NW SE NW, T28N R2E Sec 16I PN 48582 MPSC 7765, RCS services/ Delta Oil Co. (989) 732-7999, (630) 573-1717
410	3102 - Grass	1.0	No	Well site with plumbing. Spotted knapweed cover.C2 - 16. NE, NE, SW. T28N R2E Sec 16 P/N 47888 MPSC 7622
411	3102 - Grass	0.9	No	Well site with plumbing. Spotted knapweed cover. Delta oil Company. State. Elmer. A3-21. SW, NW, NE, T28N R02E Oscoda County. P/N 48593 MPSC 7766 RCS Services/ DELTA OIL CO. (989)732-7999, (630)573-1717





Stand	Cover Type	Acres	Managed Site	General Comments:
412	3102 - Grass	1.0	No	Well site with plumbing. Spotted knapweed cover. Delta oil company. State. Elmer. C4-21. SW, NE, SE, T28N R02E. PA N 49275. MPSC 7620. RCS services / Delta oil Co. (989)732-7979 (630) 573-1717
413	3102 - Grass	1.0	No	Well site with plumbing. Spotted knapweed cover. Information not posted
414	3102 - Grass	1.1	No	Well site with plumbing. Spotted knapweed cover. SE,SE, SW, T28N R02E Sec 21. D2-21. P/N 53026. MPSC 9437. (989) 732-7999
415	3102 - Grass	4.0	No	Stand encompasses steep ice-contact kettle holes separated by saddle ridges. Cover includes hairgrass and sweetfern, with some U, JP and TA encroachment at the margins.
416	3102 - Grass	10.1	No	Stand encompasses frost-pocket holes; the deepest one hits the water table and has a small wetland with bullrush surrounded by salix. Upland cover includes hairgrass, sweetfern and little bluestem with some U, JP and TA encroaching.
417	3102 - Grass	14.5	No	Stand encompasses a long shallow valley with G/U cover: sweetfern, some little bluestem, cherry & amelanchier. Jack pine, quaking aspen and pin oak are colonizing the opening.
418	3102 - Grass	4.0	No	Grassy opening with hairgrass and sweetfern cover, being colonized by the adjacent aspen stands. Part of this opening will become forested, possibly by next YOE. In the far NW corner is a small depression with L3.
421	3102 - Grass	3.7	No	Opening with sweetfern groundcover, encroaching cherry and JP. Note that there is a narrow strip of private property between Farrington Road and the state land in the W1/2SW section 29. This block of state land can be accessed through compt 19 to the west.
422	3102 - Grass	1.0	No	Old well site. Grass cover. Access road crossed private property and is now gated off. If access for managing the W1/2SW of section 20 cannot be obtained, recommend disposal of the parcel and stand is declared surplus, and should be exchanged.
423	3102 - Grass	3.7	No	Nice grassy opening with primarily little bluestem. It grades into the adjacent plantation and also has scattered RP & JP regen & poles. It is contiguous with another larger opening with similar grass cover on the adjacent private to the E. This is in an area with large, old, heavily-burned pine stumps and old railroad grades. If access for managing the SENE of section 19 cannot be obtained, recommend disposal of the parcel and stand is declared surplus, and should be exchanged.