



# Compartment Review Presentation

## Grayling Forest Management Unit

Compartment 72181

Entry Year 2020

Acreage: 1,959

County Crawford

Management Area: Camp Grayling

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**Revision Date:** 2018-07-11

**Stand Examiner:** Joan Charlebois

### Legal Description:

T26N R4W Sections 4, 5 & 6  
Grayling Township

### Identified Planning Goals:

This compartment is comprised of Military Board ownership. A majority of that ownership is on Hanson Reserve Lands which contain the following deed restrictions: The lands are to 1) be used as a permanent encampment and maneuvering ground for the military, 2) serve as a game preserve for the breeding and protection of game, and 3) serve as a forest reserve. The management goal is to maintain forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment while meeting the deed restrictions.

### Soil and topography:

The compartment's east half has gently-rolling to steep terrain, with slopes ranging from 6 to 45%, and more low ground near the tank trail. The compartment's west half has relatively flat terrain, with occasional low ridges and a seasonal high water table. Grayling, Graycalm-Grayling, and Croswell sands of varying slope predominate in the upland areas while a variety of organic soil types (primarily mucks) are represented in the lowlands.

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

This compartment is comprised of Military Board Lands. On these lands, military training has precedence over resource management activities. The DNR will coordinate all prescribed activities with the National Guard to ensure that such activities are compatible with military training needs. Most of the Military Board ownership is within the Hanson Military Reserve. Hanson Reserve Lands were given to the National Guard, Department of Military Affairs (DMA) by Rasmus Hanson in 1913, with several deed restrictions as outlined under the management goals. These restrictions have tasked the DNR with managing the natural resources on these lands, as long as management activities do not conflict with military needs. In addition, hunting is prohibited on the Hanson Reserve Lands. Camp Shawano (a youth incarceration facility) is located to the north, and there is residential private property interface along the Kalkaska County line and north of Lake Margrethe.

### Unique Natural Features:

Portions of two Ecological Reference Areas (ERAs) have been identified within the compartment. These natural communities include a wet-mesic sand prairie complex and an intermittent wetland. Several unique plant and animal species are associated with these ERAs.

### Archeological, Historical, and Cultural Features:

The area's history of logging, settlement and long-term military use is evident.

### Special Management Designations or Considerations:

This compartment is designated as a Military Special Conservation Area (SCA). It is also part of the Hanson Military Reserve, with goals and restrictions as noted above. Through a lease agreement with the Military, Camp Shawano developed a recreation field within the compartment, near their facility. Two ERAs also cross into the compartment.

### Watershed and Fisheries Considerations:

In the 1960's, Fisheries Division constructed an earthen berm with a 6-foot tall concrete water control structure in order to make a pike marsh. Water flowing south of the structure enters an engineered channel that empties into Lake Margrethe.

### Wildlife Habitat Considerations:

Plans will be developed for the Ecological Reference Areas in order to maintain and enhance the quality of the habitat they provide for associated unique species.

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

Active sand/gravel pits are located more than four miles away, but there appears to be good sand & gravel potential within the compartment on the uplands. There has been no oil & gas production in the area. There are some active leases nearby. Oil & gas potential within the compartment is considered moderate at this time, due to recent leasing. No known metallic mineral potential exists in this part of the state. The state does not own the mineral rights beneath the compartment. Private mineral rights owners must be allowed reasonable access to the surface should they choose to explore and/or develop the minerals. The former Dollar Lake Sand Pit has been the focus of ongoing stabilization efforts, including contouring and seeding the west side and blocking vehicle access.

**Vehicle Access:**

M-72 crosses diagonally through the compartment. County roads include Howes Lake Road, McIntrye Landing, and Arrowhead Road. A tank trail runs the length of the compartment.

**Survey Needs:**

None at this time.

**Recreational Facilities and Opportunities:**

The compartment has no developed recreational facilities except for the Camp Shawano-leased ball field. Hunting is specifically prohibited per Hanson Reserve Lands deed restrictions, but hunting is allowed on the non-Reserve portions of the compartment.

**Fire Protection:**

There are relatively large jack pine stands within the compartment. Lower ground with seasonal high water tables will limit suppression equipment operation in some of those stands. Howes Lake to the north and Lake Margrethe to the south are potential water sources.

**Additional Compartment Information:**

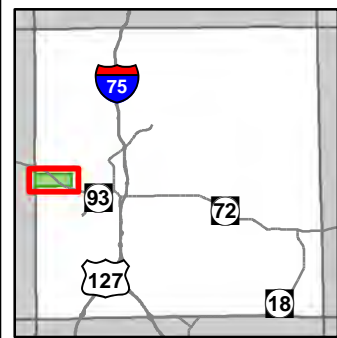
**The following reports from the Inventory are attached:**

- 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:**

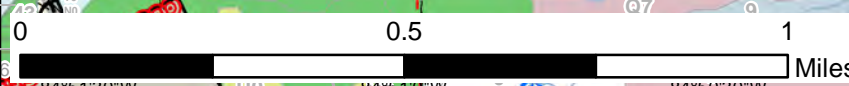
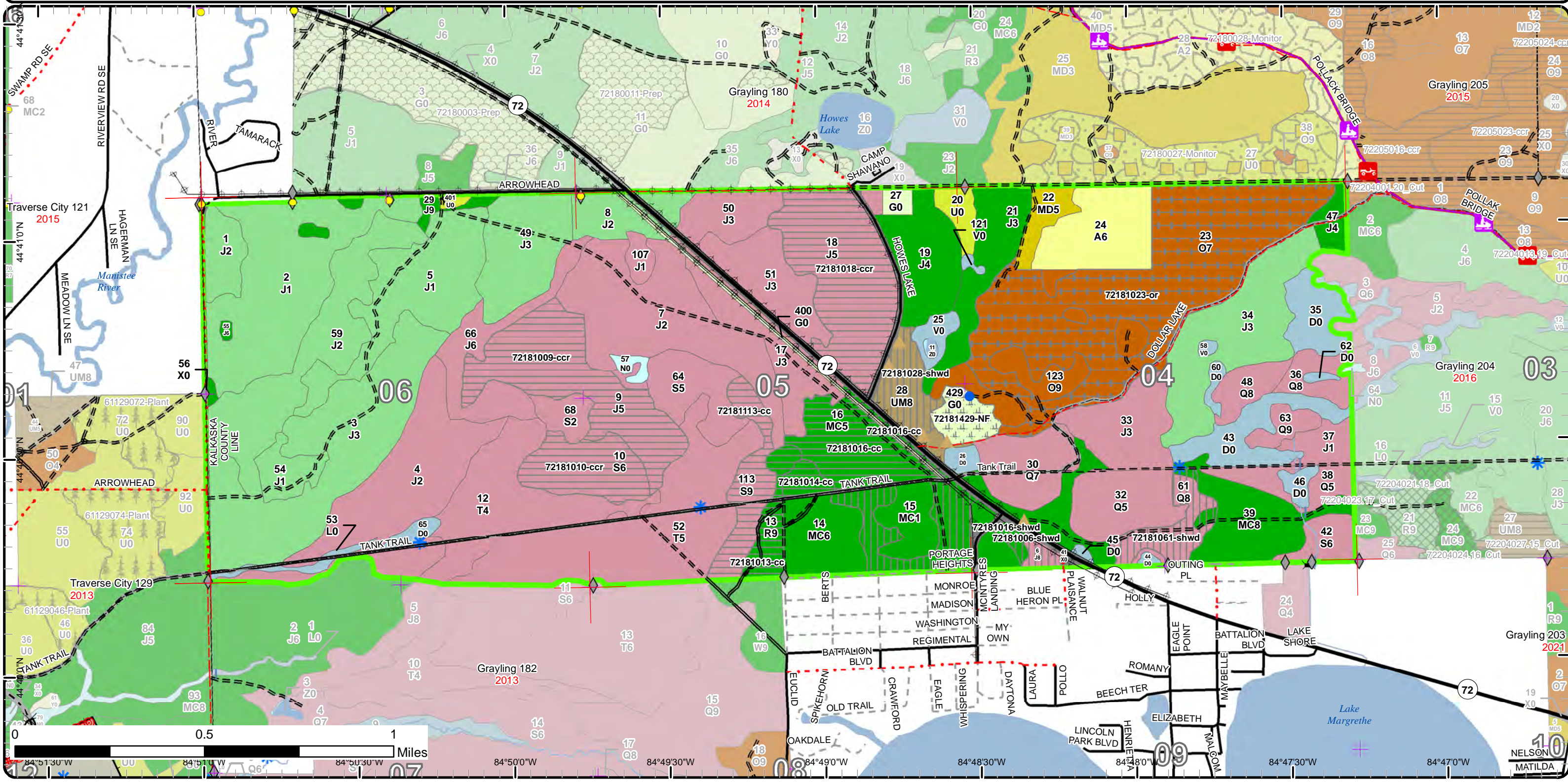
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatments Map



Compartment: 181  
 T26N, R04W, Sec. 4-6  
 County: Crawford  
 Unit: Grayling  
 Mgmt Area: Camp Grayling  
 YOE: 2020  
 Acres: 1,959 GIS Calculated  
 Examiner: Joan Charlebois  
 Map Revised: 1/28/2019  
 Map Phase: Post-Review

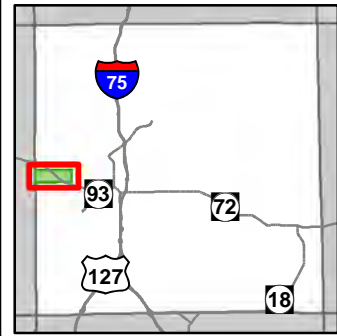
- Miris Corners
- Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- == DNR - Secondary Forest Road
- == DNR - Forest Access Route
- == Federal / State Highway
- == Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- == DNR - Secondary Forest Road
- ORV Routes
- Snowmobile Trails
- Designated ORV Route
- Designated Snowmobile Trails
- Berms
- Bridges
- Culvert
- Tower
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Powerline
- Fence
- Compartment Boundary
- Other Treatment - See Comments
- Clearcut (w/Reserves)
- Harvest, Overstory Removal
- Shelter Wood (w/Reserves)
- 412 - Oak Types
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- Lakes
- Camp Grayling Monitoring Wells
- Camp Grayling Safety Marker
- Camp Grayling Firing Point
- Camp Grayling Gates
- Camp Grayling Fence
- Camp Grayling Tank Trail
- Camp Grayling Range Area



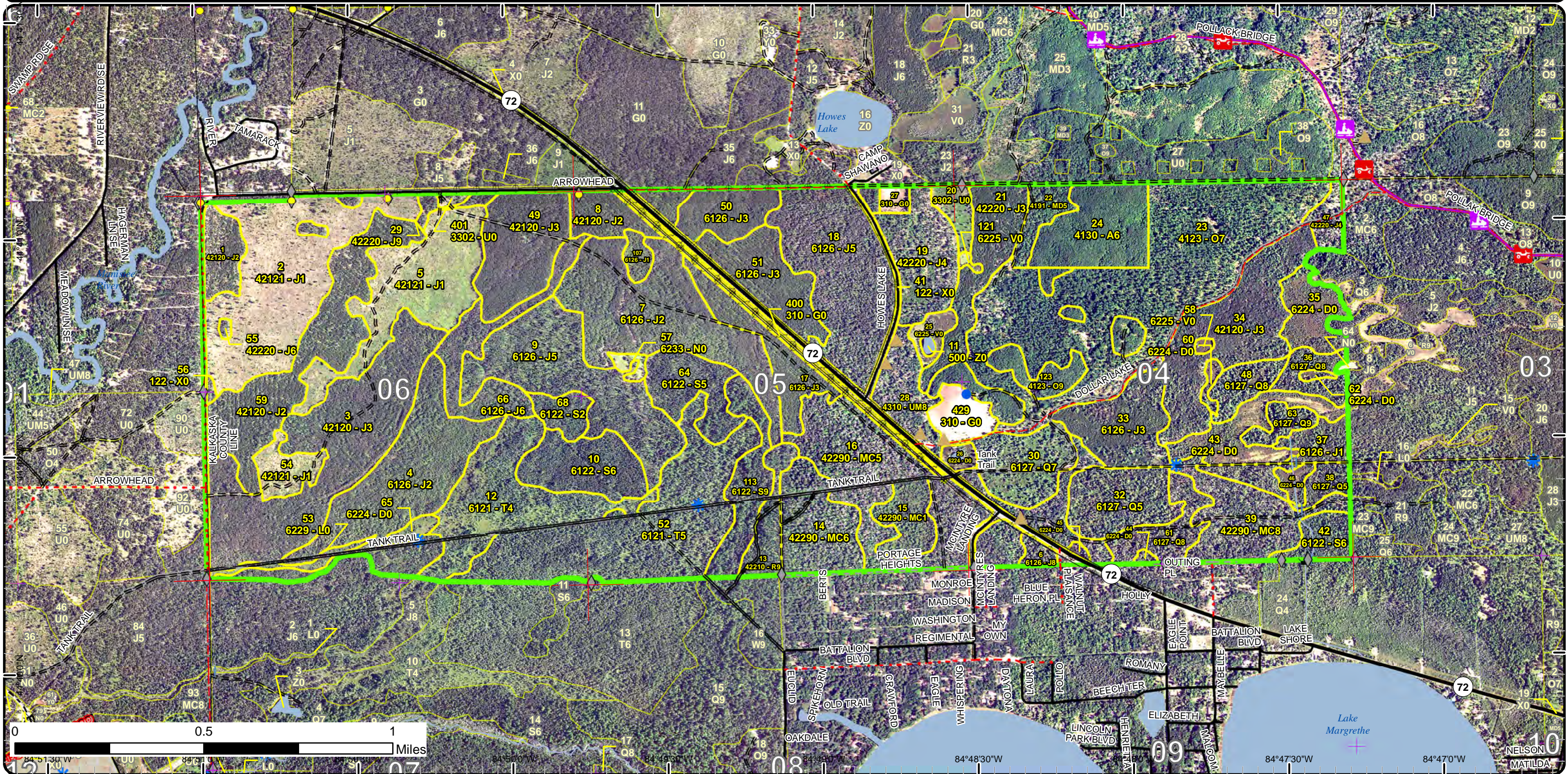
84°51'30"W 84°51'00"W 84°50'30"W 84°50'00"W 84°49'30"W 84°49'00"W 84°48'30"W 84°48'00"W 84°47'30"W 84°47'00"W

# Stand Boundary Map

Compartment: 181  
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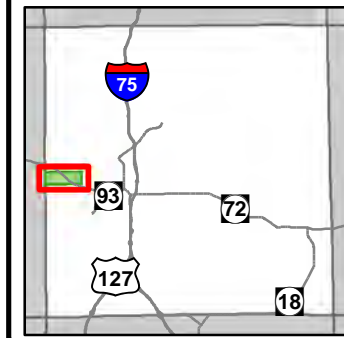


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|---|---|--|
| <ul style="list-style-type: none"> <li>— Miris Corners</li> <li>— Remonumented Section Corners</li> <li>● Survey Grade Corners</li> <li>◆ Field Grade Corners</li> <li>--- Counties</li> <li>== DNR - Secondary Forest Road</li> <li>== DNR - Forest Access Route</li> <li>== Federal / State Highway</li> <li>== Federal / State / County - Paved Road</li> <li>- - Federal / State - Dirt / Gravel Road</li> <li>- - County - Gravel Road</li> <li>- - County - Dirt Road (Seasonal)</li> <li>- - Private - Dirt / Gravel Road</li> <li>== DNR - Secondary Forest Road</li> </ul> | <ul style="list-style-type: none"> <li>ORV Routes</li> <li>Snowmobile Trails</li> <li>--- Designated ORV Route</li> <li>--- Designated Snowmobile Trails</li> <li>▲ Berms</li> <li>▲ Bridges</li> <li>▲ Culvert</li> <li>● Tower</li> <li>— Lake/Pond</li> <li>— Perennial River</li> <li>— Lakes and Rivers All</li> <li>— Powerline</li> <li>--- Fence</li> <li>■ Compartment Boundary</li> </ul> | <ul style="list-style-type: none"> <li>Stand Boundaries</li> <li>412 - Oak Types</li> <li>413 - Aspen</li> <li>419 - Mixed Upland Deciduous</li> <li>421 - Planted Pines</li> <li>422 - Natural Pines</li> <li>430 - Upland Mixed Forest</li> <li>612 - Lowland Coniferous Forest</li> <li>122 - Roads/Parking Lot</li> <li>310 - Herbaceous Openland</li> <li>330 - Low Density Trees</li> <li>500 - Water</li> <li>622 - Lowland Shrub</li> <li>623 - Emergent Wetland</li> <li>★ Camp Grayling Safety Marker</li> <li>● Camp Grayling Firing Point</li> <li>✕ Camp Grayling Gates</li> <li>— Camp Grayling Fence</li> <li>— Camp Grayling Tank Trail</li> <li>■ Camp Grayling Range Area</li> <li>★ Camp Grayling Monitoring Wells</li> </ul> |
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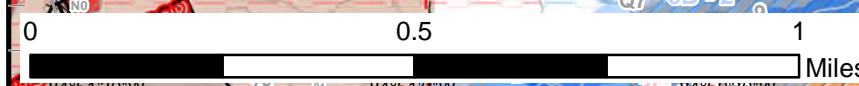
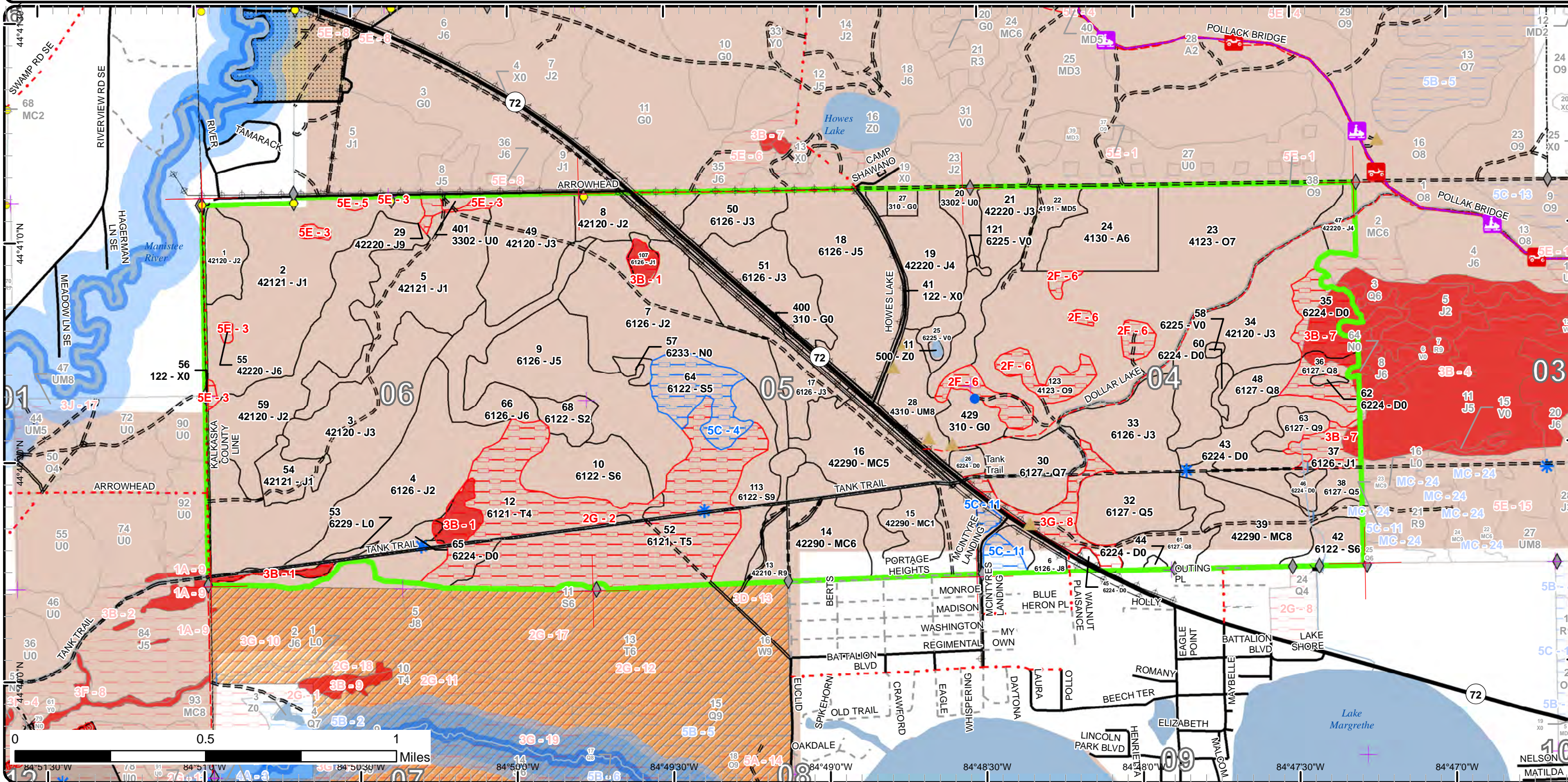


# Special Conservation Areas & Site Conditions Map

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- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Powerline
- Fence
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 3G: Other Influence zones - See comments
- 5E: Long-Term Retention
- Stand Boundaries
- Ecological Reference Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Eastern Massasauga Managed Land
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Research, Development, and Military Lands
- State Forest Campground
- ★ Camp Grayling Monitoring Wells
- ★ Camp Grayling Safety Marker
- Camp Grayling Firing Point
- ✕ Camp Grayling Gates
- Camp Grayling Fence
- Camp Grayling Tank Trail
- Camp Grayling Range Area



84°51'30" W
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84°49'30" W
84°49'00" W
84°48'30" W
84°48'00" W
84°47'30" W
84°47'00" W
NELSON  
MATILDA

# Report 1 – Total Acres by Cover Type and Age Class

Grayling Mgt. Unit

Compartment 181 Year of Entry 2020

Joan Charlebois : Examiner



## 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	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	37
Bog	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Herbaceous Openland	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Jack Pine	0	158	0	221	372	44	108	0	9	67	0	4	0	0	0	0	0	0	983
Low-Density Trees	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	104	0	0	0	0	19	0	0	0	0	0	0	123
Lowland Shrub	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Lowland Spruce/Fir	0	0	0	0	0	9	0	12	25	25	30	0	0	0	0	0	0	0	101
Marsh	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Mixed Upland Deciduous	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Natural Mixed Pines	0	0	0	16	0	0	33	38	0	0	0	96	0	0	0	0	0	0	183
Oak	0	0	0	0	0	0	0	0	0	0	0	192	0	0	0	0	0	0	192
Red Pine	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	14
Tamarack	0	0	0	0	0	0	0	0	0	0	96	0	57	0	0	0	0	0	153
Treed Bog	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	21
Urban	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	<b>143</b>	<b>158</b>	<b>0</b>	<b>237</b>	<b>420</b>	<b>53</b>	<b>245</b>	<b>50</b>	<b>34</b>	<b>92</b>	<b>147</b>	<b>311</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1959</b>



## Report 2 – Treatment Summary

Grayling Mgt. Unit

Year of Entry: 2020

Acres of Harvest

Compartment 181

Total Compartment Acres: 1,959

Commercial Harvest - 484  
 Harvests with Site Condition - 0  
 Next Step Harvest - 0  
 Habitat Cut - 0

### Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Jack Pine	134	0	0	0	4	0	0	0	0	138
Lowland Conifers	0	0	0	0	20	0	0	0	0	20
Lowland Spruce/Fir	55	0	0	0	0	0	0	0	0	55
Natural Mixed Pines	44	0	0	0	32	0	0	0	0	76
Oak	0	0	0	0	0	0	162	0	0	162
Red Pine	15	0	0	0	0	0	0	0	0	15
Upland Mixed Forest	0	0	0	0	18	0	0	0	0	18
<b>Total</b>	<b>248</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74</b>	<b>0</b>	<b>162</b>	<b>0</b>	<b>0</b>	<b>484</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	484	0	0	0	0	0	0	12	0	497
Next Step	0	59	59	0	0	59	543	0	0	718
<b>Total</b>	<b>484</b>	<b>59</b>	<b>59</b>	<b>0</b>	<b>0</b>	<b>59</b>	<b>543</b>	<b>0</b>	<b>12</b>	<b>1215</b>



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
6	72181006-shwd	3.9	6126 - Lowland Jack Pine	Sawtimber Medium	105	51-80	Harvest	Shelterwood	6127 - Lowland Pine	Two-Aged	Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription Harvest merch stems except WP & RP. Chipping may be restricted on this low ground but slash height will be managed to reduce visual impact.  
Specs:

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

Acceptable Regen: A mix of WP, JP, spruce & fir at low stocking during the initial re-inventory regen survey. This lowland ground will need an extended regen period to reach moderate stocking.

Other Comment: Operable dry summer or frozen winter. Summer would be preferable to achieve scarification.

Proposed Start Date: 10/1 /2019

9	72181009-ccr	65.1	6126 - Lowland Jack Pine	Poletimber Medium	88	81-110	Harvest	Clearcut with Retention	6125 - Lowland Black Spruce, Jack Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Final harvest merch stems except WP. Cut oak 2"+ DBH. For retention, buffer the adjacent marsh stand 57 and focus any needed additional island(s) to exclude the lowest ground. Roundwood operation required. All tops must be left scattered for regeneration purposes.

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

Acceptable Regen: A mix of JP-WP-Spruce at low stocking during the initial re-inventory regen survey. This lowland ground will need an extended regen period to reach moderate stocking.

Other Comment: Operable dry summer or frozen winter. Dry summer preferred for scarification and seed dispersal. Note that there are small inclusions of this type's overmature JP in the adjacent younger stands.

Proposed Start Date: 10/1 /2019

10	72181010-ccr	29.6	6122 - Black Spruce	Poletimber Well	94	51-80	Harvest	Clearcut with Retention	6125 - Lowland Black Spruce, Jack Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Final harvest merch stems except the supercanopy WP. Exclude for retention the lowest ground. Roundwood operation required. All tops must be left scattered for regeneration purposes.

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

Acceptable Regen: A mix of Spruce, JP & WP at low stocking during the initial re-inventory regen survey. This lowland ground will need an extended regen period to reach moderate stocking.

Other Comment: Operable dry summer or frozen winter. Dry summer preferred for scarification and seed dispersal.

Proposed Start Date: 10/1 /2019

13	72181013-cc	14.5	42210 - Natural Red Pine	Sawtimber Well	111	111-140	Harvest	Clearcut	42110 - Planted Red Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Final harvest 1"+ DBH. No retention due to long narrow stand and follow-up planting. Apply low stumps and chipping specs.  
Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Pesticide, (Inactive)Skidder/Mechanical; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)  
Treatments:

Acceptable Regen: Full stocking in planted RP

Other Comment: Follow up with mechanical and chemical treatments as needed to prepare the stand for planting and ensure RP establishment.

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
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14	72181014-cc	6.2	42290 - Natural Mixed Pine	Poletimber Well	51	51-80	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Final harvest 1"+ DBH, no retention in this portion of the stand. Apply low stumps and chipping specs. Treat concurrent with that portion of stand 16 north of the tank trail.  
Specs:

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

Acceptable full stocking in planted RP  
Regen:

Other Follow up with mechanical and chemical treatments as needed to prepare the stand for planting and ensure RP establishment.  
Comment:

Proposed Start Date: 10/1 /2019

16	72181016-cc	37.8	42290 - Natural Mixed Pine	Poletimber Medium	101	51-80	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Final harvest 1"+ DBH, no retention in this portion of the stand. Apply low stumps and chipping specs. Treat concurrent with that portion of stand 14 north of the Tank Trail.  
Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Pesticide, (Inactive)Skidder/Mechanical; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)  
Treatments:

Acceptable full stocking in planted RP  
Regen:

Other Follow up with mechanical and chemical treatments as needed to prepare the stand for planting and ensure RP establishment.  
Comment:

Proposed Start Date: 10/1 /2019

16	72181016- shwd	32.2	42290 - Natural Mixed Pine	Poletimber Medium	101	51-80	Harvest	Shelterwood with Retention	42290 - Natural Mixed Pine	Two-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Harvest merch stems except WO, WP & RP. Chipping is optional but slash height will be managed to reduce visual impact.  
Specs:

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

Acceptable WP, JP & RP at moderate stocking with minor RM & oak components. A longer timeframe to achieve that regeneration will be needed.  
Regen:

Other  
Comment:

Proposed Start Date: 3 /26/2018

18	72181018-ccr	69.2	6126 - Lowland Jack Pine	Poletimber Medium	50	51-80	Harvest	Clearcut with Retention	6126 - Lowland Jack Pine	Two-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Harvest the merchantable JP and all oak. For retention, exclude the polygon east of Howes Lake Road. Consider placing another island toward the stand's south end, encompassing some of the younger JP age class. Roundwood operation required. All tops must be left scattered for regeneration purposes but slash height will be managed to reduce visual impact.  
Specs:

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

Acceptable A mix of JP, WP and Spruce at low stocking during the initial re-inventory regen survey. This lowland ground will need an extended regen period to reach moderate stocking.  
Regen:

Other Operable dry summer or frozen winter conditions. Dry summer would be preferable for scarification.  
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
23	72181023-or	162.2	4123 - Red Oak	Sawtimber Poor	103	1-50	Harvest	Overstory Removal	4199 - Other Mixed Upland Deciduous	Two-Aged	Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription Second cut in the shelterwood system: remove the mature oak overstory, excluding the retention islands left in the original shelterwood harvest.

Specs: Also consider excluding the strip between the two largest retention islands in the stand's southwest and adding an island in the northeast. Chipping will not be required.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, RM & oak (20%) at moderate stocking.

Regen:

Other Potential green-up concern with adjacent comp 180 stand 27 (being harvested March 2018).

Comment:

Proposed Start Date: 10/1 /2019

28	72181028-shwd	18.3	4310 - Pine, Oak Mix	Sawtimber Medium	98	51-80	Harvest	Shelterwood	42290 - Natural Mixed Pine	Two-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Harvest merch stems except WO, RP & WP. Chipping is optional but slash height will be managed to reduce visual impact.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Moderate stocking in WP, JP & RP with a minor oak component. A longer timeframe to achieve that regen will be needed.

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

61	72181061-shwd	20.0	6127 - Lowland Pine	Sawtimber Medium	107	51-80	Harvest	Shelterwood	6126 - Lowland Jack Pine	Two-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Harvest the merch JP and all NPO. Exclude a tree-length buffer around the bog stand 44. Consider incorporating peninsulas of stand 39, as

Specs: approximated by the draft treatment boundary. Roundwood operation required. All tops must be left scattered for regeneration purposes but slash height will be managed to reduce visual impact.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable A mix of WP-JP-RP-Spruce at low stocking during the initial re-inventory regen survey. This lowland ground will need an extended regen period to reach moderate stocking.

Regen:

Other Dry summer or frozen winter operations recommended.

Comment:

Proposed Start Date: 10/1 /2019

113	72181113-cc	25.3	6122 - Black Spruce	Sawtimber Well	76	81-110	Harvest	Clearcut	6125 - Lowland Black Spruce, Jack Pine	Even-Aged	Draft Field Boundary
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**Habitat Cut: No**

**Site Condition:**

Prescription Harvest merch stems except the NWC. No retention due to long narrow stand. Include WP in the west redline to be maintained for seed

Specs: source. Keep open the option to mark additional supercanopy WP to leave within the harvest area. Roundwood operation required. Tops must be left scattered for regeneration purposes.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable A mix of Spruce and pine at low stocking during the initial re-inventory regen survey. This lowland ground will need an extended regen period to reach moderate stocking.

Regen:

Other Operable dry summer or frozen winter. Frozen winter is preferable for scarification.

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
429	72181429-NF	12.3	310 - Herbaceous Openland	Nonstocked			NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription Work with the Military to sign, re-vegetate and limit access to the former Dollar Lake sand pit hill. Off-road use is creating erosion on the hillside.  
Specs:

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date: 10/1 /2018

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**Total Treatment Acreage Proposed: 496.6**

## Report 4 – Site Conditions

Grayling Mgt. Unit  
Joan Charlebois : Examiner

Compartment: 181  
Year of Entry: 2020

### Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions								
		With Condition	Not Available		5C	MC	1A	2F	2G	3B	3G	5E	
37	37	0	0	Aspen									
8	8	0	0	Bog									
24	24	0	0	Herbaceous Openland									
983	958	0	25	Jack Pine	0				0	16	0	9	
10	10	0	0	Low-Density Trees								0	
122	110	0	12	Lowland Conifers		0				12	0		
5	2	0	3	Lowland Shrub						3			
101	76	25	0	Lowland Spruce/Fir	25				0				
3	3	0	0	Marsh	0								
11	11	0	0	Mixed Upland Deciduous									
183	158	8	17	Natural Mixed Pines	8	0					17		
192	162	0	30	Oak				30					
15	15	0	0	Red Pine									
153	0	0	153	Tamarack	0				146	7			
60	40	0	20	Treed Bog						20	0		
21	21	0	0	Upland Mixed Forest									
31	31	0	0	Urban	0		0			0		0	
1	1	0	0	Water									
1,959	1,666	32	260	Total Forested Acres	32	0	0	30	146	58	18	9	
	85%	2%	13%	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	3B: Threatened, endangered, and special concern species	16	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
One of several polygons that comprise the Wet-Mesic Sand Prairie ERA. The natural community extent was significantly refined by MNFI after their 2016 re-survey of the site.							

## Report 4 – Site Conditions

Grayling Mgt. Unit

Joan Charlebois : Examiner

Compartment: 181

Year of Entry: 2020

2	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	146	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Stand is on flooded ground with a shallow root mat. West end of stand is within an ERA.							
3	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	8	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Designated retention left when stands 2 & 5 were final harvested in 2012 (#613-10).							
4	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	25	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> The spruce is two-aged, some areas majority sapling, with pockets of mature poles. Areas of the stand not much above treed bog status, a mosaic of flooded ground. Let the younger spruce develop more before harvesting.							
5	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	1	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Designated retention left when stands 2 & 5 were final harvested in 2012 (#613-10).							
6	<b>Unavailable</b>	<b>2F: Too steep</b>	30	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> These islands within stand 23's shelterwood harvest (#039-00) were excluded due to steep slopes.							
7	<b>Unavailable</b>	<b>3B: Threatened, endangered, and special concern species</b>	43	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Intermittent Wetland ERA extends into the east side of these stands.							

## Report 4 – Site Conditions

Grayling Mgt. Unit  
Joan Charlebois : Examiner

Compartment: 181  
Year of Entry: 2020

8	<b>Unavailable</b>	<b>3G: Other Influence zones - See comments</b>	18	Unspecified	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> Narrow peninsulas of stand 16 between M-72, bog stands and previously harvested lowlands.</p>							
11	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	8	Unspecified	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> Exclude these hilltops from stand 16's harvest, partly due to slope, also for visual management.</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

**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.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42120 - Planted Jack Pine	Sapling Medium	14.0	25	Immature	J6 stand was final harvested in 1990 (#029-00), cutting merch stems. It was then roller-chopped and hand seeded by 1992 (C72-246). Poor recruitment from the seeding prompted trenching and planting in 1994. NPO stump sprouts extend above the planted JP.
2	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Poor	87.2	6	Immature	Two-aged JP stand with increasing mortality in the overmature component was final harvested in 2012 (#613-10), cutting stems 2"+ DBH except RP-WP-O, and island retention. Was trenched in 2012 (C72-721), and planted to JP in 2013. Yr 3 regen survey found 676 planted JP and 805 volunteer BC-JP-O per acre; was flagged for potential replant due to borderline stocking. 2018 field inventory found adequate stocking across a majority of the stand. Passes regen survey to JP M.O.
3	42120 - Planted Jack Pine	Sapling Well	97.0	34	1-50	Most of the stand (excluding the NW 10 acres) was final harvested in 1982 (#109-80A), cutting merch stems. Small patches of residual JP & WP poles are scattered across the stand. The stand was trenched, and 20 acres were recorded as planted in 1985 (C72-145), part of an ongoing planting expected to continue for several years. A later note indicated the FTP was cancelled in 1990. Moving south and east through the stand, the ground gets lower, with more JP established between rows than down in the trenches, and the groundcover shifts from blueberry to sheep laurel and traces of leatherleaf. The majority lowland portion of the treatment area was split off as strand 4.
4	6126 - Lowland Jack Pine	Sapling Medium	78.9	37	1-50	Most of the stand was final harvested in 1982 (#109-80A), cutting merch stems. The stand was trenched, and 20 acres were recorded as planted in 1985 (C72-145), part of an ongoing planting expected to continue for several years. A later note indicated the FTP was cancelled in 1990. More of the stand recruited naturally than established from the FTP. This was part of the same harvest as stand 3, but is on majority low ground. JP seeded in over leatherleaf & sheep laurel. Cover gets sparser to the south & east where the ground is flooded more of the year.
5	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Poor	58.6	6	Immature	Two-aged JP stand with overmature & immature components was final harvested in 2012 (#613-10), cutting stems 2"+ DBH except RP-WP-O, and island retention. Was trenched in 2012 (C72-721), and planted to JP in 2013. Southeast portion of the stand has a seasonal high water table; the planted JP is not developing as fast there, but more JP volunteers are present on that ground to help fill in. Yr 3 regen survey found 676 planted JP and 805 volunteer BC-JP-O per acre; was flagged for potential replant due to borderline stocking. 2018 field inventory found adequate stocking across a majority of the stand. Passes regen survey to JP M.O.
6	6126 - Lowland Jack Pine	Sawtimber Medium	3.9	105	51-80	Dead JP and marked trees were salvaged in 1967 (#141-66). Overmature JP with WP-RP, growing mainly on Kinross muck. Seasonal high water table, leatherleaf and sheep laurel common. Operable dry summer or frozen winter.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
7	6126 - Lowland Jack Pine	Sapling Medium	77.8	35		J5 stand was final harvested in 1982 (#107-80A), cutting merch stems. Most of the stand was then furrow-seeded in 1984 (C71-210). Where the ground wasn't as wet, there is excessive stocking within rows. On the lower ground, more JP established between the rows than within the trenches. The ground gets wetter moving south and east, with increasing sheep laurel and leatherleaf. Areas with primarily leatherleaf have the poorest stocking.
8	42120 - Planted Jack Pine	Sapling Medium	19.7	27	Immature	J6 stand was final harvested in 1991 (#035-90), cutting stems 2"+ DBH. Was roller-chopped in 1991 (C72-275) and hand seeded in 1992. Resulting JP regen consists of excessively stocked swaths with poorly-stocked, open-grown cover in between. Groundcover is grass and blueberry with patches of sheep laurel and leatherleaf.
9	6126 - Lowland Jack Pine	Poletimber Medium	66.7	88	81-110	Most of the stand is on Kinross muck, with a narrow ridge of Croswell sand in the southeast. Overmature JP poletimber growing over leatherleaf. Operable with dry summer or frozen winter conditions. Increasing top-mortality & root-tip. Canopy closure drifts off either end of the 50-75% category. In th north, JP regen is filling in where the canopy has broken up the most; spruce regen is heaviest in the south. Stand picks up most of its canopy spruce there also. The drier southeast peninsula has some surviving NPO; WP filling in well there.
10	6122 - Black Spruce	Poletimber Well	29.6	94	51-80	Black spruce with occasional overmature JP & xlog WP scattered above. Spruce & some WP regen filling in. The more flooded areas of the stand have sparser, less well developed spruce cover.
12	6121 - Tamarack	Poletimber Poor	57.4	119	1-50	Marginal tamarack stand with NWC-BS-JP mixed in. Growing on flooded ground with tag alder, marsh grass & areas of leatherleaf. Occasional off-site WP.
13	42210 - Natural Red Pine	Sawtimber Well	14.5	111	111-140	Eleven acres of the stand were thinned in 2006 (#657-05), cutting marked stems and all RM-JP, to an ave cruised residual of 80-90 sq. ft. The stand's bottleneck just north of the tank trail was not treated because it was at or below the Rx target BA already. Clean RP & WP saw & poles, relatively open below. Most of the stand was previously thinned in 1974 (#021-72) cutting merch JP-BS and marked RP-WP, and in 1961 (#023-61) cutting marked JP. WP branch flagging study plot just north of the tank trail.
14	42290 - Natural Mixed Pine	Poletimber Well	33.3	51	51-80	Most of the stand was shelterwood harvested in 1991 (#047-90), cutting stems 2"+ DBH except green-marked (mainly xlog RP), oak >10" DBH, and RP-WP saplings. RM-WP regen from the cut is now intermediate in the main canopy of immature residual WP-RP. Xlog RP-WP-NPO forms a supercanopy layer. The NPO has largely died out. Branch flagging still present in the WP but not worsening. Residual xlog RP is heavier on the north & west sides.
15	42290 - Natural Mixed Pine	Sapling Poor	15.9	28	1-50	Was final harvested in 1991 (#047-90), cutting stems 2"+ DBH. Main canopy of JP-WP regen from the cut with stocky open-grown WP-RP saw residual. Oak & RM stump sprouts on the perimeter. Upland with an inclusion of Kinross muck at the north end; leatherleaf & sheep laurel there.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	42290 - Natural Mixed Pine	Poletimber Medium	95.5	101	51-80	Dead JP and 12"+ DBH JP were salvaged across most of the stand south of M-72 in 1967 & 1968 (#034-67 & #025-68). North of M-72 had similar salvages in 1966 & 1967 (#140-66, #141-66, #001-67). Extensive mortality in the NPO. The overmature JP is top-dying. There is a younger JP pole component (cored 50 years), but did not average that with the majority older JP component (100 yrs). Stand has been filling in with WP. Still some WP branch flagging but not worsening. Canopy drifts of either end of the 50-75% closure category. Uneven species distribution. Most of the WO is on the hill east of McIntyre Landing Rd. WP branch flagging study plot just north of the tank trail.
17	6126 - Lowland Jack Pine	Sapling Well	26.9	27	Immature	J5 stand was final harvested in 1991 (#035-90), cutting stems 2"+ DBH. Was roller-chopped in 1991 (C72-275) and hand seeded in 1992. Resulting stocking is variable, with alternating swaths of excessive- and under-stocked JP. The plantation is on a mosaic of slightly higher ground (grass/blueberry cover), lower ground (sheep laurel), and flooded ground (leatherleaf). Traces of NPO stump sprouts, WP & spruce.
18	6126 - Lowland Jack Pine	Poletimber Medium	71.3	50	51-80	Salvage harvests in 1967 & 1968 (#142-66 & #025-68) cut standing dead JP along with some sawlog JP across most of the stand. The stand has two main canopy age classes: small pole/lg saps 40-50 years old & large pole/small saw around 100 years old. This 2-aged condition can't be reflected due to a current MiFI "rule". Distribution tends to be in pockets of a single age class. Scattered WP, RP, oak & spruce. Stand is on a mosaic of upland, intermediate & low ground, with groundcover ranging from blueberry and brackenfern to sheep laurel and leatherleaf. Mortality in the overmature JP & NPO. Set stand age to the younger pole component. Did not average in the overmature JP; would result in a meaningless number, unrepresentative of the two main age classes out there.
19	42220 - Natural Jack Pine	Poletimber Poor	32.7	48	1-50	Most of a mixed pine-oak stand was harvested in 2002 (#033-00), cutting merch JP-RP and leaving all oak. A two-chain strip on the current stand's east edge & the 2-acre square east of the ball diamond were not within the harvest boundary. FTP C72-580 was submitted in 2007 for trenching and planting JP in under-stocked areas, but was not carried out due to seasonal high water table concerns. Stand is variable, with pockets of J5, breaking up NPO, scattered WP, and large canopy gaps with J1-J3. The lowest ground has sheep laurel and the best JP regen. Next YOE, that subcanopy JP will likely be recordable in the canopy, moving the stand into the 50-75% crown closure category.
21	42220 - Natural Jack Pine	Sapling Well	30.8	28	1-50	J5 stand was final harvested in 1991 (#031-90), cutting merch stems. A quarter of the volume was NPO. The naturally-established regen is a mosaic of over- and under-stocked JP, with the heaviest stocking along skid trails. Stump-sprout oak, cherry and traces of RM are concentrated on the east side; most of the residual RP-WP is there also. Ground driest on the east side, gets closer to the water table moving west. Micro leatherleaf bog inclusions.
22	4191 - Mixed Upland Deciduous with Conifer	Poletimber Medium	10.5	38	51-80	Was final harvested in 1981 (#119-80A), cutting merch stems, followed by FTP W71-141 to manually cut the remaining stems 1"+ DBH. Primarily NPO stump sprouts, followed by RM, WO, and some aspen & BRO mixing in along the E edge. The NPO stump clumps haven't self-thinned as well as the better oak up the hill. Scattered limby RP-WP-JP.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4123 - Red Oak	Sawtimber Poor	162.2	103	1-50	Was shelterwood harvested between 2002 and 2005 (#039-00), cutting A-RM-JP 2"+ DBH & unmarked merch oak; cruised ave 30 BA. Epicormic branching common. NPO concentrated on the perimeter flats has been breaking up; most of the WP & traces of JP occur there also. A few scattered RP, mostly supercanopy. On hilly to steep terrain, with the steepest slopes excluded from harvest (now stand 123). Regen from the cut includes RM & oak stump sprouts and aspen (BTA, traces of QA). Vigorous oak stump sprouts well above the browse line. Seedling layer browsed heavier.
24	4130 - Aspen	Poletimber Well	37.3	38	51-80	Was final harvested in 1981 (#119-80A), cutting merch stems, followed by FTP W71-141 to manually cut the remaining stems 1"+ DBH. BTA with vigorous oak stump sprout canopy codominants. Oak weeding down to 3 or fewer stems per clump. RM further behind in development. Stand has inclusions that are heavier to RM-oak than aspen. On rolling hills.
28	4310 - Pine, Oak Mix	Sawtimber Medium	20.9	98	51-80	Dead merch JP and marked live JP were harvested in 1967 (#004-67). Mixed oak-pine stand on Grayling sand ridge, traces of leatherleaf in the valleys. Small wetland inclusion in the far SE corner rimmed with balsam poplar & QA. The stand's WO has decent vigor, but the NPO has been breaking up. JP is a mix of overmature saw and younger small poles. WP filling in heaviest along M-72; flagging noted last YOE hasn't progressed much.
29	42220 - Natural Jack Pine	Sawtimber Well	7.1	73	81-110	Retention islands left when stands 2 & 5 were final harvested in 2012. Multiple age classes of JP present, from immature to overmature, with increasing mortality in the older JP and scattered NPO.
30	6127 - Lowland Pine	Sawtimber Poor	27.9	54	1-50	Most of the stand was harvested in 2002 (#033-00), cutting merch JP-RP and leaving all oak. FTP C72-580 was submitted in 2007 for trenching and planting JP in under-stocked areas but was not carried out due to the seasonal high water table. Variable distribution in small saw WP, and WP & JP small pole /large sap resid from the cut. Declining NPO on the drier ground. JP regen from the cut established best on the lower ground; will likely be recordable in the canopy next YOE, bringing the crown closure into the 50-75% category. Groundcover is leatherleaf & sheep laurel.
32	6127 - Lowland Pine	Poletimber Medium	29.4	59	51-80	Was final harvested in 1981 (#129-80A), spec'd to cut merch stems. Two-aged mixed pine stand: about equal representation in open-grown residual WP & RP small saw/poles and JP poles/saplings. JP regen unevenly distributed. Canopy closure drifts of either ends of the 50-75% category; not much above treed bog on the lowest ground; on the perimeter high ground there is dense RP-WP cover, NPO stump sprouts from the harvest, and traces of mature NPO. WP was showing flagging last YOE but it hasn't gotten worse.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
33	6126 - Lowland Jack Pine	Sapling Well	31.9	23	Immature	Most of the stand was final harvested in 1991 (#038-90), cutting merch stems except oak. It was roller-chopped later in 1991 (C72-274) for slash/seed dispersal. Natural regen was found to be inadequate across portions of the stand, so 18 acres were trenched and seeded in 1996, resulting in excessive stocking within rows. JP established naturally across much of the remainder. The pockets of JP saw/pole residual were left on the lowest ground. WP residual has open-grown form. Breaking up NPO occupies the drier ground. Second age estimate drawn from adjacent stand 23.
34	42120 - Planted Jack Pine	Sapling Well	58.9	36	51-80	Was final harvested in 1981 (#73-80A), cutting merch stems, then trenched and planted to JP in 1983 (C71-246), avoiding pockets of residual WP. JP partially transitioned into the pole class. Co-dominant oak stump sprouts. On shallow-rolling terrain with forested low ground inclusions on the S & E sides.
36	6127 - Lowland Pine	Sawtimber Medium	12.0	59	51-80	Mixed pine stand on ground that's at or near the water table. Sheep laurel & leatherleaf groundcover. White pine component has been increasing as the overmature JP & NPO senesce; multiple age/size classes of WP present. N & E part of the stand within an intermittent wetland ERA.
37	6126 - Lowland Jack Pine	Sapling Poor	11.0	42	1-50	Was part of a larger area (mainly in comp 204) that was final harvested by 1977 (#027-74A), spec'd to cut merch JP-A-HW's, and a minor amount of WP-RP saw. JP established on mainly leatherleaf bog. Variable stocking, J3 to D. Slowly moving into the pole class; a majority of the stems are still sub-merch. JP on the slightly drier ground is further into the pole class. Occasional WP, BS & RP.
38	6127 - Lowland Pine	Poletimber Medium	14.3	53	51-80	WP with spruce, RP & overmature JP, growing on Kinross muck. Broadly 2-aged except in the JP. WP regen establishing in the stand's large canopy gaps. Some branch flagging on the WP.
39	42290 - Natural Mixed Pine	Sawtimber Medium	38.3	61	51-80	Mixed pine stand on mostly dry ground. Extensive mortality in the NPO. Overmature JP top-dying. RP-WP in the ascendancy. WP is filling in below, with some branch flagging. In the 1960's, Fisheries Division constructed an earthen berm with a 6' tall concrete water control structure in order to create a pike marsh. The old boards are rotted and thrown off to the side; the concrete portion is in good shape. Water flowing south of the structure enters an engineered channel that crosses onto private and appears to empty into M-72's north ditch, which then drains through a culvert into Lake Margrethe.
42	6122 - Black Spruce	Poletimber Well	11.7	63	81-110	Black spruce with cull RM, PB & NWC associates, and small amounts of WP-RP-fir-tamarack. A narrow stream bisects the stand, flowing in a channel dug south of a water control structure. The RP-WP are mainly on the stand's drier NE edge.
47	42220 - Natural Jack Pine	Poletimber Poor	8.1	57	1-50	Extensive mortality in the NPO, a lot of DWD. Patches of JP & WP pole cover kept the stand above the non-forested benchmark. Lesser component of overmature JP mixed in. Picks up some transition ground on the south edge. NPO age estimate drawn from adjacent stand 23.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
48	6127 - Lowland Pine	Sawtimber Medium	12.0	58	51-80	Was within the same harvest as stand 34 in 1981 (#73-80A), cutting merch stems, but this stand was excluded from the 1983 planting. On ground with a seasonal high water table. Variable distribution in WP residual and JP regen & residual. Groundcover varies between sheep laurel & leatherleaf. Set JP age to post-harvest, but the merch+ cutting specs made for two-aged conditions within and between species.
49	42120 - Planted Jack Pine	Sapling Well	39.9	36	1-50	J6 stand was final harvested in 1981 (#72-80A), cutting merch stems. Most of the stand was furrow-seeded by 1983 (C71-211). Where the ground wasn't as wet and a lot of seeds took, there is excessive stocking within rows. Where it is wetter, there are more JP between the rows than within the trenches. Ground gets wetter moving to the south and east. On dryer ground jack pine has more in pole class.
50	6126 - Lowland Jack Pine	Sapling Well	19.5	35	1-50	J5 stand was final harvested in 1982 (#107-80A), cutting merch stems. Most of the stand was then furrow-seeded to JP in 1984 (C71-210). Excessive stocking common on all but the wettest ground. Traces of residual WP & spruce. Groundcover is primarily sheep laurel & leatherleaf. Seasonal high water table.
51	6126 - Lowland Jack Pine	Sapling Well	29.7	27	Immature	J5 stand was final harvested in 1991 (#035-90), cutting stems 2"+ DBH. Was roller-chopped in 1991 (C72-275) and hand seeded in 1992. Resulting stocking is variable, with alternating swaths of excessive- and under-stocked JP. The plantation is on a mosaic of slightly higher ground (grass/blueberry cover), transition ground (sheep laurel), and low ground (leatherleaf). Traces of NPO stump sprouts, WP & spruce.
52	6121 - Tamarack	Poletimber Medium	95.6	93	51-80	Tamarack growing on flooded ground above tag alder & marsh grass. The bands of slightly drier ground are occupied by NWC &/or spruce
54	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Poor	12.3	6	Immature	Two-aged JP stand with increasing mortality in the overmature component was final harvested in 2012 (#613-10), cutting stems 2"+ DBH except RP-WP-O. Was trenched in 2012 (C72-721), and planted to JP in 2013. Minor amount of gall rust present. Fair amount of terminal leader weevil damage (locally up to 20% of JP affected). BC stump sprouts currently above the J3, but likely will be surpassed by the JP over time, as seen in adjacent older plantations. Yr 3 regen survey in 2016 found 676 planted JP and 805 volunteer BC-JP-O per acre; was flagged for potential replant due to borderline stocking. 2018 field inventory found adequate stocking across a majority of the stand. Passes regen survey to JP M.O.
55	42220 - Natural Jack Pine	Poletimber Well	1.9	73	51-80	Retention islands left when stand 2 was final harvested in 2012. Multiple age classes of JP present, from immature to overmature, with increasing mortality in the older JP and scattered NPO.
59	42120 - Planted Jack Pine	Sapling Medium	63.3	27	Immature	J6 stand was final harvested in 1990 (#029-00), cutting merch stems. It was then roller-chopped and hand seeded by 1992 (C72-246). Small clumps of JP pole residual from the cut are scattered above the alternating dense swaths of seeded-in JP and sparse strips in between.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
61	6127 - Lowland Pine	Sawtimber Medium	18.7	107	51-80	Split off from stand 39 due to majority low ground. Overmature JP with RP-WP. NPO on the slightly higher ground has largely died out. The old JP is top-dying. WP filling in the large canopy gaps.
63	6127 - Lowland Pine	Sawtimber Well	7.9	52	81-110	Was part of a larger area (mainly in comp 204) that was harvested by 1977 (#027-74A), spec'd to cut merch JP-A-HW's, and a minor amount of WP-RP saw. On slightly less flooded ground than the surrounding stands. Supercanopy WP and RP above the main canopy of younger pole-log WP. WP saps filling in below. The east third was cut more cleanly, with majority younger WP & spruce there. Could not reflect the younger WP's split Pole/Log size in the canopy table due to a current MIFI error.
64	6122 - Black Spruce	Poletimber Medium	24.7	84	51-80	Black spruce with JP on partially flooded bog ground. Canopy closure drifts off ether end of the 50-75% category; some patches not much above treed bog cover, spruce poles 2+ aged. Pockets of NWC on drier ground in the southeast. Scattered off-site WP-RP.
66	6126 - Lowland Jack Pine	Poletimber Well	29.1	52	1-50	The north half of the stand is on AuGres sand, the rest on Kinross muck. Small pole/large sap JP with WP-BS increasing to the south. The low-density overmature JP scattered above (singly and in small pockets) has been dying out. Ground more flooded to the south; sapling proportion increases & canopy is more open.
68	6122 - Black Spruce	Sapling Medium	9.3	48	1-50	Some mature JP & spruce scattered above, but the main canopy is large sap/small pole BS-JP-WP. Growing on wetter ground than stand 9.
107	6126 - Lowland Jack Pine	Sapling Poor	5.0	26	Immature	Was part of a larger area (stand 7) that was final harvested in 1982 (#107-80A), cutting merch stems. The stand was then furrow-seeded in 1984 (C71-210) but there was poor survivorship due to the saturated ground. Most of the current JP sapling cover filled in naturally since the harvest and scarification. Full cover is low shrubs (leatherleaf & sheep laurel).
113	6122 - Black Spruce	Sawtimber Well	25.3	76	81-110	The south half of the stand was thinned in 1974 (#021-72), cutting merch JP-BS and marked RP-WP, and in 1961 (#023-61), cutting marked JP. Black spruce poles with variable distribution in WP-RP sawtimber above. Growing on Kinross muck with water table at or near the surface. RP fading, tufted crowns. WP not as stressed by the high water table but have some thin crowns and epicormic branching. Spruce cored 65-85 years old, ave 75. Overmature JP on the east edge. Traces of NWC, tamarack & PB.
123	4123 - Red Oak	Sawtimber Well	29.7	101	81-110	This stand is made up of the leave islands within stand 23's shelterwood harvest (#039-00) that were excluded due to steep slopes. RO & WO with overmature BTA and intermediate RM. Some of the islands contain small former borrow pits. Estimate drawn from previous inventory age and stand 23's current age.



Stand	Cover Type	Acres	Managed Site	General Comments:
11	500 - Water	1.0	No	Small pond within bog stand 25.
20	3302 - Low Density Conifer Trees	8.1	No	Stand of immature to overmature JP was final harvested in 2012 (#613-10), cutting merch stems except RP-WP-WO. Natural regen objective (JP) and longer timeframe were preferred over planting because of the seasonal high water table. JP slowly seeding in over mainly sheep laurel, some leatherleaf, with BC on the drier perimeter. WP-RP-JP seed trees scattered across the stand. Follow-up site prep work not recommend, given the seasonal high water table and planting risks. Current LDT condition accepted at Comp Review.
25	6225 - Bog	6.0	No	Leatherleaf bog with patches of open water marsh. There is an island of slightly higher ground in the middle with spindly off-site JP & WP, and spruce. Encompasses a small pond at the south end.
26	6224 - Treed Bog	3.7	No	Leatherleaf bog with sub-acre lens of open water (Dollar Lake?). Colonizing WP-JP-spruce cover, heaviest at the water's edge.
27	310 - Herbaceous Openland	3.6	Yes	The State Military Board issued a Special Use Permit to Michigan DSS - Camp Shawano in 1994 for development of a recreational field. The site was clearcut the same year (#056-94-02). Baseball diamond with backstop. Grass, knapweed and encroaching JP.
35	6224 - Treed Bog	18.4	No	Leatherleaf bog steadily being colonized by JP-WP-tamarack-spruce; close to forested benchmark. Sub-acre spruce island in the southeast. Two-thirds of the stand is within an intermittent wetland ERA, with the majority of that natural community mapped within adjacent comp 204.
41	122 - Road/Parking Lot	25.8	No	M-72, Howes Lake Road and McIntyre Landing Road cleared corridors.
43	6224 - Treed Bog	23.9	No	Leatherleaf bog with colonizing JP-WP-BS. Patches of open marsh. Was part of a larger area (mainly in comp 204) that was final harvested by 1977 (#027-74A), spec'd to cut merch JP-A-HW's, and a minor amount of WP-RP saw. Dissected by former railroad grades and a channel dug to drain south to a water control structure in stand 39.
44	6224 - Treed Bog	1.1	No	Leatherleaf bog with colonizing WP-JP.
45	6224 - Treed Bog	1.0	No	Leatherleaf bog with scattered JP, perimeter WP.
46	6224 - Treed Bog	4.2	No	Leatherleaf bog with colonizing WP. A channel was dug through this stand to a water control structure in stand 39.
53	6229 - Mixed lowland shrub	4.9	No	Was part of a larger area (stands 3 & 4) that was final harvested in 1982 (#109-80A), cutting merch stems. It was then trenched for the subsequent 1985 planting area (C72-145), but remains non-stocked due to the seasonal high water table and flooding. Leatherleaf groundcover with tag alder, salix, Cal can. and scattered JP regen
56	122 - Road/Parking Lot	5.1	No	Cleared county road corridor.





Stand	Cover Type	Acres	Managed Site	General Comments:
57	6233 - Wet Meadow	3.0	No	Marsh with emergent grasses, patches of jack pine tree cover, surrounded by dense leatherleaf cover.
58	6225 - Bog	1.1	No	Leatherleaf bog with colonizing JP-WP.
60	6224 - Treed Bog	2.7	No	Leatherleaf bog with colonizing JP-WP.
62	6224 - Treed Bog	1.2	No	Flooded leatherleaf bog with encroaching WP-JP.
65	6224 - Treed Bog	3.9	No	Most of the stand was final harvested in 1982 (#109-80A), cutting merch stems. The stand was trenched but not planted. Leatherleaf bog with colonizing JP saplings. Some tag alder and marsh grasses.
121	6225 - Bog	1.1	No	West end has a patch of open water marsh surrounded by dense leatherleaf cover. Boundary was gerrymandered to the southeast to pick up a small nearby leatherleaf bog.
400	310 - Herbaceous Openland	8.2	No	Cleared utility corridor with overhead powerline & buried phone cable. Seasonal high water table. Alternating sheep laurel, blueberry & grass cover with a small bog at the south end.
401	3302 - Low Density Conifer Trees	1.7	No	Grassy opening with open-grown JP and cherry brush.
429	310 - Herbaceous Openland	12.3	No	Former Dollar Lake sand pit. Old notes indicate that is was contoured and reseeded on the west side. Part of the Military's rehab effort has included blocking vehicle access. Ditches along the road have been breached, with a handful of illegal hill climb runs re-established. Cover includes grass, spotted knapweed, Mullen, exposed soil, and scattered WP-JP saplings. A Military communications tower was installed on the hilltop in 2006. Access to the tower's service road is not restricted; consider gating near Dollar Lake Road.