



# Compartment Review Presentation

## Grayling Forest Management Unit

Compartment 72279

Entry Year 2026

Acreage: 1,359

County: Crawford

Management Area: High Sand Plains

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**Stand Examiner:** Joan Charlebois

### Legal Description:

T27N R02W Sections 35, 36

T26N R02W Sections 1, 12

### 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. And in addition, for Section 36, to provide an area that allows for National Guard training.

### Soil and topography:

The compartment is characterized by gently rolling upland terrain on primarily Grayling and Croswell-AuGres sands, interspersed with numerous low, poorly-drained areas on Tawas-Lupton mucks and Dawson-Loxely peats.

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

Section 36 is under a long term lease (L-1479) with the Michigan National Guard, DMVA to provide for military usage with no permanent buildings or improvements to be erected (Act 154, P.A. 1935). Sections 1 and 12 are general State Forest land. Part of Section 12 was obtained using Pittman-Robertson Funds. The blocks of state land in section 12 interface several private parcels that have a mix of year-round and seasonal residences.

### Unique Natural Features:

The Barker Creek Fen was identified as a high quality example of the Northern Fen natural community type. There is the potential for rare plant and animal species to be associated with the compartment's lowland covertypes.

### Archeological, Historical, and Cultural Features:

There are known concerns within the compartment. All proposed management activities have taken these concerns into consideration.

### Special Management Designations or Considerations:

Section 36 is part of the Research and Military Area Special Conservation Area (SCA). The Barker Creek Fen is an Ecological Reference Area (ERA), a type of High Conservation Value Area (HCVA).

### Watershed and Fisheries Considerations:

Barker Creek, a designated trout stream, flows through the northern third of the compartment. It is a tributary to the AuSable, a designated Natural River.

### Wildlife Habitat Considerations:

With its diverse mix of open marsh, bogs, conifer swamps, and upland pine, oak and aspen cover types, this compartment supports a variety of game and non-game wildlife species.

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

The northern portion of the compartment is within the Camp Grayling reservation area, consisting of lands under a long-term lease or easement granted to the State Military Board, and while the DNR maintains control over the mineral rights, parcels in sections 35 & 36 have been classified as non-leasable in the past. No known potential exists for commercial metallic mineral production in this part of the state. The closest known active sand/gravel operation is roughly four miles west. Much of the compartment consists of low wetlands, which would inhibit any surface mining. The closest oil & gas production, past or present, is two miles northeast. There has been very minimal oil & gas test drilling in the vicinity of the compartment, no well permits have been issued recently in the area, and potential for future production of hydrocarbons from beneath the compartment is considered low at this time.

### Vehicle Access:

County roads include: Dyer Truck Trail, Conner's Flat Road, Polly Trail (as far as Payne Road), Payne Road, and Wakeley Bridge Road. Access through existing trail roads in Section 36 has been limited by expanding beaver floodings. Two short State trail roads (one of which has been paved) are used as driveways for two houses on the south side of

Conner's Flat Road in Section 1. Several cottages and residences along the AuSable River derive their sole access via another trail road (off Polly Trail in Section 12) which has been signed on the ground as "Appleton Avenue". Two other cabins and one residence are accessed across State land in the NENE of Section 12. An easement for construction of an access roadway, granted to the State of Michigan as part of the Ludington Pump Storage Settlement Agreement, runs south of Polly Trail in Section 12 and then east into the adjacent Compt 280.

**Survey Needs:**

None at this time.

**Recreational Facilities and Opportunities:**

The compartment does not contain designated recreational trails or facilities, but it supports dispersed recreation in the form of hunting, trapping, camping and wildlife viewing.

**Fire Protection:**

The northwest end of the compartment was impacted by the Stephan Bridge Fire in 1990, which burned through upland pine types until it hit the swamps. Marshes, bogs, swamps and streams serve as fuel breaks but also limit access to suppression equipment.

**Additional Compartment Information:**

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

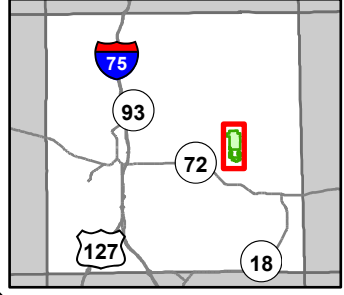
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

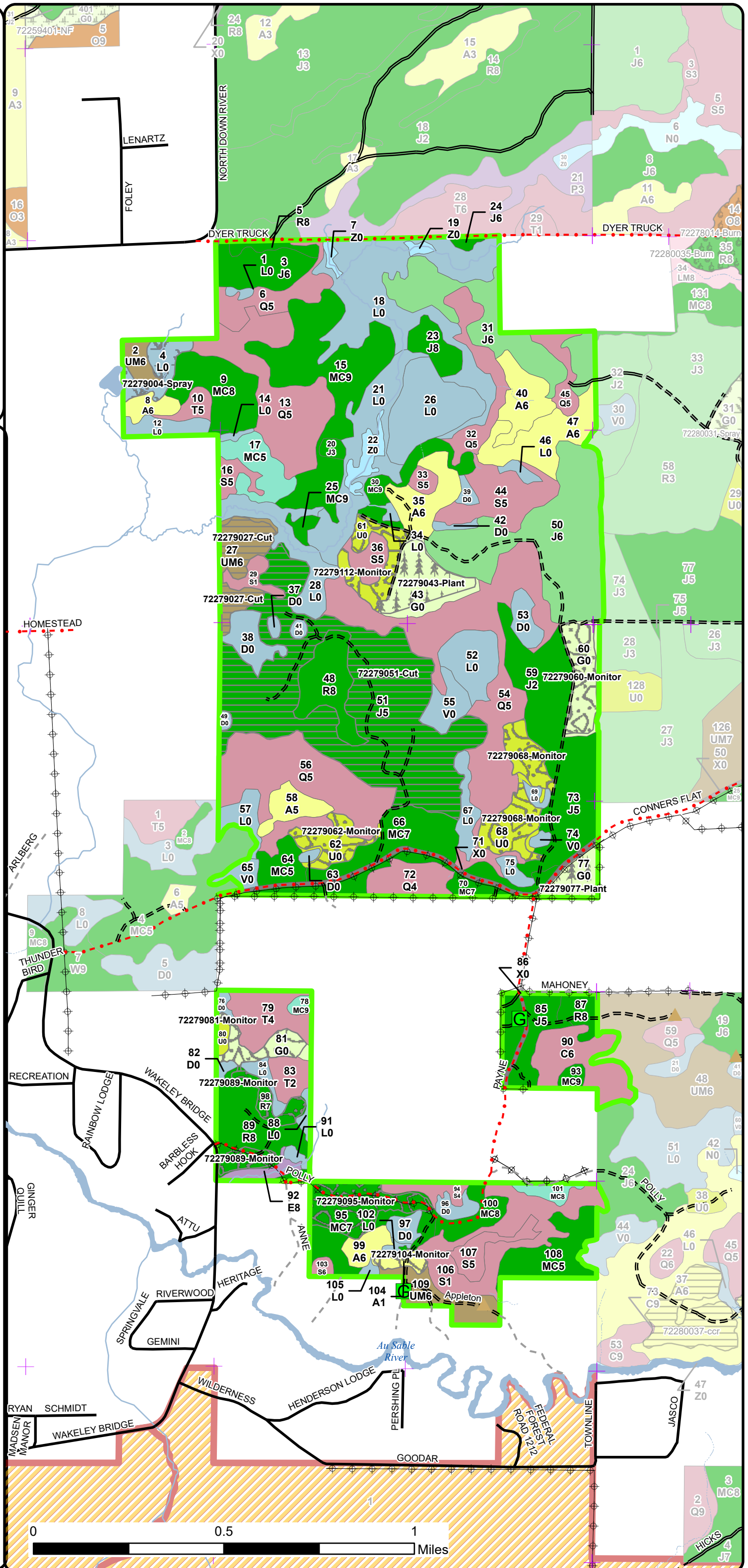
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatments Map

Compartment: 72279  
 T27N, R2W, Sec: 35, 36  
 County: Crawford  
 Unit: Grayling  
 Mgmt Area: High Sand Plains  
 YOE: 2026  
 Acres: 1359.5 GIS Calculated  
 Examiner: Joan Charlebois  
 Map Revised: 10/15/2024  
 Map Phase: Post Review



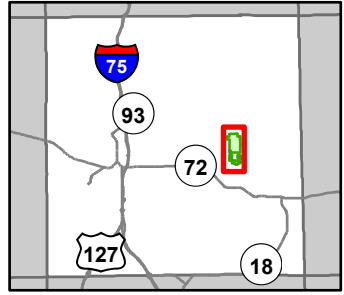
- ✚ Remonumented Section Corners
- ▲ Berms
- G Gate
- ⌒ Culvert
- DNR - Secondary Forest Road
- - - DNR - Forest Access Route
- Federal / State / County - Paved Road
- - - Federal / State - Dirt / Gravel Road
- . - . - County - Gravel Road
- - - Private - Dirt / Gravel Road
- ⋯ Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- ⚡ Powerline
- ▭ Compartment Boundary
- ☁ Pesticide
- 🌲 Planting (Tree Species)
- ▭ Clearcut (w/Reserves)
- 🌱 Regeneration Survey
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub



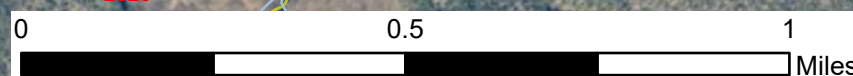
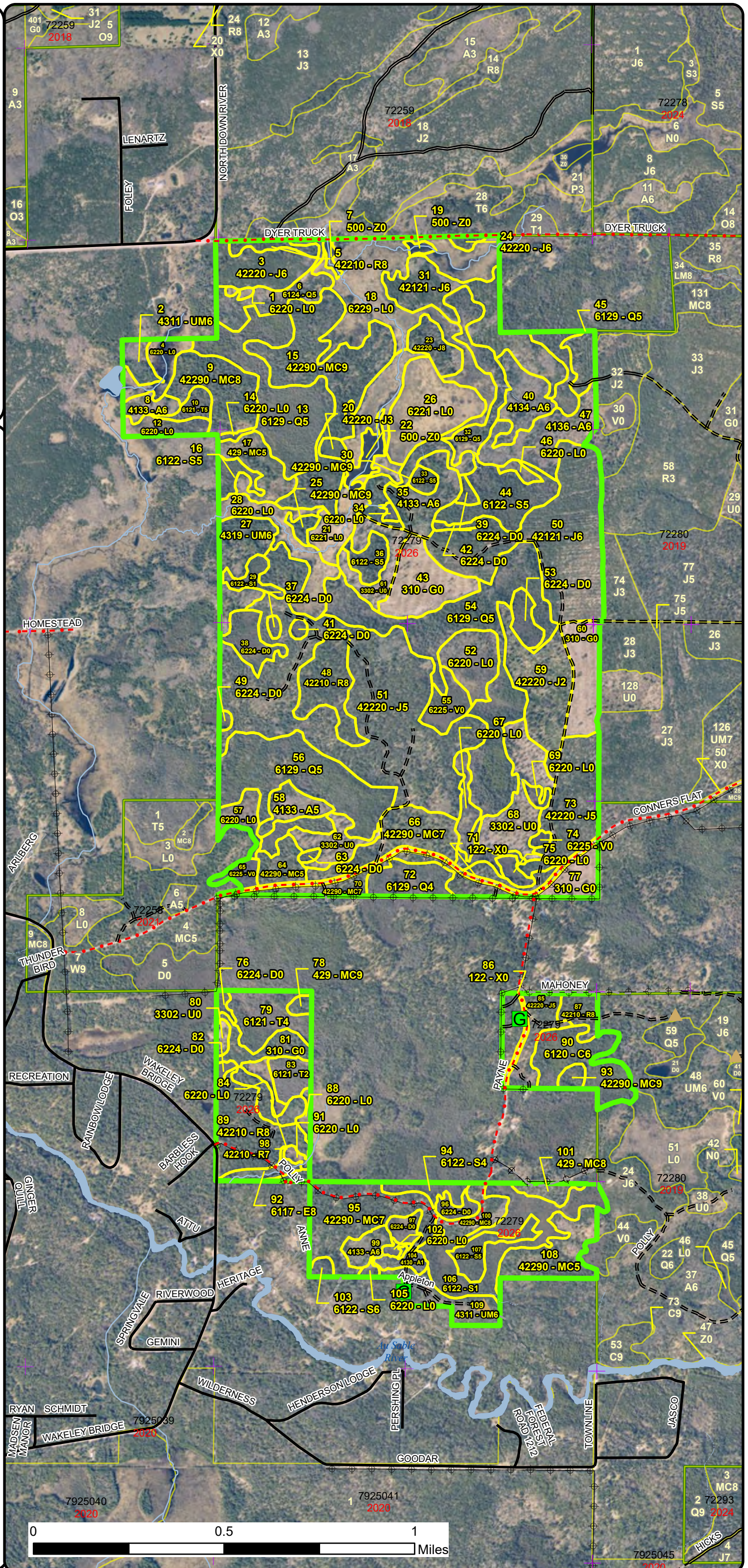


**Stand Boundary Map**

Compartment: 72279  
 T27N, R2W, Sec: 35, 36  
 County: Crawford  
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 YOE: 2026  
 Acres: 1359.5 GIS Calculated  
 Examiner: Joan Charlebois  
 Map Revised: 10/15/2024  
 Map Phase: Post Review



- + Remonumented Section Corners
- ▲ Berms
- G Gate
- Culvert
- DNR - Secondary Forest Road
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- ▭ Stand Boundaries
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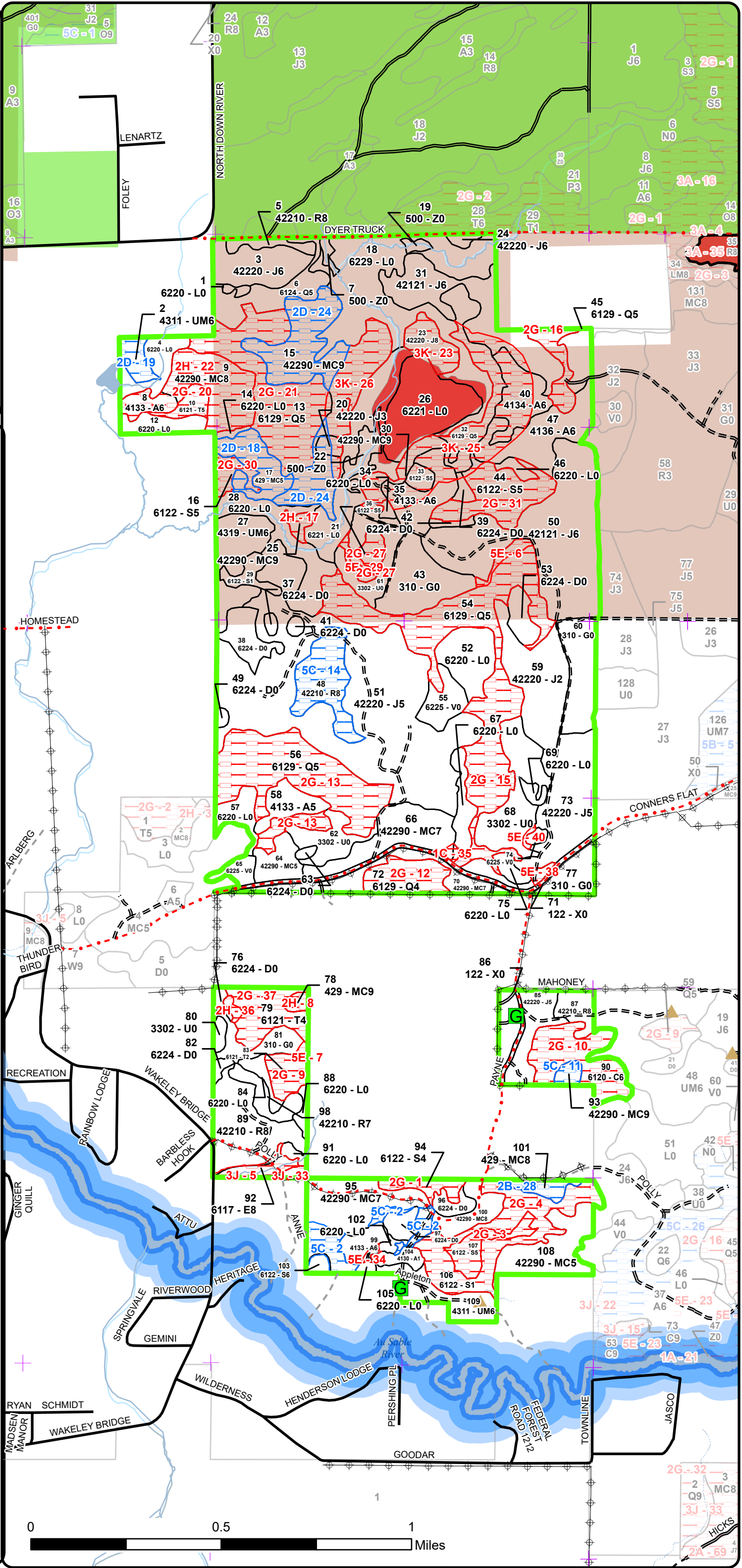
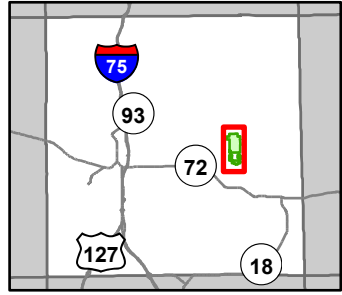


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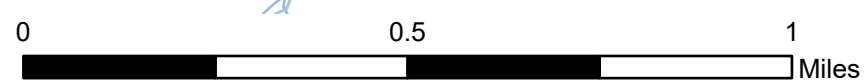


# Special Conservation Areas & Site Conditions Map

Compartment: 72279  
 T27N, R2W, Sec: 35, 36  
 County: Crawford  
 Unit: Grayling  
 Mgmt Area: High Sand Plains  
 YOE: 2026  
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 Map Phase: Post Review



- + Remonumented Section Corners
  - ▲ Berms
  - G Gate
  - Culvert
  - DNR - Secondary Forest Road
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  - County - Gravel Road
  - Private - Dirt / Gravel Road
  - Intermittent Stream
  - Lake/Pond
  - Perennial River
  - Lakes and Rivers
  - Powerline
  - Compartment Boundary
  - SCA
  - Available w/ Constraints
  - Unavailable
- 2D: Portable Bridge Needed (Dept. bridge will be adequate)
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 1C: Other dept or div proc/practices
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3J: Water quality / BMPs (stream, river, or lake)
- 3K: Rare or unique landforms
- 5E: Long-Term Retention
- Available w/ Constraints
  - Unavailable
  - Stand Boundaries
  - Stand Boundaries
  - Ecological Reference Areas
  - Natural Rivers Vegetative Buffer
  - Natural Rivers Zoning District
  - Kirtland Warbler Habitat
  - Cold Water Streams
  - High Priority Trout Stream Buffer
  - Type 1 and Type 2 Old Growth
  - Research, Development, and Military Lands





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	3	0	8	58	0	0	0	0	0	0	0	0	0	0	0	0	0	69
Bog	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	21
Herbaceous Openland	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
Jack Pine	0	0	25	0	115	2	45	124	0	8	0	0	0	0	0	0	0	0	319
Low-Density Trees	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
Lowland Conifers	0	0	0	0	14	0	0	12	0	7	0	14	108	47	0	0	0	0	202
Lowland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4
Lowland Shrub	182	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182
Lowland Spruce/Fir	0	0	0	0	0	5	0	0	7	6	28	0	8	0	0	0	0	30	81
Natural Mixed Pines	0	0	0	0	18	8	70	17	21	0	50	2	0	0	0	0	2	0	188
Red Pine	0	0	0	0	0	0	6	0	30	0	21	0	0	0	0	0	0	0	57
Tamarack	0	0	0	0	0	7	0	0	0	0	0	0	4	15	0	0	0	0	26
Treed Bog	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
Upland Conifers	0	0	0	0	13	0	2	0	0	0	0	4	0	0	0	0	0	0	19
Upland Mixed Forest	0	0	0	0	18	0	16	0	0	0	0	0	0	0	0	0	0	0	34
Urban	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Water	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
<b>Total</b>	<b>340</b>	<b>3</b>	<b>25</b>	<b>8</b>	<b>236</b>	<b>22</b>	<b>139</b>	<b>153</b>	<b>58</b>	<b>21</b>	<b>99</b>	<b>20</b>	<b>141</b>	<b>62</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>30</b>	<b>1360</b>



## Report 2 – Treatment Summary

Grayling Mgt. Unit

Year of Entry: 2026

Acres of Harvest

Compartment 279

Total Compartment Acres: 1,359

Commercial Harvest - 139  
 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	124	0	0	0	0	0	0	0	0	124
Upland Mixed Forest	16	0	0	0	0	0	0	0	0	16
<b>Total</b>	<b>139</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>139</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	139	0	22	0	0	9	93	0	0	263
Next Step	0	0	0	0	0	35	218	35	0	288
<b>Total</b>	<b>139</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>311</b>	<b>35</b>	<b>0</b>	<b>552</b>



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

<b>4</b>	<b>72279004-Spray</b>	8.7	6220 - Alder/willow	Nonstocked	Unspecified	Pesticide	Hand Application	6220 - Alder/willow		No
<p><u>Prescription</u> Control the invasive Phragmites</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Herbicide Use</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										
<b>27</b>	<b>72279027-Cut</b>	15.5	4319 - Mixed Upland Forest	Poletimber Well	59	81-110	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged No
<p><u>Prescription</u> Final harvest. Protect the RP-WP legacy trees and boundary-exclude the RMZ and flooded swale. Spec dry summer or frozen winter operations. Add drumming log spec. Set up in 2025 with stand 51.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Moderate stocking in aspen with a conifer component, and poorly-stocked inclusions.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2024</p>										
<b>51</b>	<b>72279051-Cut</b>	123.5	42220 - Natural Jack Pine	Poletimber Medium	60	81-110	Harvest	Clearcut with Retention	42221 - Natural Jack Pine, Mixed Deciduous	Even-Aged No
<p><u>Prescription</u> Final harvest except protect legacy pine and boundary-exclude the small non-forested wetlands and the stream RMZ. Set up in 2025 due to accelerating JP budworm mortality.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Intermediate)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Moderate stocking in mixed conifers, aspen, and upland shrub cover. If natural regen fails in the E1/2, plant the core of that area to RP, with site prep and release treatments as needed, that may include roller chopping, trenching, herbicide application, and pre-commercial thinning.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2024</p>										





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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
<b>62 72279062-Monitor</b>	8.9	3302 - Low Density Conifer Trees	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Re-Inventory)	429 - Mixed Upland Conifers	Even-Aged	No
<p><u>Prescription</u> Check regen  <u>Specs:</u>  <u>Next Step</u>  <u>Treatments:</u>  <u>Acceptable</u> Moderately stocked mix of spruce, fir, RP, WP, JP &amp; tamarack, with poorly stocked inclusions on the driest ground.  <u>Regen:</u>  <u>Other</u>  <u>Comment:</u>  <u>Site Condition:</u>  <u>Proposed Start Date:</u> 10/1 /2033</p>										
<b>68 72279068-Monitor</b>	20.5	3302 - Low Density Conifer Trees	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Re-Inventory)	429 - Mixed Upland Conifers	Even-Aged	No
<p><u>Prescription</u> check regen  <u>Specs:</u>  <u>Next Step</u>  <u>Treatments:</u>  <u>Acceptable</u> Moderately stocked mix of spruce, fir, RP, WP, JP &amp; tamarack, with poorly stocked inclusions on the driest ground.  <u>Regen:</u>  <u>Other</u>  <u>Comment:</u>  <u>Site Condition:</u>  <u>Proposed Start Date:</u> 10/1 /2033</p>										
<b>61 72279112-Monitor</b>	11.7	3302 - Low Density Conifer Trees	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Re-Inventory)	429 - Mixed Upland Conifers	Even-Aged	No
<p><u>Prescription</u> check regen  <u>Specs:</u>  <u>Next Step</u>  <u>Treatments:</u>  <u>Acceptable</u> Moderately stocked mix of spruce, fir, RP, WP, JP &amp; tamarack, with poorly stocked inclusions on the driest ground.  <u>Regen:</u>  <u>Other</u>  <u>Comment:</u>  <u>Site Condition:</u>  <u>Proposed Start Date:</u> 10/1 /2033</p>										

**Approved Treatments:**

<b>43 72279043-Plant</b>	14.7	310 - Herbaceous Openland	Nonstocked	0	Unspecified	Planting	Initial Plant	42110 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> plant RP  <u>Specs:</u>  <u>Next Step</u> Pesticide, Skidder - Release; Other, Pre-Commercial Thinning - Hand; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)  <u>Treatments:</u>  <u>Acceptable</u> Planted red pine with minor deciduous components.  <u>Regen:</u>  <u>Other</u> Percent to Treat = 100%  <u>Comment:</u>  <u>Site Condition:</u>  <u>Proposed Start Date:</u> 10/1 /2024</p>										



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	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
60	<b>72279060-Monitor</b>	12.8	310 - Herbaceous Openland	Nonstocked	0	Unspecified	Monitoring	Artificial Regen(1yr)	42110 - Planted Red Pine	Two-Aged	No
<p><u>Prescription</u> check regen  <u>Specs:</u></p> <p><u>Next Step</u> Pesticide, Skidder - Release; Other, Pre-Commercial Thinning - Hand; Monitoring, Herbicide Use; Monitoring, Artificial Regen(3yr)  <u>Treatments:</u></p> <p><u>Acceptable</u> Planted red pine with minor deciduous components.  <u>Regen:</u></p> <p><u>Other</u> Percent to Treat = 100%  <u>Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2023</p>											
77	<b>72279077-Plant</b>	7.6	310 - Herbaceous Openland	Nonstocked	0	Unspecified	Planting	Initial Plant	42110 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Plant RP  <u>Specs:</u></p> <p><u>Next Step</u> Pesticide, Skidder - Release; Other, Pre-Commercial Thinning - Hand; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)  <u>Treatments:</u></p> <p><u>Acceptable</u> Planted red pine with minor deciduous components.  <u>Regen:</u></p> <p><u>Other</u> Percent to Treat = 100%  <u>Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2024</p>											
81	<b>72279081-Monitor</b>	7.8	310 - Herbaceous Openland	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Re-Inventory)	429 - Mixed Upland Conifers	Even-Aged	No
<p><u>Prescription</u> Acceptable regen is a mix of pine, fir &amp; spruce with oak, aspen &amp; paper birch.  <u>Specs:</u></p> <p><u>Next Step</u>  <u>Treatments:</u></p> <p><u>Acceptable</u> Includes a mix of pine, fir &amp; spruce with oak, aspen &amp; paper birch.  <u>Regen:</u></p> <p><u>Other</u> Percent to Treat = 100%  <u>Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2033</p>											
98	<b>72279089-Monitor</b>	10.2	42210 - Natural Red Pine	Sawtimber Poor	76	1-50	Monitoring	Natural Regen (Re-Inventory)	429 - Mixed Upland Conifers	Two-Aged	No
<p><u>Prescription</u> Acceptable regen includes a mix of pine, fir, spruce, aspen &amp; mixed deciduous. Areas with thinning-level residual will not be expected to have regen.  <u>Specs:</u></p> <p><u>Next Step</u>  <u>Treatments:</u></p> <p><u>Acceptable</u> Includes a mix of pine, fir, spruce, aspen &amp; mixed deciduous. Areas with thinning-level residual will not be expected to have regen.  <u>Regen:</u></p> <p><u>Other</u> Percent to Treat = 100%  <u>Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2033</p>											





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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
<b>95 72279095-Monitor</b>	18.4	42290 - Natural Mixed Pine	Sawtimber Poor	54	51-80	Monitoring	Natural Regen (Re-Inventory)	42260 - Natural Pine, Mixed Deciduous	Two-Aged	No
<p><u>Prescription</u> Acceptable regen includes a mix of pine, fir, spruce, aspen &amp; mixed deciduous. Areas with thinning-level residual will not be expected to have regen.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> <u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Includes a mix of pine, fir, spruce, aspen &amp; mixed deciduous. Areas with thinning-level residual will not be expected to have regen.</p> <p><u>Other Comment:</u> Percent to Treat = 100%</p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2033</p>										
<b>104 72279104-Monitor</b>	3.1	4130 - Aspen	Sapling Poor	1	Immature	Monitoring	Natural Regen (Re-Inventory)	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Acceptable regen includes aspen, RM &amp; mixed conifers.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> <u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Includes aspen, RM &amp; mixed conifers.</p> <p><u>Other Comment:</u> Percent to Treat = 100%</p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2033</p>										

**Total Treatment Acreage Proposed: 263.4**

# Report 4 – Site Conditions

Grayling Mgt. Unit  
Joan Charlebois: Examiner

Compartment: 279  
Year of Entry: 2026



### Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions									
		With Condition	Not Available		2B	2D	5C	1C	2G	2H	3J	3K	5E	
68	41	0	27	Aspen			0				5		21	1
13	13	0	0	Bog										
21	0	0	20	Cedar					20					
52	51	0	1	Herbaceous Openland					0					1
319	306	1	12	Jack Pine		1			0				12	
45	44	0	0	Low-Density Trees					0					0
201	18	0	183	Lowland Conifers				0	170				11	2
4	0	0	4	Lowland Deciduous								4		
182	182	0	0	Lowland Shrub			0					0		0
82	6	0	76	Lowland Spruce/Fir			0		71				3	1
188	90	47	51	Natural Mixed Pines		34	13	0	0	23	1	25		1
58	40	18	0	Red Pine			18				0			
26	0	0	26	Tamarack					25	1				0
31	31	0	0	Treed Bog			0						0	
18	0	17	2	Upland Conifers	4	13				2				
34	29	5	0	Upland Mixed Forest		5								
9	9	0	0	Urban										
8	8	0	0	Water										
1,359	868	87	404	Total Forested Acres	4	53	31	1	287	31	6	73		6
	64%	6%	30%	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	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							



## Report 4 – Site Conditions

Grayling Mgt. Unit  
Joan Charlebois: Examiner

Compartment: 279  
Year of Entry: 2026



2	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	11	Unspecified	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> This portion of the stand was excluded from the currently-proposed harvest because it has sparser RP cover and a higher proportion in the 1988 year of origin aspen. The middle poly also excludes a low ground patch. The west poly would likely be treated concurrent with the adjacent aspen stand (part of the same previous harvests).</p>							
3	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	8	Unspecified	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> Sparse cover on low ground.</p>							
4	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	30	Unspecified	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> The transition ground edge is operable and supports dense tree cover but the core interior is sparse and barely above treed bog status.</p>							
5	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	5	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> Stream floodplain with hillside seeps.</p>							
6	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	2	Unspecified	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> Part of the designated retention for stand 43's harvest.</p>							
7	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	1	Unspecified	Unspecified	Unspecified	Unspecified
<p><b>Comments:</b> Retention designated for stand 81's harvest, encompassing a pocket of supercanopy pine.</p>							

## Report 4 – Site Conditions

Grayling Mgt. Unit  
Joan Charlebois: Examiner

Compartment: 279  
Year of Entry: 2026



8	<b>Unavailable</b>	<b>2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)</b>	2	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Upland finger that extends from the adjacent private to the east. Access from state is blocked by low ground. Unknown if the adjoining upland private property is similarly cut off by lowlands.							
9	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	7	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Saturated ground; standing water between the hummocks. Degree of flooding influenced by beaver activity on drainage to SE on private.							
10	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	20	5A: Not able to obtain desirable regeneration	Unspecified	Unspecified	Unspecified
<b>Comments:</b> The stand has a drier transition ground edge and small PARVCo islands, but the majority is saturated (black muck with standing water visible through the root mat).							
11	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	2	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Pine island in the swamp. Doesn't meet the criteria for Type I or II old growth, but has a significant legacy tree component (RP & WP). Even if the stand was accessible, would not recommend harvesting.							
12	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	12	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Aside from the pine island, the stand has saturated to flooded ground. An ephemeral drain empties into this stand from the NE.							



## Report 4 – Site Conditions

Grayling Mgt. Unit  
Joan Charlebois: Examiner

Compartment: 279  
Year of Entry: 2026



13	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	47	5A: Not able to obtain desirable regeneration	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Aside from the transition ground edge, this stand ranges from very wet ground with sparse canopy cover to slightly less flooded ground with dense cedar cover.							
14	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	18	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Natural pine stand does not meet criteria for thinning at this time.							
15	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	66	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Aside from the transition ground edge, this stand is very wet. Ephemeral drainages originate within the stand and flow west and south							
16	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	7	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Too wet except for the transition ground edge.							
17	<b>Unavailable</b>	<b>2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)</b>	2	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Pine island surrounded by lowland shrub wetland.							

## Report 4 – Site Conditions

Grayling Mgt. Unit  
Joan Charlebois: Examiner

Compartment: 279  
Year of Entry: 2026



18	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	13	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Reaching this block of land will require a temporary bridge and composite mats.							
19	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	5	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Accessing this stand would require a bridge & crane mats, or permission to cross private property.							
20	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	4	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> The operable transition ground edge could be treated concurrent with adjacent upland stands; the core interior is too wet.							
21	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	38	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> This stand is on saturated ground. The N1/2 has groundwater visible through the root mat. The south half is not much above tree bog, with poorer stocking & diameter. The drier transition ground edge could be treated concurrent with adjacent upland stands.							
22	<b>Unavailable</b>	<b>2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)</b>	26	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Reaching this block of land would require a bridge and crane mats, or road-building through a swamp.							

## Report 4 – Site Conditions

Grayling Mgt. Unit  
Joan Charlebois: Examiner

Compartment: 279  
Year of Entry: 2026



23	<b>Unavailable</b>	<b>3K: Rare or unique landforms</b>	8	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Pine island surrounded by lowland shrub wetland. Borders an MNFI-identified northern fen ERA, with protection comments indicating leaving a 100-200 meter buffer around the ERA. This stand lies within 200 meters of the ERA.							
24	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	35	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Access from the south would require a portable bridge & crane mats. Access from the north may be achieved through crane mats/winter road building to cross 2-3 chains of lowland transition ground.							
25	<b>Unavailable</b>	<b>3K: Rare or unique landforms</b>	48	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Borders an MNFI-identified northern fen ERA, with protection comments indicating leaving a 100-200 meter buffer around the ERA. This block lies within 200 meters of the ERA.							
26	<b>Unavailable</b>	<b>3K: Rare or unique landforms</b>	17	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Borders an MNFI-identified northern fen ERA, with protection comments indicating leaving a 100-200 meter buffer around the ERA. This portion of the stand lies within 200 meters of the ERA.							
27	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 4 – Site Conditions

Grayling Mgt. Unit  
Joan Charlebois: Examiner

Compartment: 279  
Year of Entry: 2026



28	<b>Available</b>	<b>2B: Unknown if access through adjacent landowner(s) is possible</b>	4	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> This portion of Polly Trail is not County road and it crosses private property to the west & east of where it intersects the stand. Check Consumers Power deed regarding easement rights.							
29	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	1	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Pine islands left in swamp from stand 43's harvest.							
30	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	5	2D: Portable Bridge Needed (Dept. bridge will be adequate)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Aside from the transition ground edge, the water table is too high.							
31	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	19	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> This stand has operable transition ground edge as well as a PARVCo band across the north half, but the majority low ground has either tag alder or thick leatherleaf cover.							
33	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	1	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Narrow triangle of stand 95 excluded during sale prep. Excluding the north edge RMZ would reduce the harvest block to less than an acre hemmed in by stream corridor, roads and private property.							
34	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	1	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Designated retention excluded from stand 104 during sale prep. Is cut off by low swales.							



## Report 4 – Site Conditions

Grayling Mgt. Unit  
Joan Charlebois: Examiner

Compartment: 279  
Year of Entry: 2026



35	<b>Unavailable</b>	<b>1C: Other dept or div proc/practices</b>	1	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> see locked comments							
36	<b>Unavailable</b>	<b>2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)</b>	1	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Two islands of high ground separated from the rest of stand 81 by low swales. Excluded from stand 81's treatment during sale prep.							
37	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	14	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Aside from the transition ground edge and PARVCo islands, the stand's core is too wet.							
38	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	1	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Designated retention for stand 77's harvest.							
40	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	1	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Retention islands to protect interior and adjacent bogs and an ephemeral drainage for stand 68's harvest.							

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
<b>Comments</b>				



**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	Non-Dedicated Natural Areas and National Natural Landmarks	This category is comprised of those Natural, Wilderness and Wild Areas that have been nominated or proposed for legal dedication, but for which legal dedication by legislature has not occurred. The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.
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	Designated Critical Habitat	Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.
HCVA	Legally dedicated Natural Areas, Wilderness or Wild Areas	The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.
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.
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.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																				
1	6220 - Alder/willow	Nonstocked	1.0		Unspecified	No	2014 edge comments: Was within the 1976 (#42-75) harvest area and may also have burned in 1990. It is a non-forested wetland now, with dense tag alder, some salix, and perimeter aspen, JP, spruce & fir.																																																				
2	4311 - Pine, Aspen Mix	Poletimber Well	5.0	34	81-110	N/A	Merch JP & A were cut in 1970 (#13-70), then the north half burned in 1990, establishing a younger age class of aspen & JP there. Stand's 1st age is set to the fire and 2nd age to the 1970 harvest. WP is mainly in the unburned south half. Xlog RP & WP rim the creek floodplain. There is a small tag alder inclusion in the stand's north half, and a beaver clearing. Small patch of phragmites was found on the edge of stand 4 in 2024 (see NW Reference point).																																																				
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3	42220 - Natural Jack Pine	Poletimber Well	15.5	34	51-80	N/A	2014 field comments: Burned trees were salvaged in 1990 (#30-90-2) after the Stephan Bridge Road fire. The stand regenerated to densely-stocked JP with stump-origin NPO and small clones of aspen. Scattered above are RP saw that survived the fire. 2024 update: there are traces of low ground with leatherleaf on the W-center edge and intermediate ground along the S edge. The stand is still transitioning into the pole class but has crossed the 30% threshold to call it pole overall.																																																				
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4	6220 - Alder/willow	Nonstocked	8.7		Unspecified	No	Drawn-down beaver marsh has been filling in with salix & tag alder. A permanent stream flows through it. NWC & WP snags are common, with Q scattered along the stand margins. Small patch of phragmites was found at the edge of stand 2 in 2024.																																																				
5	42210 - Natural Red Pine	Sawtimber Medium	3.7	93	111-140	N/A	2014 field comments: Small stand of RP sawtimber bordering Dyer Truck Trail. Burned trees were salvaged in 1990 (#30-90-2) after the Stephan Bridge Road fire. Sparse on the margins where it burned hottest. Some fire-regenerated JP & NPO below. The far east end didn't burn as hard; it has small amounts of fir, oak, aspen & WP. RP overstory age range 70-100 years old, ave 83. 2024 update: some of the fire-regenerated JP is recordable in the canopy now. Widely-variable RP stocking; densest in the middle third.																																																				
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
6	6124 - Lowland Spruce-Fir	Poletimber Medium	14.1	34	81-110	N/A	2014 field. Most of the stand was final harvested in 1976 (#42-75), except for the far NE 1.2 acres (2nd age was from the mature RM there). The 1990 Stephan Bridge Road fire then burned across approximately 50% of the harvested area. Timber in the burned areas (mostly in the N1/2) was salvaged later that year (#30-90-2). The stand occupies majority saturated ground and picks up transition ground along stands 3 & 15. All species have fire-origin & cut-origin age classes but only one age could be assigned to each. The fire-origin cover is sapling-pole in size and the cut-origin material is pole-sap-log.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Red Pine		1	Log/Pole	10		Black Spruce		Low	5 - 10 feet	Sapling	
Tamarack		5	Sapling/Pole	4	34	Tag Alder		Medium	10 - 20 feet	Tall Shrub	
Jack Pine		5	Pole	6	34	Balsam Fir		Low	5 - 10 feet	Sapling	
Black Spruce		40	Sapling/Pole	4	34						
Balsam Poplar		8	Pole/Sap/Log	6	48						
Balsam Fir		15	Sapling/Pole	4	34						
White Pine		1	Pole/Sap/Log	8							
Quaking Aspen		20	Pole/Sap/Log	6	48						
Red Maple		5	Log/Pole	11	85						
7	500 - Water	Nonstocked	1.5		Unspecified	No		Small beaver pond.			
8	4133 - Aspen, Mixed Pine	Poletimber Well	4.9	34	51-80	N/A		2014 field comments: Burnt in 1990 Stephan Bridge Road fire. Regenerated to aspen, with JP in the NW and spruce on the perimeter. A few surviving RP saw are in the east end. The stand is upland overall but has a tag alder swale cutting up through the middle, and transition ground on the perimeter. Some beaver felling there.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height	Size
Quaking Aspen		55	Pole/Sapling	5	34	Tag Alder			Low	10 - 20 feet	Tall Shrub
Bigtooth Aspen		15	Pole/Sapling	6	34						
Black Spruce		5	Sapling/Pole	4							
Red Pine		5	XLog/Log	20							
Jack Pine		15	Pole/Sapling	5	34						
Balsam Poplar		5	Pole/Sapling	5	34						
9	42290 - Natural Mixed Pine	Sawtimber Medium	20.8	73	81-110	N/A	2014 field comments: Mixed pine stand with immature to overmature components. Fire-scarred supercanopy RP scattered across the stand seeded in the canopy-dominant RP saw (1st age). Overmature JP saw shares that canopy level but is top-dying and breaking up. Below the RP & JP is a codominant-intermediate layer of WP with fir, aspen, spruce, RM & declining NPO. WP & balsam fir are filling in where the JP is dropping out. The 1990 fire burned into the NW & SE edges of the stand. The NW spot fire patch filled in with JP & WP. The SE spot fire is still sparse.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Black Spruce		6	Pole/Sap/Log	7		Black Cherry		Low	Variable	Tall Shrub	
Jack Pine		5	Log	14		Balsam Fir		Low	Variable	Sapling	
Quaking Aspen		5	Log/Pole	12		Black Spruce		Low	Variable	Sapling	
Northern Pin Oak		2	Log	12		White Pine		Low	Variable	Sapling	
Red Pine		40	Log/Pole/XLog	15	73	Jack Pine		Low	10 - 20 feet	Sapling	
Red Maple		2	Pole/Log	7							
White Pine		30	Log/Pole	11	53						
Balsam Fir		10	Pole	7							
10	6121 - Tamarack	Poletimber Medium	4.2	114	1-50	N/A	2014 field comments: Marginal tamarack and spruce stand with traces of RM, paper birch & WP. Cover is dense on the transition ground edge, but the rest of the stand is sparse, growing over tussock sedge/marsh grass with standing water, spots of cattail. Porcupine damage common in the tamarack, black spruce with spindly tops.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Tamarack		75	Pole/Sap/Log	7	114	Tamarack		Low	Variable	Sapling	
Black Spruce		25	Pole/Sap/Log	6		Black Spruce		Low	Variable	Sapling	
						Tag Alder		High	5 - 10 feet	Tall Shrub	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																													
12	6220 - Alder/willow	Nonstocked	6.4		Unspecified	No	2014 edge comments: Tag alder with scattered spruce and tamarack, NWC snags, and a sub-acre patch of marsh by the creek.																																																													
13	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	38.8	119	51-80	N/A	2014 field comments: Mixed conifer swamp on saturated ground. The stand's north half has water visible in root mat holes but is on richer ground than in the south half. Much of the south half is growing on bog conditions, with sparser cover and smaller diameters; canopy closure drifts off the low end of 50-75% there. Species distribution varies from majority tamarack to majority black spruce, with the cedar concentrated in two patches of slightly drier ground in the NW & NE peninsulas. Very slow-growing tamarack cored 150 years - did not average that one into the 1st age.																																																													
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14	6220 - Alder/willow	Nonstocked	0.9		Unspecified	No	2014 edge comments: Flooded tag alder swale with Q/E on the margins. An intermittent stream flows west through it, draining the adjacent swamp stand 13.																																																													
15	42290 - Natural Mixed Pine	Sawtimber Well	49.6	92	111-140	N/A	2014 field comments: A significant amount of overstory removal was apparent on the 1938 aerial photos. Aside from the scattered xlog RP-WP, most of the current pine canopy was sapling-sized at the time of harvest or seeded in afterwards. The mediam RP saw is around 90 years old. The overmature breaking up JP is in its early 80's, and the intermediate-codominant pole-log WP is a couple decades younger. Canopy dominance shifts back and forth between the RP-JP-WP across the stand. Minor associates include aspen (beaver periodically started new age classes), poor quality NPO, RM, and fir-spruce (concentrated along the lowland edge). Snow load breakage in the densely stocked WP & BF poles. WP branch flagging common. 2024 update: much of the overmature JP & NPO has dropped out of the canopy. Branch flagging in the WP understory is far less prevalent.																																																													
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16	6122 - Black Spruce	Poletimber Medium	4.5	75	51-80	N/A	2014 field comments: Lowland spruce stand with variable canopy closure. Dense spruce cover over sphagnum moss alternates with sparse cover over full tag alder/standing water. Best growth is on the drier transition ground. RM, fir, aspen and paper birch are strung along the upland edge.																																																													
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17	429 - Mixed Upland Conifers	Poletimber Medium	12.7	34	51-80	N/A	2014 field comments: Was salvaged in 1990 (#42-90-02) after the Stephan Bridge Road fire, merch stems except only the marked RP & WP. Large residual RP & WP survived on the lee side of stand 16. Regen from the fire alternates between dense JP & aspen. Two LDT inclusions, one in the NW and a larger one in the SE, drag the canopy closure down into the 50-75% range. Fir, spruce and balsam poplar rim the lowland edges.																																																														
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18	6229 - Mixed lowland shrub	Nonstocked	53.1		Unspecified	No	2014 edge comments: Large beaver meadow with mixed lowland shrub cover filling in: tag alder, sweet gale, salix, spiraea, bog birch, leatherleaf, shrubby cinquefoil and bog laurel. The stand picks up small upland islands and scattered colonizing Q along the perimeter. Snags common.																																																														
19	500 - Water	Nonstocked	1.3		Unspecified	No	2014 edge comments: Open water with yellow pond lily, behind beaver dam.																																																														
20	42220 - Natural Jack Pine	Sapling Well	2.0	34	1-50	N/A	Spot fire from the Stephan Bridge Road fire. Filled in with dense JP cover. Xlog RP scattered along the perimeter.																																																														
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21	6221 - Fen	Nonstocked	26.7		Unspecified	No	2014 edge comments: Beaver marsh with varying water levels, flooded to south. Cover is sedge/marsh grass with colonizing sweet gale, some patches of tag alder and spiraea, and snags near the upland edge. Adjacent to an MNFI-identified Northern Fen ERA on the other side of the creek.																																																														
22	500 - Water	Nonstocked	5.6		Unspecified	No	2014 edge comments: Water backed up behind beaver dam, with some floating aquatic plants (yellow pond lily, etc.).																																																														
23	42220 - Natural Jack Pine	Sawtimber Medium	8.0	87	51-80	N/A	2014 field comments: Pine island surrounded by lowland shrub wetland. A significant amount of overstory removal is apparent on the 1938 aerial photos. Aside from the scattered xlog RP, most of the current pine canopy was sapling-sized at the time of harvest or seeded in afterwards. The overmature JP has been dropping out of the canopy. Minor associates include RP of all size classes, poor quality NPO, aspen (beaver periodically started new age classes), WP & spruce.																																																														
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<b>24</b>	42220 - Natural Jack Pine	Poletimber Well	1.5	40	51-80	N/A	2014 field comments: Island of high ground along Dyer Truck Trail, with an old borrow pit. The overmature JP is dying out, being replaced by pole-sapling JP. Black spruce and tamarack rim the lowland edge.																																																																			
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<b>25</b>	42290 - Natural Mixed Pine	Sawtimber Well	2.4	105	81-110	N/A	2014 field comments: Pine island surrounded by lowland shrub wetland. Xlog RP form a supercanopy layer above the main canopy of log-pole RP & WP. Minor associates include NPO, RM & aspen, with fir & spruce along the lowland edge. Balsam fir & WP are filling in below.																																																																			
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<b>26</b>	6221 - Fen	Nonstocked	25.1		Unspecified	No	2014 edge comments: MNFI-identified Barker Creek Northern Fen ERA. Sedge/marsh grass with patches of <40% cover in short shrubs: sweet gale, shrubby cinquefoil, spiraea, bog birch, leatherleaf. Pitcher plant common.																																																																			
<b>27</b>	4319 - Mixed Upland Forest	Poletimber Well	16.4	59	81-110	N/A	Was cut in 1965 (#36-64 & #15-65), merch JP & aspen, except for green-marked JP seed trees. Remaining merch JP, fir & spruce were cut in 1972 (#15-72). Under a deer range improvement FTP (#67-G) all stems 2"+ DBH except RP & WP were to be non-commercially cut. Marked RP & WP sawtimber were removed between 1973-1975 (#23-72 & #6-74). The stand has aspen clones separated by variable cover in fir, RP, WP, JP & upland shrubs. Most of the xlog RP is not legacy, just open-grown. While the aspen age was set to the first harvest and the oak age to the last FTP, the series of cuts started new age classes within each species. Despite being immature, the stump-origin oak has been declining & dying. The minority overmature aspen along the floodplain has largely died out; dense fir cover there is also starting to collapse. The stand's bottleneck has a tag alder swale with ephemeral drainage to the west. There's ground close to the water table in the NE.																																																																			
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<b>28</b>	6220 - Alder/willow	Nonstocked	17.6		Unspecified	No	2014 edge comments: Tag alder over marsh grass on the Barker Creek floodplain. Some areas of open marsh. Snags common, with Q along the perimeter.																																																																			





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
29	6122 - Black Spruce	Sapling Poor	4.5	44	1-50	N/A	2014 edge comments: Tag alder wetland that has been colonized enough to cross into the forested category. Mostly black spruce with tamarack, and a trace of mature aspen on the west end. Seen from the edges and entered only to core one sapling. Given the progressive nature of the colonization, the stand likely has multiple age classes.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Black Spruce	80	Sapling/Pole	3	44	Tag Alder	High		5 - 10 feet	Tall Shrub
Tamarack	20	Sapling/Pole	3						
30	42290 - Natural Mixed Pine	Sawtimber Well	10.6	54	81-110	N/A	2014 field comments: This shallow dry ridge flanking the floodplain has a mix of pine, aspen & oak, with perimeter spruce-fir. The WP & RP cover ranges from pole to xlog in size. The median small saw WP are relatively young (1st age). The stand's 2nd age on the larger RP saw is likely also representative of the mature to overmature JP, oak, RM & spruce. Slash is building as the overmature components break up. Beaver were probably responsible for starting new age classes in the aspen. Ephemeral drainages cross through the stand, connecting adjacent swamps to the creek floodplain.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Northern Pin Oak	10	Log/XLog	14		Black Spruce	Low		Variable	Sapling
Balsam Fir	3	Pole	7		White Pine	Low		Variable	Sapling
White Pine	40	Log/Pole	12	54	Balsam Fir	High		Variable	Sapling
Black Spruce	3	Log/Pole	10						
Jack Pine	2	Log	14						
Red Pine	25	Log/XLog/Pole	15	102					
Quaking Aspen	10	Log/Pole	10						
Red Maple	5	Log/XLog/Pole	14						
Black Cherry	2	Pole	7						
31	42121 - Planted Jack Pine, Mixed Deciduous	Poletimber Well	35.9	35	51-80	N/A	2014 field comments: Was part of a larger harvest cut 2"+ DBH in 1987 (#001-87). This drier portion of the harvest area was roller chopped and hand-seeded to JP in fall 1989 (C72-222). Although the stand doesn't have the appearance of a plantation due to the hand-seeding technique used, it meets the "planted" definition by having >50% cover in artificial regen. Densely-stocked bands of JP alternate with poorer-stocked swaths. Open-grown form is common in those unseeded swaths. NPO stump sprouts are mixed in, along with small clones of aspen. Spruce-fir is concentrated along the swamp edge.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Jack Pine	60	Pole/Sapling	5	35	Black Cherry	Medium		5 - 10 feet	Tall Shrub
Black Cherry	1	Pole	5	37					
Red Pine	1	Pole/Log	8						
Red Maple	2	Sapling/Pole	3						
Black Spruce	5	Pole/Sapling	5						
Quaking Aspen	15	Pole/Sapling	5	37					
Bigtooth Aspen	2	Pole/Sapling	6	35					
Northern Pin Oak	8	Pole/Sapling	5	37					
Balsam Fir	5	Pole/Sapling	6						
32	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	14.4	102	51-80	N/A	2014 field comments: Narrow lowland forested stand between the Barker Creek floodplain and the uplands. The stand is collectively a string of forested patches separated by sparse/marsh/shrub swales. The forested patches range from majority tamarack, to black spruce, to a mix of WP-aspen-RM on the slightly drier transition ground. Flood-killed snags are common on the fen edge. First age was on the mature tamarack. 2nd age was on younger black spruce. Those age brackets are likely representative of the older & younger components present across most of the stand's species.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	5	Pole/Sap/Log	7		Black Cherry	Low		Variable	Tall Shrub
Balsam Fir	10	Pole	7		Balsam Fir	Low		Variable	Sapling
Tamarack	45	Pole/Log	8	102	Black Spruce	Low		Variable	Sapling
Black Spruce	25	Pole/Log	8	58	Red Maple	Low		Variable	Sapling
White Pine	8	Log/Pole/XLog	12		Tag Alder	Medium		Variable	Tall Shrub
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Red Pine	2	Log/XLog	15						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																							
<b>33</b>	6122 - Black Spruce	Poletimber Medium	2.6	90	1-50	N/A	2014 field comments: Small swamp stand surrounded by uplands. Black spruce & tamarack are growing above tag alder in standing water. Large WP rim the upland edge. An ephemeral drainage connects this stand with the Barker Creek floodplain.																																																							
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<b>34</b>	6220 - Alder/willow	Nonstocked	1.0		Unspecified	No	2014 edge comments: Flooded tag alder wetland with Low-Density Tree levels of tamarack, spruce & WP. An ephemeral drainage connects this stand to the Barker Creek floodplain.																																																							
<b>35</b>	4133 - Aspen, Mixed Pine	Poletimber Well	13.8	36	81-110	N/A	2014 field comments: Was part of a larger harvest cut 2"+ DBH in 1988 (#004-87), but not much JP established from the subsequent hand-seeding FTP (C72-221). The stand regenerated more to A-RM and WP, with stump-origin NPO, some JP, and spruce-fir along the lowland edge. Cover between the dense aspen clones tends to be open-grown.																																																							
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<b>36</b>	6122 - Black Spruce	Poletimber Medium	6.1	80	51-80	N/A	2014 edge comments: Black spruce and tamarack growing on saturated sphagnum and tag alder covered ground. There are likely younger age classes of spruce on the transition ground edge, but time was not spent coring additional trees to document that. 2024 update: The stand picks up small islands of supercanopy pine; two of them were retention for stand 61's harvest (see Site Condition layer, 2nd age drawn from stand 61's legacy pine).																																																							
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<b>37</b>	6224 - Treed Bog	Nonstocked	1.1		Unspecified	No	2014 edge comments: Treed bog: leatherleaf and Labrador tea with tamarack, black spruce, JP, RP & WP.																																																							
<b>38</b>	6224 - Treed Bog	Nonstocked	8.5		Unspecified	No	2014 edge comments: Leatherleaf bog with increasing cover in tamarack, spruce, WP & RP. The stand's south 1/3rd is also being colonized by taller shrub cover (salix, tag alder, spiraea & bog birch).																																																							
<b>39</b>	6224 - Treed Bog	Nonstocked	1.7		Unspecified	No	2014 edge comments: Thick leatherleaf cover with scattered WP, black spruce, & tamarack.																																																							



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
<b>40</b>	4134 - Aspen, Spruce/Fir	Poletimber Well	12.9	37	51-80	N/A	2014 field comments: Was part of a larger harvest cut 2"+ DBH in 1987 (#001-87). Patches to the N & NE were roller chopped and hand-seeded to JP in fall 1989 (C72-222). This lowland portion of the harvest saw little of the planting, and instead regenerated to quaking aspen with balsam fir and balsam poplar. There is some dry ground by the road but most of this stand is on intermediate to low ground, dissected by flooded tag alder swales, with intermittent drainage to the west. Tag alder cover is high along the swales but averages to low overall. There isn't a distinct boundary between this majority lowland portion of the 1987 harvest and stand 47's majority upland portion of the same harvest.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Quaking Aspen		65	Pole/Sapling	5	37	Balsam Fir		
Balsam Poplar		5	Pole/Sapling	5	37	Black Cherry		
Balsam Fir		18	Pole/Sapling	6		Tag Alder		
White Pine		5	Pole/Log	8				
Black Spruce		2	Pole/Sapling	5				
Red Maple		5	Sapling/Pole	3				
<b>41</b>	6224 - Treed Bog	Nonstocked	1.2		Unspecified	No	2014 edge comments: Atypical treed bog: leatherleaf cover with taller shrubs colonizing in addition to the expected conifers. Colonizers include bog birch, tag alder, salix, spiraea, spruce & tamarack.	
<b>42</b>	6224 - Treed Bog	Nonstocked	1.3		Unspecified	No	2014 edge comments: Thick leatherleaf cover with scattered WP, black spruce, & tamarack. South edge overlaps the 1988 harvest area.	
<b>43</b>	310 - Herbaceous Openland	Nonstocked	19.3	0	Unspecified	4211 - Planted Red Pine	Naturally-established mixed pine stand with declining NPO was final harvested with retention by early 2021 (#639-17), cutting stems 1"+ DBH except boundary-excluded retention and green-marked (resid BAs: 3 RP, 1 WP, tr WO). Most of the residual pine was legacy stature. Will be planted to RP (C72-909). FRD trenched April 2022. TMS recon in 2023 did not find competition warranting site prep herbicide. Will cancel that step and go straight to planting. Was scheduled to be planted in 2024 but the nursery ran short on trees; it will now be planted in 2025.	
<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>				
Red Pine		Trace	>20 feet	Log				
<b>44</b>	6122 - Black Spruce	Poletimber Medium	19.9	92	51-80	N/A	2014 field comments: The southern 2/3rds of the stand is growing on bog conditions. The north 1/3rd has a band of drier PARVCo ground, with saturated, tag alder-covered ground on its north edge. The PARVCo band has large cull RM & overmature JP above dense spruce-fir-WP pole cover. The bog cover is sparser, with mostly black spruce and tamarack, but also a fair amount of WP & RP. The less dense canopy over the bog drains the stand's overall closure down into the 50-75% category.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Jack Pine		2	Log/Pole	10		Balsam Fir		
Red Maple		2	Log	14		Black Spruce		
Balsam Fir		5	Pole	6		Tag Alder		
Black Spruce		50	Pole/Sapling	6	92	Tamarack		
Red Pine		6	Pole/Log	8				
Tamarack		20	Pole	7				
White Pine		15	Pole/Log	9				



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<b>45</b>	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	7.0	87	1-50	N/A	2014 edge comments: Small stand of spruce and tamarack with balsam fir, scattered NWC, and misc. deciduous. The transition ground supports the densest cover; the saturated interior is sparser, with tag alder and patches of cattail below. The stand's south 2/3rds was within a larger 1987 harvest, spec'd to be cut 2"+ DBH (#001-87). Low ground conditions prevented complete harvesting. The residual there, albeit sparser, is still the featured canopy, and some of the post-harvest regen is recordable in the canopy (2nd age, set to harvest). The north 1/3 of the stand was not harvested; most of the mature spruce & tamarack is concentrated there.																																																																			
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<b>46</b>	6220 - Alder/willow	Nonstocked	1.9		Unspecified	No	2014 edge comments: Flooded tag alder swale with patches of cattail and scattered E/Q. The stream to the west likely originates within this swale.																																																																			
<b>47</b>	4136 - Aspen, Mixed Conifer	Poletimber Well	20.0	37	51-80	N/A	2014 field comments: Was part of a larger harvest cut 2"+ DBH in 1987 (#001-87). Patches to the N & NE were roller chopped and hand-seeded to JP in fall 1989 (C72-222). This part of the harvest saw little of the planting, and instead regenerated to quaking aspen mixed conifers, RM & NPO. Black canker is widespread in some clones. The stand has a lot of lowland edge & small wetland inclusions. There isn't a distinct boundary between this majority upland portion of the 1987 harvest and stand 40's majority lowland portion of the same harvest.																																																																			
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<b>48</b>	42210 - Natural Red Pine	Sawtimber Medium	17.7	92	111-140	N/A	Most of this naturally-established RP stand was thinned in 2008 (#057-06), cutting marked RP, merch JP & some of the oak, except for a 2-acre retention island in the middle and the SE peninsula that had lower initial stocking. Majority cover in the overstory is small-medium RP saw, along with WP poles & saw (mostly on the west side), widely-scattered supercanopy RP-WP and poor quality NPO. The residual distribution varies. The N-end has lower stocking and larger diameters. Stocking improves and diameters decrease moving SW. There was a wide range of ages present in the 12-15" DBH RP (cored 70-110 years old, ave 92). Self-extinguishing RP mortality pocket in the N end has healthy WP regen below. There isn't a distinct boundary with stand 51; this stand's RP cover feathers into the surrounding JP cover.																																																																			
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<b>49</b>	6224 - Treed Bog	Nonstocked	1.0		Unspecified	No	2014 edge comments: Leatherleaf bog being colonized by JP, spruce, tamarack, RP & WP.																																																																			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																							
50	42121 - Planted Jack Pine, Mixed Deciduous	Poletimber Well	61.9	35	51-80	N/A	2014 field comments: Was part of a larger harvest cut 2"+ DBH in 1988 (#004-87), then roller chopped and hand-seeded to JP in fall 1989 (C72-221). Densely-stocked bands of JP alternate with poorer-stocked swaths. Open-grown form is common in those unseeded swaths and across the residual WP-RP. Stump-origin NPO from the cut increases moving uphill to the SE; canopy closure is lower there. The aspen, fir & spruce occur mostly along the swamp edge. Although the stand doesn't have the appearance of a plantation due to the hand-seeding technique used, it meets the "planted" definition by having >50% cover in artificial regen. The stand has small wetland inclusions (OFS).																																																																							
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51	42220 - Natural Jack Pine	Poletimber Medium	123.7	60	81-110	N/A	Was cut in 1964 (#38-63A), merch JP (except marked seed trees), fir & aspen. The remaining JP was cut by 1972 (#62-70, #37-71), and deer range improvement FTPs (#68-G, #69-G, #62-G) non-commercially cut 2"+ residual aspen & oak by 1973. Several small contracts removing RP sawtimber were carried out in the early 1970's. The stand has JP pole cover with residual RP (2nd age estimate from stand 48), small clones of aspen, and NPO stump sprouts. The RP occurs scattered throughout the interior and in dense pockets along the swamp edge; only traces of the xlog RP are legacy. While the JP age was set to the first harvest and the aspen age to the last FTP, the series of cuts started new age classes across both species. The stand has a long lowland border, wraps around several wetlands, and has low ground inclusions. The cover is dense along the transition ground edge and sparser interior. Widespread JPBW defoliation & increasing JP mortality has caused the ave canopy closure to dip below 75%.																																																																							
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52	6220 - Alder/willow	Nonstocked	13.4		Unspecified	No	2014 edge comments: Tag alder with Low-Density Tree levels of pole-sapling tamarack, spruce, aspen and fir.																																																																							
53	6224 - Treed Bog	Nonstocked	5.4		Unspecified	No	2014 edge comments: Treed bog: leatherleaf and Labrador tea, with sapling-pole spruce, tamarack, and some JP-RP.																																																																							
54	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	68.7	115	51-80	N/A	2014 edge comments: Long, narrow swamp stand. Its irregular boundary wraps around several non-forested wetland stands and is flanked by uplands. Away from the considerable transition ground edge, this stand is very wet. Ephemeral drainages originate within the stand and flow out the NW and south ends. Canopy dominance shifts back and forth between NWC, tamarack and spruce as you move across the stand. The transition ground supports denser, larger-diameter cedar and spruce cover. The most saturated ground has almost pure tamarack. Cover adjacent to the non-forested wetlands is sparse and continuing to fill in. Small amounts of QA, balsam poplar, RM & paper birch are scattered along the margins. The stand's 1st & 2nd ages were on the majority mature components. A younger class of spruce and tamarack is present on the upland edge but was not cored. 2024 update: 2.4 acres of stand 43's designated retention were merged into this stand's NE edge (see Site Condition layer).																																																																							
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**55** 6225 - Bog Nonstocked 7.8 Unspecified No 2014 edge comments: Leatherleaf bog rimmed with treed bog (spruce, JP, WP, RP, tamarack) that is slowly colonizing the N1/2.

**56** 6129 - Mixed Coniferous Lowland Forest Poletimber Medium 46.9 121 51-80 N/A 2014 field comments: Mixed conifer swamp with canopy closure varying with the degree of flooding. The most saturated ground has sparse spruce and tamarack over tag alder. The drier transition ground has dense cedar, spruce or tamarack cover. Ground falling in between the two extremes supports a moderately stocked mix of the canopy dominants. 1st age was on the NWC pole cover. Minority NWC saw cored 50 years older. Spruce cored on the transition ground edge was significantly younger (2nd age) than the interior spruce. Minor associates include balsam fir, aspen, RM, WP and paper birch.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Tamarack	10	Pole	7		Balsam Fir	Medium	Variable	Sapling
Red Maple	2	Log	14		Black Spruce	Low	Variable	Sapling
White Pine	2	XLog	28		Tag Alder	Medium	5 - 10 feet	Tall Shrub
Quaking Aspen	2	Pole/Log	8					
Balsam Poplar	2	Pole	7					
Northern White Cedar	45	Pole/Log	8	121				
Balsam Fir	5	Pole/Sapling	7					
Black Spruce	30	Pole	7	58				
Paper Birch	2	Pole/Log	8					

**57** 6220 - Alder/willow Nonstocked 6.2 Unspecified No 2014 edge call: Tall tag alder with scattered tamarack, fir & spruce.

**58** 4133 - Aspen, Mixed Pine Poletimber Medium 7.8 28 51-80 N/A 2014 field comments: Was cut 2"+ DBH in 1996 (#18-96), except for the perimeter and SW peninsula. That peninsula was part of an island-hop used to access the harvest from the SW and is cut off by tag alder swales. The main harvested island has dense aspen cover in the middle surrounded by a sparser-stocked zone filling in with JP & balsam fir. The transition ground edge has dense cover in residual WP, fir, NPO, aspen, RM, & RP.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
White Pine	10	Log/Pole	12	50	Balsam Fir	Low	Variable	Sapling
Red Maple	1	Pole/Log	9		Black Spruce	Low	Variable	Sapling
Jack Pine	10	Pole/Sapling	5	28				
Quaking Aspen	8	Sapling/Pole	4	28				
Red Pine	1	Log/XLog	17					
Balsam Fir	10	Pole/Sapling	7					
Black Spruce	5	Pole/Sapling	6					
Bigtooth Aspen	50	Pole/Sapling	5	28				
Northern Pin Oak	5	Pole/Sap/Log	5					

**59** 42220 - Natural Jack Pine Sapling Medium 25.4 16 1-50 N/A Was final harvested Nov 2008 (#019-06), cutting merch JP & oak (cruise residual 10 BA RP-WP). Two interior bogs were red-line excluded (OFS pts). Well-established JP regen from the harvest is the featured canopy, with RP-WP residual scattered above. The JP distribution is variable, resembling KW habitat.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Jack Pine	80	Sapling	2	16	Leatherleaf	Trace	< 5 feet	Tall Shrub
Red Pine	12	Log/Pole/XLog	14	71	Black Cherry	Low	Variable	Tall Shrub
White Pine	3	Log/XLog	16					
Northern Pin Oak	5	Sapling	3	16				





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments									
60	310 - Herbaceous Openland	Nonstocked	15.8	0	Unspecified	4211 - Planted Red Pine	Naturally-established mixed pine stand with declining NPO was final harvested with retention by early 2021 (#639-17), cutting stems 1"+ DBH except green-marked (resid BAs: 4 RP, tr WO). Most of the residual pine was legacy stature. Will be planted to RP (C72-909). FRD trenched April 2022. Site prep sprayed July 2023. Effective control of the aspen & BC regen, low shrub & herbaceous layers. 814 LTPA PRT RP planted in May 2024.									
								Sub-Canopy Species	Density	Avg. Height	Size					
								Red Pine	Trace	< 5 feet	Seeding					
								Red Pine	Trace	>20 feet	Log					
61	3302 - Low Density Conifer Trees	Nonstocked	11.6	0	Unspecified	429 - Mixed Upland Conifers	This west half of stand 43 was shelterwood harvested with retention by early 2021 (#639-17), cutting merch stems except green-marked (12 sq ft mostly legacy RP, 6 sq ft WP, traces of WO), and islands within the adjacent swamp. Those islands were merged into stand 36 (see Site Condition layer). Designated retention also includes the legacy pine residual. Fair amount of windthrow in the pockets of immature spruce-fir that had been protected during the harvest. Traces of spruce, RP, WP, JP, fir & tamarack have slowly been seeding in. Regen doesn't meet stocking standards at this time. In-growth is expected due to good access to the water table and available seed sources.									
								Sub-Canopy Species	Density	Avg. Height	Size					
								Balsam Fir	Low	Variable	Sapling					
								White Pine	Low	>20 feet	Log					
								Black Spruce	Trace	< 5 feet	Seeding					
								White Pine	Low	>20 feet	Pole					
Red Pine	Low	>20 feet	Log													
62	3302 - Low Density Conifer Trees	Nonstocked	9.7	0	Unspecified	429 - Mixed Upland Conifers	Naturally established pine stand on intermediate ground was seed tree harvested by Jan 2021 (#639-17), cutting merch stems except green-marked (30 sq ft cruised resid: mostly legacy-stature RP, some WP). Margin near bog stand 63 was excluded from the harvest. Designated retention includes the legacy pine residual. There has been a lot of blowdown in the pockets of immature fir-spruce-WP that were protected during harvesting. The traces of spruce, WP, RP, JP, fir & tamarack regen that have been seeding in do not meet minimum stocking standards at this time but continued in-growth is expected.									
								Sub-Canopy Species	Density	Avg. Height	Size					
								Red Pine	Trace	< 5 feet	Seeding					
								White Pine	Trace	< 5 feet	Seeding					
								Red Pine	Low	>20 feet	Log					
								Balsam Fir	Trace	Variable	Sapling					
								Black Spruce	Trace	Variable	Sapling					
								White Pine	Trace	>20 feet	Pole					
								White Pine	Trace	>20 feet	Log					
								Black Spruce	Trace	< 5 feet	Seeding					
63	6224 - Treed Bog	Nonstocked	0.9		Unspecified	No	2014 edge comments: Leatherleaf with some Labrador tea & tag alder, being colonized by WP, black spruce, tamarack to more or less treed bog status.									
64	42290 - Natural Mixed Pine	Poletimber Medium	7.6	56	51-80	N/A	Was cut in 1996 (#18-96), merch JP, aspen & dead oak. The harvest's considerable residual is the featured canopy: open-grown WP-RP, pole JP, declining NPO, and increasing spruce-fir. The JP regen from the cut (mainly in the S-center of the stand) will be recordable in the canopy by next YOE and lift the canopy closure above 75%.									
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
								Black Spruce	8	Pole	7		White Pine	Low	Variable	Sapling
								Red Pine	10	Log/XLog/Pole	16		Balsam Fir	Low	Variable	Sapling
								Quaking Aspen	1	Log/Pole	10		Black Spruce	Low	Variable	Sapling
								White Pine	40	Log/Pole/XLog	14	56	Jack Pine	Medium	>20 feet	Sapling
								Northern Pin Oak	8	Log	15	110				
								Balsam Fir	7	Pole	7					
								Red Maple	1	Pole	8					
								Jack Pine	25	Pole	7					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																															
65	6225 - Bog	Nonstocked	3.7		Unspecified	No	2014 edge comments: Flooded bog. Full leatherleaf cover, with patches of taller shrub above (salix, spiraea, tag alder, viburnum) and colonizing tamarack & spruce.																																																															
66	42290 - Natural Mixed Pine	Sawtimber Poor	19.5	57	1-50	N/A	Was cut in early 2008 (72-19-06-01), removing JP, RM & marked NPO (cruise residual 20 sq. ft. NPO, 20 sq. ft. conifers, mostly open-grown WP). A small bog inclusion was red-line excluded in the west (OFS pt). Was trenched in 2010 & interplanted to WP in 2011 as a nurse crop for the oak (C72-598). The residual is still the featured canopy but will likely flip to the regen next YOE as the overmature oak continues to drop out. The planted WP is growing well and occupying areas that would otherwise have filled in with cherry brush, but it did not function as intended to support oak regen establishment. Windthrow in the west end.																																																															
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67	6220 - Alder/willow	Nonstocked	6.3		Unspecified	No	2014 edge comments: Lowland shrub swale being progressively colonized by the swamp to the east. Cover is salix, tag alder & spiraea, with increasing tamarack & black spruce.																																																															
68	3302 - Low Density Conifer Trees	Nonstocked	21.7	0	Unspecified	429 - Mixed Upland Conifers	Naturally-established RP stand on intermediate ground was seed-tree harvested by Jan 2021 (#639-17), cutting merch stems except green-marked (15 sq ft RP, 2 sq ft WP), cedar, and retention around the bog in the NE, the ephemeral drainage at the bottleneck, and by the adjacent bog stand 74. The legacy pine residual is also designated retention. A lot of windthrow has occurred in the pockets of immature spruce-fir-WP that were protected during the harvest. Less than recordable amounts of RP, WP, JP, spruce & fir regen has established despite the good scarification, access to the water table, & seed source.																																																															
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69	6220 - Alder/willow	Nonstocked	1.8		Unspecified	No	2014 edge comments: Flooded lowland shrub wetland with tag alder, salix, leatherleaf and bog birch. Drains to the NW across stand 68.																																																															
70	42290 - Natural Mixed Pine	Sawtimber Poor	17.2	61	1-50	N/A	Most of the stand was cut in early 2008 (72-19-06-01), merch stems except RP, WP, spruce, fir, birch & marked NPO. The stand's narrow far ends were red-line excluded (half-acre swamp inclusion on the W end & half-acre sparse driveway area on the east end. The narrow poly on the N side of the road was also excluded from the harvest; its east end picks up stand 77's retention (see Site Condition layer). Residual from the harvest is RP-WP of multiple size classes, declining NPO, and pole-sap balsam fir, JP & black spruce. Traces of QA, RM, PB & tamarack occur mostly along the swamp margins. Regen is a variable mix of pine, fir, spruce, aspen & traces of oak. The JP regen is mostly in the W1/2 & the WP regen in the E1/2. Canopy is sparser in the west due to windthrow, and higher in the uncut portion north of the county road.																																																															
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71	122 - Road/Parking Lot	Nonstocked	7.4		Unspecified	No	County road corridor.																																																															



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
<b>72</b>	6129 - Mixed Coniferous Lowland Forest	Poletimber Poor	11.6	67	1-50	N/A	2014 comments: Aside from a pine island inclusion, this stand is on saturated to flooded ground with a diverse lowland shrub understory. From west to east, the cover starts with a dense patch of spindly spruce poles, moves onto a small island of RP-JP, drops back down into the swamp with very sparse cover, then picks up more cedar and tamarack at the east end. Traces of aspen, RM & paper birch rim the uplands. An ephemeral drain empties into the stand from the NE.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Northern White Cedar		30	Pole/Log	9	107	Tag Alder		
Black Spruce		35	Pole/Sapling	6	67	Bog Birch		
Tamarack		25	Pole/Sapling	6		Michigan Holly		
Jack Pine		5	Pole/Log/Sap	7		Sandbar Willow		
Red Pine		5	Log/XLog	17				
<b>73</b>	42220 - Natural Jack Pine	Poletimber Medium	28.1	54	51-80	N/A	Was cut in 1970 (#53-70, #40-70), merch JP east of the two-track and JP saw west of the two-track. Most of the residual RP was then cut in 1974 (#45-73). Stand was sprayed for JP budworm control (W71-194, 1982). The stand regenerated well to JP. The densest stocking and best growth is on the west side by the lowlands. Moving uphill to the N & E, the canopy closure drifts below 75%. Stump-origin oak from the harvest is mainly on the hill in the NE. Residual from the harvest includes log-xlog RP (some of it legacy), declining NPO saw, and small saw JP. The WP, spruce & fir occurs mostly on the west edge transition ground. Some thin crowns from JPBW defoliation last year. Scattered JP mortality.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Red Pine		8	Log/XLog/Pole	14		Black Cherry		
Black Spruce		1	Pole/Sap/Log	7		Red Pine		
Jack Pine		80	Pole	7	54			
White Pine		2	Log/Pole/XLog	11				
Balsam Fir		1	Pole	6				
Northern Pin Oak		8	Pole/Sap/Log	7				
<b>74</b>	6225 - Bog	Nonstocked	1.2		Unspecified	No	2014 edge comments: Leatherleaf bog with some swamp birch, and colonizing JP, RP spruce & tamarack.	
<b>75</b>	6220 - Alder/willow	Nonstocked	2.8		Unspecified	No	2014 edge comments: Tag alder with some salix, being colonized by tamarack, spruce, WP & RM. There may be a bog patch in the middle.	
<b>76</b>	6224 - Treed Bog	Nonstocked	1.5		Unspecified	No	2014 edge comments: Leatherleaf bog colonized to treed bog status with black spruce, tamarack, WP & JP.	
<b>77</b>	310 - Herbaceous Openland	Nonstocked	8.2	0	Unspecified	4211 - Planted Red Pine	Naturally-established mixed pine stand with declining NPO was final harvested with boundary-excluded retention by early 2021 (#639-17), cutting stems 1"+ DBH except green-marked (resid BA 6 RP, tr NPO). Most of the residual RP was legacy stature. Will be planted to RP (C72-909). FRD trenched April 2022. TMS recon in 2023 did not find competition warranting site prep herbicide. Will cancel that step and go straight to planting. Was scheduled to be planted in 2024 but the nursery ran short on trees; it will now be planted in 2025. The harvest's designated retention on the north side of Conners Flat Rd was merged with stand 70 (see Site Condition layer).	
<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>				
Red Pine		Trace	>20 feet	Log				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																				
<b>78</b>	429 - Mixed Upland Conifers	Sawtimber Well	1.7	53	81-110	N/A	2014 edge call: Small finger of dry ground that extends from the adjacent private property into the swamp. Cover includes log-pole WP and dense patches of pole balsam fir, with cull RM saw & black spruce rimming the swamp, terrible quality NPO, and clumps of large RP.																																																				
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<b>79</b>	6121 - Tamarack	Poletimber Poor	15.3	120	1-50	N/A	2014 field comments: The stand's core saturated ground has sparse tamarack over marsh/tag alder. Denser NWC cover fingers in on the N & E edges. A string of small PArVCo islands across the north end have fairly dense cover in WP, fir, RM & spruce. The stand's SW has majority cover in black spruce over sphagnum/leatherleaf. 2024 update: Two uncut islands of stand 81 were merged in on the west edge.																																																				
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<b>80</b>	3302 - Low Density Conifer Trees	Nonstocked	1.8		Unspecified	No	Within an area cut in 1960 (#85-60A), merch aspen & marked JP. Was then cut in 1976 (#12-76), again removing merch JP. Appears to have been cut in conjunction with a larger adjacent private harvest. This part of the harvest was split out as a non-forested stand. Cover is a mix of grass, weeds and low shrubs, with patches of JP, WP, RP & NPO.																																																				
<b>81</b>	310 - Herbaceous Openland	Nonstocked	8.7	0	Unspecified	429 - Mixed Upland Conifers	Mixed conifer stand was final harvested in fall 2023 (#043-17), cutting trees 2"+ DBH except green-marked (10 BA WP-RP), an 0.6-acre retention island on the east end excluding a pocket of xlog pine, and a pair of islands in the NW cut off by low ground (merged into stand 79). The wood wasn't forwarded until spring 2024. Cover was JP-WP-NPO with spruce-fir and minor RP-A components. Most of the stand had been within an area cut in 1960 (#85-60A), merch aspen & marked JP. The west end then had merch JP cut in 1976 (#12-76).																																																				
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<b>82</b>	6224 - Treed Bog	Nonstocked	1.3		Unspecified	No	2014 edge comments: Leatherleaf bog with colonizing JP, spruce, WP & RP.																																																				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
<b>83</b>	6121 - Tamarack	Sapling Medium	6.7	47	Unspecified	N/A	July 2014 inventory: Tamarack, with black spruce and occasional WP & RM, on saturated ground. The stand's pole component (2nd age, 93) is concentrated on the perimeter. The interior has majority sapling cover (1st age, 37). There is likely a wide range of ages in the sapling class, given the progressive nature of the colonization, but only one sapling was cored. The shrub layer has short tag alder, with swamp birch, leatherleaf and Labrador tea, over sphagnum hummocks. Amount of standing water influenced by beaver activity on drainage to SE on private.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Black Spruce		20	Sapling	3		Tag Alder		
Tamarack		15	Pole	7	103	Medium		
Black Spruce		10	Pole	6		< 5 feet		
White Pine		3	Pole/Log	7		Tall Shrub		
Red Maple		2	Pole/Sapling	7				
Tamarack		50	Sapling	3	47			
<b>84</b>	6220 - Alder/willow	Nonstocked	3.1		Unspecified	No	2014 edge comments: Tag alder with sparse black spruce, tamarack, aspen & paper birch.	
<b>85</b>	42220 - Natural Jack Pine	Poletimber Medium	16.7	51	51-80	N/A	Was part of a larger harvest in 1973 (#14-73A, majority in adjacent comp 280), cutting merch stems except RP-WP. Regen from the harvest is the featured canopy, with residual RP, WP & traces of NPO scattered above. Regen was predominantly JP (now 5-7" DBH), with stump-origin NPO (mainly in the SE), two sub-acre aspen clones in the S-end, and fir on the S-edge transition ground. Dense cover alternates with sparse openings; canopy closure drifts off either side of 75%. Terrain is rolling in the SW.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Jack Pine		65	Pole	6	51	Black Cherry		
Bigtooth Aspen		2	Pole/Log	8	51	Trace		
White Pine		5	Log/Pole	12		Variable		
Balsam Fir		5	Pole	6		Trace		
Quaking Aspen		3	Pole/Log	8	51	Variable		
Northern Pin Oak		5	Pole/Log	8		Trace		
Red Pine		15	Log/XLog/Pole	16	63	Variable		
<b>86</b>	122 - Road/Parking Lot	Nonstocked	1.7	0	Unspecified	No	Cleared county road corridor.	
<b>87</b>	42210 - Natural Red Pine	Sawtimber Medium	6.0	58	81-110	N/A	Was part of a larger harvest in 1973 (#14-73A, majority in adjacent comp 280), cutting merch stems except RP-WP. This part of the harvest area had more RP & JP residual than regen. The main canopy layer is made up of small saw-large pole RP with JP. Legacy RP are scattered above. JP and NPO regen from the harvest is intermediate in the canopy. The mature residual JP & NPO have been dropping out. Spruce, fir, WP & traces of A-RM rim the swamp. Canopy closure drifts off either side of 75%.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
White Pine		5	Log/Pole/XLog	12		Red Pine		
Balsam Fir		3	Pole	6		Low		
Northern Pin Oak		5	Log/Pole	12		Variable		
Quaking Aspen		1	Pole	7		Trace		
Red Pine		65	Log/Pole/XLog	13	58	Variable		
Jack Pine		20	Pole/Log	8		Trace		
Black Spruce		1	Pole	6		Sapling		
<b>88</b>	6220 - Alder/willow	Nonstocked	1.9		Unspecified	No	2014 edge comments: Tag alder over marsh, with flood-killed snags.	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
<b>89</b>	42210 - Natural Red Pine	Sawtimber Medium	24.0	76	81-110	N/A	Merch aspen & marked JP were cut in 1960 (#85-60A). In 1997 (#027-96) 2"+ DBH A-JP-NPO were cut, except for on a couple acres each along the stream corridor & in the thumb. The species-removal harvests released RP & WP that had established across 5+ decades. A significantly older supercanopy pine component had to be merged into the canopy records with the majority younger pine due to a MiFI limitation. Canopy closure is variable; dense cover alternates with numerous canopy gaps. The densest RP in the SW 4 acres were shelterwood harvested in 2024 (#043-17) down to 37 BA RP; the canopy closure is 25-50% there but it has been kept as part of the parent stand. Species distribution is also variable; WP increases in the NW and SE. WP, fir & RP are recruiting in the understory, heaviest along the lowlands, & there are traces of NPO stump sprouts from the 1997 harvest. The stand has perimeter transition ground, and small bog inclusions in the NW.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
White Pine	30	Pole/Log/XLog	9	55	Balsam Fir	Low		Variable	Sapling
Balsam Fir	2	Pole	7		Red Pine	Low		Variable	Sapling
Red Pine	68	Log/Pole/XLog	14	76	White Pine	Medium		Variable	Sapling
					Northern Pin Oak	Trace	>20 feet	Sapling	
<b>90</b>	6120 - Lowland Cedar	Poletimber Well	20.9	113	111-140	N/A	2014 field comments: The stand's core saturated ground has dense NWC pole cover with black spruce & tamarack mixed in. Moving out toward the stand's perimeter, the proportion in NWC decreases while that species' DBH increases. The stand's drier transition ground edge and small PARVCo islands have dense black spruce pole cover with some RP & WP saw, paper birch & cull RM. Balsam fir common in the understory		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	5	Log	14		Black Spruce	Low		Variable	Sapling
White Pine	3	Log/Pole	12		Tag Alder	Low		5 - 10 feet	Tall Shrub
Tamarack	10	Pole	7		Balsam Fir	High		Variable	Sapling
Northern White Cedar	55	Pole/Log	8	113					
Black Spruce	24	Pole/Sapling	7						
Paper Birch	3	Pole/Log	7						
<b>91</b>	6220 - Alder/willow	Nonstocked	1.5		Unspecified	No	2014 edge comments: Tag alder & salix over marsh grass. Scattered WP. East end above the old beaver dam is mostly marsh, with some ponding.		
<b>92</b>	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Medium	4.1	130	51-80	N/A	2014 field comments: Mixed lowland stand occupying a shallow valley. A permanent stream serpentine across the width of the floodplain. Mucky hillside seeps feed into the stream. Variable cover in RM, paper birch & quaking aspen, with xlog WP hugging the stream and fir-spruce on the sideslopes. Occasional NWC & RP. Cull and break-up common in the overmature components. RM age had to be extrapolated due to pervasive interior rot. WP age extrapolated due to corer bit limitations.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Balsam Poplar	2	Log/Pole	14		Tag Alder	Low		Variable	Tall Shrub
Black Spruce	10	Pole/Log	8		Black Spruce	Low		Variable	Sapling
White Pine	5	Pole/Log	8		Balsam Fir	High		Variable	Sapling
Northern White Cedar	2	Log/Pole	12						
Balsam Fir	10	Pole	7						
Quaking Aspen	8	Log/Pole	12						
Paper Birch	15	Log	12						
Red Pine	3	XLog/Log	20						
Red Maple	35	Log/Pole/XLog	12	130					





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																															
<b>93</b>	42290 - Natural Mixed Pine	Sawtimber Well	2.4	172	141-170	N/A	2014 edge comments: Island of dry ground in the cedar swamp, dominated by supercanopy-stature RP & WP. Occasional NPO and overmature quaking aspen. RM & paper birch are intermediate-suppressed in the canopy. The understory has locally full cover in balsam fir & WP. The average WP diam is >24 inches but MiFI doesn't allow splitting the size class to XLog-Log above 22 inches.																																															
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<b>94</b>	6122 - Black Spruce	Poletimber Poor	5.2	90	1-50	N/A	2014 field comments: West end of the stand is not much above treed bog status, with conifer cover establishing through deep leatherleaf. Moving east, the leatherleaf gives way to more sphagnum moss groundcover with Labrador tea and blueberry. The majority spruce cover there is spindly and small-crowned, with similar-stature tamarack and occasional WP, RP & JP.																																															
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<b>95</b>	42290 - Natural Mixed Pine	Sawtimber Poor	31.4	54	51-80	N/A	18 acres were shelterwood harvested in fall 2023 (#043-17), leaving 42 sq ft residual RP-WP. The wood wasn't forwarded until spring 2024. Lower-stocked areas of the stand were excluded from the harvest (narrow peninsulas to the SE & SW), along with the NW poly stream RMZ. Those excluded polys now have higher BAs than the post-harvest portion but were not split out as separate stands due to their small size. Original stand comments: Was within a larger harvest in 1960 (#084-60A) that cut merch aspen & marked JP. Was cut again in 1988 (#002-87), 2"+ DBH except only the marked RP & WP. NW multi-poly was not in the 1988 harvest area but had an acre cut in 1997 (#027-96), 2"+ DBH aspen, JP & oak. Wide range of ages in the pine overstory. Roughly a third of the current canopy was sapling-sized at time of the '88 harvest & is now large pole-small saw in size (most of it WP (2nd age 54), some RP). Roughly a third of the stand is large saw 90-110 years old (mostly RP, 1st age 102, some WP). In between is medium RP saw, generally in its 80's. Except where stocking held up, there is a tendency toward persistent heavy limbs in the large RP. Small patches of aspen are scattered across the stand; log-pole clones dating to the 1960 harvest & sapling-pole to the 1988 harvest. Filling in below is a mix of WP, RP & fir.																																															
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<b>96</b>	6224 - Treed Bog	Nonstocked	3.4		Unspecified	No	2014 edge comments: Thick leatherleaf cover colonized to treed bog status by tamarack, black spruce & WP.																																															
<b>97</b>	6224 - Treed Bog	Nonstocked	3.6		Unspecified	No	2014 edge comments: Atypical treed bog. There is full cover in leatherleaf and Labrador tea, but also tag alder, salix & spiraea above it, in addition to the colonizing tamarack, black spruce & WP.																																															
<b>98</b>	42210 - Natural Red Pine	Sawtimber Poor	6.3	76	1-50	N/A	This portion of stand 89 was shelterwood harvested fall 2023 (#043-17), leaving a cruised residual of 32 sq ft (27-RP,5-WP). The wood wasn't forwarded until spring 2024.																																															
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
<b>99</b>	4133 - Aspen, Mixed Pine	Poletimber Well	5.6	36	81-110	N/A	2014 field comments: Was part of a larger area cut in 1960 (#84-60A), merch aspen & marked JP. Was cut again by 1988 (#002-87), 2"+ DBH and marked RP-WP. This part of the harvest had only scattered RP residual. The stand's core is dense aspen pole cover; the perimeter is where the WP, fir & RP are concentrated. The spruce occupies the transition ground edge. 2024 update: An uncut island of stand 104 was merged into the SE of this stand; that retention encompasses a seasonally flooded swale with sparse overmature balsam poplar and quaking aspen (see Site Condition layer).	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Black Cherry		1	Pole	6		White Pine		
Black Spruce		3	Pole	6		Medium		
Balsam Poplar		5	Pole/Log	9	64	Trace		
Quaking Aspen		55	Pole/Sapling	5	36	Variable		
Balsam Fir		10	Pole/Sapling	5		Sapling		
White Pine		20	Pole/Log	8		10 - 20 feet		
Red Pine		5	XLog/Log/Pole	22		Tall Shrub		
Northern Pin Oak		1	Pole/Sapling	6	36			
<b>100</b>	42290 - Natural Mixed Pine	Sawtimber Medium	8.3	45	51-80	N/A	Small variable stand was within a larger area cut in 1960 (#84-60A), merch aspen & marked JP. Was cut again by 1988 (#002-87), 2"+ DBH and only the marked RP & WP. WP-RP residual and JP-A regen from the harvest make up the featured canopy. Spruce occupies the transition ground edge. Most of the WP is young but saw-sized from being very open-grown. Species distribution and canopy closure is variable, with upland brush/grassy opening inclusions common. In 2024, an acre of dense RP sawtimber was thinned to 80-110 BA and an acre of mature aspen from the 1960 harvest was clearcut (#043-17); those treated areas are distinct inclusions.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Jack Pine		30	Pole/Sapling	6	36	White Pine		
Quaking Aspen		8	Pole/Sapling	6	36	Trace		
Black Spruce		2	Pole	6		Variable		
Northern Pin Oak		1	Pole/Sapling	7	36	5 - 10 feet		
Balsam Fir		5	Pole	7		Tall Shrub		
Red Pine		20	Log/XLog/Pole	16	100			
White Pine		34	Log/Pole/XLog	15	45			
<b>101</b>	429 - Mixed Upland Conifers	Sawtimber Medium	4.0	108	51-80	N/A	2014 field comments: Small upland stand along the compartment/private property boundary and hemmed in by the swamp. JP with significant oak and aspen components, and lesser amounts of WP, RP, spruce & fir. The top three species are largely overmature, with cull, decadence & snags common and contributing to the slash load. Low overall understory cover in a mix of pine, spruce & fir.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Northern Pin Oak		20	Log	14		Balsam Fir		
Balsam Fir		3	Pole	6		Low		
Jack Pine		45	Log	13	108	Variable		
White Pine		5	Pole/Log	8		Sapling		
Red Pine		5	Log/Pole	15		Sapling		
Black Spruce		2	Pole	6		Sapling		
Quaking Aspen		20	Log	14		Sapling		
						Pole		
<b>102</b>	6220 - Alder/willow	Nonstocked	1.1		Unspecified	No	2014 edge comments: Tag alder and salix, with some cattail and perimeter WP, QA, black spruce & tamarack.	
<b>103</b>	6122 - Black Spruce	Poletimber Well	1.8	77	51-80	N/A	2014 edge comments: Small pocket of low ground with dense black spruce pole cover on the perimeter, cull RM, and occasional paper birch, NWC & balsam fir. The interior has sparser cover.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Paper Birch		3	Pole	8		Black Spruce		
Balsam Fir		2	Pole	6		Low		
Black Spruce		80	Pole	8	77	Variable		
Northern White Cedar		2	Pole	8		5 - 10 feet		
Red Maple		13	Log/Pole	12		Tall Shrub		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
<b>104</b>	4130 - Aspen	Sapling Poor	3.3	1	Immature	N/A	Overmature aspen stand that had regenerated following a 1960 harvest (#84-60A) was final harvested with retention in late 2023 (#047-17), cutting stems 2"+ DBH except for a few green-marked xlog WP & RP, and intact fir regen patches. The stand's west edge on a seasonally flooded swale was excluded as retention and later merged with stand 99 (see Site Condition layer). Aspen was already sprouting at sale closure. The residual fir saplings were flagging from the exposure.	
Canopy Species		% Cover	Size Class	DBH	Age			
Quaking Aspen		95	Sapling	1	1			
Balsam Fir		5	Sapling	3				
<b>105</b>	6220 - Alder/willow	Nonstocked	1.0		Unspecified	No	2014 edge comments: Tall tag alder over marsh, with a sub-acre patch of lowland spruce on the east side.	
<b>106</b>	6122 - Black Spruce	Sapling Poor	30.1	67	Unspecified	N/A	2014 field comments: Black spruce and tamarack slowly filling in over dense leatherleaf groundcover. Tag alder and bog birch rim the perimeter. Occasional WP, RP & JP. Progressive colonization has created a multi-storied, multi-aged stand, but time was not spent coring more trees to document that condition. Barely averages above treed bog status. 2024 update: the stand margin by the uplands has dense pole cover that gives way to sparse sapling-pole cover moving inward.	
Canopy Species		% Cover	Size Class	DBH	Age			
Jack Pine		2	Sapling	2		Sub-Canopy Species		
Tamarack		35	Sapling/Pole	2		Density		Avg. Height
White Pine		5	Pole/Sapling	5		Low		< 5 feet
Red Pine		3	Pole/Sapling	5		Low		Variable
Black Spruce		55	Sapling/Pole	3	67	Low	< 5 feet	
							Size	
							Seeding	
							Seeding	
							Tall Shrub	
							Tall Shrub	
<b>107</b>	6122 - Black Spruce	Poletimber Medium	7.5	110	51-80	N/A	2014 field comments: Spindly black spruce with tamarack growing on spongy sphagnum & sedge-covered ground. The pole-sapling overstory barely averages 6" DBH. 2024 update: The 2nd age had also been on the spruce but a MiFI limitation prevents listing that record separately, so that age was applied to the tamarack in order to represent the stand's 2-aged condition.	
Canopy Species		% Cover	Size Class	DBH	Age			
Black Spruce		90	Pole/Sapling	6	110	Sub-Canopy Species		
Tamarack		10	Pole/Sapling	6	78	Density	Avg. Height	
						Low	Variable	
						Low	Variable	
							Sapling	
							Sapling	
<b>108</b>	42290 - Natural Mixed Pine	Poletimber Medium	18.2	36	51-80	N/A	2014 field comments: Was final harvested by 1988 (#002-87), cutting 2"+ DBH except for a narrow band of lowland spruce along S-center edge. Regen from the harvest, along with then-sapling material released by the harvest, make up the featured canopy. That canopy includes pole-sapling JP, aspen, balsam fir & stump-origin oak, and stocky, open-grown log-pole WP & RP. Distribution is patchy; dense cover alternates with upland brush/grassy openings. The harvest was accessed from the SW on a temporary road that crossed a narrow intermittent stream flowing out of stand 106.	
Canopy Species		% Cover	Size Class	DBH	Age			
Black Spruce		3	Pole/Sapling	6		Sub-Canopy Species		
White Pine		20	Log/Pole	15	47	Density		Avg. Height
Jack Pine		40	Pole/Sapling	5	36	Trace		Variable
Red Pine		5	Log/Pole/XLog	12		Trace		Variable
Balsam Fir		10	Pole	6		Trace		Variable
Northern Pin Oak		5	Pole/Sapling	6	36	Low		Variable
Black Cherry		2	Pole	5				Tall Shrub
Quaking Aspen		15	Pole/Sapling	6	36			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**109**      4311 - Pine, Aspen Mix      Poletimber Well      12.6      36      81-110      N/A

Was final harvested by 1988 (#002-87), cutting 2"+ DBH. Regen from the harvest, along with then-sapling material released by the harvest, make up the featured canopy. The canopy has dense aspen clones separated by somewhat open-grown WP cover and patches of upland shrub. Fir is filling in below the aspen. There is spruce on the transition ground bordering stand 106 and an inclusion of lowland spruce in the far NW end.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	15	Pole/Sapling	6		Balsam Fir	Low	Variable	Sapling
White Pine	30	Log/Pole	15	47	White Pine	Low	Variable	Sapling
Jack Pine	1	Pole	6		Black Cherry	Low	Variable	Tall Shrub
Black Cherry	1	Pole	5					
Black Spruce	3	Pole	6					
Northern Pin Oak	1	Pole	6	36				
Quaking Aspen	45	Pole	6	36				
Red Pine	4	Pole/Log	9					