



# Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61101

Entry Year 2022

Acreage: 1,652

County Kalkaska

Management Area: Grayling Ice Contact

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**Revision Date:** 2020-05-06

**Stand Examiner:** Paul Roell

**Legal Description:**

T28N R05W Sections 1-3

**Identified Planning Goals:**

Management in the Grayling Ice Contact management area (MA) will emphasize continuing to balance the age class of aspen on suitable sites and thinning the northern hardwoods, balancing age classes of red pine and jack pine and regenerating the aging oak resource. Management will strive to sustainably produce various forest products; enhance game and non-game wildlife habitat; protect areas of unique character, such as the historic Deward Tract; and provide for forest-based recreational uses. With about 3% of the management area being lowland, management activities will be minimally constrained. Expected trends within this 10-year planning period are increased recreational pressure, managing oil and gas development, introduced pests and diseases and the difficulty in regenerating oak.

**Soil and topography:**

The topography in this compartment ranges from flat to slightly rolling to hilly. Poor sandy soils are found in much of this part of Kalkaska County.

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

The state ownership is fragmented in the western part of the compartment. Private lands and development are most prevalent around the lakes and upon the better soils. There is a Private 80 acre parcel in Sec. 2 and the 11 acre Michigan State Police 800 MHz Radio tower site is located in Sec. 1.

**Unique Natural Features:**

There is a historical observation of the eastern massasauga rattle snake within the compartment.

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

None Known

**Special Management Designations or Considerations:**

The Deward Tract - all lands East of Deward Road is part of this special area where it is prohibited to operate any "wheeled" motorized vehicle on roads other than those roads that are designated as open for use.

**Watershed and Fisheries Considerations:**

**Wildlife Habitat Considerations:**

This compartment falls onto 3 landforms. The western ¼ is part of a pitted outwash plain. This portion of the compartment should continue to be managed for a variety of forest age classes, successional stages, and patch sizes, as well as grass/shrub openings, consistent with the fire-driven dynamics that historically shaped vegetation on the outwash plain. Some non-forested acreage has converted to forested habitat through the lack of natural disturbances. Therefore, brush management should occur to take the place of fire. Where harvesting is to occur in these types, we should maintain within stand structural diversity by retaining various leave trees (particularly mast producers), snags, and down logs. Tops should be left unchipped and scattered around the sale area, preferably in piles for wildlife cover. Some bracken fern reduction and planting of native grasses has been scheduled this entry cycle. Eventually prescribed burning should be used to maintain vegetation in open areas. Natural depressions and draws tend to remain open from cold air drainage; adjacent slopes can be cut periodically to extend open habitat.

The eastern end of the compartment falls on a narrow outwash channel. In the mixed swamp forest east of Deward Road, no treatments are prescribed for this period. Future harvests or habitat cuts should be small and carefully designed to optimize regeneration and to mimic naturally occurring blowdown pockets. Upland areas west of the road should continue to be managed for open habitat and early to mid-successional aspen-pine forest in a variety of age classes. Thinnings in red pine plantations should retain some deciduous component and some down logs if replanting operations allow.

The remainder of the compartment is on an ice-contact ridge. Much of the former beech-maple forest on this landform has been altered by historic logging, fire, land clearing, and more recently beech bark disease and emerald ash borer. Remaining northern hardwoods are poorly developed second growth. A significant portion of this LTA could be restored to mature closed –canopy northern hardwood forest through succession and careful selection harvest. In some cases, hardwoods may be nurtured as understory species in conifer stands. Maintaining diversity of hardwood species and retention of cavity trees and down logs should be a part of selection cutting. Aspen, pine, and upland brush should be allowed to succeed over time to hardwoods, except in draws and depressions that naturally tend toward earlier successional species. Approximately the north ½ of section 2 and the northeast corner of section 3 could be maintained in early to mid-successional aspen-pine forest for diversity on this LTA. Natural wildfires on adjacent pitted outwash plain probably carried over to this landform, thus some younger forest is appropriate here. Final harvests of aspen types should retain snags and pockets of residual live trees as well as some down logs for habitat structure. Tops should be left unchipped and scattered around the sale in piles for wildlife habitat.

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

Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift is the Mississippian Coldwater Shale. The Coldwater does not have an economic use. The nearest gravel pit is four miles to the southeast. Gravel potential in the compartment is thought to be good. This area is located within the Silurian Niagaran reef trend and has had previous oil and gas exploration, with additional potential possible. The Antrim Shale has been tested in the area, but the wells were plugged. The depth to the Antrim is approaching the maximum depth for commercial production. Most of the compartment is currently under lease. At present only one active well remains in Sec. 1

### **Vehicle Access:**

There is good access throughout the Compartment.

### **Survey Needs:**

None needed at this time.

### **Recreational Facilities and Opportunities:**

Large segments of the Kalkaska ORV trail and the Snowmobile Trail run throughout this compartment. Proposed timber management activities should include trail protection specifications to reduce impacts, as well as improve recreation and hunting experiences for future generations.

### **Fire Protection:**

Kalkaska DNR and Blue Lake Township Fire Department cover this compartment for fire suppression

### **Additional Compartment Information:**

The following reports from the Inventory are attached:

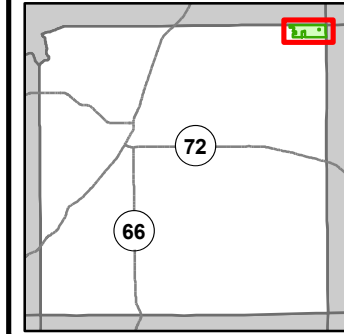
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

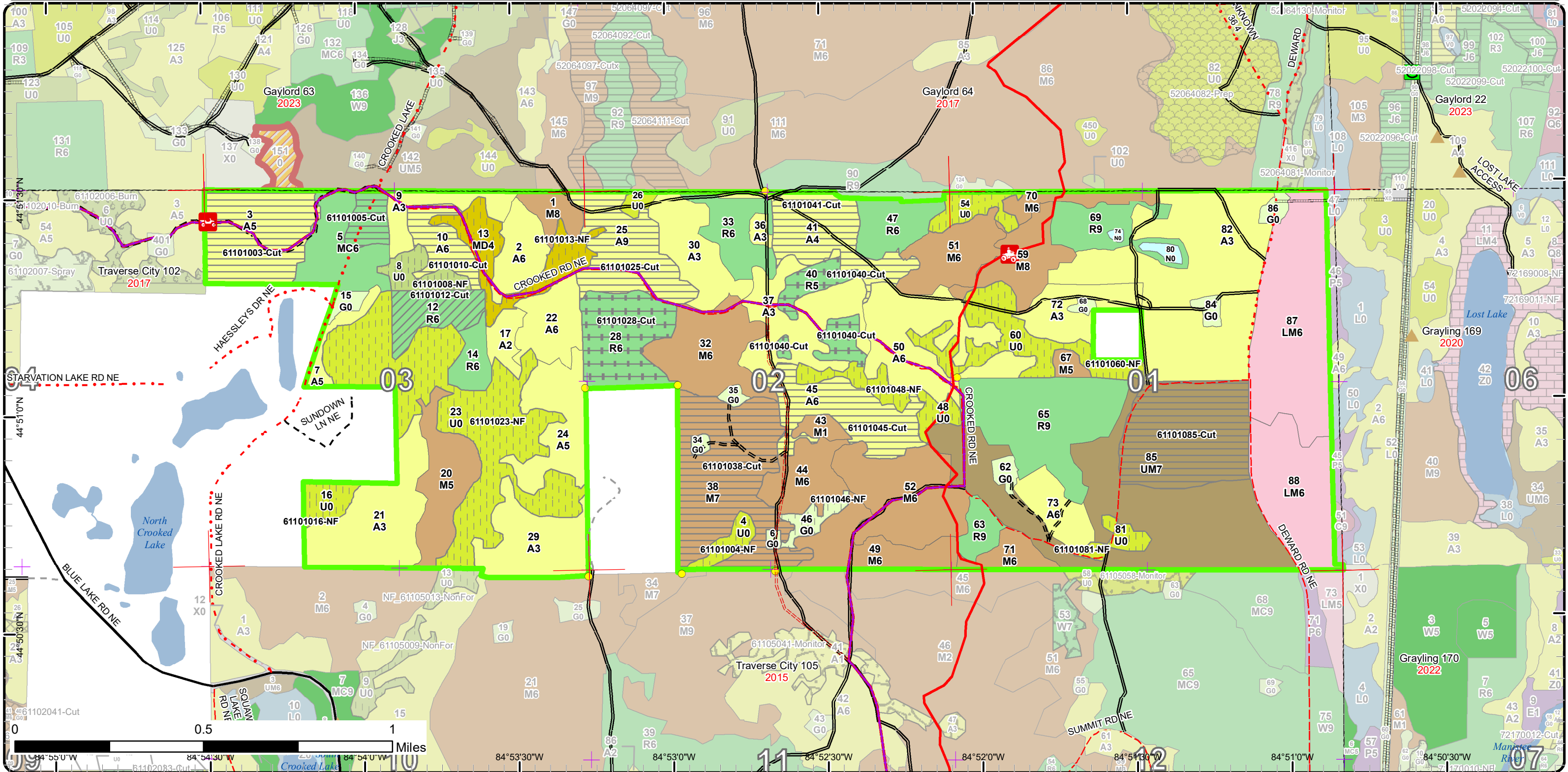
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatments Map

Compartment: 101  
 T28N R05W 1-3  
 County: Kalkaska  
 Unit: Traverse City  
 Mgmt Area: Grayling Ice Contact  
 YOE: 2022  
 Acres: 1,652.4 GIS Calculated  
 Examiner: Paul Roell  
 Map Revised: 1/8/2021  
 Map Phase: Post-Review

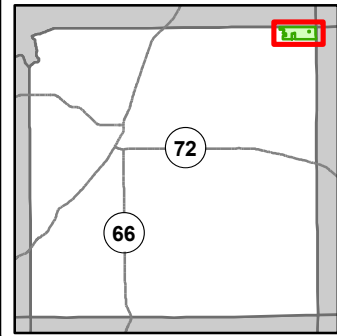


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- 🚙 ORV Trails
- 🚙 ORV Routes
- Designated ATV Trails
- Designated ORV Route
- Designated Snowmobile Trails
- ▲ Berms
- G Gate
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Pipeline
- Compartment Boundary
- Clearcut (w/Reserves)
- Harvest, Overstory Removal
- Thinning (Crown, Low, Systematic)
- Opening Maintenance
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 430 - Upland Mixed Forest
- 613 - Lowland Mixed Forest
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 623 - Emergent Wetland

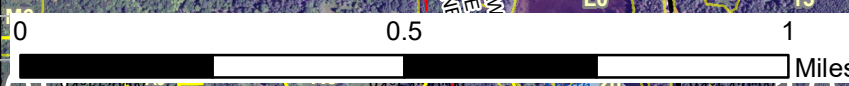
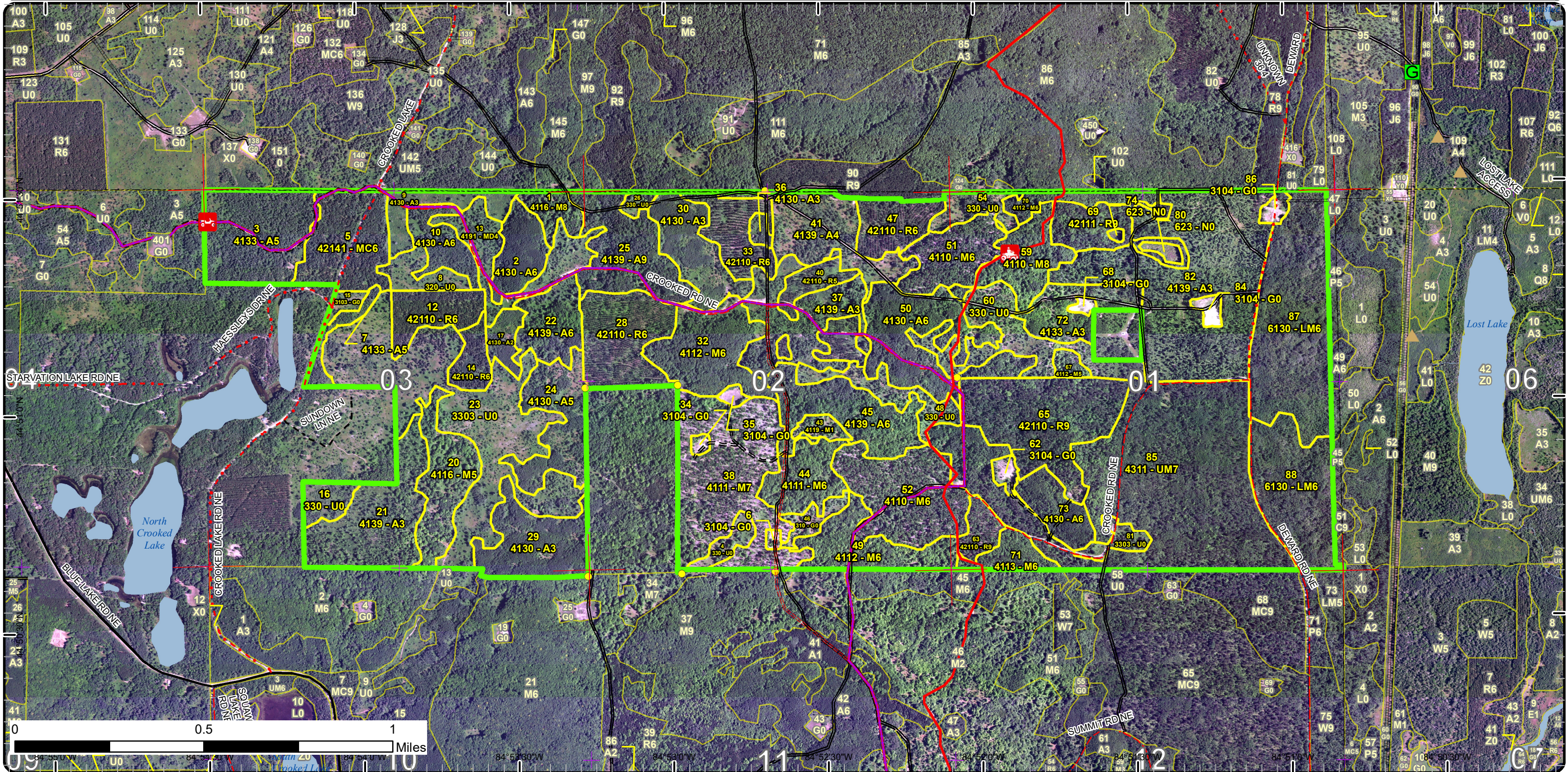


# Stand Boundary Map

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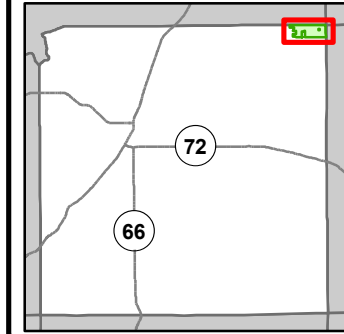
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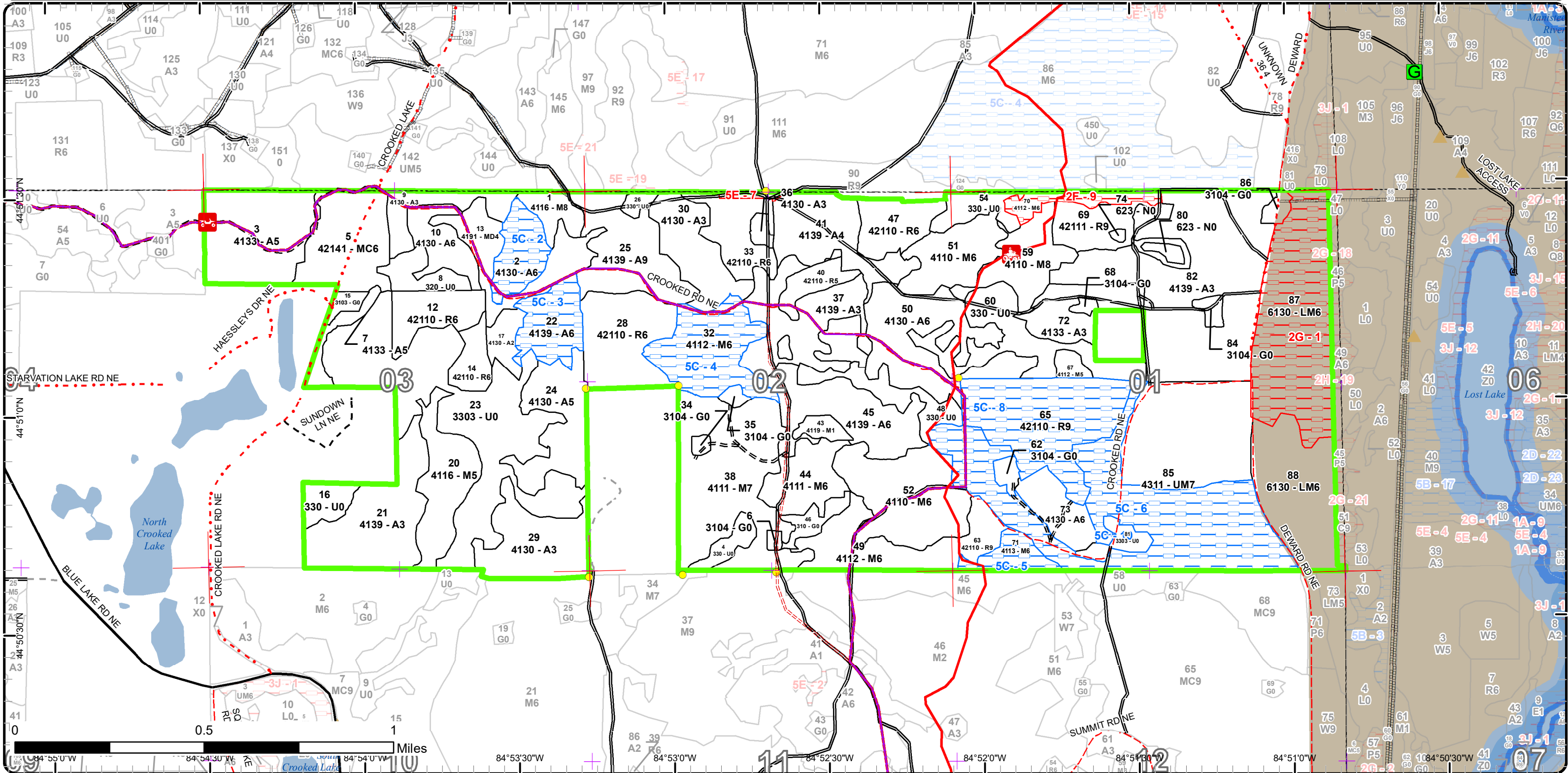
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# Special Conservation Areas

Compartment: 101  
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- G Gate
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Pipeline
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 5E: Long-Term Retention
- Stand Boundaries
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Dedicated Management Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Unnever-Aged	Total
Aspen	0	93	141	32	20	115	147	0	36	0	0	0	0	0	0	0	0	0	584
Herbaceous Openland	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Low-Density Trees	182	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182
Lowland Mixed Forest	0	0	0	0	118	0	0	0	0	0	0	0	0	0	0	0	0	0	118
Marsh	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Mixed Upland Deciduous	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	25
Northern Hardwood	0	0	0	0	0	0	4	0	26	192	56	28	0	0	0	0	0	5	310
Planted Mixed Pines	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	35
Red Pine	0	0	0	0	0	0	116	0	28	56	0	0	0	0	0	0	0	0	200
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	161	0	0	0	0	0	0	0	0	161
Upland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
<b>Total</b>	<b>220</b>	<b>93</b>	<b>141</b>	<b>32</b>	<b>138</b>	<b>115</b>	<b>327</b>	<b>0</b>	<b>90</b>	<b>409</b>	<b>56</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1653</b>



## Report 2 – Treatment Summary

Traverse City Mgt. Unit  
Year of Entry: 2022

Compartment 101  
Total Compartment Acres: 1,652

### Acres of Harvest

Commercial Harvest - 367  
Harvests with Site Condition - 0  
Next Step Harvest - 0  
Habitat Cut - 0

### Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	162	0	0	0	0	0	0	0	0	162
Northern Hardwood	70	0	0	0	0	0	0	0	0	70
Planted Mixed Pines	9	0	0	0	0	0	0	0	0	9
Red Pine	0	0	0	0	18	52	0	0	0	69
Upland Mixed Forest	57	0	0	0	0	0	0	0	0	57
<b>Total</b>	<b>298</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>367</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	367	0	0	0	0	0	0	220	0	587
Next Step	0	205	172	0	0	237	336	0	0	949
<b>Total</b>	<b>367</b>	<b>205</b>	<b>172</b>	<b>0</b>	<b>0</b>	<b>237</b>	<b>336</b>	<b>0</b>	<b>220</b>	<b>1537</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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**Approved Treatments:**

<b>3</b>	<b>61101003-Cut</b>	43.6	4133 - Aspen, Mixed Pine	Poletimber Medium	53	1-50	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest stand. Cut all trees two inches and greater in diameter. Leave minimal area retention around the snowmobile trail. Possibly</p> <p><u>Specs:</u> mark a couple trees to leave for seed source.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Aspen, cherry and mixed pine</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>											
<b>4</b>	<b>61101004-NF</b>	6.4	330 - Low-Density Trees	Nonstocked			NonForestMgt	Herbaceous/Crop /Grass Planting	3204 - Mast Producing Shrub		No
<p><u>Prescription</u> Mechanically treat bracken as needed.</p> <p><u>Specs:</u> Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Work around some of the existing beneficial vegetation to establish a seed mix of native grasses and forbs suited to site and soil conditions. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment.</p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u></p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>											
<b>5</b>	<b>61101005-Cut</b>	9.2	42141 - Planted Mixed Pine, Mixed Deciduous	Poletimber Well	51	111-140	Harvest	Clearcut	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest stand. Cut all trees two inches and greater in diameter. No retention to maximize regeneration.</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</u> aspen, red maple, cherry and mixed pine.</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 1 /22/2020</p>											





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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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<b>8</b>	<b>61101008-NF</b>	10.2	320 - Upland Shrub	Nonstocked			NonForestMgt	Herbaceous/Crop /Grass Planting	3204 - Mast Producing Shrub	No
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Prescription Mechanically treat bracken as needed.  
Specs: Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Work around some of the existing beneficial vegetation to establish a seed mix of native grasses and forbs suited to site and soil conditions. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Site Condition

Proposed Start Date: 10/1 /2021

<b>10</b>	<b>61101010-Cut</b>	14.7	4130 - Aspen	Poletimber Well	54	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
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Prescription Final harvest stand. Cut all trees two inches and greater in diameter. Leave minimal area retention around the snowmobile trail. Possibly mark a couple trees to leave for seed source.

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

Acceptable aspen, cherry, red maple and mixed pine.  
Regen:

Other  
Comment:

Site Condition

Proposed Start Date: 10/1 /2021

<b>12</b>	<b>61101012-Cut</b>	17.5	42110 - Planted Red Pine	Poletimber Well	51	171-200	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	No
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Prescription cut one row leave two rows.

Specs:

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Site Condition

Proposed Start Date: 10/1 /2021



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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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13	61101013-NF	25.1	4191 - Mixed Upland Deciduous with Conifer	Poletimber Poor	51	1-50	NonForestMgt	Herbaceous/Crop /Grass Planting	3204 - Mast Producing Shrub	No
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Prescription Mechanically treat bracken as needed.  
Specs: Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Work around some of the existing beneficial vegetation to establish a seed mix of native grasses and forbs suited to site and soil conditions. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Site Condition

Proposed Start Date: 10/1 /2021

16	61101016-NF	8.3	330 - Low-Density Trees	Nonstocked			NonForestMgt	Herbaceous/Crop /Grass Planting	3204 - Mast Producing Shrub	No
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Prescription Mechanically treat bracken as needed.  
Specs: Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Work around some of the existing beneficial vegetation to establish a seed mix of native grasses and forbs suited to site and soil conditions. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Site Condition

Proposed Start Date: 10/1 /2021

23	61101023-NF	100.6	3303 - Mixed Low Density Trees	Nonstocked	Immature		NonForestMgt	Herbaceous/Crop /Grass Planting	3204 - Mast Producing Shrub	No
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Prescription Mechanically treat bracken as needed.  
Specs: Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Work around some of the existing beneficial vegetation to establish a seed mix of native grasses and forbs suited to site and soil conditions. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment.

Next Step  
Treatments:

Acceptable  
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Other  
Comment:

Site Condition

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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>25 61101025-Cut</b>	36.3	4139 - Aspen, Mixed Deciduous	Sawtimber Well	74	81-110	Harvest	Clearcut with Retention	4116 - Mixed N. Hardwood - Aspen	Even-Aged	No
<p><u>Prescription</u> Cut all trees four inches and larger in addition Cut all Iron wood and Beech. Leave minimal retention along the rec trail. There is a lot of advanced sugar maple regeneration within the stand so require a cut to length to minimize damage.</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</u> aspen, sugar maple, red maple and cherry.</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
<b>28 61101028-Cut</b>	34.2	42110 - Planted Red Pine	Poletimber Well	51	81-110	Harvest	Overstory Removal	4116 - Mixed N. Hardwood - Aspen	Even-Aged	No
<p><u>Prescription</u> Cut all red pine to release established regeneration. Require cut to length equipment to minimize damage to the regeneration. Protect the snowmobile trail during the harvest.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u></p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
<b>38 61101038-Cut</b>	70.0	4111 - S.Maple, Hard Mast Association	Sawtimber Poor	86	1-50	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Cut all trees. Require chipping and low stumps to facilitate planting operations. Protect rec trails during harvest.</p> <p><u>Specs:</u></p> <p>Last entry stand was leave tree marked leaving 30-50 BA which resulted in a fully stocked dense understory of 5-10 foot tall beech and iron wood.</p> <p><u>Next Step</u> Pesticide, Aerial - Site Prep; SitePrep, Roller Chopping; SitePrep, Trenching; Planting, Initial Plant; Pesticide, Aerial - Release;</p> <p><u>Treatments:</u> Monitoring, Artificial Regen(1yr); Planting, Replant; Monitoring, Artificial Regen(3yr)</p> <p><u>Acceptable</u> fully stocked stand of planted red pine.</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
<b>40 61101040-Cut</b>	17.5	42110 - Planted Red Pine	Poletimber Medium	50	81-110	Harvest	Overstory Removal	4139 - Aspen, Mixed Deciduous	Even-Aged	No
<p><u>Prescription</u> Cut all red pine to release established regeneration. Require cut to length equipment to minimize damage to the regeneration. Protect the snowmobile trail during the harvest</p> <p><u>Specs:</u></p> <p><u>Next Step</u></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 /2021</p>										
<b>41 61101041-Cut</b>	32.3	4139 - Aspen, Mixed Deciduous	Poletimber Poor	51	1-50	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> cut all trees 2 inches and larger, require low stumps and chipping of slash to facilitate planting operations and protect recreation trails during harvest.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Pesticide, Skidder - Site Prep; SitePrep, Trenching; SitePrep, Roller Chopping; Planting, Initial Plant; Pesticide, Skidder - Release;</p> <p><u>Treatments:</u> Pesticide, Skidder - Release</p> <p><u>Acceptable Regen:</u> fully stocked stand of pine.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
<b>45 61101045-Cut</b>	34.7	4139 - Aspen, Mixed Deciduous	Poletimber Well	56	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest stand. Cut all trees two inches and greater in diameter. Leave minimal area retention around the rec trail. Possibly mark a couple trees to leave for seed source.</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> aspen, red maple, cherry and mixed pine.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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46	61101046-NF	6.2	310 - Herbaceous Openland	Nonstocked			NonForestMgt	Herbaceous/Crop /Grass Planting	3204 - Mast Producing Shrub	No
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Prescription Mechanically treat bracken as needed.  
Specs: Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Work around some of the existing beneficial vegetation to establish a seed mix of native grasses and forbs suited to site and soil conditions. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Site Condition

Proposed Start Date: 10/1 /2021

48	61101048-NF	14.8	330 - Low-Density Trees	Nonstocked			NonForestMgt	Herbaceous/Crop /Grass Planting	3204 - Mast Producing Shrub	No
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Prescription Mechanically treat bracken as needed.  
Specs: Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Work around some of the existing beneficial vegetation to establish a seed mix of native grasses and forbs suited to site and soil conditions. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Site Condition

Proposed Start Date: 10/1 /2021

54	61101054-NF	9.9	330 - Low-Density Trees	Nonstocked	Immature		NonForestMgt	Herbaceous/Crop /Grass Planting	3204 - Mast Producing Shrub	No
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Prescription Mechanically treat bracken as needed.  
Specs: Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Work around some of the existing beneficial vegetation to establish a seed mix of native grasses and forbs suited to site and soil conditions. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Site Condition

Proposed Start Date: 10/1 /2021



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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>60 61101060-NF</b>	32.2	330 - Low-Density Trees	Nonstocked			NonForestMgt	Herbaceous/Crop /Grass Planting	3204 - Mast Producing Shrub		No
<p><u>Prescription</u> Mechanically treat bracken as needed.  <u>Specs:</u> Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Work around some of the existing beneficial vegetation to establish a seed mix of native grasses and forbs suited to site and soil conditions. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment.</p> <p><u>Next Step</u>  <u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u>  <u>Proposed Start Date:</u> 10/1 /2021</p>										
<b>81 61101081-NF</b>	6.6	3303 - Mixed Low Density Trees	Nonstocked			NonForestMgt	Herbaceous/Crop /Grass Planting	3204 - Mast Producing Shrub		No
<p><u>Prescription</u> Mechanically treat bracken as needed.  <u>Specs:</u> Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Work around some of the existing beneficial vegetation to establish a seed mix of native grasses and forbs suited to site and soil conditions. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment.</p> <p><u>Next Step</u>  <u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u>  <u>Proposed Start Date:</u> 10/1 /2021</p>										
<b>85 61101085-Cut</b>	57.1	4311 - Pine, Aspen Mix	Sawtimber Poor	82	1-50	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	No
<p><u>Prescription</u> Cut all trees two inches and larger. Leave minimal area retention. Its time to start breaking up the age classes and harvesting the pine before its any larger.  <u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)  <u>Treatments:</u></p> <p><u>Acceptable Regen:</u> aspen, red maple, cherry and mixed pines.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u>  <u>Proposed Start Date:</u> 1 /30/2020</p>										

**Total Treatment Acreage Proposed: 587.4**

## Report 4 – Site Conditions

Traverse City Mgt. Unit

Paul Roell : Examiner

Compartment: 101

Year of Entry: 2022

### Availability for Management

Total Acres	Acres Available	Acres Avail With Condition	Acres Not Available	Dominant Site Conditions				
Acres	Available	With Condition	Not Available	5C	2F	2G	5E	
584	546	37	2	Aspen	37			2
25	25	0	0	Herbaceous Openland				
182	182	0	0	Low-Density Trees				
118	45	0	73	Lowland Mixed Forest			73	
3	3	0	0	Marsh				
25	25	0	0	Mixed Upland Deciduous				
310	253	46	10	Northern Hardwood	46	10		
35	35	0	0	Planted Mixed Pines				
200	144	56	0	Red Pine	56			
161	57	104	0	Upland Mixed Forest	104			
10	10	0	0	Upland Shrub				
1,652	1,325	242	85	Total Forested Acres	242	10	73	2
	80%	15%	5%	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)	73	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> could use a closer look. Some of this stand might be operable.							
2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	17	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 4 – Site Conditions

Traverse City Mgt. Unit

Paul Roell : Examiner

Compartment: 101

Year of Entry: 2022

3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	36	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	104	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
7	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	56	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							



# Report 4 – Site Conditions

Traverse City Mgt. Unit

Paul Roell : Examiner

Compartment: 101

Year of Entry: 2022

9	Unavailable	2F: Too steep	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



### Report 5 – PROPOSED SPECIAL CONSERVATION AREA\* (SCA) DETAILS

\* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



**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
HCVA	Dedicated Management Areas	Such areas are dedicated by the DNR Director for specific management uses through the promulgation of rules, as governed by Part 5, Department of Natural Resources, of the NREPA (MCL 324.502(2) and 324.504). Section 38 of the Administrative Procedures Act (MCL 24.238) provides for public requests for the promulgation of rules. This is an active program, with one proposed site currently under review by the DNR.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
1	4116 - Mixed N. Hardwood - Aspen	Sawtimber Medium	9.1	97	1-50	N/A	Open grown stand with some nice sugar maple regeneration in pockets.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Sugar Maple		50	Log/Pole	10	97	Sugar Maple	
White Pine		15	Log/Pole	12		Medium	
Bigtooth Aspen		20	Pole	8		Variable	
Red Oak		5	Pole	8		Sapling	
Black Cherry		10	Pole	8		Low	
						5 - 10 feet	
						Tall Shrub	
2	4130 - Aspen	Poletimber Well	16.7	49	81-110	N/A	Variable stand with steep slopes and pockets of mature aspen with maple poles and heavy pockets of hard maple regeneration.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Red Maple		20	Pole/Log	8		Red Maple	
Quaking Aspen		15	Pole/Log	8		Low	
Bigtooth Aspen		65	Pole/Log	8	49	5 - 10 feet	
						Sapling	
						Sapling	
3	4133 - Aspen, Mixed Pine	Poletimber Medium	43.6	53	1-50	N/A	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Quaking Aspen		50	Pole	7	53	Quaking Aspen	
White Pine		25	Log/Pole	10		Low	
Black Cherry		20	Pole	6		< 5 feet	
Red Maple		5	Pole	6		Sapling	
4	330 - Low-Density Trees	Nonstocked	6.4			No	
5	42141 - Planted Mixed Pine, Mixed Deciduous	Poletimber Well	34.9	51	111-140	N/A	Hold treatment of stand ten years, final harvest stand and convert to Aspen. Very poor quality pine lots damage and stunted.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Quaking Aspen		35	Pole/Log	8		Quaking Aspen	
Red Pine		50	Pole	8	51	Low	
Black Cherry		5	Pole	6		< 5 feet	
White Pine		10	Log/Pole	12		Sapling	
6	3104 - Degraded	Nonstocked	1.3		Unspecified		
7	4133 - Aspen, Mixed Pine	Poletimber Medium	6.4	47	51-80	N/A	Open grown edge stand
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Quaking Aspen		48	Pole/Log	8	47	Quaking Aspen	
White Pine		20	Log/Pole	12		Low	
Red Pine		20	Log/Pole	12	76	5 - 10 feet	
Red Oak		2	Log	12		Sapling	
Black Cherry		10	Pole	8			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																									
8	320 - Upland Shrub	Nonstocked	10.2			No	Scattered cherry and stumps, bumpy.																									
9	4130 - Aspen	Sapling Well	14.1	7	Immature	N/A	Stand was harvested in the January of 2015 'PC to TC Aspen'. Stand has sprouted back fairly well, regen is about 4-5' tall, scattered white pine were left.																									
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13	4191 - Mixed Upland Deciduous with Conifer	Poletimber Poor	25.1	51	1-50	N/A																										
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14	42110 - Planted Red Pine	Poletimber Well	9.6	53	111-140	N/A	Stand had aspen - cherry removed in 2005 - heavily browsed regen																									
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15	3103 - Rubus-Fern	Nonstocked	3.2			No																										
16	330 - Low-Density Trees	Nonstocked	8.3			No																										



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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<b>17</b>	4130 - Aspen	Sapling Medium	7.6	16	Immature	N/A	Stand harvested in 2005 - good aspen regen.
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Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	70	Sapling	1	16
Bigtooth Aspen	20	Sapling	1	16
Black Cherry	10	Sapling	1	

<b>20</b>	4116 - Mixed N. Hardwood - Aspen	Poletimber Medium	28.0	100	51-80	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	30	Log/Pole	11	100	White Pine	Low	5 - 10 feet	Sapling
White Pine	10	Log/Pole	10					
Bigtooth Aspen	20	Log/Pole	12					
Red Maple	40	Pole/Log	8	100				

<b>21</b>	4139 - Aspen, Mixed Deciduous	Sapling Well	43.2	6	Immature	N/A	Ideally should have been final harvested Stand was cut fairly heavily in Feb of 2015. 'PC to TC Aspen' 61-072-12-01. All red maple greater than 6" was cut, all aspen, and birch over 8". All the sugar maple was left for a seed source. Should sprout back to a mix of red and sugar maple with pockets of A3.
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Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	50	Sapling	1	6
Red Maple	20	Sapling/Pole	2	6
Paper Birch	10	Pole	8	
White Pine	10	Log/Pole	10	
Black Cherry	10	Sapling	1	6

<b>22</b>	4139 - Aspen, Mixed Deciduous	Poletimber Well	19.9	56	51-80	N/A	mixed aspen with open grown red and sugar maple
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	5	Pole	6	50	Red Maple	Low	5 - 10 feet	Sapling
Sugar Maple	35	Log/Pole	10		Ironwood	Medium	Variable	Sapling
Bigtooth Aspen	55	Pole/Log	8	56				
Black Cherry	5	Pole	8					

<b>23</b>	3303 - Mixed Low Density Trees	Nonstocked	100.6		Immature	No	mixed size classes of cherry white pine and aspen
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<b>24</b>	4130 - Aspen	Poletimber Medium	29.7	41	51-80	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	15	Pole	5		Red Maple	Low	5 - 10 feet	Sapling
Quaking Aspen	30	Pole	6					
Bigtooth Aspen	40	Pole	6	41				
Black Cherry	15	Sapling/Pole	4					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																														
<b>25</b>	4139 - Aspen, Mixed Deciduous	Sawtimber Well	36.3	74	81-110	N/A	Variable stand with steep slopes and pockets of mature aspen with maple poles and heavy pockets of hard maple regeneration.																																														
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<b>26</b>	330 - Low-Density Trees	Nonstocked	2.8			No	Hilly																																														
<b>28</b>	42110 - Planted Red Pine	Poletimber Well	34.2	51	81-110	N/A	Once thinned red pine plantation with heavy aspen/maple regen. Thin heavy now and let residue pine aid in height development of aspen/maple  Stand had 1 row removed and 1 row left. Also all the aspen, cherry and red maple were removed 61-083-12-01 'Crooked Red Pine' filling in with A3/M3 in the understory.																																														
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<b>29</b>	4130 - Aspen	Sapling Well	32.0	27		N/A	Stand harvested in 1993. - has scattered oak regen and on rolling terrain																																														
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<b>30</b>	4130 - Aspen	Sapling Well	25.7	18	Immature	N/A	Sale #80-02 Red Rock Aspen																																														
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32	4112 - Maple, Beech, Cherry Association	Poletimber Well	35.8	85	111-140	N/A	Mixed hardwood/aspens - portions of stand were marked in past but not sold, old paint still evident. Variable stand with some better quality in spots mainly medium quality. Thin in next inventory cycle. 2020 dkj 3-18-2010																																																
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33	42110 - Planted Red Pine	Poletimber Well	19.7	50	51-80	N/A	Included a small pocket of hardwood in this stand. Poor quality red pine should be restarted next entry possible converted to hardwoods if there is enough aspen and maple present.  Stand had 2 rows removed and 2 rows left. Also all the aspen, cherry and red maple were removed 61-083-12-01 'Crooked Red Pine' filling in with A3/M3 in the understory.																																																
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37	4139 - Aspen, Mixed Deciduous	Sapling Well	36.1	7	Immature	N/A	Left pockets of sugar maple regen scattered through out during harvest. Cut in December of 2014. 'Late Model Mix 61-097-12-01. Stand should come back to a mix of aspen and hardwood.																																																
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38	4111 - S.Maple, Hard Mast Association	Sawtimber Poor	70.0	86	1-50	N/A	Sale was cut in spring of 2016. Left a residual BA of 20-50sqft. 'Long or Short Hardwoods' 61-021-13-01																																																
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments			
40	42110 - Planted Red Pine	Poletimber Medium	17.5	50	81-110	N/A	Stand was thinned, cut 1 row leave one in the fall of 2014 'Late Model mix'. Stand also had any aspen or red maple removed. Poor quality red pine, lots of porky damage. Understory is fully stocked A3/M3.			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Red Pine		100	Pole	8	50	Sugar Maple		Medium	5 - 10 feet	Sapling
						Red Maple		Medium	5 - 10 feet	Sapling
						Quaking Aspen	Medium	5 - 10 feet	Sapling	
41	4139 - Aspen, Mixed Deciduous	Poletimber Poor	34.1	51	1-50	N/A				
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Black Cherry		55	Pole	8	51	Black Cherry		Medium	10 - 20 feet	Sapling
Quaking Aspen		45	Pole	8	51	Serviceberry (Juneberry)		Low	10 - 20 feet	Sapling
43	4119 - Mixed Northern Hardwoods	Sapling Poor	4.5	28	Immature	N/A				
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Sugar Maple		45	Sapling/Pole	3	28	Serviceberry (Juneberry)		Low	10 - 20 feet	Sapling
Black Cherry		20	Pole/Sapling	6						
White Pine		15	Pole	8						
Red Maple		10	Sapling	3						
Ironwood		10	Sapling	3						
44	4111 - S.Maple, Hard Mast Association	Poletimber Well	20.3	84	51-80	N/A	Open grown hdwd with scattered aspen - extremely low quality.			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Sugar Maple		60	Pole	8	84	Sugar Maple		Medium	5 - 10 feet	Sapling
Red Maple		15	Pole	8		Beech		Low	5 - 10 feet	Sapling
Beech		15	Pole/Log	8		Ironwood		High	10 - 20 feet	Sapling
Bigtooth Aspen		10	Pole	9		Serviceberry (Juneberry)		Low	10 - 20 feet	Sapling
45	4139 - Aspen, Mixed Deciduous	Poletimber Well	34.8	56	51-80	N/A	convert to aspen			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Sugar Maple		25	Pole	7		Sugar Maple		Medium	Variable	Sapling
Quaking Aspen		30	Pole	8	56	Ironwood		Medium	Variable	Sapling
Bigtooth Aspen		25	Log/Pole	12						
Red Maple		15	Pole/Log	8						
White Pine		5	Log	10						
46	310 - Herbaceous Openland	Nonstocked	6.2			No				
47	42110 - Planted Red Pine	Poletimber Well	17.4	50	81-110	N/A	Stand had poor survival rate and heavy porky damage. Stand had 2 rows removed and 2 rows left. The portion north of the bottle neck has been managed by the Gaylord unit. Also all the aspen, cherry and red maple were removed 61-083-12-01 'Crooked Red Pine'			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Red Pine		100	Pole	8	50	Red Maple		Low	< 5 feet	Sapling
						Bigtooth Aspen		Low	< 5 feet	Sapling
						Beech	High	5 - 10 feet	Sapling	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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48	330 - Low-Density Trees	Nonstocked	14.8			No	
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49	4112 - Maple, Beech, Cherry Association	Poletimber Well	26.3	75	51-80	N/A	Open grown hdwd filling in with sugar maple regen.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	50	Pole/Sap/Log	8	75	Sugar Maple	Medium	5 - 10 feet	Sapling
Beech	15	Pole/Log	8		Ironwood	Low	5 - 10 feet	Sapling
Bigtooth Aspen	5	Pole/Log	8		Beech	Medium	5 - 10 feet	Sapling
Red Maple	30	Pole/Sapling	6					

50	4130 - Aspen	Poletimber Well	46.6	46	51-80	N/A	young pole size mixed aspen stand
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	15	Pole	6		Red Maple	Low	5 - 10 feet	Sapling
Quaking Aspen	10	Pole	6	46				
Bigtooth Aspen	60	Pole	8	46				
Black Cherry	15	Pole	6					

51	4110 - Sugar Maple Association	Poletimber Well	23.9	97	81-110	N/A	Sale was thinned on 11/05/15. BA reduced to about 80 BA. Stand is on some hilly terrain. Most of the beech was removed. Medium quality hardwoods.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	72	Pole/Log	8	97	Sugar Maple	Low	5 - 10 feet	Sapling
Basswood	16	Pole/Log	8		Beech	High	< 5 feet	Sapling
Beech	2	Pole/Log	8		Ironwood	Low	5 - 10 feet	Sapling
Black Cherry	10	Pole/Log	8					

52	4110 - Sugar Maple Association	Poletimber Well	44.8	80	51-80	N/A	dense beech and iron wood as a result of the last harvest
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	68	Pole/Log	8	80	Sugar Maple	Low	5 - 10 feet	Sapling
Red Maple	15	Pole/Log	9		Beech	High	5 - 10 feet	Sapling
Basswood	15	Pole/Log	8		Ironwood	Low	5 - 10 feet	Sapling
Beech	2	Pole/Log	8					

Stand was thinned in July of 2015 'Best for Last Hardwoods' 61-101-12-01. Most of the beech was removed, marked a few to leave. All the aspen was removed. Residual BA's are variable due to where the beech and aspen were harvested. Overall mediocre quality maple.

54	330 - Low-Density Trees	Nonstocked	9.9		Immature	No	
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59	4110 - Sugar Maple Association	Sawtimber Medium	23.0	97	51-80	N/A	Open grown hard maple with dense pockets of 3-4 inch dbh iron wood scattered throughout.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	80	Log/Pole	10	97	Sugar Maple	Low	< 5 feet	Sapling
Beech	15	Pole/Log	8		Ironwood	High	10 - 20 feet	Sapling
Basswood	5	Pole	8					

60	330 - Low-Density Trees	Nonstocked	32.2			No	
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																				
62	3104 - Degraded	Nonstocked	3.2		Unspecified		old well site Good project for quad and plotmaster.																																				
63	42110 - Planted Red Pine	Sawtimber Well	8.2	76	81-110	N/A	Stand was thinned in the fall of 2015 'Roof Top Red Pine' 61-102-12-01. Reduced BA to about 90sqft/ac. Also, the aspen was removed and is now established in the understory.																																				
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65	42110 - Planted Red Pine	Sawtimber Well	55.7	83	51-80	N/A	stand thinned in 2005																																				
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67	4112 - Maple, Beech, Cherry Association	Poletimber Medium	3.6	51	1-50	N/A	open grown cherry - maple																																				
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68	3104 - Degraded	Nonstocked	1.5		Unspecified		old well site																																				
69	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	19.8	74	81-110	N/A	Very steep terrain - leave stand as retention for old stand 82 to the east. includes a .5 acre pocket of sapling red pine																																				
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70	4112 - Maple, Beech, Cherry Association	Poletimber Well	10.5	80	111-140	N/A	The stand is a steep hill side																																				
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
71	4113 - R.Maple, Conifer	Poletimber Well	10.3	89	111-140	N/A	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Red Maple		70	Pole/Log	8	89	Ironwood	
Red Pine		20	Log/Pole	12		Medium	
White Pine		5	Pole/Log	8		Low	
Sugar Maple		5	Pole/Log	8		Avg. Height	
						Size	
						10 - 20 feet	
						5 - 10 feet	
						Sapling	
						Sapling	
72	4133 - Aspen, Mixed Pine	Sapling Well	20.3	32	1-50	N/A	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>		
Sugar Maple		10	Sapling	3			
Quaking Aspen		55	Sapling	4	32		
Black Cherry		15	Sapling	3			
Jack Pine		10	Sapling	3			
Red Pine		10	Sapling	3			
73	4130 - Aspen	Poletimber Well	15.4	45	1-50	N/A	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Red Maple		15	Pole	5		Sugar Maple	
Quaking Aspen		80	Pole	5	45	Low	
Red Pine		5	Log	14		< 5 feet	
						Sapling	
74	623 - Emergent Wetland	Nonstocked	0.8			No	
80	623 - Emergent Wetland	Nonstocked	2.3			No	
81	3303 - Mixed Low Density Trees	Nonstocked	6.6			No	Quaking aspen, white pine, red pine, jack pine, bracken, clad, poverty, sedge, grape, moss.
82	4139 - Aspen, Mixed Deciduous	Sapling Well	104.4	12	Immature	N/A	Sale # 071-08-01- red pine project . Final harvest on 70+ year old plantation no replanting due to heavy aspen maple residual and regeneration.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Red Maple		30	Sapling/Pole	2		White Pine	
Black Cherry		10	Sapling/Pole	3		Low	
Quaking Aspen		50	Sapling/Pole	2	12	< 5 feet	
White Pine		10	Log/Pole	12		Sapling	
84	3104 - Degraded	Nonstocked	3.0		Unspecified		JORDAN DEVELOPMENT STATE BLUE LAKE "B" 3-1 SWD



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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<b>85</b>	4311 - Pine, Aspen Mix	Sawtimber Poor	160.8	82	1-50	N/A	Stand has approx 20 sq ft of residual red pine left from previous harvest. Very good aspen, red maple regen.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Sapling/Pole	4	
Quaking Aspen	35	Sapling/Pole	4	34
Red Pine	50	Log	16	82

<b>86</b>	3104 - Degraded	Nonstocked	3.2		Immature		old well site
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<b>87</b>	6130 - Fir, Aspen, Maple	Poletimber Well	73.0	39		N/A	Same as stand # 88 - only difference is this stand has more lowland brush and has a higher water table. also part of the Deward Tract - Sprcial Management Area.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Pole/Sapling	5	
Quaking Aspen	35	Sapling/Pole	4	39
Balsam Fir	15	Sapling/Pole	5	
Black Spruce	5	Pole/Sapling	4	
Northern White Cedar	5	Pole/Log	6	
White Pine	25	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	Medium	5 - 10 feet	Sapling
Balsam Fir	Low	5 - 10 feet	Sapling
Alder	Medium	< 5 feet	Tall Shrub

<b>88</b>	6130 - Fir, Aspen, Maple	Poletimber Well	45.0	39	81-110	N/A	Area part of the Deward Tract - Special Management Area. Stand is a mix of spotty higher ground and lower land. In 1959 all higher ground was cut with D-7 treecutters leaving only the pine and cedar. In 1982 the lowground was cut Aspen/Fir. This has now regenerated to a mixed stand of aspen, fir, spruce, red maple and lowland brush. Small size pole stand.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	20	Pole/Sapling	6	
Quaking Aspen	30	Pole/Sapling	5	39
Balsam Fir	15	Pole/Sapling	5	
Black Spruce	5	Pole	6	
Northern White Cedar	10	Pole/Log	8	
White Pine	20	Pole	8	

Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	Medium	10 - 20 feet	Sapling
Balsam Fir	Medium	10 - 20 feet	Sapling