



Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72066

Entry Year 2021

Acreage: 1,906

County Iosco

Management Area: Wurtsmith

Revision Date: 2019-08-20

Stand Examiner: Colton Behrmann

Legal Description:

T24N R8E, Sections 4, 5 & 6. Grayling Forest Management Unit, Iosco County

Identified Planning Goals:

To maintain species diversity while also addressing sustainability, forest health, productivity, wildlife habitat requirements, aesthetics, best management practices and recreational opportunities throughout the compartment.

Soil and topography:

Topography within this compartment is generally flat to gently rolling with ridges in the northern portions of the compartment, concentrated along drainages and small creeks. Steeper slope can be found near Duval creek. The major soil complex present in this area is Grayling sand with small inclusions of other types present, the most notable being Graycalm sands. This association is found primarily on upland flats and low knolls which are dominated by jack pine stands commonly in association with red pine and oak species. This soil complex is characterized as being excessively drained with major management concerns including equipment limitation, seedling mortality and erosion from wind and water. Windthrow is also a concern throughout this soil type complex. The bottomlands of this compartment, mainly to the west and north are made up mainly of Tawas-Lupton Muck and Tacoda-Wakeley complex. These soil complexes are characterized as being poorly drained and are most often associated with a water course or water body.

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

The entire compartment is under state ownership. Part of this compartment was used for military training by nearby Wurtsmith Air Force Base. As a result, section 6 has been identified as a hazard area and a Director's order was obtained in July 2009 to close this section off to foot and vehicle entry. Private parcels exist adjacent to the compartment on the north side of sections 4 and 5, and along the eastern side of section 4. The western edge of the compartment is adjacent to USFS land.

Unique Natural Features:

Natural features include a relatively deep valley which contains Duval Creek. This is a narrow coldwater creek with a mixture of sand and gravel substrate. Cedar, white pine red maple and birch inhabit this valley providing shade to the stream while also maintaining water quality. Abundant wildlife utilizes the cover and variable food sources throughout the valley.

Archeological, Historical, and Cultural Features:

None known at this time.

Special Management Designations or Considerations:

Section 6 is part of the Wurtsmith FUDS project. This area was a historical bombing range used by the military in the 1950's. Recent evidence of ordnance being found in the area has resulted in closure of all ORV trails in section 6 as well as a prohibition of foot traffic into this area based on safety concerns. Stand 1 was part of the actual bombing range, with surrounding stands serving as buffers. A Director's Order was obtained in 2009 to enforce the closure of Section 6. The closure will remain until surveys reveal if areas are safe to reopen to the public. Meanwhile all timber harvesting prescribed will be factor limited until equipment can access the area.

There is potential for dry prairie plants in grassy openings to include pine barren's species of Hill's thistle, rough fescue, Alleghany plum and Pale Agoseris. There also is potential for pine barren's species including dusted skipper, grizzled skipper and red-legged spittlebug to be present in these openings. Warbler species will be found in the young jack pine stands that abound in this region. There is also the potential for Eastern Massasauga Rattler, wood turtle and loon to exist within the riparian zones of this compartment. Bald Eagle have been documented in this area.

Watershed and Fisheries Considerations:

Duval Creek traverses the compartment along with multiple tributaries in the north-central portion of section 5, leading through section 6. Forest management in the riparian areas of these creeks should consider ramifications and negative

impacts of any activity to water quality. Potential erosive areas should be avoided at all times.

Wildlife Habitat Considerations:

This compartment is valuable for many species of wildlife. Jack pine forests along with plantations that are dense and large in terms of acreage provide tracts of land used for thermal and protective cover throughout the year by many wildlife species. The creek corridor and surrounding swamps and riparian forests also provide large tracts of uninterrupted land used by a variety of wildlife species for breeding and nesting, protection from predators and forage grounds. Management decisions within this compartment are influenced greatly by wildlife considerations.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine (lake) sand and gravel and fine-textured till. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Coldwater Shale. The Coldwater does not have a current economic use. No active sand/gravel pits are known to exist in the area, and sand & gravel potential within the compartment appears to be limited. There is no active oil & gas production in the area and no active leasing. Mineral rights in the compartment were previously leased as recently as 2016. There has been some sparse Antrim Shale gas development in the area, but the compartment is several miles from the main Antrim play, and additional Antrim development in the compartment is unlikely. No other known oil & gas potential exists in this area. There is no known metallic mineral potential in this part of the state. The state does not own all mineral rights within the compartment. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights.

Vehicle Access:

Access within this compartment is variable. The west side of the compartment is bounded by Wilber Road, a county road that extends .5 miles north along Section 6. It is difficult to reach the northern portions of the compartment because of roads ending at deep drainages. Access to the remainder of the compartment is from Bissonette Rd, a county road. Two-tracks and forest roads head north from the Bissonette Road and reach this compartment after crossing semi-maintained Fawn Rd. Note, this section of Fawn Road is not designated county road, it is a state forest trail extending off a county road located to the west. The forest roads vary in condition and are not maintained throughout the winter months. The area within the vicinity of the proposed treatments within this compartment have adequate access and connectivity. Trails/roads for temporary management access will likely be closed when activities area complete.

Survey Needs:

The northern side of section 5 (Corner code D-1) could not be found during current inventory (2021 YOE).

Recreational Facilities and Opportunities:

The compartment contains part of the Old State House ORV Route. This general area receives heavy ORV use. Hunting, snowmobiling and fishing also occur regularly within the compartment.

Fire Protection:

Fire protection is considered in this area because of its close proximity to large jack pine plantations and its tendency for quite droughty soils. Many of the management decisions within this compartment are based on and influenced by the stands probability to be a fire hazard before and after treatment. Section 6 which is part of the FUDS designation is a no plow zone and fire vehicles are to remain on designated roads for all fire suppression activities.

Additional Compartment Information:

The following reports from the Inventory are attached:

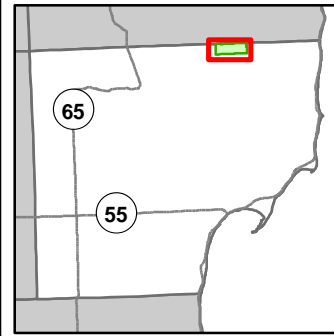
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

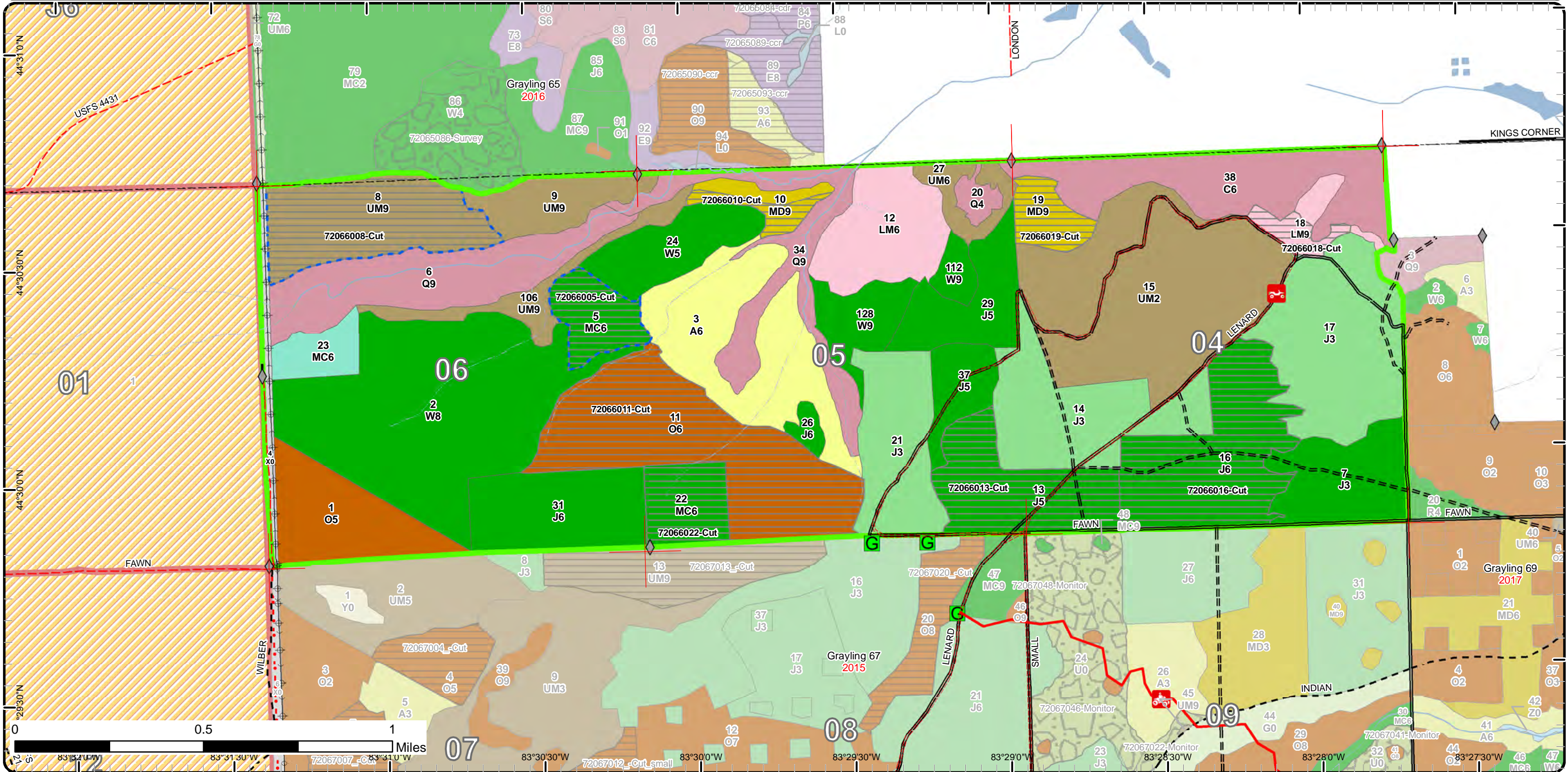
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 66
 T24N, R08E, Sec. 4-6
 County: Iosco
 Unit: Grayling
 Mgmt Area: Wurtsmith
 YOE: 2021
 Acres: 1,906 GIS Calculated
 Examiner: Colton Behrmann
 Map Revised: 12/9/2019
 Map Phase: Post-Review

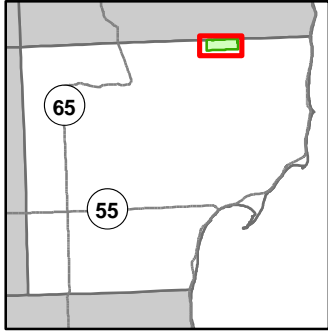
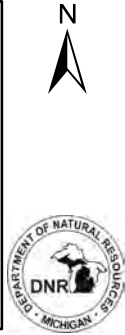


- Miris Corners
- ◆ Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- 🚙 ORV Trails
- 🚙 ORV Routes
- Designated ATV
- - - Designated ORV Route
- G Gate
- Drain
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- ⊕ Powerline
- ▭ Compartment Boundary
- ▭ Treatments with Site Conditions
- Clearcut (w/Reserves)
- 412 - Oak Types
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 110 - Low Intensity Urban



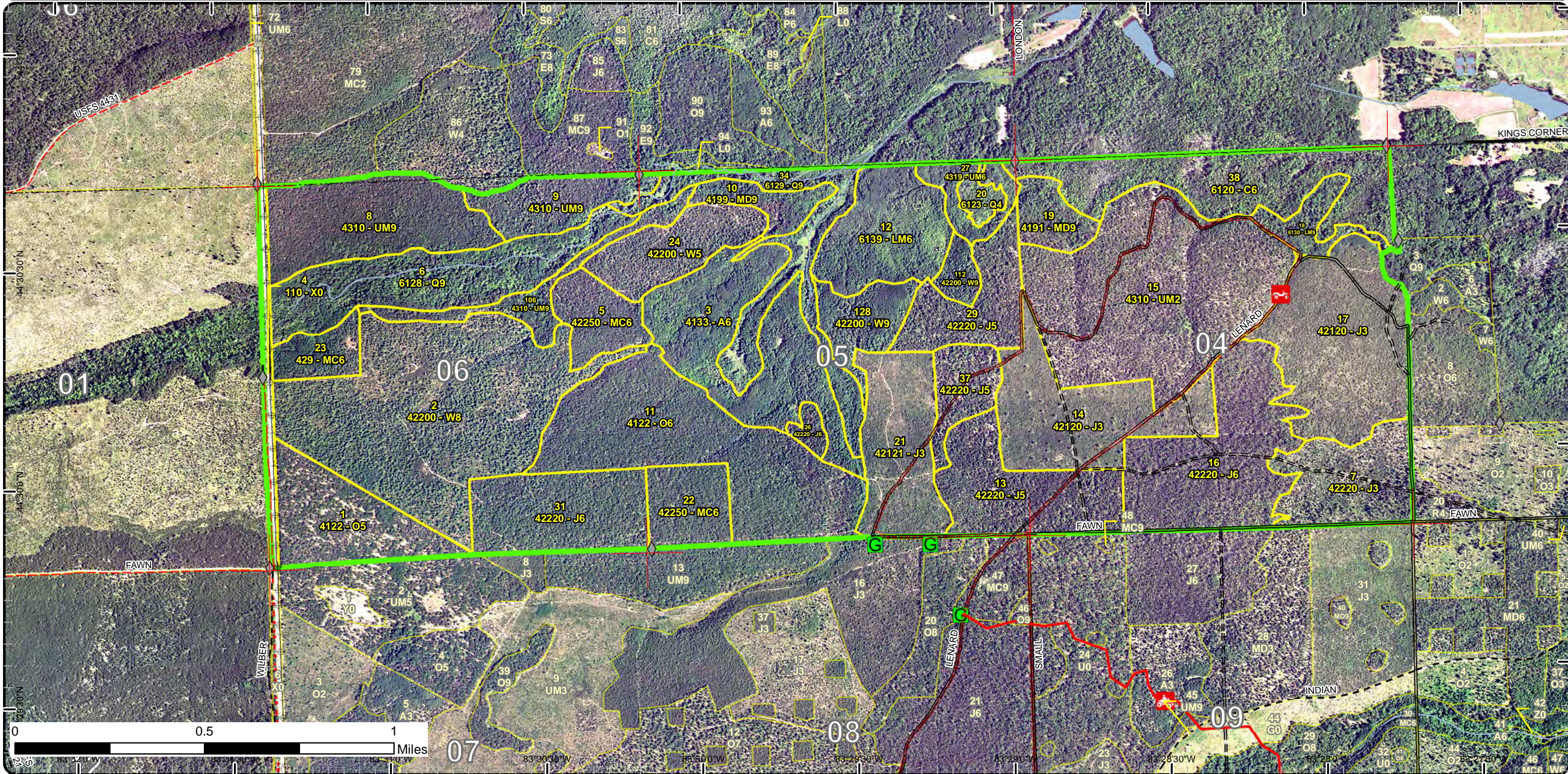
Stand Boundary Map

Compartment: 66
T24N, R08E, Sec. 4-6
County: Iosco
Unit: Grayling
Mgmt Area: Wurtsmith
YOE: 2021
Acres: 1,906 GIS Calculated
Examiner: Colton Behrmann
Map Revised: 12/9/2019
Map Phase: Post-Review



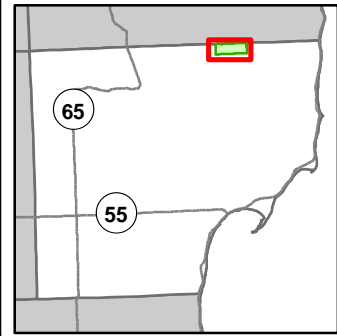
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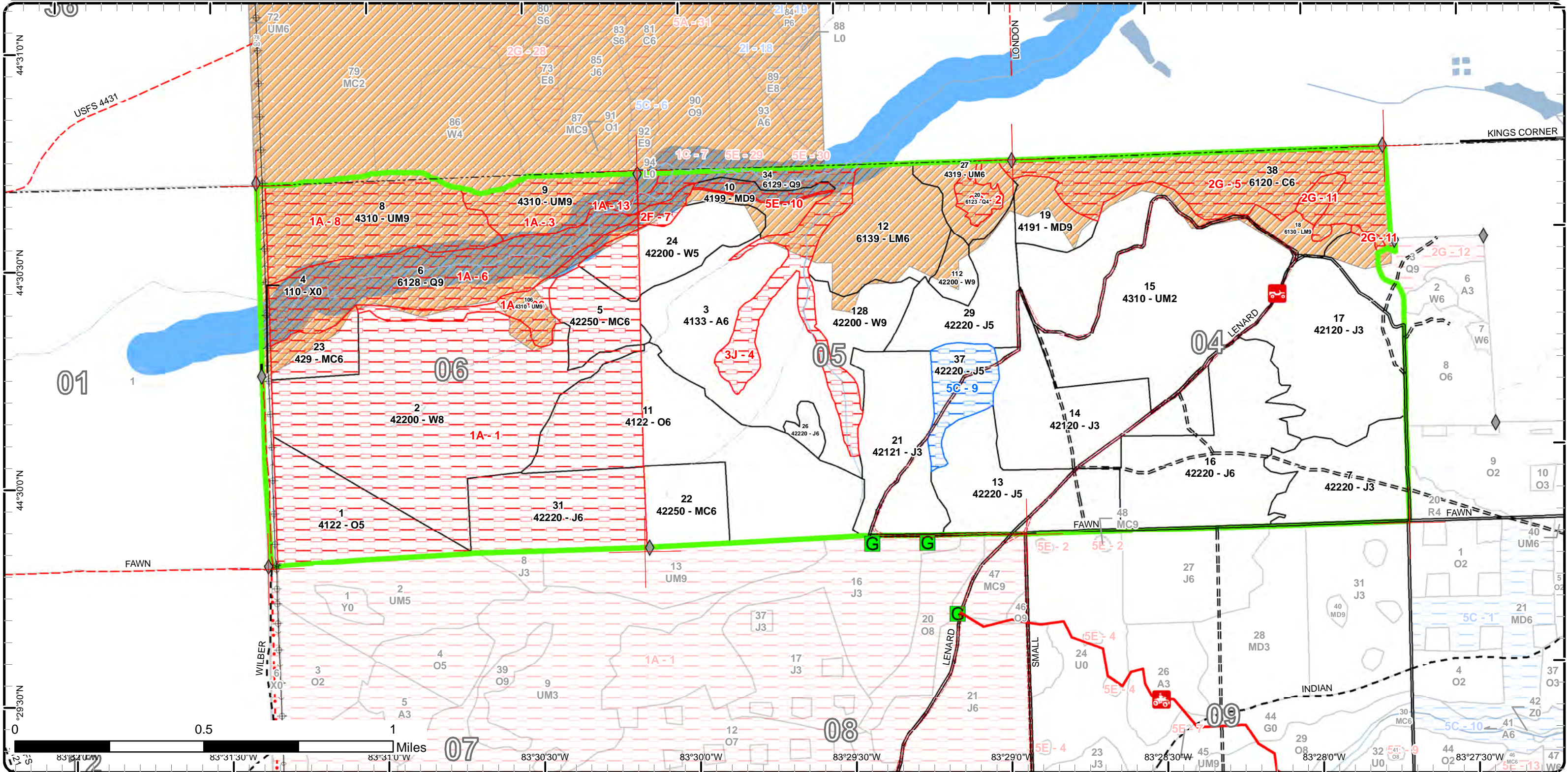


Special Conservation Areas

Compartment: 66
T24N, R08E, Sec. 4-6
County: Iosco
Unit: Grayling
Mgmt Area: Wurtsmith
YOE: 2021
Acres: 1,906 GIS Calculated
Examiner: Colton Behrmann
Map Revised: 12/9/2019
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- ORV Routes
- Designated ATV
- Designated ORV Route
- Gate
- Drain
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Powerline
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 1A: Federal/State/Local Law
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Eastern Massasauga Managed Land
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



Report 1 – Total Acres by Cover Type and Age Class

Grayling Mgt. Unit

Compartment 66

Year of Entry 2021

Colton Behrmann : Examiner



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	0	0	97	0	0	0	0	0	0	0	0	0	0	0	0	0	97
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	88	0	0	0	0	0	88
Jack Pine	0	52	243	0	110	0	64	119	0	0	0	0	0	0	0	0	0	0	588
Lowland Conifers	0	0	0	0	7	0	0	0	0	0	59	0	0	0	82	0	0	0	148
Lowland Mixed Forest	0	0	0	0	57	0	0	0	0	18	0	0	0	0	0	0	0	0	75
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	19	0	18	0	0	0	0	0	0	37
Natural Mixed Pines	0	0	0	0	0	0	0	27	30	0	0	0	0	0	0	0	0	0	57
Oak	0	0	0	0	0	0	0	57	0	133	0	0	0	0	0	0	0	0	190
Upland Conifers	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	19
Upland Mixed Forest	0	0	0	0	189	0	0	59	0	76	0	0	0	0	0	0	0	0	324
Urban	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
White Pine	0	0	0	0	0	221	41	10	0	0	0	0	0	0	0	0	0	0	272
Total	15	52	243	0	460	221	105	291	30	246	59	18	88	0	82	0	0	0	1910



Report 2 – Treatment Summary

Grayling Mgt. Unit

Year of Entry: 2021

Acres of Harvest

Compartment 66

Total Compartment Acres: 1,906

Commercial Harvest - 362
 Harvests with Site Condition - 103
 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	160	0	0	0	0	0	0	0	0	160
Lowland Mixed Forest	10	0	0	0	0	0	0	0	0	10
Mixed Upland Deciduous	29	0	0	0	0	0	0	0	0	29
Natural Mixed Pines	57	0	0	0	0	0	0	0	0	57
Oak	133	0	0	0	0	0	0	0	0	133
Upland Mixed Forest	76	0	0	0	0	0	0	0	0	76
Total	465	0	0	0	0	0	0	0	0	465

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	465	0	0	0	0	0	0	0	0	465
Next Step	0	0	0	0	0	465	0	0	0	465
Total	465	0	0	0	0	465	0	0	0	929



Stand	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:

5	72066005-Cut	26.8	42250 - Pine, Oak	Poletimber Well	65	81-110	Harvest	Clearcut with Retention	4310 - Pine, Oak Mix	Even-Aged	No
<p><u>Prescription</u> Final harvest all trees 2 inches and greater in diameter. Follow standard retention guidelines.</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> Naturally regenerated stand with oak and a mix of conifer species meeting acceptable stocking levels.</p> <p><u>Other Comment:</u> Consider harvesting with stand 11 to help with access.</p> <p><u>Site Condition</u> Federal/State/Local Law</p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>											
8	72066008-Cut	76.1	4310 - Pine, Oak Mix	Sawtimber Well	88	111-140	Harvest	Clearcut with Retention	4122 - Oak, Pine	Even-Aged	No
<p><u>Prescription</u> Final harvest all trees 2 inches and greater in diameter. Follow standard retention guidelines. Focus retention along the southern boundary as a buffer for Duval creek and slope. Limit harvest to a dry summer or frozen winter conditions. Use brush piles as habitat for the massasauga. Protect wildlife shrub species where possible.</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> Naturally regenerated stand with oak, mixed deciduous and a conifer component meeting acceptable stocking levels.</p> <p><u>Other Comment:</u> Stand is in the CCAA Massasauga managed lands.</p> <p><u>Site Condition</u> Federal/State/Local Law</p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>											
10	72066010-Cut	9.8	4199 - Other Mixed Upland Deciduous	Sawtimber Well	102	81-110	Harvest	Clearcut	4319 - Mixed Upland Forest	Even-Aged	No
<p><u>Prescription</u> Final harvest all trees 2 inches and greater in diameter. No retention due to small and irregular stand size, this will help to maximize regeneration potential. Protect wildlife shrub species where possible. Limit harvest to a dry summer or frozen winter conditions. Use brush/slash piles as habitat for the massasauga.</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> Naturally regenerated stand of mixed deciduous and conifer species meeting acceptable stocking levels.</p> <p><u>Other Comment:</u> Group stand with Stands 5 & 11 to help with road access. Stand is in the CCAA Massasauga managed lands.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /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
11 72066011-Cut	133.1	4122 - Oak, Pine	Poletimber Well	88	81-110	Harvest	Clearcut with Retention	4122 - Oak, Pine	Even-Aged	No
<p><u>Prescription</u> Final harvest all trees 2 inches and greater in diameter. Follow standard retention guidelines. Focus on not leaving retention near adjacent</p> <p><u>Specs:</u> Stand 3. Add trail spec.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Naturally regenerated stand with oak and a mix of conifer species meeting acceptable stocking levels.</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 /2020</p>										
13 72066013-Cut	64.4	42220 - Natural Jack Pine	Poletimber Medium	57	51-80	Harvest	Clearcut with Retention	42250 - Pine, Oak	Even-Aged	No
<p><u>Prescription</u> Final harvest all trees 2 inches and greater in diameter. Follow standard retention guidelines. Add trail spec. Protect ORV trails. Focus</p> <p><u>Specs:</u> retention between Stands 13 & 16 as a wildlife corridor.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Naturally regenerated stand of jack pine with an oak component meeting acceptable stocking levels.</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 /2020</p>										
16 72066016-Cut	95.2	42220 - Natural Jack Pine	Poletimber Well	60	81-110	Harvest	Clearcut with Retention	42250 - Pine, Oak	Even-Aged	No
<p><u>Prescription</u> Final harvest all trees 2 inches and greater in diameter. Follow standard retention guidelines. Add spec 4.1.12. Protect ORV trails. Focus</p> <p><u>Specs:</u> retention between Stands 13 & 16 as a wildlife corridor.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Naturally regenerated stand of jack pine with an oak component meeting acceptable stocking levels.</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 /2020</p>										
18 72066018-Cut	10.1	6130 - Fir, Aspen, Maple	Sawtimber Well	84	111-140	Harvest	Clearcut	6112 - Lowland Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest all trees 2 inches and greater in diameter. No retention due to small and irregular stand size, this will help to maximize</p> <p><u>Specs:</u> regeneration potential. Limit harvest to a dry summer or frozen winter conditions. Protect wildlife shrub species where possible. Protect ORV trails. Use brush/slash piles as habitat for the massasauga.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Naturally regenerated lowland aspen stand with mixed deciduous and conifer species meeting acceptable stocking levels.</p> <p><u>Regen:</u></p> <p><u>Other</u> Stand is in the CCAA Massasauga managed lands.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /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
19 72066019-Cut	19.2	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	84	81-110	Harvest	Clearcut with Retention	4191 - Mixed Upland Deciduous with Conifer	Even-Aged	No
<p><u>Prescription</u> Final harvest all trees 2 inches and greater in diameter. Follow standard retention guidelines. Protect wildlife shrub species where possible.</p> <p><u>Specs:</u> Limit harvest to a dry summer or frozen winter conditions. Use brush/slash piles as habitat for the massasauga.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Naturally regenerated stand of mixed deciduous with conifer species meeting acceptable stocking levels.</p> <p><u>Regen:</u></p> <p><u>Other</u> Stand is in the CCAA Massasauga managed lands.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>										
22 72066022-Cut	29.9	42250 - Pine, Oak	Poletimber Well	71	81-110	Harvest	Clearcut with Retention	4310 - Pine, Oak Mix	Even-Aged	No
<p><u>Prescription</u> Final harvest all trees 2 inches and greater in diameter. Follow standard retention guidelines.</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> Naturally regenerated stand of mixed conifer with an oak component meeting acceptable stocking levels.</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 /2020</p>										

Total Treatment Acreage Proposed: 464.6

Report 4 – Site Conditions

Grayling Mgt. Unit
Colton Behrmann : Examiner

Compartment: 66
Year of Entry: 2021

Availability for Management

Total	Acres	Acres Avail	Acres
Acres	Available	<i>With Condition</i>	Not Available

Dominant Site Conditions

	Availability for Management			Dominant Site Conditions							
	Acres	Available	<i>With Condition</i>	5C	1A	1C	2F	2G	3J	5E	
97	97	0	0	Aspen							
88	0	0	88	Cedar				88			
587	501	24	62	Jack Pine	24	62		0			
148	0	0	148	Lowland Conifers		83		0	7	58	0
74	67	0	7	Lowland Mixed Forest					7		
37	29	0	8	Mixed Upland Deciduous				0		7	1
57	31	0	26	Natural Mixed Pines		26					
190	90	0	99	Oak		99					
19	0	0	19	Upland Conifers		19					
324	190	0	133	Upland Mixed Forest		129	0	5			
15	15	0	0	Urban		0					
271	67	0	205	White Pine		205		0			
1,906	1,087	24	795	Total Forested Acres	24	623	0	5	102	64	1
	57%	1%	42%	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	1A: Federal/State/Local Law	411	Unspecified	Unspecified	Unspecified	Unspecified
Comments: These stands are within the Wurtsmith Bombing and Gunnery Range (BGR) Formerly Used Defense Site (FUDS). Directors order has restricted the entrance and use of equipment in T24N, R08E Section 6.							
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Grayling Mgt. Unit

Colton Behrmann : Examiner

Compartment: 66

Year of Entry: 2021

3	Unavailable	1A: Federal/State/Local Law	32	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified
Comments:							
These stands are within the Wurtsmith Bombing and Gunnery Range (BGR) Formerly Used Defense Site (FUDS). Directors order has restricted the entrance and use of equipment in T24N, R08E Section 6.							
White pine has recruited into the canopy. Hold to let white pine grow towards log-sized stand.							
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	64	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	88	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	1A: Federal/State/Local Law	82	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
These stands are within the Wurtsmith Bombing and Gunnery Range (BGR) Formerly Used Defense Site (FUDS). Directors order has restricted the entrance and use of equipment in T24N, R08E Section 6.							
Slope leading down to creek bank. Possible erosion hazards with equipment use. Soils are wet at bottom of slope.							
7	Unavailable	2F: Too steep	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
Stand was delineated in previous inventory as a slope that leads down to Duval creek.							

Report 4 – Site Conditions

Grayling Mgt. Unit

Colton Behrmann : Examiner

Compartment: 66

Year of Entry: 2021

8	Unavailable	1A: Federal/State/Local Law	76	Unspecified	Unspecified	Unspecified	Unspecified
Comments: These stands are within the Wurtsmith Bombing and Gunnery Range (BGR) Formerly Used Defense Site (FUDS). Directors order has restricted the entrance and use of equipment in T24N, R08E Section 6.							
9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	24	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Hold stand to let 2nd age class of oak and pine grow into more merchantable timber. Mature jack pine is already dead/dieing, and white pine will hold.							
10	Unavailable	5E: Long-Term Retention	1	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Saturated ground as stand 18 transitions into stand 38.							
13	Unavailable	1A: Federal/State/Local Law	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: These stands are within the Wurtsmith Bombing and Gunnery Range (BGR) Formerly Used Defense Site (FUDS). Directors order has restricted the entrance and use of equipment in T24N, R08E Section 6.							
106	Unavailable	1A: Federal/State/Local Law	20	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments: These stands are within the Wurtsmith Bombing and Gunnery Range (BGR) Formerly Used Defense Site (FUDS). Directors order has restricted the entrance and use of equipment in T24N, R08E Section 6.							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

ERA = Ecological Reference Area
 HCVA = High Conservation Value Area
 SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water 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	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.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																					
1	4122 - Oak, Pine	Poletimber Medium	56.8	65	51-80	N/A	Low stocked oak stand with patches of jack pine. Jack pine thicker in the southwest corner of stand. Stand is patchy with open areas, ranging around the 50 BA range. Poor quality trees. OPIC - FMD: Note, this stand is part of a historical bombing range used by military in relation to Wurtsmith air force base back in the 1950s. It is located within identified FUDS special mgt area, which is an area that may contain explosive devices and all entry, foot and vehicle, have been restricted. A Director's order was obtained to enforce the restriction in 2009. SJT. Lowly stocked/low quality oak. Some pockets are thicker than others. JP is scattered throughout, mostly non-merchantable size class. Overall stand make-up is denser on western side, I.e., more jack pine. Stand used to be part of Wurtsmith Guntery Range. (old comment) Old Bombing Range																																					
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2	42200 - Natural White Pine	Sawtimber Medium	193.2	44	51-80	N/A	White pine stand with scattered oak in the overstory. The understory consists of jack pine and oak, with medium to high stocking depending on location in stand. Some patches consists of thick jack pine, where other areas consist of thick oak regeneration. OPIC - FMD: O3 understory with light overstory of white pine that was left when stand was cut. Aspen regen is more common in open areas. Occasional overstory oak present, did not pick up any while sampling within stand. Some places stand is more of a W3/O3. Lots of wildlife use, thick regen in most of stand. (old comment) (good RP - WP understory. Remove overstory Oak & Jack pine, leaving clumps of healthy oak Old Comment). Timber Sale # 72-015-01-01, Wilber Road Oak Block. Cut by Yates Forest Products during winter 2002/2003. The stand is now a W3. 05/12/2003. Mm																																					
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3	4133 - Aspen, Mixed Pine	Poletimber Well	96.9	34	111-140	N/A	Very diverse stand overall. Edges of stand contain greater numbers of fir, white pine and paper birch. Red maple sprouts are growing in well with the aspen. Western side of stand contains a lowland area that is heavily dominated by fir, cedar and red maple. OPIC - FMD: A3 stand with clones scattered throughout. Sometimes stand is uniform, other times there are openings along with pockets of aspen mixed with significant numbers of balsam fir, oak and white pine. Some red maple clumps are present as well, in relatively low numbers. Stand is variable in places, is a combination of previous stands 3 and 11.																																					
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White Pine	Medium	Variable	Sapling																																									
4	110 - Low Intensity Urban	Nonstocked	14.8			No	OPIC - FMD: Powerline. Grassy openings for most of the stand. Does drop down to duval creek and becomes quite wet. Creek flows through in this area. Roads are blocked on either side of this valley to obstruct traffic flow and avoid erosion issues. (old comment) Powerline ROW and trail road along it																																					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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5	42250 - Pine, Oak	Poletimber Well	26.8	65	81-110	N/A				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
White Pine		14	Log	14		White Pine		Medium	Variable	Sapling
Red Pine		8	Log	11		Red Pine		Low	5 - 10 feet	Sapling
Northern Pin Oak		35	Log/Pole	11		Northern Pin Oak		Medium	Variable	Sapling
Jack Pine		40	Pole/Log	8	65					

Jack pine stand that is past maturity. As jack pine dies, oak is becoming the most prevalent canopy species with a mix of white pine. Previous inventory had a treatment on the stand, but was never completed due to being in the FUDS restricted area. OPIC - FMD: Note: This stand is located in the FUDS restricted area, due to risk of military explosive devices that may remain in the area from a historical bombing range (see std 1), the area was closed to all foot and vehicle traffic in 2009 until military studies reveal the area is clear of devices. No entry can be obtained to harvest this stand until military clearance is obtained. The stand is factor limited - it is anticipated it will be at least 5 years for studies to be completed. SJT. Quite a mixed stand with jack pine dominant overall. Red pine and white pine present in descent numbers and are growing well for the most part. Poor quality oak present as well. Thick understory, some large red and white pine present in overstory. ORV route travels through west side of stand and along eastern edge. Harvest stand as final harvest with reserves, removing all jack pine and oak. Leave red and white pine. Regeneration following harvest will most likely be oak species along with jack pine and natural red and white pine regen. Finger of stand extends to the southwest along stand 36. More oak is present as this is a transition zone between stands 5 and 36. Final harvest this area leaving a few reserve trees. This should help to create more of a thicker edge by regenerating the oak and obtaining some natural regen of jack pine, red pine and white pine. Where stand meets stand 106, similar composition can be found. Stand 106 was delineated because of species differences and stocking levels but also because of topographical differences. This stand line should be maintained during sale setup to avoid steep slopes and erosion issues.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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6 6128 - Lowland Coniferous, Mixed Deciduous Sawtimber Well 81.7 131 141-170 N/A

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	15	Log	16	
White Pine	26	XLog/Log	19	131
Bigtooth Aspen	15	Log	13	
Balsam Fir	8	Pole	7	
Red Maple	20	Log	12	131
Red Pine	10	XLog/Log	19	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling
Red Maple	Medium	>20 feet	Sapling
White Pine	Medium	Variable	Sapling
Red Pine	Low	Variable	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub

Lowland stand with a diverse mix of species. White pine and red maple are most prevalent, with a good mix of red pine, cedar and aspen. Any cedar that is browse height or lower shows no chance of making it past the deer. Aspen was commonly found along the slopes that lead down into the stand. There are multiple drainages and seeps that connect with Duval creek. A couple fingers of red maple, oak and aspen were found in the stand on the south side of the creek. The south side of the creek also contains areas of witch hazel. Any red maple or oak regeneration is being browsed heavily, with high amounts of wildlife use throughout the stand. The north side of Duval creek showed areas of higher balsam fir regeneration, with pockets of aspen saplings as well. OPIC - FMD: Stand is located in military FUDS boundary, a special mgt area in which all access is restricted due to potential presence of military explosive devices resulting from activities related to a historical bombing range located in stand 1. No foot or equipment entry is allowed, restricting harvest of the stand, until military studies reveal the area is safe for entry, which will probably take at least 5 years. SJT. Mixed stand with pockets of single species composition. Areas of cedar, red maple, birch and fir/WP. Creek flows through central portion of stand/valley, approximately 2-6' wide and 6-18" in depth. Lots of wildlife activity within stand. Heavy browse in places. Areas of thick fir/WP regen in understory. Stand fazes to upland oak/pine with steep banks. These banks were originally part of stand 6 but have been renumbered as stand 106. Limiting factor of being too steep and too wet for any management activities in this area. Blow down and natural flooding have opened up areas of stand for natural regeneration over the years. (old comment) Recommend staying OUT of this area due to steep slopes and water influence. Potential old growth area.

7 42220 - Natural Jack Pine Sapling Well 51.6 9 Immature N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	10	Log	14	67
Northern Pin Oak	15	Sapling	3	
Jack Pine	74	Sapling	3	9

Immature jack pine stand with pockets of mature red pine and scattered immature oak. White pine is also present in the canopy. Majority of mature red pine is found in the southern and eastern portion of the stand. Few scattered canopy oak in northern portion of the stand. OPIC - FMD: Jack Pine/Red Pine stand. Some scattered Oak. Understory consists of an O2. Ground cover consists of blueberry patches and sedges. Recommend a Selection cut, removing all Jack Pine, Oak and any Aspen that exists within the stand. Protect the Red Pine and Oak regenerations were ever it exists. Harvest stand with stand 19. Will accept a mix of A, O, and JP regen. Harvest update: cut under 720300701 North Coppler Creek by Shawn Muma FP in May/June 2010.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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8	4310 - Pine, Oak Mix	Sawtimber Well	76.2	88	111-140	N/A				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
White Pine		27	Pole/Log	9		Witch Hazel		Low	5 - 10 feet	Tall Shrub
Red Pine		8	Log	12		Northern Pin Oak		Low	< 5 feet	Sapling
Jack Pine		15	Pole/Log	9		White Pine		Medium	>20 feet	Sapling
Northern Pin Oak		38	Log/Pole	11	88	Red Pine		Trace	>20 feet	Sapling
White Oak		10	Log	14						

Mature oak and white pine stand with declining jack pine in the canopy. Heavy browse on oak is common. There is steep terrain in the southern portion of the stand that leads down to Duval creek. OPIC - FMD: Note: This stand is located in the FUDS restricted area, due to risk of military explosive devices that may remain in the area from a historical bombing range (see std 1), the area was closed to all foot and vehicle traffic in 2009 until military studies reveal the area is clear of devices. No entry can be obtained to harvest this stand until military clearance is obtained. The stand is factor limited - it is anticipated it will be at least 5 years for studies to be completed. SJT. Mixed oak pine stand with oak more plentiful in northern portion of stand while central area is more of a true mixed stand with oak and jack pine dominant, oak is of smaller diameter in these areas. Oak is of very poor quality. Understory is thick white pine in places however not quite as heavy as adjacent stand 9. Oak understory thick in places however browse is heavy in pockets-not much recruitment into sapling layer. Treat stand by final harvesting and planting to Jack pine. Leave a few islands within stand, attempt to concentrate these where white pine regen is thickest in order to maintain oak/pine mixture within these pockets as jack pine begins to decline. Stand 108 was delineated to protect slope leading into stand 6. Be careful when setting up boundary to avoid topography that is too steep for timber harvest operations. Oak very poor quality. Manage for JP. Consider harvest and planting in 2011. Excluded portion of stand north of trail road in 2006- see std 108. SJ Thiel 4/06 Treat portino of stand north of trail road with adj stand 44 of compt 65 per rreview discussion iwhen reviewing compt 65. SJT Small area of stand was treated north of trail road under tsale contract 0150601-Alcona Jack.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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9	4310 - Pine, Oak Mix	Sawtimber Well	33.8	62	111-140	N/A		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
White Pine	35	Pole	8	62	White Pine	Medium	>20 feet	Sapling
Red Pine	11	Log/Pole	10		Red Pine	Low	10 - 20 feet	Sapling
Jack Pine	10	Pole	8		Northern Pin Oak	Low	< 5 feet	Sapling
Northern Pin Oak	20	Log	12		Red Maple	Trace	>20 feet	Sapling
White Oak	18	Log	14					

Stand has transitioned to a white pine and oak stand. Much more white oak and red pine in this stand than adjacent stand 8. The white pine has grown into the canopy and is healthy, while the larger more mature oak and jack pine is showing signs of decline. X-log red and white pine can be found in the stand, with a majority of them in the southern portion. The stand contains steep terrain that leads down to Duval creek.

OPIC - FMD: Very mixed oak/pine stand. Typed as an O9 stand however there are areas where pine is a bit more dominant and where stand is more pole sized. Majority of overstory is made up of mixed oak with some large red and white pine present as well. Aspen is also present in low numbers in localized areas. Understory is very thick white and red pine regeneration. Stand 108 was created/separated to delineate slope to stand 6 from stand 8 and 9. JP is present in small pockets. Could treat stand by removing overstory oak and jack pine however quite a bit of damage would occur to understory/regen as previously stated in comments. Access is ok on FS roads coming in the the south/west. Possibly look at in the future as white pine regen begins to thin itself out and develop into more of a W^ stand with supercanopy red/white pine and oak. (old comment) Good W3 stand. Remove Oak & JP. May want to mark occasional RP-WP log tree. Expect some damage to residual understory. Logging activities should be held is late fall, winter, or early spring. Upon field examination and disucssion with Wildlife biologist Robinson, Unit Manager Thiel, J. Bielecki and AALM Montei it was decided to change the prescription that was decided at the Compartment Review. It was agreed to drop the prescription as written and do NO TREATMENT during this YOЕ. See notes in the Compartment file for further information. Montei 08/02/2001.

10	4199 - Other Mixed Upland Deciduous	Sawtimber Well	17.7	102	81-110	N/A		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Bigtooth Aspen	29	Pole/Log	9		White Pine	Medium	Variable	Sapling
White Pine	15	Pole	8		Witch Hazel	Low	5 - 10 feet	Tall Shrub
Red Maple	12	Pole/Log	9		Northern Pin Oak	Low	Variable	Sapling
Northern Pin Oak	40	Log	11	102	Balsam Fir	Trace	10 - 20 feet	Sapling
					Red Maple	Low	Variable	Sapling

Overall oak is dominating the canopy, with a mix of white pine filling in. Heavy browse on the oak throughout stand. The eastern end of stand contains a pocket of bigtooth aspen that are mature, and they can also be found scattered in the stand. Western end of stand does have some slope, but should not prevent equipment use. OPIC - FMD: Mixed stand, predominantly oak species. Some aspen and mixed conifer species including white pine and balsam fir in north and eastern portions of stand as it fazes into adjacent stand 34. Lots of wildlife use within stand and some blowdown which has increased wildlife habitat and overall structural diversity. (no old comment)

11	4122 - Oak, Pine	Poletimber Well	133.1	88	81-110	N/A		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Jack Pine	25	Pole/Log	9		Jack Pine	Low	10 - 20 feet	Sapling
White Pine	10	Pole/Log	9		Red Pine	Trace	10 - 20 feet	Sapling
Northern Pin Oak	59	Pole/Log	9	88	White Pine	Medium	Variable	Sapling
					Northern Pin Oak	Medium	Variable	Sapling
					Balsam Fir	Trace	10 - 20 feet	Sapling

Mature oak/pine stand. The jack pine is declining. Red pine and white pine can be found throughout the stand, and the red pine shows healthy growth characteristics. Oak in the subcanopy shows heavy browse, with majority of oak regen not reaching above browse height. OPIC - FMD: Moderate to poor quality oak stand, short in height. Lots of WP, JP and RP throughout stand. Moderate stocking of understory in places, low in others. Stand is quite variable overall. Next YOЕ, consider final harvesting with islands. Leave WP and RP as these species look are doing much better in terms of growth and sie index. May want to plant to red pine following harvest. Lots of trailing arbutus, areas of very thick blueberry. (no old comment)



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																						
12	6139 - Mixed Lowland Forest	Poletimber Well	56.8	31	51-80	N/A	Stand varies greatly between upland and lowland. There are patches of tag alder, black spruce and cattail in the eastern part of the stand. Aspen is the dominant species overall, with red maple filling in and balsam fir in the subcanopy. Areas not dominated by aspen contain white pine with balsam fir (mostly found in the southern end of the stand). There are remnants of skid trails in the stand and drainages also trace through the stand. OPIC - FMD: Mixed stand in the process of regeneration. Definitive stand line was difficult to determine because of mixture of species and some overlap into stand 27 and 34. Aspen and red maple predominate, called stand an E3. Some white pine and small numbers of JP in southern half of stand. Some wet areas and evidence of areas of seasonal high water throughout. (old comment) mix of red maple, balsam fir, WP, aspen, & JP																																																						
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13	42220 - Natural Jack Pine	Poletimber Medium	64.4	57	51-80	N/A	Mature jack pine stand with a mixture of oak and white pine in the canopy. Better quality timber than adjacent Stand 16, but contains scattered openings. Red pine logs located in the eastern part of stand. OPIC - FMD: Mixed stand with JP dominant. Oak scattered around, heavy in understory in some areas of stand. Red pine overstory present in pockets. Overall stand is fair quality providing good cover and age diversity within compartment. (no old comment)																																																						
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14	42120 - Planted Jack Pine	Sapling Well	78.5	15	Immature	N/A	Planted jack pine ranging from 10-20' tall. Oak is doing well, filling in any gaps within the stand. Overstory oak lightly scattered throughout. Traces of red pine and white oak saplings. OPIC - FMD: Planted J3 stand with heavy oak component. (old comment) (Trees dead/dying - CC & replant to make 1 aged stand. In heavy oak areas, leave scattered oak. Logging activities should be held in late fall, winter, or early spring. Old comment) Manage for a mixed jack pine/oak ecosystem per TMS Jim Bielecki on 11/24/2003 11/25/2003 mm (Stand planted under FTP Proposal 8-2004)																																																						
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15	4310 - Pine, Oak Mix	Sapling Medium	172.2	37	1-50	N/A	Stand is dominated by jack pine and oak. Currently jack pine has more canopy cover. As the stand progresses the oak will continue to grow into large gaps and the crowns will become more dominant. White pine log trees and saplings are scattered throughout, as well as traces of red pine logs and saplings. OPIC - FMD: Very mixed stand with oak, JP, WP, RM and occasional RP. Overall stand is O3 with significant JP component. Stand continues to be O3 stand with a small amount of merchantable stems scattered throughout. (old comment) mix of oak and JP																																																						
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16	42220 - Natural Jack Pine	Poletimber Well	95.2	60	81-110	N/A	Mature jack pine stand with oak in both the canopy and subcanopy. Red pine (log size) in NW corner. Heavy oak browse in patches, other patches of dense oak regen. road running north from Fawn Road is grown in. Overall poor quality timber. Pocket of aspen not picked up in plots on the southern end of stand near Fawn Road. OPIC - FMD: JP stand with oak common throughout, both as overstory and understory components. JP is fair in quality, short in height, small in DBH. Mostly 1-2 sticks of merchantable timber. Oak is poor quality, of stump sprout origin. Occasional aspen pockets throughout stand, mainly along edges.																																														
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17	42120 - Planted Jack Pine	Sapling Well	102.7	14	Immature	N/A	Planted jack pine is doing well, ranging from 10-20 foot tall. Medium density of pin oak mixed into the stand, as well as a trace of white oak. OPIC - FMD: J3/O3 stand with thick oak regen in places, mainly of stump sprout origin, some seed source. Lots of browse in places. Some 4-6" DBH JP/RP/WP scattered throughout stand, low #'s. Some overstory oak left as well. Planted JP is doing ok. Overall stand will most likely develop into mixture of oak/JP providing nice diversity. (old comment) cc and hope for natural regeneration [old comment]. Sale completed in June 2002. It appears that there will be sufficient natural oak regeneration. As of nov 2003- it was decided in light of ediscussion at compartment review to plant stand to JP and allow it to come back as a mix of JP and Oak.-SJTAugust 29, 002 mm (Planted to Jack Pine through FTP 485 8-2004)																																														
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18	6130 - Fir, Aspen, Maple	Sawtimber Well	17.5	84	111-140	N/A	Very diverse mixed lowland stand. The stand mostly consists of red maple, balsam fir and pockets of bigtooth aspen. Large super-canopy white pine sporadic throughout stand. X/log and log sized red pine mostly found in the finger running north into stand 38. Cedar is common along the northern edge as it transitions into stand 38. OPIC - FMD: Mixed stand, a few cedar here and there. Some very large super-canopy WP. The stand is mostly RM and PB. Majority of PB is dead or declining. Stand is currently dry (april) with no open water. This may be a good stand/opportunity to work with wildlife to try and enhance edge and vertical structure. Possibly final harvest some portions?? Stand is along southern edge of stand 38 and is located on and at base of slope down to swampy area. (no old comment)																																														
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19	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	19.2	84	81-110	N/A	Mature black/red hybrid oak stand with a jack pine component. There are pockets of bigtooth aspen located on the northern end of stand, as well as red maple mixed in. Traces of witch hazel were found in the northern end of stand. OPIC - FMD: Poor soils/poor timber. Oak regen looks good for this area, many 15'+. This stand is still mostly unmerchantable in size. There is a nice mix of moderately stocked regen. WP, WO, RO, RM, JP and RP are all present in moderate numbers. Stand should develop into a mixed pine/oak stand. Overall, stand is typed to be a J4 stand but could be called W4, even mix between these two species as far as merchantable timber goes. (no old comment)																																														
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20	6123 - Lowland Fir	Poletimber Poor	7.3	36	1-50	N/A	Forested stand on the lower end of the 25-50% canopy cover. Balsam fir dominated canopy with red maple and paper birch filling in on higher ground. High tag alder density throughout. Traces of cedar in the stand, as well as hemlock on transition zones into higher ground.																																											
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21	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	61.4	15	Immature	N/A	Planted jack pine stand with oak stump sprouts filling in gaps. Natural white and red pine are being recruited throughout the stand, as well as traces of white oak. Height varies anywhere from 5-20' for jack pine. OPIC - FMD: Planted J3 stand with significant oak component. JP is 2-5' in height, growing well. Oak is of stump sprout origin, shrubby and browsed heavily in places. (old comment) (Logging activities should be held in late fall, winter, or early spring. Old Comment). After discussion at CR- decided to replant back to JP via trenching and let stand regenerate as a mixed oak jack pine stand. Timber Sale # 72-014-01-01, ORV Oak-Jack Block. Cut by Georgia-Pacific during winter 2002/2003. 05/12/2003 mm (Planted to Jack Pine through FTP 485 in 8-2004)																																											
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22	42250 - Pine, Oak	Poletimber Well	29.9	71	81-110	N/A	Mature Jack pine stand overall with a heavy oak component. Areas in the canopy that had opened up are filled with oak. Mature jack pine is declining. OPIC - FMD: Lightly stocked JP stand with thick oak understory, some pockets of light oak regeneration. JP is good quality/form. Some WP present in understory as well. Minimal mortality in JP. Looks like oak was removed, final harvest next YOE after diameter/volume increases slightly and then replant to JP or convert to oak. JP is much higher quality on this site. (no old comment)																																											
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23	429 - Mixed Upland Conifers	Poletimber Well	18.8	63	81-110	N/A	Pine dominated stand with white and red pine mixed with balsam fir. There is a large pocket of aspen in the middle of the stand that is still pole sized. OPIC - FMD: Mixed stand of white pine and fir. Some areas fir dominates stand in terms of cover type. White pine common with occasional pole sized trees. Steep hill to swamp and high water in northern reaches of stand. (old comment) poor response to cut. Heavy browse. Water influence and steep hills. Potential old growth area.																																											
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24	42200 - Natural White Pine	Poletimber Medium	40.7	50	51-80	N/A	Currently white pine is in the canopy with oak and jack pine filling in canopy gaps. Similar to stand 35, the canopy closer will be 75-100% once the saplings reach maturity. OPIC - FMD: J3 stand with significant white pine and oak throughout. Stand is desely stocked with all 3 species represented fairly well. Growing well overall. Oak is being browsed heavily in spots. (no old comment)																																											
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26	42220 - Natural Jack Pine	Poletimber Well	5.7	39	81-110	N/A	Small natural jack pine stand mixed with white pine and oak. Subcanopy contains a medium density of oak regen with white pine mixed in. OPIC - FMD: Mixed stand of oak and naturally regenerated JP. Oak is of very poor quality, JP is fair. Some WP mixed throughout. Understory mainly mixed oak species, browsed heavily and low quality as well. Some pockets of J# within stand. (no old comment)																																											
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
27	4319 - Mixed Upland Forest	Poletimber Well	16.7	33	81-110	N/A	Plot data shows the stand as an aspen stand throughout. Thicker white pine and balsam fir can be found in the transition to the tag alder and along the western side of stand. OPIC - FMD: Aspen, birch and red maple. Averaging 20' in height. Middle of stand has a pocket of alder (L3)-Birch, aspen and mixed conifer continue to be present throughout. Patchy areas of A3/A2/F1/L3/B2/M2/M3. Western side looks to have more of a fir component overall, making small pockets somewhat of a p-type. (old comment) Aspen with scattered Balsam Fir, WP, & JP		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Balsam Fir	25	Pole	7		Red Maple	Medium		10 - 20 feet	Sapling
Bigtooth Aspen	35	Pole	8	33	Northern Pin Oak	Low		10 - 20 feet	Sapling
White Pine	25	Log/Pole	11		Balsam Fir	Medium		Variable	Sapling
Red Maple	15	Pole	6						
29	42220 - Natural Jack Pine	Poletimber Medium	41.8	36	51-80	N/A	Jack pine stand with a mix of white pine. Oak is filling in canopy gaps and traces of red pine (both sapling and log size) can be found in the western part of the stand. The subcanopy consists of oak, with a mix of jack pine and white pine. OPIC - FMD: Poor soils/poor timber. Oak regen looks good for this area, many 15'+. This stand is still mostly unmerchantable in size. There is a nice mix of moderately stocked regen. WP, WO, RO, RM, JP and RP are all present in moderate numbers. Stand should develop into a mixed pine/oak stand. Overall, stand is typed to be a J4 stand but could be called W4, even mix between these two species as far as merchantable timber goes. (no old comment)		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Jack Pine	68	Pole	7	36	Northern Pin Oak	Medium		Variable	Sapling
Northern Pin Oak	15	Pole	5		White Pine	Low		5 - 10 feet	Sapling
White Pine	15	Log/Pole	13		Jack Pine	Low		5 - 10 feet	Sapling
					Red Pine	Trace		5 - 10 feet	Sapling
					White Oak	Low		5 - 10 feet	Sapling
					Balsam Fir	Trace	10 - 20 feet	Sapling	
31	42220 - Natural Jack Pine	Poletimber Well	62.1	33	81-110	N/A	Jack pine stand with a heavy oak component. Younger stand and oak is still recruiting into the overstory in open areas. OPIC - FMD: Stand is a mixture of J3/O3 with some heavier pockets of WP. Few merchantable JP stems exist, mainly in southern portion of stand. Nice mixed stand overall, valuable for wildlife in many ways. Some scattered A2 in central portion of stand. (old comment) stand a mix of Jack pine - oak		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
White Pine	20	Log	14		White Pine	Low		5 - 10 feet	Sapling
Northern Pin Oak	15	Pole	6		Northern Pin Oak	Medium		Variable	Sapling
Jack Pine	64	Pole	7	33	Jack Pine	Low		10 - 20 feet	Sapling
34	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	59.1	91	111-140	N/A	Stand varies from thick, younger white pine (8-9 in. DBH) to areas where hemlock dominates the canopy with minimal regeneration in the understorey. Balsam fir is common throughout the whole stand in both the canopy and understorey, while cedar can only be found in the canopy. Previous notes mention beaver activity, but no current activity or flooding was found (January 2019). Stand contains sporadic hard and soft maple. OPIC - FMD: Few very small/some seasonal creeks converge to form small stream. Backed up in a couple spots by beaver activity which has created small ponds in places. Forested portion of stand which is the majority consists of cedar, BF, large WP, abundant hemlock, aspen and some oak in transition zones. Oak are of very good quality. Really nice, unique stand with fair soils, lots of fern species and nice scenery. (no old comment)		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Northern White Cedar	15	Log/Pole	10		White Pine	Medium		10 - 20 feet	Sapling
Hemlock	30	Log/Pole	12	91	Balsam Fir	Medium		Variable	Sapling
White Pine	26	Pole/Log	9		Red Maple	Low		>20 feet	Sapling
Balsam Fir	20	Pole	7		Paper Birch	Low		>20 feet	Sapling
					Tag Alder	Medium		5 - 10 feet	Tall Shrub
37	42220 - Natural Jack Pine	Poletimber Medium	23.6	67	51-80	N/A	Two-aged mixed stand of mature jack pine and white pine in 60+ yo canopy. The younger canopy (~30 years) contains jack pine, oak, white pine and traces of white oak and red pine. Stand has open patches similar to adjacent Stand 13. OPIC - FMD: Small pockets of overstorey JP with areas of J3 as well. Very mixed stand overall with oak, JP, WP and occasional RM throughout. Blueberry thick with some scattered leatherleaf as well. Some larger WP as well as the occasional RP. Looks like past treatment removed overstorey with some smaller (4" DBH) JP left. This is now developing with mixed regeneration filling in. Stand is 2-aged. (no old comment)		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Jack Pine	65	Pole/Log	9	67	Northern Pin Oak	Medium		10 - 20 feet	Sapling
White Pine	10	Log/Pole	12		White Pine	Low		5 - 10 feet	Sapling
Northern Pin Oak	24	Pole	7	34	Red Pine	Trace		10 - 20 feet	Sapling
					White Oak	Trace		10 - 20 feet	Sapling
					Red Maple	Low	>20 feet	Sapling	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
38	6120 - Lowland Cedar	Poletimber Well	87.8	117	201+	N/A	Cedar swamp with white spruce, red maple, paper birch and balsam fir filling in canopy gaps. Large super-canopy white pine can be found throughout the stand. Western part of stand consists of smaller diameter cedar (still very high BA), and dense fir understory. Areas of windthrow in the stand. OPIC - FMD: Mixed stand with cedar dominant. Pretty typical cedar swamp complex. Areas of high density cedar, some areas of supercanopy white pine. Occasional areas of red maple, mostly near edges and transition zones. Some paper birch, low numbers. (no old comment)				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Northern White Cedar		87	Pole/Log	9	117	Balsam Fir		Medium	Variable	Sapling	
						White Pine		Low	< 5 feet	Sapling	
106	4310 - Pine, Oak Mix	Sawtimber Well	25.0	63	111-140	N/A	Overall a pine dominated stand with mixed oak and aspen. Most of the aspen can be found along the slope. There is a pocket of x-log red and white pine adjacent to stand 5. This stand is limited by slope. OPIC - FMD: Very mixed stand on slope/ridge/ridgetop between swamp and WP stand (6). Some nice RP, scattered JP, poor quality oak. Thick WP understory, aspen scattered, thick pocket in central/southern area of stand. Slope is very steep in places. Stand could be types a number of ways depending on plot data as entire stand is quite mixed. Typed as an oak stand because it looked as though oak species were most prevalent aside from sampling. (new stand, no old comment)				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Red Pine		15	XLog/Log	21		White Pine		Medium	Variable	Sapling	
Northern Pin Oak		15	Log	12		Balsam Fir		Low	Variable	Sapling	
White Oak		8	Log	12		Red Pine		Low	Variable	Sapling	
Red Maple		8	Pole/Log	9		Witch Hazel		Low	5 - 10 feet	Tall Shrub	
Bigtooth Aspen		17	Log	12							
White Pine		37	Log	11	63						
112	42200 - Natural White Pine	Sawtimber Well	9.7	65	81-110	N/A	Good quality white pine logs in the canopy. Oak stump sprouts, red maple and bigtooth aspen are filling in canopy gaps well. Balsam fir regen can be found on slopes leading down to more lowland type stands (stand 12). OPIC - FMD: Everything but the white pine removed. Excellent regen in the open areas. Some fir in the understory and occasional areas of excellent oak regen. Aspen in areas where canopy is lightened. In places aspen mixes with fir to create excellent cover/habitat. (no old comment)				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
White Pine		75	Log/Pole	12	65	Red Pine		Low	Variable	Sapling	
Northern Pin Oak		10	Pole	8		Balsam Fir		Medium	Variable	Sapling	
Bigtooth Aspen		12	Pole/Sapling	6		Northern Pin Oak		Medium	>20 feet	Sapling	
						Red Maple		Medium	>20 feet	Sapling	
						White Pine		Low	Variable	Sapling	
128	42200 - Natural White Pine	Sawtimber Well	27.6	48	81-110	N/A	White pine stand with a very diverse and well stocked understory. Majority of white pine is log sized. Pole size white pine also present in the stand. Large pocket of aspen located on the east end of stand (about 4 acres). Any oak regen shorter than 5' shows signs of heavy browse. OPIC - FMD: W4/W6 stand with oak and aspen present in descent #'s. Some red pine present as well. Larger WP/RP present near central/narrow portion of stand. Edges of stand contain mixture of white pine and dominant A3/4. (no old comment)				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
White Pine		65	Log	11	48	White Pine		Medium	Variable	Sapling	
Red Pine		10	Log	10		Bigtooth Aspen		Low	10 - 20 feet	Sapling	
Northern Pin Oak		8	Pole	6		Red Pine		Low	Variable	Sapling	
Bigtooth Aspen		15	Pole	7		White Oak		Low	10 - 20 feet	Sapling	
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