



Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72065

Entry Year 2026

Acreage: 2,755

County: Alcona

Management Area: High Sand Plains

Stand Examiner: Joan Charlebois

Legal Description:

T25N R08E Sections 15, 19, 20, 29, 30, 31, 32

Identified Planning Goals:

To maintain riparian and forest health, structural and species diversity, and overall productivity while providing for sustainable multiple uses. A large part of the compartment is also dedicated habitat for the Eastern massasauga rattlesnake (EMR).

Soil and topography:

The compartment's considerable lowland acreage occurs primarily on the somewhat poorly-drained mucky sand soils of the Tacoda-Wakeley complex. The uplands occur mainly on the somewhat excessively drained Graycalm sand series, dissected by steep valleys. Permanent streams flow through most of those valleys.

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

Only the south edge of the compartment borders other state land. The west side is adjacent to U.S. Forest Service lands managed for Kirtland's warbler. The rest of the compartment adjoins private property, with two private in-holdings. Both year-round and seasonal residential use occurs on the adjacent private property. Section 31 is within the Wurtsmith FUDS boundary.

Unique Natural Features:

There is the potential for rare plants and animals to be associated with the large cedar swamp and stream corridors.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features have been recorded within the compartment.

Special Management Designations or Considerations:

Duval Creek is listed as a high priority trout stream. EMR management guidelines apply within the dedicated habitat.

Watershed and Fisheries Considerations:

The compartment is within the Pine River watershed and contains several tributaries, including Roy, Grey & Duval Creeks. While those tributaries are classified as warm transitional streams, Duval Creek is classified as a high priority trout stream and they are all considered important for the production of young trout.

Wildlife Habitat Considerations:

During severe winters, deer yard in the large cedar swamp and associated stream corridor cedar stands. The compartment's mix of upland oak and pine and lowland aspen and conifers provide habitat for a variety of game and non-game wildlife. There is a long history of beaver activity along the streams.

Mineral Resource and Development Concerns and/or Restrictions

No known potential exists for commercial metallic mineral production in this part of the state. An active sand/gravel pit exists in Sec 26. Potential for sand & gravel development within the compartment appears to be limited due to wetlands and distance to commercial markets for aggregate resources. There might be potential for some small borrow pits for internal department use. Some sparse Antrim Shale gas wells have been drilled in the region, but the compartment is well outside the main Antrim play, and the nearest oil & gas production, past or present, is two miles away. No recent well permits have been issued in the area, and there is no current leasing activity involving State-owned mineral rights. Potential for hydrocarbons from known producing formations beneath the compartment is considered low at this time. The State does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, the surface owner must provide the owner of the mineral rights reasonable access to the surface for mineral exploration and development.

Vehicle Access:

Direct county road access from the east is by way of Andrews, Goddard and Vandercook roads. Several U.S. Forest Service and seasonal county roads provide access from the west. There are some interior trail roads, but the steep

drainage valleys and lack of stream crossings limit access.

Survey Needs:

Missing survey corners were set in 2023 through a DNR-contracted survey project.

Recreational Facilities and Opportunities:

The Vandercook Road Snowmobile Trail Head is located in the northwest of section 19. Snowmobile trail #962 starts there and heads south through the compartment and the adjacent U.S. Forest Service land. Dispersed recreational opportunities include hunting, fishing, trapping, camping and wildlife viewing.

Fire Protection:

The wide cleared powerline corridor along the compartment's west edge acts as a fuelbreak for the adjacent Kirtland's warbler management area. The U.S.F.S. stream crossing in the NENE Section 24 is a potential water source. Steep sideslopes limit access to other streams within the compartment.

Additional Compartment Information:

The following reports from the Inventory are attached:

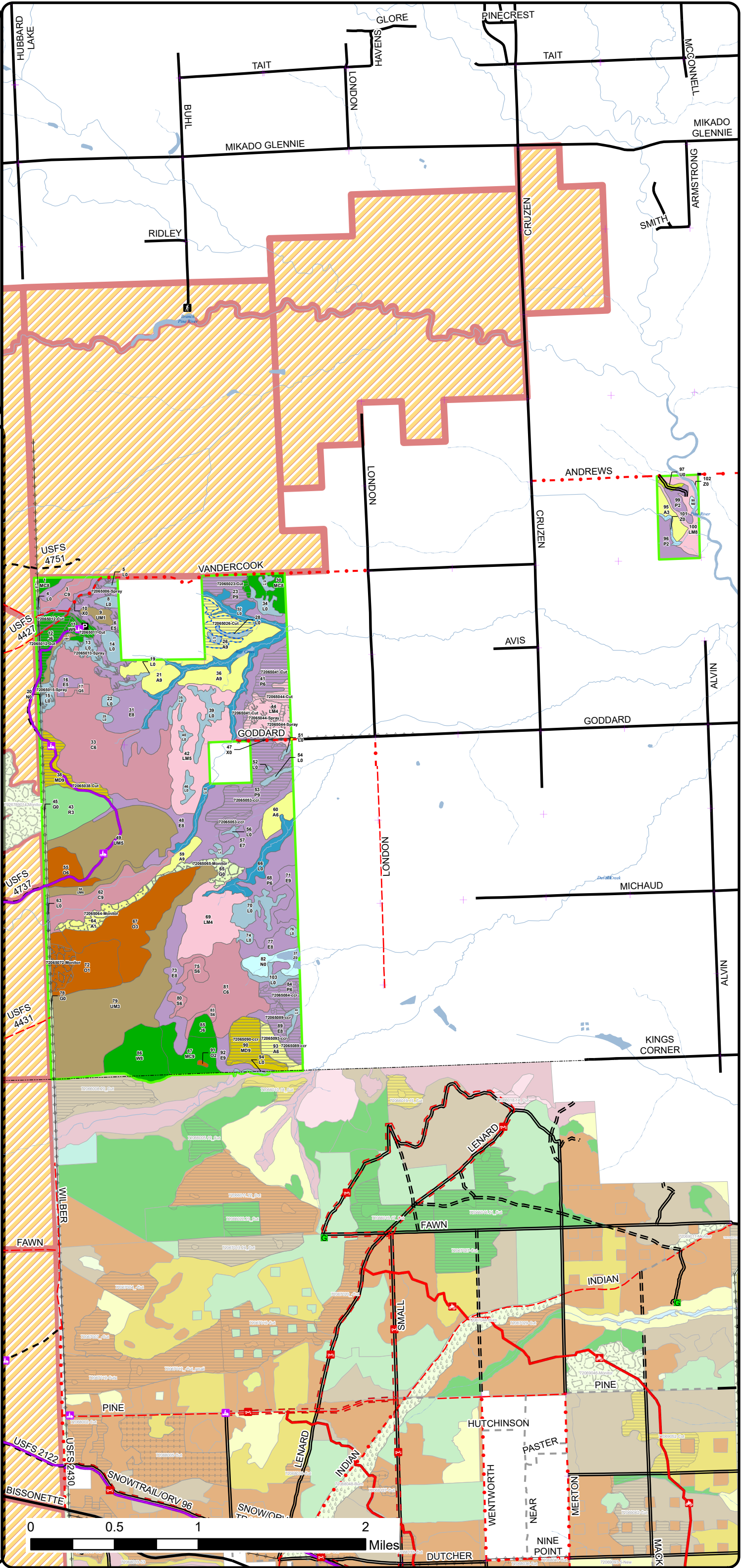
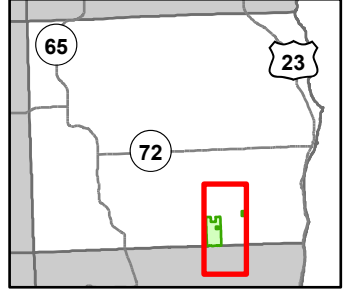
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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: 72065
 T25N, R08E, Sec. 15, 19, 20,
 29-32
 County: Alcona
 Unit: Grayling
 Mgmt Area: High Sand Plains
 YOE: 2026
 Acres: 2754.9 GIS Calculated
 Examiner: Joan Charlebois
 Map Revised: 10/16/2024
 Map Phase: Post Review

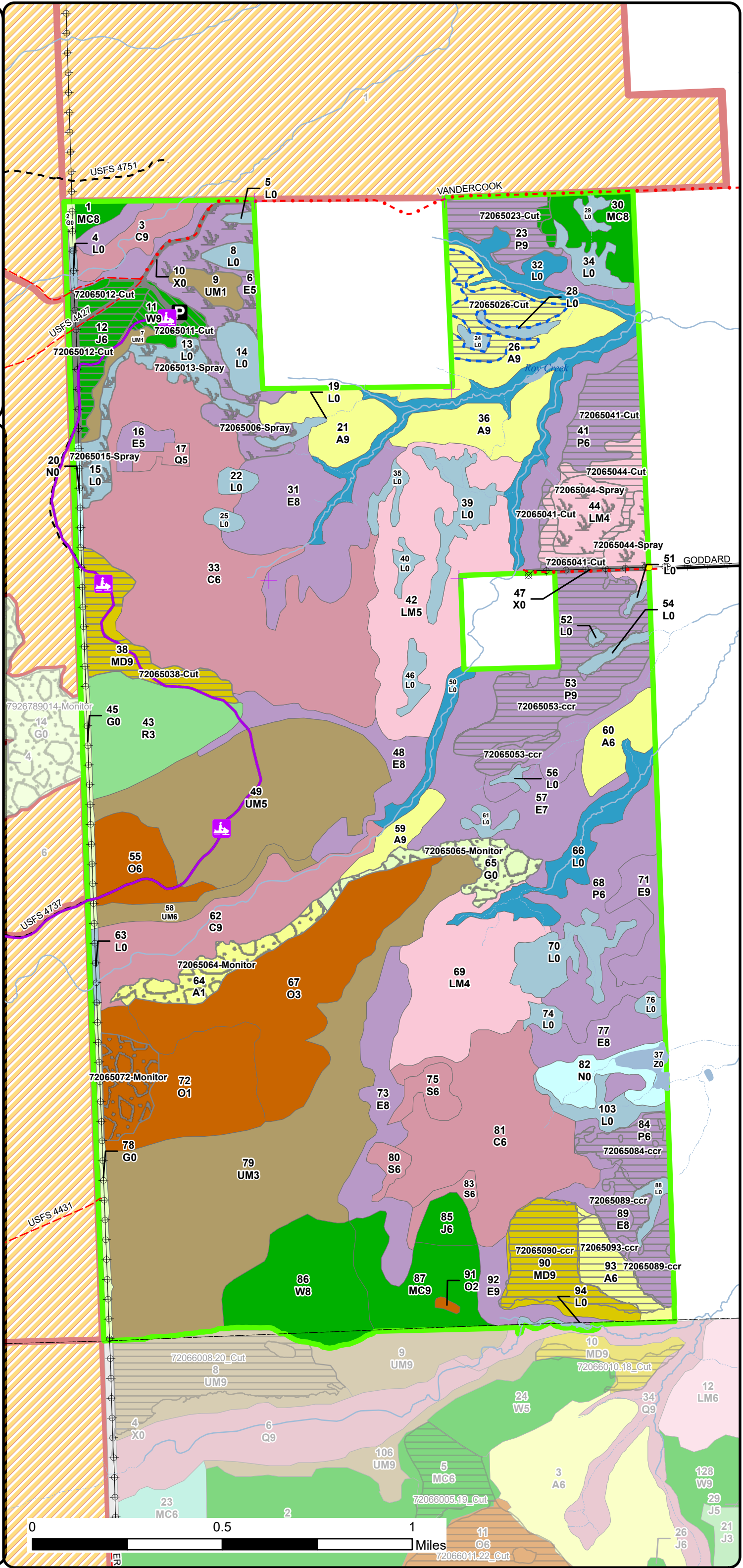
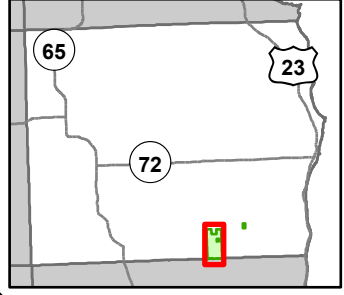


- Hiking Trails
- ORV Trails
- ORV Routes
- Snowmobile Trails
- Designated ORV Routes
- Designated Snowmobile Trails
- Designated ATV Trails
- Remonumented Section Corners
- Survey Grade Corners
- Gate
- Parking Lot
- Trailhead
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Drain
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Powerline
- Compartment Boundary
- Treatments with Site Conditions
- Pesticide
- Other Harvest - See Comments
- Clearcut (w/Reserves)
- Regeneration Survey
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed Non-forested Wetland

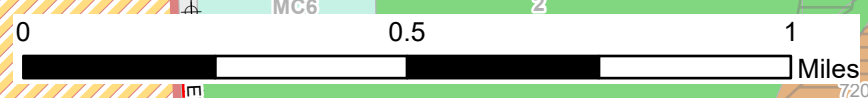


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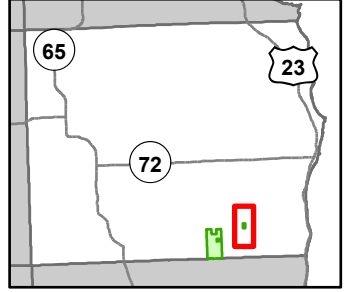


- Snowmobile Trails
- Designated Snowmobile Trails
- Remunemented Section Corners
- Survey Grade Corners
- Parking Lot
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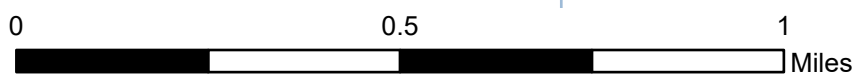
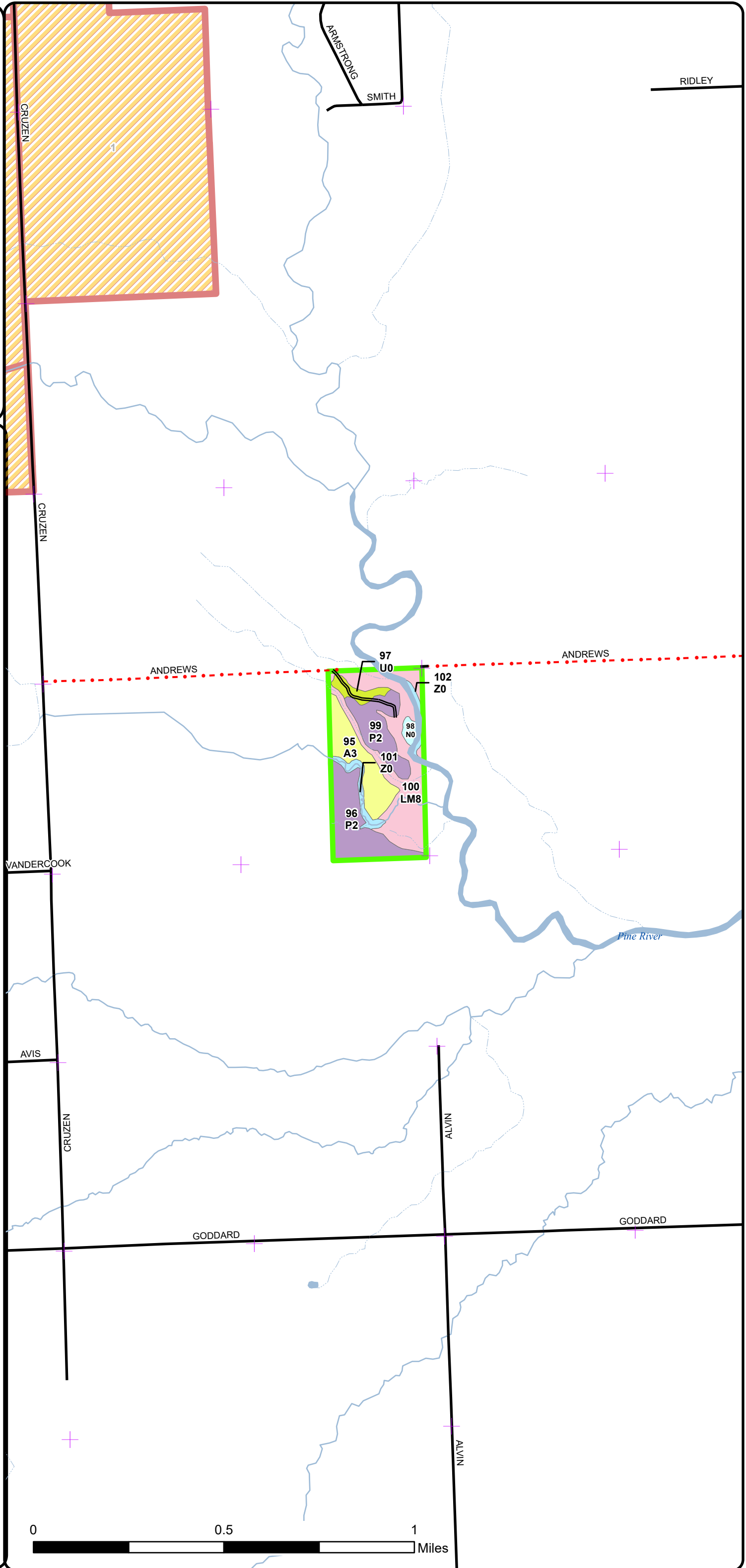


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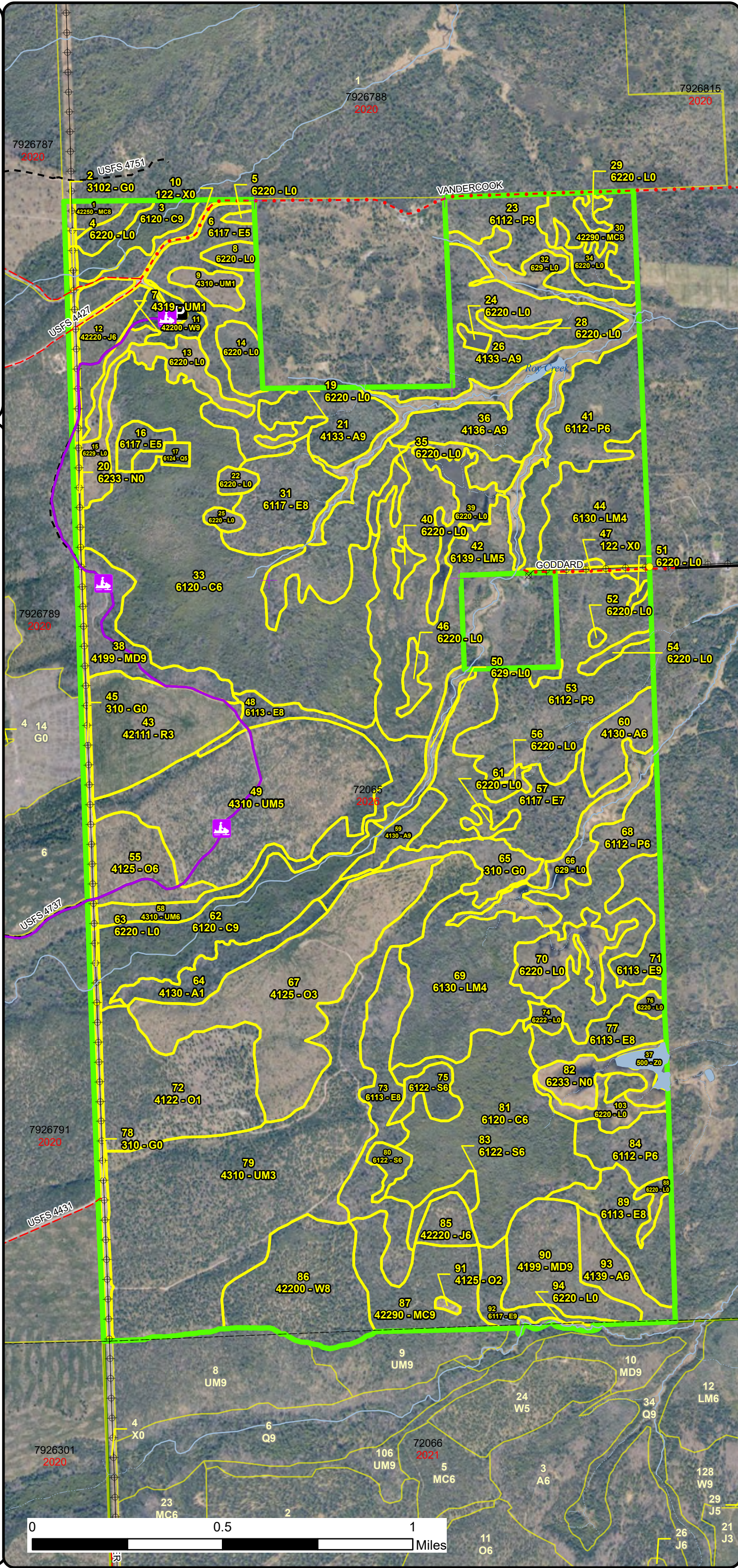
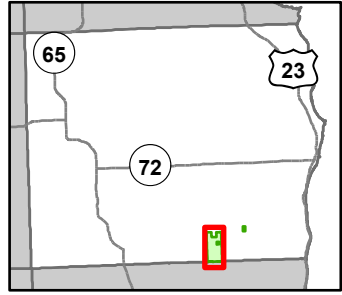


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Stand Boundary Map

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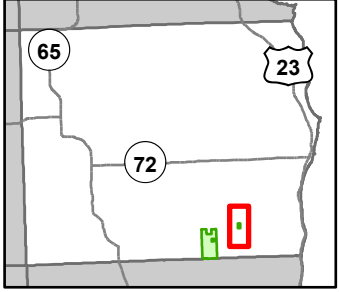


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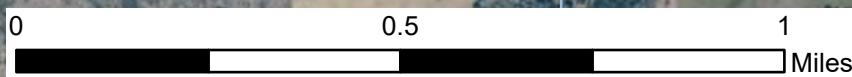
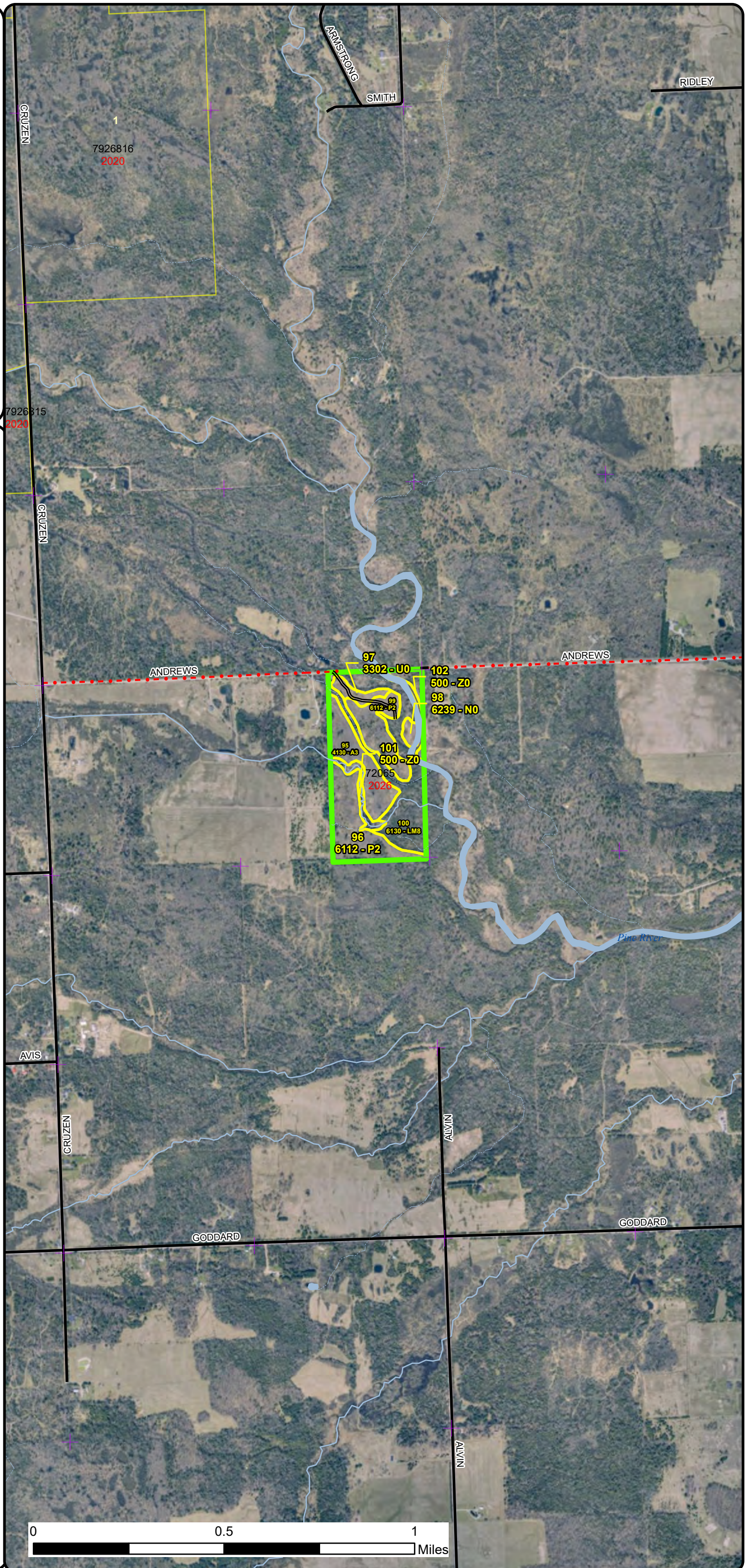


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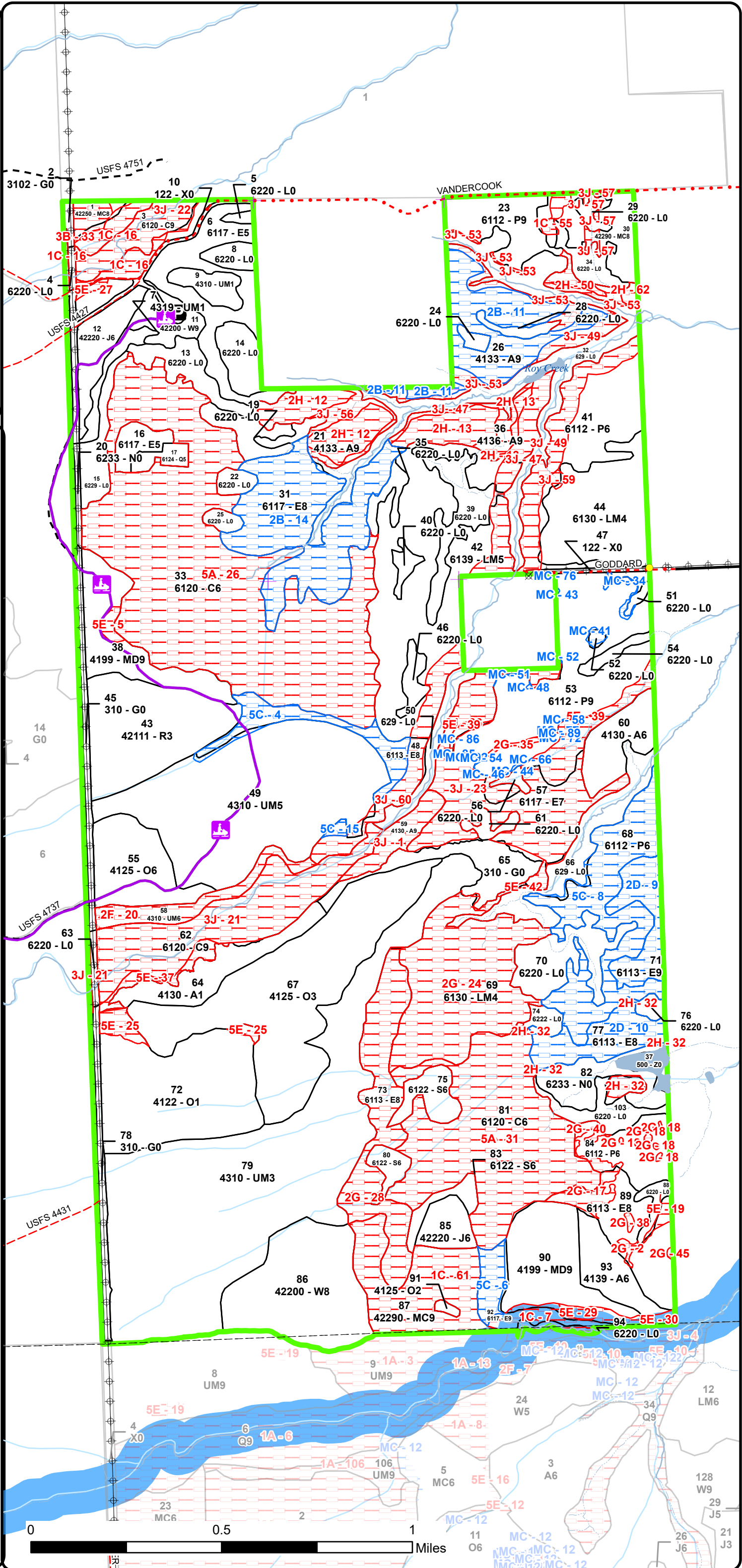
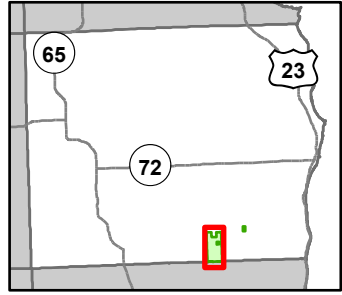


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Special Conservation Areas & Site Conditions Map

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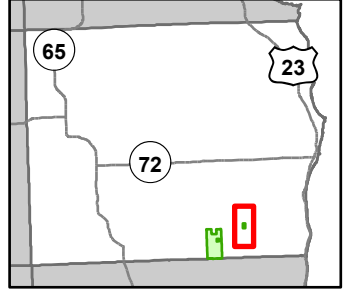
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- Compartment Boundary
- Available w/ Constraints
- Unavailable

- 2D: Portable Bridge Needed
(Dept. bridge will be adequate)
- 5C: Delay treatment for age/size
class diversity or exceptional
site quality
- 1C: Other dept or div proc/
practices
- 2F: Too steep
- 2G: Too wet (sensitive soils,
does not include access issues)
- 2H: Blocked by physical obstacle
(e.g. upland stand in a lowland
area)
- 3J: Water quality / BMPs
(stream, river, or lake)
- 5A: Not able to obtain desirable
regeneration
- 5E: Long-Term Retention
- Available w/ Constraints
- Unavailable
- Stand Boundaries
- Stand Boundaries
- Cold Water Streams
- High Priority Trout Stream Buffer

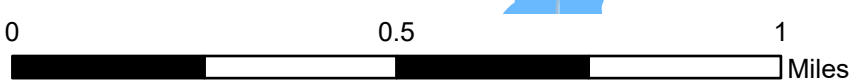
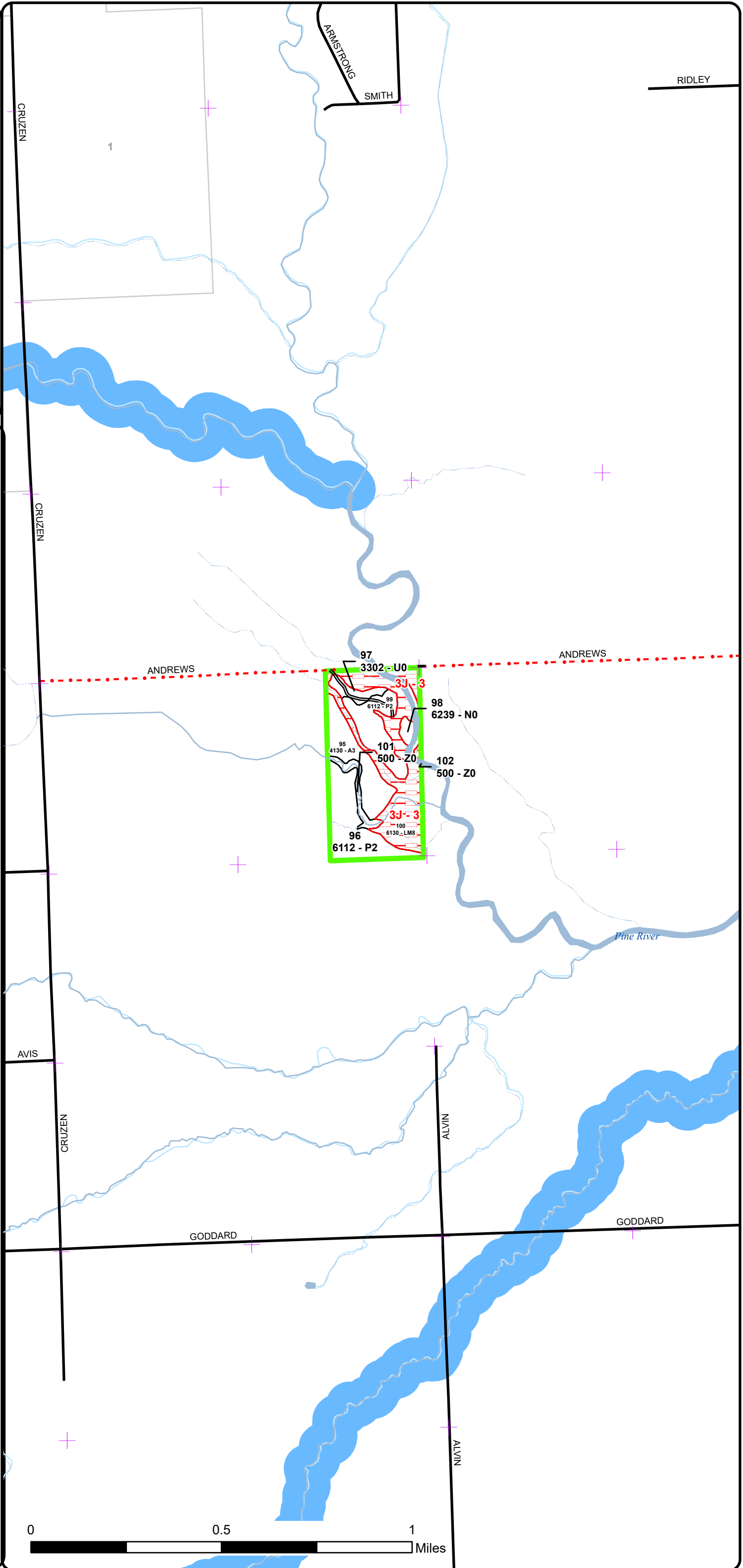
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& Site Conditions Map**

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- Stand Boundaries
- Stand Boundaries
- Cold Water Streams
- High Priority Trout Stream Buffer



Joan Charlebois : Examiner



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	22	13	19	0	0	0	132	0	11	0	0	0	0	0	0	0	0	197
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	221	183	0	0	0	0	404
Herbaceous Openland	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Jack Pine	0	0	0	0	0	0	34	0	0	0	0	0	0	0	0	0	0	0	34
Low-Density Trees	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lowland Aspen/Balsam Poplar	0	0	28	0	0	52	29	169	0	0	0	0	0	0	0	0	0	0	278
Lowland Conifers	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Lowland Deciduous	0	0	0	0	0	0	67	132	0	0	42	89	0	32	0	0	0	0	361
Lowland Mixed Forest	0	0	0	99	0	49	0	0	0	74	28	0	0	0	0	0	0	0	250
Lowland Shrub	259	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	259
Lowland Spruce/Fir	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	22
Marsh	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	34	0	41	0	0	0	0	75
Natural Mixed Pines	0	0	0	0	0	0	0	0	65	5	0	0	0	0	0	0	0	0	70
Oak	0	79	106	1	32	0	0	0	0	0	0	0	0	0	0	0	0	0	218
Red Pine	0	0	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
Upland Mixed Forest	0	0	15	214	128	0	0	0	0	0	0	15	0	0	0	0	0	0	370
Urban	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Water	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
White Pine	0	0	0	0	0	0	60	0	0	11	0	0	0	0	0	0	0	0	71
Total	349	101	216	333	165	101	190	455	65	101	70	138	221	256	0	0	0	0	2757



Report 2 – Treatment Summary

Grayling Mgt. Unit

Year of Entry: 2026

Acres of Harvest

Compartment 65

Total Compartment Acres: 2,755

Commercial Harvest - 287
 Harvests with Site Condition - 23
 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	40	0	0	0	0	0	0	0	0	40
Jack Pine	21	0	0	0	0	0	0	0	0	21
Lowland Aspen/Balsam Poplar	139	0	0	0	0	0	0	0	0	139
Lowland Deciduous	21	0	0	0	0	0	0	0	0	21
Lowland Mixed Forest	18	0	0	0	0	0	0	0	0	18
Mixed Upland Deciduous	63	0	0	0	0	0	0	0	0	63
White Pine	0	0	0	0	0	0	0	0	9	9
Total	301	0	0	0	0	0	0	0	9	310

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	310	0	0	0	0	97	64	0	0	471
Next Step	0	0	0	0	0	29	428	0	0	457
Total	310	0	0	0	0	127	491	0	0	928



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

6	72065006-Spray	44.3	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	59	51-80	Pesticide	Hand Application	611 - Lowland Deciduous Forest	Two-Aged	No
<p><u>Prescription</u> Control invasive plants such as phragmites, narrowleaf cattail and glossy buckthorn.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Herbicide Use</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u></p> <p><u>Site Condition:</u></p> <p>Proposed Start Date: 10/1 /2025</p>											
11	72065011-Cut	9.2	42200 - Natural White Pine	Sawtimber Well	83	81-110	Harvest	Other - Specify	4220 - Natural White Pine	Two-Aged	No
<p><u>Prescription</u> Remove the JP, spruce, fir, RM, BC & aspen concurrent with stand 12. Exclude the south poly that is heavy to xlog pine & NWC. The proposed exclusion has been removed from the Rx boundary. Add snowmobile trail and parking lot protection specs. Shortwood only in order to increase DWD for habitat. Follow EMR CCAA management guidance.</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>Proposed Start Date: 10/1 /2025</p>											
12	72065012-Cut	20.5	42220 - Natural Jack Pine	Poletimber Well	51	81-110	Harvest	Clearcut with Retention	4129 - Mixed Oak	Even-Aged	No
<p><u>Prescription</u> Final harvest that portion east of the powerline corridor. Leave all WP. Exclude for retention the steep hill on the north edge. Apply snowmobile trail protection specs. Shortwood only in order to increase DWD for habitat. Follow EMR CCAA management guidance. The proposed area-based exclusions have been removed from the draft Rx boundary.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Moderate stocking in oak with pine & RM.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition:</u></p> <p>Proposed Start Date: 10/1 /2025</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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13	72065013-Spray	13.4	6220 - Alder/willow	Nonstocked		Unspecified	Pesticide	Hand Application	613 - Lowland Mixed Forest	Even-Aged	No
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Prescription Control invasive plants such as phragmites, narrowleaf cattail and glossy buckthorn.

Specs:

Next Step Monitoring, Herbicide Use

Treatments:

Acceptable

Regen:

Other

Comment:

Site Condition:

Proposed Start Date: 10/1 /2025

15	72065015-Spray	11.1	6229 - Mixed lowland shrub	Nonstocked		Unspecified	Pesticide	Hand Application	622 - Lowland Shrub		No
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Prescription Control invasive plants such as phragmites, narrowleaf cattail and glossy buckthorn.

Specs:

Next Step Monitoring, Herbicide Use

Treatments:

Acceptable

Regen:

Other

Comment:

Site Condition:

Proposed Start Date: 10/1 /2025

23	72065023-Cut	22.2	6112 - Lowland Aspen	Sawtimber Well	53	81-110	Harvest	Clearcut with Retention	6112 - Lowland Aspen	Even-Aged	No
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Prescription Final harvest except legacy pine and standard area-based retention. Exclude the creek RMZ, sparse ground, and narrow SE peninsula cut off by low ground and an intermittent stream. Apply drumming log spec. No chipping due to low ground & EMR managed lands. Follow EMR CCAA management guidance. The treatment boundary has been edited to approximate the intended exclusions, only a subset of which will be designated as retention.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Moderate stocking in aspen, lowland hardwoods and conifers, with non-stocked lowland shrub inclusions.

Regen:

Other

Comment:

Site Condition:

Proposed Start Date: 10/1 /2033



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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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26	72065026-Cut	23.3	4133 - Aspen, Mixed Pine	Sawtimber Well	63	111-140	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	No
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Prescription If permission can be obtained to access from the west, harvest the operable ground that isn't fragmented by intermittent streams or lowland swales. Protect legacy pine. Exclude the 300-ft RMZ along Roy Creek and 100-ft RMZs along the tributaries. Apply drumming log spec & EMR CCAA guidelines. The draft treatment boundary has been edited to approximate the proposed exclusions, but additional exclusions may be made in response to ground conditions encountered during sale prep.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen with RM, WP & fir.

Regen:

Other

Comment:

Site Condition: Unknown Access

Proposed Start Date: 10/1 /2025

38	72065038-Cut	29.1	4199 - Other Mixed Upland Deciduous	Sawtimber Well	102	81-110	Harvest	Clearcut with Retention	4191 - Mixed Upland Deciduous with Conifer	Even-Aged	No
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Prescription Final harvest except protect the legacy WP-RP and island retention. Consider locating the island to exclude part of the strip between the old snowmobile trail and the swamp. The treatment boundary has been edited to approximate that proposed exclusion. Apply snowmobile trail protection specs. Shortwood only in order to increase DWD for habitat. Follow EMR CCAA management guidance.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable A moderately stocked mix of aspen, maple, oak and conifers.

Regen:

Other

Comment:

Site Condition:

Proposed Start Date: 10/1 /2025

41	72065041-Cut	29.4	6112 - Lowland Aspen	Poletimber Well	48	111-140	Harvest	Clearcut with Retention	6112 - Lowland Aspen	Even-Aged	No
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Prescription Final harvest. Leave all WP. Exclude the 300-ft RMZ along Roy Creek. Protect the vernal pool and ephemeral drainage. Apply drumming log spec. No chipping due to low ground & EMR managed lands. Follow EMR CCAA management guidance.

Next Step Monitoring, Natural Regen (Re-Inventory); Pesticide, Hand Application; Monitoring, Herbicide Use

Treatments:

Acceptable Moderate stocking in aspen, fir & WP. Lowland shrub inclusions are expected and accepted.

Regen:

Other

Comment:

Site Condition:

Proposed Start Date: 10/1 /2025



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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
44 72065044-Cut	18.3	6130 - Fir, Aspen, Maple	Poletimber Poor	48	1-50	Harvest	Clearcut with Retention	613 - Lowland Mixed Forest	Even-Aged	No
<p><u>Prescription</u> Harvest operable portions adjacent to stand 41 concurrent with that stand. The east peninsula of the harvest was designed for the purpose of allowing the existing road to be cleared for stand 41 harvest access. No chipping due to low ground & EMR managed lands. Follow EMR CCAA management guidance.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Moderate to poor stocking in fir, spruce, pine, aspen & lowland hardwoods.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										
44 72065044-Spray	28.6	6130 - Fir, Aspen, Maple	Poletimber Poor	48	1-50	Pesticide	Hand Application	613 - Lowland Mixed Forest	Even-Aged	No
<p><u>Prescription</u> Control the invasive glossy buckthorn within the stand.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Herbicide Use</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										
64 72065064-Monitor	22.3	4130 - Aspen	Sapling Poor	1	Immature	Monitoring	Natural Regen (Re-Inventory)	4139 - Aspen, Mixed Deciduous	Even-Aged	No
<p><u>Prescription</u> Check regen</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Moderate stocking in aspen, oak, RM & mixed conifers, with poorly-stocked inclusions acceptable for EMR habitat.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2033</p>										
65 72065065-Monitor	20.2	310 - Herbaceous Openland	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Re-Inventory)	4139 - Aspen, Mixed Deciduous	Even-Aged	No
<p><u>Prescription</u> check regen</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Moderate stocking in aspen, oak, RM & mixed conifers, with poorly-stocked inclusions acceptable for EMR habitat.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2033</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
72 72065072-Monitor	21.2	4122 - Oak, Pine	Sapling Poor	4	1-50	Monitoring	Natural Regen (Re-Inventory)	4122 - Oak, Pine	Even-Aged	No
<p><u>Prescription</u> check regen <u>Specs:</u> <u>Next Step</u> <u>Treatments:</u> <u>Acceptable</u> A moderately stocked mix of oak, WP, JP & RP. <u>Regen:</u> <u>Other</u> Given how light the deer browse has been and how reliably oak recruits in the area, this survey can be conducted at re-inventory. <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/1 /2033</p>										

Approved Treatments:

53 72065053-ccr	70.6	6112 - Lowland Aspen	Sawtimber Well	60	81-110	Harvest	Clearcut with Retention	6112 - Lowland Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest 2" DBH & up. Apply area-based retention: first priority is adequate RMZ protection, then consider retention along linear tag alder swales. Small amounts of individual leave-trees (ie: WP saw) may also be designated. Per Fisheries Division, a 300 ft buffer is recommended along Roy Creek. A 100 ft buffer was excluded along the trib to Grey Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> Includes a mix of aspen, lowland deciduous, conifer, and lowland shrub cover. <u>Regen:</u> <u>Other</u> The stand contains a mosaic of lowland and upland ground and is dissected with linear tag alder swales. Old next step comments: Natural regen survey. Acceptable regen includes a mix of aspen, lowland deciduous, conifer, and lowland shrub cover. <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/1 /2022</p>										
84 72065084-ccr	16.5	6112 - Lowland Aspen	Poletimber Well	60	111-140	Harvest	Clearcut with Retention	6112 - Lowland Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest except leave cedar. Spec the minimum cutting diameter to remove enough of the conifer understory to ensure vigorous regeneration. Apply standard area-based retention. Small amounts of individual leave-trees (ie: oak saw) may be designated in addition to the cedar. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> Includes a mix of aspen, red maple, conifers and lowland shrubs. <u>Regen:</u> <u>Other</u> Old next step comments: Natural regen survey. Acceptable regen includes a mix of aspen, red maple, conifers and lowland shrubs. <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/1 /2022</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
89 72065089-ccr	20.8	6113 - Lowland Maple	Sawtimber Medium	126	81-110	Harvest	Clearcut with Retention	6117 - Lowland Deciduous, Mixed Coniferous	Even-Aged	No
<p><u>Prescription</u> Final harvest except leave cedar & hemlock. Spec the minimum cutting diameter so that enough of the conifer understory is removed to facilitate operations and regeneration, but enough is retained to regulate the water table. Apply standard area-based retention, which may include individual leave-trees (ie: white pine saw) in addition to the hemlock & cedar. Sparse or majority-immature cover bordering the swamp conifer stands may be excluded (see Stage 1 stand comments).</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> Includes a mix of lowland deciduous, conifers and shrub cover.</p> <p><u>Other Comment:</u> Old next step comments: Natural regen survey. Acceptable regen includes a mix of lowland deciduous, conifers and shrub cover.</p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>										
90 72065090-ccr	33.7	4199 - Other Mixed Upland Deciduous	Sawtimber Well	127	81-110	Harvest	Clearcut with Retention	4121 - Oak, Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest 2" DBH & up except leave white pine & red pine. Apply standard area-based retention, which may include individual leave-trees (ie: oak saw). Leave an adequate RMZ along Duval Creek. Extend the north & west harvest boundary down into the adjacent lowland stands to incorporate the denser transition ground cover. Per Fisheries Division, a 300 ft buffer is recommended along Duval Creek. A 100 ft buffer was excluded along the trib to Duval Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Intermediate)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Includes a mix of oak, aspen, red maple and conifers. If regen fails, conduct necessary site prep and supplemental plant red pine.</p> <p><u>Other Comment:</u> Old next step comments: Natural regen survey. Acceptable regen includes a mix of oak, aspen, red maple and conifers. If regen fails, conduct necessary site prep and supplemental plant red pine.</p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2015</p>										
93 72065093-ccr	16.3	4139 - Aspen, Mixed Deciduous	Poletimber Well	60	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest. Spec the minimum cutting diameter so that enough of the conifer understory is removed to facilitate operations and regeneration. Apply standard area-based retention, which may include individual leave-trees (ie: red pine, oak saw). Per Fisheries Division, a 300 ft buffer is recommended along Duval Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.</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> Includes aspen, red maple, oak and mixed conifers.</p> <p><u>Other Comment:</u> Old next step comments: Natural regen survey. Acceptable regen includes aspen, red maple, oak and mixed conifers.</p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2015</p>										

Total Treatment Acreage Proposed: 471

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Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available	Dominant Site Conditions	Dominant Site Conditions											
		With Condition				2B	2D	5C	MC	1C	2F	2G	2H	3B	3J	5A	5E
197	71	40		86	Aspen	40				0		0	36		48		2
403	1	0		402	Cedar	0	0	0			0	0			72	324	6
43	42	0		0	Herbaceous Openland							0			0		
34	33	0		1	Jack Pine			0									1
3	3	0		0	Low-Density Trees												
278	169	57		52	Lowland Aspen/Balsam Poplar		0	55	2	0		5	4		41		1
5	5	0		0	Lowland Conifers												
361	81	132		148	Lowland Deciduous	68	39	25	0	18	0	52	3	1	70		4
249	129	0		121	Lowland Mixed Forest				0			73			47		1
259	254	2		3	Lowland Shrub	0	0	1	1	0		0			2		1
22	22	0		0	Lowland Spruce/Fir												
22	22	0		0	Marsh								0				
74	67	0		7	Mixed Upland Deciduous					4		0					4
70	18	0		52	Natural Mixed Pines			0		46				4	2		
218	213	0		6	Oak										0		6
54	54	0		0	Red Pine												
371	354	1		16	Upland Mixed Forest			1			15	0			1		
12	12	0		0	Urban												
10	10	0		0	Water												
71	71	0		0	White Pine												
2,755	1,628	233		894	Total Forested Acres	109	39	82	3	68	15	130	43	5	284	324	25
	59%	8%		32%	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	3J: Water quality / BMPs (stream, river, or lake)	11	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:							
300 foot uncut strip along Roy Creek, left at Fisheries Division request to discourage beaver activity on a stream important for trout production. Standard RMZ width otherwise would have been 100 feet. Also retention for stand 59's harvest. The harvested portion of stand 59 was merged with stand 65.							

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2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Saturated ground excluded from stand 89's harvest boundary.							
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	28	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments: Floodplain and first terrace of the Pine River and three tributaries.							
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	18	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Green-up concerns with stand 43 (to be planted in 2014). Would prefer not to leave a buffer out of this already narrow stand. Consider treating next YOE along with the adjacent stand 38 that has the same green-up issue.							
5	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Potential retention for stand 38's proposed harvest.							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Small portion of the lowland stand outside of the Duval Creek RMZ. Consider treating denser transition ground edges when adjacent upland stands are prescribed.							
7	Unavailable	1C: Other dept or div proc/practices	11	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments: 300 foot uncut strip along Duval Creek, left at Fisheries Division request to discourage beaver activity on a stream important for trout production. Also includes a small tributary.							

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8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	56	2D: Portable Bridge Needed (Dept. bridge will be adequate)	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified
Comments: Delay harvest on this stand in order to meet the M.A. plan's area regulation goal for the aspen covertype. Treat stands 71 & 77 at the same time. This block of stands is isolated by streams, beaver floodings and private property. Treat the stands in one block when the access is resolved.							
9	Available	2D: Portable Bridge Needed (Dept. bridge will be adequate)	18	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
Comments: Delay treatment until the adjacent aspen stand 68 is prescribed for harvest (likely next YOE). Treat stand 77 at the same time. This block of stands is isolated by streams, beaver floodings and private property. Treat the stands as one block when the access is resolved.							
10	Available	2D: Portable Bridge Needed (Dept. bridge will be adequate)	20	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
Comments: Delay treatment until the adjacent aspen stand 68 is prescribed for harvest (likely next YOE). Treat stand 71 at the same time. This block of stands is isolated by streams, beaver floodings and private property. Treat the stands as one block when the access is resolved.							
11	Available	2B: Unknown if access through adjacent landowner(s) is possible	40	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Isolated by Roy Creek, tributaries and private property.							
12	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	21	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Isolated by streams and lowland ground.							

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13	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Isolated by Roy Creek, tributaries and low ground.							
14	Available	2B: Unknown if access through adjacent landowner(s) is possible	68	2D: Portable Bridge Needed (Dept. bridge will be adequate)	Unspecified	Unspecified	Unspecified
Comments: Isolated by Roy Creek, tributaries, lowland stands and private property. Will need to install a stream crossing or obtain permission to cross private property.							
15	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Green-up concerns with stand 43 (to be planted in 2014). Would prefer not to leave a buffer out of this already narrow stand. Consider treating next YOE along with the adjacent stand 38 that has the same green-up issue.							
16	Unavailable	1C: Other dept or div proc/practices	13	3J: Water quality / BMPs (stream, river, or lake)	3B: Threatened, endangered, and special concern species	Unspecified	Unspecified
Comments: Part of the stand is within 300 feet of Vandercook Creek, left at Fisheries Division request to discourage beaver activity on a stream important for trout production. Standard RMZ width otherwise would have been 100 feet.							
17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Excluded from stand 84 & 89 harvest boundary due to saturated ground, sparse cover, &/or immature cover.							

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18	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments: Small wetlands boundary-excluded from stand 84's harvest							
19	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Immature cover excluded from stand 89's harvest boundary.							
20	Unavailable	2F: Too steep	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Steep south aspect above Roy Creek swamp.							
21	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	58	5A: Not able to obtain desirable regeneration	Unspecified	Unspecified	Unspecified
Comments: Cedar stand on Roy Creek floodplain. The stream meanders through the stand. Heavy deer use in the winter of 2013/2014.							
22	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	16	5A: Not able to obtain desirable regeneration	Unspecified	Unspecified	Unspecified
Comments: Cedar swamp with a perennial stream meandering through it.							
23	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	74	2G: Too wet (sensitive soils, does not include access issues)	5F: Evaluated for Forest Health Considerations	2I: Survey needed	Unspecified
Comments: Stand 57 was flagged in 2015 query as being at high risk for Spruce Budworm impact. Salvage Rx not recommended due to the marginal BF component, low ground, and RMZ's (300' for Roy Creek, 100' for trib to Grey Creek). JC							

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24	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	73	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
Comments: Stand was flagged in a 2015 query as being at high risk for Spruce Budworm impact. Salvage Rx not recommended due to the low ground dissected with mucky seeps.							
25	Unavailable	5E: Long-Term Retention	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
26	Unavailable	5A: Not able to obtain desirable regeneration	221	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Past cedar harvests in this stand have converted the cover to spruce, fir, aspen, or lowland hardwoods (see stands 16 & 17).							
27	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Proposed retention for stand 12, excluding the steep hillside.							
28	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	45	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stand was prescribed for 2016 YOE treatment. Tsale prep staff requested variance approval to drop treatment due to significant loss of acreage due to low/wet areas throughout the stand.							
29	Unavailable	5E: Long-Term Retention	2	3J: Water quality / BMPs (stream, river, or lake)	1C: Other dept or div proc/practices	Unspecified	Unspecified
Comments: Long term retention for stand 90. 300 foot uncut strip along Duval Creek, left at Fisheries Division request to discourage beaver activity on a stream important for trout production. Also includes a small tributary.							

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30	Unavailable	5E: Long-Term Retention	2	3J: Water quality / BMPs (stream, river, or lake)	1C: Other dept or div proc/practices	Unspecified	Unspecified
Comments: Long Term Retention for stand 93.300 foot uncut strip along Duval Creek, left at Fisheries Division request to discourage beaver activity on a stream important for trout production. Also includes a small tributary.							
31	Unavailable	5A: Not able to obtain desirable regeneration	104	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Past cedar harvests in this stand have converted the cover to spruce, fir, aspen, or lowland hardwoods (see stands 75, 80, 83).							
32	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
33	Unavailable	3B: Threatened, endangered, and special concern species	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
34	Available	Minor Change in Acreage	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
35	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Tag alder swale							

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36	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	0	2G: Too wet (sensitive soils, does not include access issues)	5F: Evaluated for Forest Health Considerations	2I: Survey needed	Unspecified
Comments: Stand 57 was flagged in 2015 query as being at high risk for Spruce Budworm impact. Salvage Rx not recommended due to the marginal BF component, low ground, and RMZ's (300' for Roy Creek, 100' for trib to Grey Creek). JC							
37	Unavailable	5E: Long-Term Retention	6	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments: Retention for stand 64's harvest that boundary-excluded the Roy Creek RMZ and additional low ground.							
38	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Saturated ground excluded from stand 89's harvest boundary.							
39	Unavailable	5E: Long-Term Retention	3	2G: Too wet (sensitive soils, does not include access issues)	2I: Survey needed	Unspecified	Unspecified
Comments: Retention for stand 53's harvest.							
40	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments: Excluded from stand 84 & 89 harvest boundary due to saturated ground, sparse cover, &/or immature cover. This portion also designated retention for stand 84's harvest.							
41	Available	Minor Change in Acreage	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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42	Unavailable	5E: Long-Term Retention	3	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments: Stand 65's boundary-excluded RMZ for the adjacent tributary to Grey Creek.							
43	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
44	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
45	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Saturated ground excluded from stand 89's harvest boundary.							
46	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
47	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 100-ft RMZs							
48	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Grayling Mgt. Unit
Joan Charlebois: Examiner

Compartment: 65
Year of Entry: 2026



49	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	45	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 300 ft RMZ recommended by Fisheries Division along Roy Creek							
50	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Narrow bottleneck crosses low ground to reach the drier ridge along the creek.							
51	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
52	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
53	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 100-ft RMZ							
54	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
55	Unavailable	1C: Other dept or div proc/practices	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Grayling Mgt. Unit
Joan Charlebois: Examiner

Compartment: 65
Year of Entry: 2026



56	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 100-ft RMZs							
57	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 100-ft RMZ							
58	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
59	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 100-ft RMZ							
60	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 300-ft RMZ along Roy Creek							
61	Unavailable	1C: Other dept or div proc/practices	43	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Hold pending release of Natural Pine management guidelines.							

Report 4 – Site Conditions

Grayling Mgt. Unit
Joan Charlebois: Examiner

Compartment: 65
Year of Entry: 2026



62	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This far SE end of stand 23 is cut off by an intermittent stream and low ground.							
66	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
72	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
76	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
77	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
85	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
86	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Grayling Mgt. Unit
Joan Charlebois: Examiner

Compartment: 65
Year of Entry: 2026



89	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
92	Available	Minor Change in Acreage	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
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	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	42250 - Pine, Oak	Sawtimber Medium	5.2	83	51-80	N/A	Feb 2014 field comments: Stand is on a hilltop and dry south aspect down to the swamp. The hilltop has most of the overmature JP, with short, poor-quality NPO. The JP cover decreases and the oak, WP & RP increases on the hillside. RM picks up as the ground flattens out near the swamp. The understory has oak, WP, and to a lesser extent RP & JP filling in. The mature oak likely represents an older age class than the JP, and the WP/RP appears to have recruited much later than either of them. 2024 update: JP & NPO are dropping out of the canopy. Most of the SE on the flats was shifted to stand 6.																																												
<table border="1"> <thead> <tr> <th>Canopy Species</th> <th>% Cover</th> <th>Size Class</th> <th>DBH</th> <th>Age</th> </tr> </thead> <tbody> <tr> <td>Red Maple</td> <td>5</td> <td>Pole/Sap/Log</td> <td>7</td> <td></td> </tr> <tr> <td>White Pine</td> <td>5</td> <td>Pole/Log</td> <td>8</td> <td></td> </tr> <tr> <td>Jack Pine</td> <td>55</td> <td>Pole/Log</td> <td>9</td> <td>83</td> </tr> <tr> <td>Red Pine</td> <td>5</td> <td>Pole/Log</td> <td>8</td> <td></td> </tr> <tr> <td>Black/Red (Hybrid) Oak</td> <td>30</td> <td>Log/Pole</td> <td>11</td> <td></td> </tr> </tbody> </table>		Canopy Species	% Cover	Size Class	DBH	Age		Red Maple	5	Pole/Sap/Log	7		White Pine	5	Pole/Log	8		Jack Pine	55	Pole/Log	9	83	Red Pine	5	Pole/Log	8		Black/Red (Hybrid) Oak	30	Log/Pole	11		<table border="1"> <thead> <tr> <th>Sub-Canopy Species</th> <th>Density</th> <th>Avg. Height</th> <th>Size</th> </tr> </thead> <tbody> <tr> <td>Black/Red (Hybrid) Oak</td> <td>Medium</td> <td>Variable</td> <td>Sapling</td> </tr> <tr> <td>White Pine</td> <td>Low</td> <td>Variable</td> <td>Sapling</td> </tr> </tbody> </table>		Sub-Canopy Species	Density	Avg. Height	Size	Black/Red (Hybrid) Oak	Medium	Variable	Sapling	White Pine	Low	Variable	Sapling					
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White Pine	Low	Variable	Sapling																																																
2	3102 - Grass	Nonstocked	1.8		Unspecified	No	Cleared powerline corridor and a strip of state land on the corridor's west side. That strip (approx. a chain wide) on the off side of the corridor was cut, roller-chopped & burned by the USFS concurrent with their adjacent lands; NPO regen there is re-sprouting.																																												
3	6120 - Lowland Cedar	Sawtimber Well	15.7	125	141-170	N/A	Feb 2014 field comments: Cedar swamp bordering Vandercook Creek. NWC health is good overall, but size & vigor decreases at the west end near the powerline corridor. No visible NWC regen. Black spruce has filled in densely and recruited to fill gaps in the cedar canopy. WP is a minor canopy associate, along with lesser amounts of RM, PB & balsam fir. Balsam fir regen cover is locally high, but averages out to low.																																												
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4	6220 - Alder/willow	Nonstocked	1.3		Unspecified	No	Willow and tag alder within the cleared powerline corridor. Vandercook Creek crosses through.																																												
5	6220 - Alder/willow	Nonstocked	1.4		Unspecified	No	Feb 2014 edge comments: Within an area of manual habitat cutting in 1965 (FTP G-41), spec's not noted. Tag alder, willow & ilex with increasing cover in large sapling E/Q.																																												



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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6	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	60.4	59	51-80	N/A	Feb 2014 field comments: Lowland hardwoods stand on the gradient between the uplands, cedar swamps & flooded shrub wetlands. Mostly RM, with WP, paper birch, and minor JP, QA, fir & spruce associates. Also trace amounts of NWC, tamarack, NPO, RP & BTA. The lowest ground bordering L3-types has mostly sapling cover. Holes in the canopy have locally high understory cover in ilex, tag alder, WP & BF. Two-thirds of the stand (that part SE of Vandercook Rd) was within the 1965 manual habitat cutting FTP G-41. While the spec's were not noted, they likely involved chainsaw felling some of the RM, PB & aspen. The partial cutting specs applied across part of the stand created two broad age classes in the deciduous species. The RM 1st age is based on the 1965 FTP record. The RM 2nd age was on the residual small saw. The previous inventory RM age of 98 years is likely representative of part of the saw class in untreated portions of the stand. Stand includes cedar strip W of the powerline. 2024 update: due to a change in the MiFI canopy rules, the 2nd age class of RM could no longer be listed separately; the residual log RM had to be merged into the dominant immature record & the RM 2nd age was applied to the WP canopy record as a surrogate. Canopy closure is fullest on the dry ground (mainly along the roads & bordering stand 1) and becomes increasingly sparse on the saturated ground. Phragmites was found scattered along the skid route that crosses through from stand 9 to stand 11.
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Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	5	Pole	7	
Balsam Fir	5	Pole	6	
White Pine	15	Log/Pole/XLog	14	81
Jack Pine	3	Log/Pole	12	
Red Maple	47	Pole/Sap/Log	8	59
Paper Birch	10	Pole/Sapling	6	
Northern White Cedar	5	Log	13	
Black Spruce	10	Pole/Sapling	7	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	10 - 20 feet	Sapling
Balsam Fir	Medium	Variable	Sapling
White Pine	Medium	Variable	Sapling
Michigan Holly	Medium	5 - 10 feet	Tall Shrub
Tag Alder	Low	5 - 10 feet	Tall Shrub

7	4319 - Mixed Upland Forest	Sapling Poor	6.3	12	Immature	N/A	Merch stems were harvested in 2012 (#026-07). Split off from previous YOE stand 15 at re-inventory; regen on this drier ground has crossed into the Forested benchmark and passed to an upland mixed forest objective.
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Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	2	Pole	8	
White Pine	20	Sapling	1	
Jack Pine	20	Sapling	1	12
White Pine	3	Log	16	
Red Maple	25	Sapling	1	12
Northern Pin Oak	15	Sapling	1	
Red Pine	10	Sapling	1	
Black Spruce	5	Sapling	1	

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Medium	Variable	Tall Shrub
Chokeberry	Medium	< 5 feet	Tall Shrub
Tag Alder	Trace	5 - 10 feet	Tall Shrub
Serviceberry (Juneberry)	Trace	10 - 20 feet	Tall Shrub

8	6220 - Alder/willow	Nonstocked	5.3		Unspecified	No	Feb 2014 edge comments: Within an area of manual habitat cutting in 1965 (FTP G-41), spec's not noted. Tag alder with ilex and increasing cover in RM & PB large saplings/small poles.
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
9	4310 - Pine, Oak Mix	Sapling Poor	8.2	12	Immature	N/A	Merch stems were cut in 2012 (#026-07). Site is continuing to fill in with a patchy, diverse mix of pine, oak, aspen, spruce & fir. Most of the now-pole residual was WP-RP. Passed at re-inventory with 587 TPA secure regen & 660 TPA deciduous <6 ft tall that have good potential to recruit (deer browse currently very light). In addition, there was 293 TPA BC. The M.O. also accepted a shrub component. Ground is upland overall, with transition ground on the margins and a lowland swale through the middle. Two small illegal food plots were created in the E1/2; looks like they were burned and then seeded with forage cover.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Bigtooth Aspen		10	Sapling	1	12	Tag Alder		Trace	5 - 10 feet	Tall Shrub	
Quaking Aspen		5	Sapling	1		Black Cherry		Medium	5 - 10 feet	Tall Shrub	
Balsam Fir		5	Sapling	1		Witch Hazel		Low	5 - 10 feet	Tall Shrub	
Red Pine		5	Sapling/Pole	1		Balsam Fir		Low	< 5 feet	Seeding	
Jack Pine		20	Sapling	1	12	Chokeberry		Trace	< 5 feet	Tall Shrub	
White Pine		20	Sapling/Pole	2		Northern Pin Oak		Trace	< 5 feet	Seeding	
Red Maple		5	Sapling	1							
Black Spruce		5	Sapling/Pole	1							
Northern Pin Oak		25	Sapling	1	12						
10	122 - Road/Parking Lot	Nonstocked	9.8		Unspecified	No		Vandercook Road, the snowmobile trailhead parking lot, and a portion of the powerline corridor with sandy two-tracks.			
11	42200 - Natural White Pine	Sawtimber Well	10.7	83	81-110	N/A	Natural mixed pine stand wraps around the snowmobile trail parking lot and access road. The stand is upland overall, with transition ground on all margins except against stand 12. Cover is majority WP, with JP, RM, RP & black spruce, and trace amounts of oak, black cherry, cedar & aspen. The JP is largely overmature. A few xlog WP rim the south edge.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Northern White Cedar		1	Log	13		Balsam Fir		Low	Variable	Sapling	
Red Maple		10	Pole/Log	8		Hazelnut (Beaked)		Low	5 - 10 feet	Tall Shrub	
Black Spruce		6	Pole	8		Serviceberry (Juneberry)		Trace	10 - 20 feet	Tall Shrub	
Jack Pine		15	Log/Pole	10		White Pine		Medium	Variable	Sapling	
Black Cherry		1	Pole	7		Witch Hazel		Low	5 - 10 feet	Tall Shrub	
White Pine		60	Log/XLog/Pole	16	83						
Balsam Fir		2	Pole	7							
Red Pine		5	Log/Pole/XLog	16	105						
12	42220 - Natural Jack Pine	Poletimber Well	23.7	51	81-110	N/A	Most of the stand was harvested in 1973 (#019-73), cutting JP two sticks+ and merch RM-O. Excluded from the harvest area were a narrow strip of state land on the west side of the powerline corridor, a narrow strip of mature oak & JP along the stand's SE edge, & the poly N of Vandercook Rd. The stand's 1st age was set to the harvest but the partial cutting specs left a 2nd age class of now overmature JP & oak that couldn't be reflected in the canopy data due to a MiFI limitation. RP was interplanted in the stand's NW. WP increases moving downhill to the east. Well-developed NPO understory gives way to more RM in the south end. There are a few JP with Sirex woodwasp trap tree signs in the NE.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Jack Pine		60	Pole/Log	8	51	Northern Pin Oak		Medium	< 5 feet	Seeding	
Red Maple		2	Pole/Sap/Log	7		Red Maple		Low	Variable	Sapling	
Balsam Fir		1	Pole/Log	7		Northern Pin Oak		Medium	Variable	Sapling	
Bigtooth Aspen		2	Log/Pole	16		White Pine		Low	Variable	Sapling	
Red Pine		10	Log/Pole	10	61						
White Pine		5	Log/Pole	14							
Northern Pin Oak		20	Pole/Sap/Log	7							



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
13	6220 - Alder/willow	Nonstocked	13.4		Unspecified	6139 - Mixed Lowland Forest	Merch stems were harvested in 2012 (#026-07). Harvesting was suspended due to rutting and the rest of the unit on inoperable low ground was removed from the contract. The contract was extended 5x's to allow for harvest completion or at least rut rehab, but ground conditions did not improve enough to allow for either. Regen passed at re-inventory with 1408 TPA of secure regen & an additional 990 TPA that didn't meet minimum height standards but are likely to recruit (current deer browse is very low). Recordable tree cover (>3 ft tall) hasn't reached 25% yet so the stand still types out as lowland shrub. Ground gets drier in the SW peninsula. A small illegal food plot was created down there; looks like it was burned, then seeded with forage cover. Phragmites was found scattered along the main skid route in the W1/2 and there is a dense, long-established patch on the center-S edge that extends into stand 33.				
								Sub-Canopy Species	Density	Avg. Height	Size
								White Pine	Low	< 5 feet	Sapling
								Willow spp.	Medium	5 - 10 feet	Tall Shrub
								Red Maple	Trace		Seeding
								Black Spruce	Low		Sapling
								Balsam Poplar	Trace	< 5 feet	Sapling
								Quaking Aspen	Low	< 5 feet	Sapling
								Tag Alder	Medium	5 - 10 feet	Tall Shrub
								Balsam Fir	Trace	< 5 feet	Sapling
								Red Maple	Low	< 5 feet	Sapling
Paper Birch	Low	5 - 10 feet	Sapling								
14	6220 - Alder/willow	Nonstocked	11.2		Unspecified	No	Feb 2014 edge comments: Tag alder, willow and ilex with encroaching large sapling/small pole RM, PB & BF (as seen from the edge) and what appears on the aerial imagery to be small patches of E/Q interior.				
15	6229 - Mixed lowland shrub	Nonstocked	11.1		Unspecified	No	Merch stems were harvested in 2012 (#026-07). A portion of the harvest unit was left in cut due to inoperable ground; that narrow strip was included in the adjacent swamp stand. Tree cover is slowly filling in but the stand is dominated by lowland shrub cover. Phragmites was found scattered along the main skid route.				
								Sub-Canopy Species	Density	Avg. Height	Size
								Tag Alder	Medium	5 - 10 feet	Tall Shrub
								Serviceberry (Juneberry)	Low		Tall Shrub
								Northern Pin Oak	Trace		Seeding
								Black Spruce	Trace		Sapling
								Serviceberry (Juneberry)	Low		Tall Shrub
								White Pine	Low		Sapling
								Paper Birch	Trace		Pole
								Serviceberry (Juneberry)	Low		Tall Shrub
								Chokeberry	Trace		Tall Shrub
								Michigan Holly	Low	5 - 10 feet	Tall Shrub
								Balsam Fir	Low		Sapling
								Serviceberry (Juneberry)	Low		Tall Shrub
								Serviceberry (Juneberry)	Low		Tall Shrub
								Red Maple	Trace		Pole
Serviceberry (Juneberry)	Low		Tall Shrub								



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																
16	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	7.3	59	51-80	N/A	Feb 2014 field comments: This stand was part of a manual habitat cut in 1965 (FTP G-40). The cutting specs were not noted, but appear to have involved felling RM, paper birch and aspen. The stand has small pole-large sapling cover in those species, along with a mixed conifer component (black spruce, balsam fir, WP & cedar). Stand age was set to the cut, but there is a minority component of older stems that were residual from the cut.																																																																
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17	6124 - Lowland Spruce-Fir	Poletimber Medium	4.7	34	51-80	N/A	Feb 2014 field comments: Small blocks of cedar were final harvested between 1986-1990 (#024-86, #009-89 & #059-89). Regenerated to Q/P/E with no observed cedar regen. Balsam fir and black spruce regen is heaviest in the west, giving way to more balsam poplar in the east.																																																																
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19	6220 - Alder/willow	Nonstocked	3.2		Unspecified	No	Feb 2014 edge comments: Tag alder with RM, fir & WP filling in. Was part of a manual habitat cut in 1965 (FTP G-41).																																																																
20	6233 - Wet Meadow	Nonstocked	2.5		Unspecified	No	Lowland stretch of cleared powerline corridor.																																																																
21	4133 - Aspen, Mixed Pine	Sawtimber Well	28.2	63	81-110	N/A	Merch aspen, RM & paper birch were cut across most of the stand by 1961 (#082-59A). The partial cutting spec's applied across parts of the stand resulted in two main age classes in the deciduous species. The stand's first age was set to the cutting record, and the second age was estimated based on the post-harvest residual RM cored in two adjacent stands that were part of the same harvest. The stand is upland overall but there is low ground in the SE, on the stand margins, along the intermittent stream that crosses through, and the stand is dotted with vernal pools. Beaver had reduced the aspen on the stand's margins; the canopy is more open there and heavier to WP, fir & spruce. BTA occupies the high ground. The QA has been dropping out of the canopy, with fir & WP filling in from below. Traces of NPO & RP occur with the aspen on the higher ground & there are traces of NWC on the lower ground.																																																																
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22	6220 - Alder/willow	Nonstocked	3.9		Unspecified	No	Feb 2014 edge comments: Tag alder & ilex with E/Q colonizing. Not enough cover in the large sapling RM, balsam fir, PB & tamarack to call Forested overall, but close.																																																																



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
23	6112 - Lowland Aspen	Sawtimber Well	29.3	53	81-110	N/A	<p>A manual habitat cut (FTP G-61) was carried out in 1971 across the stand's W1/2, spec'd to drop RM, PB & A, except for RM & PB w/in 5 chains of the county road. Merch RM-A in the stand's SE were cut commercially in 1970 (#048-68). The partial cutting specs resulted in two main age classes across the A-RM-PB: mid-50's regen from the cut and now overmature residual. The residual RM is heaviest within 5 chains of Vandercook Rd. The proportion in aspen increases south of that zone. The ground is a lowland-upland mosaic with cradle knoll topo & flooded tag alder/ilex swales. The overmature aspen component occupies marshy ground by stand 32's stream corridor and is breaking up. The few rows of JP that extend into this stand were part of stand 30's 1965 plantation. There are traces of legacy RP and oak on the drier ground and traces of balsam poplar, tamarack & spruce on the lower ground. WP increases moving SE. An intermittent stream crosses the SE end.</p>				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Paper Birch		2	Log/Pole	11		Balsam Fir		Low	Variable	Sapling	
Balsam Poplar		2	Pole	7		White Pine		Medium	Variable	Sapling	
Quaking Aspen		50	Log/Pole	10	53	Tag Alder		Low	10 - 20 feet	Tall Shrub	
Jack Pine		3	Pole/Log	9	59	Michigan Holly		Low	5 - 10 feet	Tall Shrub	
Bigtooth Aspen		5	Log/Pole	12		Black Cherry		Low	Variable	Tall Shrub	
Red Pine		2	XLog/Log/Pole	20							
White Pine		12	Pole/Log/XLog	9							
Red Maple		20	Log/Pole/XLog	12	93						
Black Cherry		1	Pole	8							
Balsam Fir		3	Pole/Log	8							
24	6220 - Alder/willow	Nonstocked	2.1		Unspecified	No	Jan 2014 edge comments: Tag alder, willow, leatherleaf & ilex, with sparse E/Q to the west.				
25	6220 - Alder/willow	Nonstocked	3.0		Unspecified	No	Feb 2014 edge comments: Tag alder & ilex with E/Q colonizing. Not yet enough cover in the large sapling/small pole balsam fir, RM, PB, black spruce & tamarack to call Forested overall.				
26	4133 - Aspen, Mixed Pine	Sawtimber Well	56.1	63	111-140	N/A	<p>A manual habitat cut (FTP G-61) was carried out in 1971 across the stand's NW 7 acres, spec'd to drop RM, PB & A. Merch RM-A in the stand's East 13 acres were cut commercially in 1970 (#048-68). The partial cutting specs applied across parts of the stand resulted in 3 main age classes across the deciduous species: mid-50's regen from the cut, residual aspen in its early 60's, and residual RM around 90 years old. Note that the QA, BTA & RM have components landing in each age class, so the single age assigned to each canopy record only represents part of that species. The ages assigned were based on: the cutting record for the QA, cored BTA outside of the two recorded treatment areas, and older saw residual for the RM. Most of the WP is concentrated on the stand's S & E edges by the creek floodplain where beaver had reduced the aspen cover.</p>				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Northern White Cedar		1	Log	15		Black Cherry		Trace	Variable	Tall Shrub	
Red Maple		20	Log/Pole/XLog	12	88	Balsam Fir		Medium	Variable	Sapling	
Black Cherry		1	Pole	7		White Pine		Medium	Variable	Sapling	
Paper Birch		1	Log/Pole	12		Michigan Holly		Trace	5 - 10 feet	Tall Shrub	
Quaking Aspen		10	Log/Pole	10	54	Witch Hazel		Trace	5 - 10 feet	Tall Shrub	
Red Pine		2	Log/Pole/XLog	14		Tag Alder		Low	10 - 20 feet	Tall Shrub	
Balsam Fir		5	Pole/Log	8							
Bigtooth Aspen		40	Log/Pole	11	63						
White Pine		20	Log/Pole/XLog	14							
28	6220 - Alder/willow	Nonstocked	3.4		Unspecified	No	Jan 2014 edge comments: Tag alder swale with scattered E/Q.				
29	6220 - Alder/willow	Nonstocked	3.4		Unspecified	No	Jan 2014 edge comments: Part of a cultivated field on the 1938 photos; tax reverted in 1939. Trenched & planted to JP in 1965 but the planting largely failed on this low ground. Lowland shrub cover (willow, tag alder & ilex) with scattered WP, tamarack, JP.				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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30	42290 - Natural Mixed Pine	Sawtimber Medium	21.6	71	51-80	N/A	Cultivated fields visible on the 1938 photos, tax reverted in 1939. WP had been seeding in when most of the stand was trenched & planted to JP in 1965. The field became increasingly saturated after drain maintenance ended. Ground gets mucky in the stand's S1/2 & adjacent to the L3 stands. Increasing mortality in the planted JP has shifted the stand out of the "planted" category. The lower ground has majority WP cover; elsewhere WP is mixed into the JP plantation. Heavy RM-WP understory makes the canopy appear fuller and is recruiting as the JP drops out. Open-grown form is common in the WP.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Balsam Poplar		1	Pole/Sapling	6		White Pine		Medium	Variable	Sapling	
Paper Birch		1	Pole	7		Black Cherry		Low	5 - 10 feet	Tall Shrub	
Tamarack		1	Log/Pole	10		Red Maple		High	Variable	Sapling	
Black Cherry		1	Pole	7		Tag Alder		Medium	10 - 20 feet	Tall Shrub	
Jack Pine		45	Pole/Log	9	59						
Quaking Aspen		1	Log/Pole	12							
White Pine		45	Log/Pole/XLog	15	71						
Red Maple		5	Pole/Log	8							

31	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Medium	68.6	63	51-80	N/A	Feb 2014 field comments: Merch aspen, RM & PB were cut across most of the stand by 1961 (#082-59A). The stand is PARVCo overall, with drier and wetter inclusions, cut by drainage swales. The stand has pole/cull saw RM with mixed conifer, aspen & PB associates. Species distribution & canopy closure vary widely with the ground conditions. The driest ground has less RM, more aspen & 75-100% canopy closure. The majority intermediate ground has 50-75% canopy cover and a higher proportion in RM, WP, balsam fir, black spruce & PB. The lowest ground adjacent to L-types and the cedar swamp tends to have sparser cover & more lowland brush. JP & a trace of hybridized oak also occur within the stand. The partial cutting spec's applied across parts of the stand resulted in two main age classes across the deciduous species. The stand's first age was set to the cutting record, but there is a significant portion of the stand that is older (second age was on the post-harvest residual RM saw). 2024 update: because a MiFI limitation prevents the RM 2nd age from being recorded separately, it was applied to the WP canopy record as a surrogate. Changed Balsam Fir Age to 84 for second age as placeholder.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Quaking Aspen		10	Pole	7	63	Michigan Holly		Low	5 - 10 feet	Tall Shrub	
Paper Birch		5	Pole/Sap/Log	7		Tag Alder		Low	5 - 10 feet	Tall Shrub	
Bigtooth Aspen		10	Pole/Log	8	63	White Pine		Medium	Variable	Sapling	
Balsam Fir		10	Pole/Sap/Log	6		Balsam Fir		Medium	Variable	Sapling	
Jack Pine		3	Log	12		Black Spruce		Low	Variable	Sapling	
Red Maple		40	Pole/Log/Sap	8	63						
White Pine		12	Log/Pole/XLog	14	84						
Black Spruce		10	Pole/Log/Sap	8							

32	629 - Mixed non-forested wetland	Nonstocked	57.7		Unspecified	No	January 2014 edge comments: Floodplain of Roy Creek & associated tribs. Terraced with beaver dams. Cover alternates between alder-willow, wet meadow and open water, depending on proximity to each dam and the level of dam maintenance. Cedar snags and stumps common. Cedar was salvaged in beaver floodings in 1981 & 1982 under several small negotiated sales. Scattered E/Q encroaching along margins. OFS point is for glossy buckthorn.
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																					
33	6120 - Lowland Cedar	Poletimber Well	220.6	114	141-170	N/A	<p>Jan 2014 field comments: Cedar-dominated conifer swamp that had a series of small-scale treatments recorded within it: manual habitat cut patches in 1965 (FTPs G-40 & G-41), several small "deeryard" commercial cuttings in the 1950's, 60's & late 1980's, & ~12 acres cut in 2012 (#026-07, split off as stand 13). Operations on #026-07 were suspended due to excessive rutting. The contract was extended 5x's to allow for harvest completion or at least rehab of the ruts, but ground conditions did not improve enough to allow either. Sale was closed incomplete in 2016. The harvests that were large enough to meet minimum stand mapping rules & that resulted in covertype conversion were separated out as unique stands. Cuts that did not meet those criteria remain as inclusions & tend to be occupied with balsam fir, black spruce, RM & PB regen &/or tag alder. Cedar regen was not observed. Mature lowland hardwood mixes in along the stand's perimeter. Cedar health & vigor is best on that transition ground & poorest on the stand's most saturated ground. Between those extremes, the typical cover is dense cedar poles with black spruce, balsam fir & scattered WP. The understory ranges from open to full balsam fir cover.</p>																																																					
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34	6220 - Alder/willow	Nonstocked	8.2		Unspecified	No	<p>Jan 2014 edge comments: Part of a cultivated field on the 1938 photos; tax reverted in 1939. Trenched & planted to JP in 1965 but the planting largely failed on this low ground. Tag alder & salix with scattered WP saw and small clumps of quaking aspen, balsam poplar & RM.</p>																																																					
35	6220 - Alder/willow	Nonstocked	5.1		Unspecified	No	<p>Feb 2014 edge comments: Willow and tag alder with some cattail. Balsam fir, paper birch and RM encroaching.</p>																																																					
36	4136 - Aspen, Mixed Conifer	Sawtimber Well	29.4	63	111-140	N/A	<p>Merch aspen, RM & paper birch were cut across most of the stand by 1961 (#082-59A). The stand is upland overall, but transitions to low ground all along its margins and bordering the intermittent streams that cuts across. Beaver had reduced the aspen along the creeks; those RMZs have more fir & WP. The partial cutting spec's applied across parts of the stand resulted in two main age classes in the deciduous species. The stand's first age was set to the cutting record and the second age was on the post-harvest residual RM (saw-sized now). Combined full fir-WP understory has been recruiting into the canopy as the QA drops out.</p>																																																					
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37	500 - Water	Nonstocked	4.5		Unspecified	No	<p>Beaver pond with fluctuating water levels.</p>																																																					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																																	
38	4199 - Other Mixed Upland Deciduous	Sawtimber Well	33.6	102	81-110	N/A	Stand is upland overall, with the highest elevation along the powerline corridor, then grades down onto intermediate ground by the cedar swamp. Most of the BTA (overmature) and oak is concentrated on the higher ground west of the snowmobile trail. On the flats east of the snowmobile trail, canopy dominance shifts from oak to more RM & paper birch. Occasional legacy WP & RP. The oak & paper birch have been dropping out of the canopy. The RM is starting to top-die. WP-fir understory increases to full cover moving toward the swamp. This stand includes a narrow strip of forested state land on the west side of the powerline corridor; cover in that strip was not factored into the stand data.																																																																																	
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39	6220 - Alder/willow	Nonstocked	18.5		Unspecified	No	Feb 2014 edge comments: Part of the stand was cut merch in 1997 (#026-96). Filled in with salix, tag alder, ilex, aronia and patches of cattail. Balsam fir & paper birch are colonizing the margins. A small stream drains out of that end; there is marsh and periodic ponding when beaver activity picks up.																																																																																	
40	6220 - Alder/willow	Nonstocked	3.4		Unspecified	No	Feb 2014 edge comments: Willow and tag alder, with ilex & wild raisin. Balsam fir, tamarack, RM & paper birch saplings encroaching.																																																																																	
41	6112 - Lowland Aspen	Poletimber Well	51.5	48	111-140	N/A	Merch stems were harvested across most of the stand in 1976 (#016-75A), then some low-density residual was chainsaw felled in 1979 (FTP W-178). A narrow buffer was left uncut along Roy Creek. Stand age was set to the commercial harvest. Regenerated to quaking aspen and balsam fir, with minor associates (BTA, WP, JP, RM, balsam poplar & NWC, tamarack). The heaviest fir canopy cover is within the Roy Creek RMZ; moving interior, the fir is overtopped by the aspen so little is seen from above. Breakage & root-tip common in the fir. The ground is intermediate to low, with a dry ridge in the middle where the BTA is. A square clearing in the stand's north-center wasn't big enough to delineate out as a separate non-forested stand. Traces of invasive glossy buckthorn where encountered in the SW end.																																																																																	
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42	6139 - Mixed Lowland Forest	Poletimber Medium	98.7	27	1-50	N/A	Feb 2014 field comments: Aspen-fir cover was final harvested except for oak in 1997 (#026-96) and regenerated to a wide mix of P/E/Q. Lowland overall, with shallow dry ridges. JP occurs on the driest ground flanking a skid route that laps the stand, along with a few acres in the SW. Most of the aspen clones are scattered along the stand's east side; birch picks up there also. The more saturated interior has sparse fir, spruce & WP cover. Roughly a chain-wide strip was left uncut along Roy Creek, with mature RM, NPO, RP, NWC, etc. Canopy closure drifts off either end of 50-75%, typically where the ground is wettest and driest, respectively. The stand is dissected with linear flooded L3 swales (see 1998 DOQs). 2024 update: Cover has edged past the 30% pole benchmark to be called Pole overall, mostly due to open-grown conditions. Beaver are continuing to reduce the aspen around stand 39.																																																																																	
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43	42111 - Planted Red Pine, Mixed Deciduous	Sapling Well	53.8	10	Immature	N/A	JP-O stand was final harvested in 2009 (#015-06). FTP C72-623 was submitted for planting JP. Variance approved in 2013 to change M.O. to RP. Was roller-chopped & trenched in 2013 except for an island of oak regen in the middle. RP was planted in 2014. Yr 1 survey found 935 RP & 1,455 O-C TPA. Was release sprayed in 2015. Yr 3 regen survey found 750 RP & 1,698 O TPA. TSI was considered, but TMS eval in 2022 found it wasn't needed (good component of oak, but the site looks great). FTP is completed. 2024 field inventory found that the RP is vigorous and largely making it past the most common competitor (oak). The JP is a stronger competitor against the RP but it is far less common, concentrated at the landing and main skid routes.																																																																																																
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44	6130 - Fir, Aspen, Maple	Poletimber Poor	48.7	48	1-50	N/A	Merch stems were cut across most of the stand north of Goddard Road in 1976 (#016-75A), then low-density residual was chainsaw felled in 1979 (FTP W-178). Stand age set to the commercial harvest. The terrain is pock-marked with dozens of sub-acre lowland brush inclusions (see 1998 DOQs). Wrapping around those wetland potholes is a mosaic of intermediate to low ground. A sketchy trail road runs up the stand's east side on the drier ground. Most of the aspen is concentrated there, along with traces of oak & RP. Cover in balsam fir, WP, tamarack, PB & JP increases on the lower ground. Marginal RM occurs throughout. The wettest ground has dense lowland shrub cover with colonizing E/Q. Invasive glossy buckthorn was found scattered mainly in the south end of the stand. Canopy closure is >50% in places, but the many non-forested wetland inclusions drag the stand average down into the 25-50% category.																																																																																																
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45	310 - Herbaceous Openland	Nonstocked	10.6		Unspecified	No	Cleared powerline corridor.																																																																																																
46	6220 - Alder/willow	Nonstocked	5.3		Unspecified	No	Jan 2014 edge comments: Tag alder with ilex, some aronia. Being colonized by paper birch, balsam fir, WP & RM saplings.																																																																																																
47	122 - Road/Parking Lot	Nonstocked	2.4		Unspecified	No	Cleared corridor of Goddard Road and overhead powerline. Lowland ground beneath powerline.																																																																																																



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48	6113 - Lowland Maple	Sawtimber Medium	29.3	102	81-110	N/A	Feb 2014 field comments: RM-dominated stand on the narrow band of transition ground between the uplands and the cedar swamp. Associates include paper birch, WP, JP, fir, and small amounts of oak, BTA, RP & cedar. The understory is heavy to balsam fir, with tag alder & ilex near the cedar swamp edge. 2024 update: Top mortality starting in the RM, JP has been dropping out.																																																																			
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49	4310 - Pine, Oak Mix	Poletimber Medium	128.0	36	1-50	N/A	Feb 2014 field comments: JP-O stand was final harvested in 1988 (#006-87). Regen from the cut is mainly JP and oak. Open-grown WP & RP are scattered across the stand. Species distribution and stocking are variable. On the stand's lower slope perimeter, the proportion in oak, WP & RP increases, as does the canopy closure. BTA occurs along that edge too. This stand includes a narrow strip of state land on the west side of the powerline corridor that was not within the state harvest; this roughly 1-acre strip has older JP, oak & RP that was not factored into the parent stand's data. 2024 update: enough of the JP has shifted into the pole class to call the stand Pole overall (>30% cover in poles). Single-stem NPO continues to recruit into the canopy																																																																			
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50	629 - Mixed non-forested wetland	Nonstocked	11.2		Unspecified	No	Feb 2014 edge comments: Floodplain of Roy Creek. Cover alternates between alder-willow, wet meadow and water, depending on the level of beaver activity. Flood-killed cedar snags common in the north end. E/Q is encroaching along the margins, and the south end is filling in with WP, fir & tamarack.																																																																			
51	6220 - Alder/willow	Nonstocked	1.4		Unspecified	No	Feb 2014 edge comments: Tag alder with grey dogwood and colonizing balsam fir.																																																																			
52	6220 - Alder/willow	Nonstocked	1.0		Unspecified	No	Feb 2014 edge comments: Tag alder & salix with colonizing E/Q.																																																																			



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53	6112 - Lowland Aspen	Sawtimber Well	92.6	60	81-110	N/A	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) that was spec'd to remove merch A, RM, PB & JP, and merch balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". The ground is PARVCo with drier and wetter inclusions. The terrain is cut with a series of linear swales containing tag alder, ilex & grey dogwood. The lowland brush cover is patchy elsewhere. On the highest ground, fairly complete cutting occurred in the aspen, but the merch cutting specs & incomplete access made for a 2nd older age class across most species (cull common in that residual). 2nd age was on the residual RM; 1st age reflects the post-harvest regen, including a portion of the RM. In addition to the aspen & RM, there is patchy representation in balsam fir, PB, WP, JP & black spruce, & traces of balsam poplar, oak, tamarack & RP (by the PVT). 2023 tsale prep volume data was used to inform canopy edits for this stand, currently on contract 72-036-23.																																																																							
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54	6220 - Alder/willow	Nonstocked	3.8		Unspecified	No	Feb 2014 edge comments: Linear swale with tag alder, grey dogwood, dead ash & elm, widely-scattered RM, overmature QA & balsam poplar, and colonizing balsam fir.																																																																							
55	4125 - Black, N. Pin Oak	Poletimber Well	31.8	36	1-50	N/A	Feb 2014 field comments: JP-O stand was final harvested in 1988 (#006-87). Regen from the harvest is mostly stump-origin oak, with stocky WP, JP & RP and some RM. There is a single-stem sapling oak component that has potential to recruit. This stand includes a narrow strip of state land on the west side of the powerline corridor that was not within the state harvest; the strip includes J3 planted to the KW weave pattern by the USFS and sub-acre portions N & S in pole JP, oak & RP; that cover was not factored into the parent stand's data. 2024 update: enough of the NPO has shifted into the pole class to call the stand Pole overall (>30% cover in poles). Upper crown mortality starting to occur in the stump-origin oak.																																																																							
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56	6220 - Alder/willow	Nonstocked	1.9		Unspecified	No	Feb 2014 edge comments: Tag alder, salix & grey dogwood. Patch of open marsh behind the old beaver dam.																																																																							



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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57	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Poor	62.7	60	1-50	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	40	Pole/Sap/Log	8	60
Jack Pine	5	Log/Pole	12	102
Balsam Fir	15	Pole	6	
Quaking Aspen	13	Log/Pole	10	60
Northern White Cedar	2	Log/Pole	11	
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Paper Birch	10	Pole/Sap/Log	6	60

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	5 - 10 feet	Sapling
Balsam Fir	Medium	Variable	Sapling
Tag Alder	Medium	5 - 10 feet	Tall Shrub
Black Spruce	Low	Variable	Sapling
Michigan Holly	Medium	5 - 10 feet	Tall Shrub

Feb 2014 field comments: The stand was within a 400+ acre harvest (#078-60A), that was spec'd to cut merch A, RM, PB & JP, and merch BF & NWC in aspen clones. The harvest was active from 1961 to 1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". The partial harvest spec's partially applied made for two broad age classes across the deciduous species. The stand's first age was set to the harvest, but there is a mature component across most species. This ground is lowland overall, with drier inclusions & non-forested wetland swales. The variable, marginal-quality E/Q overstory is majority pole, with log-sized residual scattered throughout & concentrated in pockets that the logger couldn't access. Small aspen clones occupy the drier ground. The understory has diverse lowland shrub cover and patchy E/Q regen. May 2024 update: the ground is liberally cut with flooded swales (see 1998 DOQs). The operable upland patches have marginal cover; the log-sized components there tend to be oversized pulp. Due to a change in the MiFI canopy rules, the 2nd age class of RM could no longer be listed separately; that residual log RM had to be merged into the dominant immature record & the RM 2nd age was applied to the JP canopy record as a surrogate. Part of stand 65's boundary-excluded retention was merged with this stand during treatment closing updates (see Site Condition layer).

58	4310 - Pine, Oak Mix	Poletimber Well	14.5	103	81-110	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	2	Pole/Log	8	
Northern Pin Oak	30	Pole/Log	8	103
White Pine	30	Pole/Log/Sap	7	59
Red Pine	10	Pole/Log	8	
Balsam Fir	3	Pole/Sapling	6	
Red Maple	15	Pole/Sapling	6	
White Oak	10	Log/Pole	12	

Sub-Canopy Species	Density	Avg. Height	Size
Northern Pin Oak	Low	Variable	Sapling
Balsam Fir	Low	Variable	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub
White Pine	Low	Variable	Sapling

Feb 2014 field comments: Mixed oak-pine stand on dry south aspect; steep drop down to cedar swamp and Roy Creek. Short, scrubby oak with WP & RP of all size classes. Even large saplings reach into this stand's low canopy. On the south edge, leveling out near the swamp, the oak cover decreases and balsam fir and RM increase.

59	4130 - Aspen	Sawtimber Well	11.1	88	111-140	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age
Northern Pin Oak	3	Log/Pole	12	
Paper Birch	2	Log/Pole	12	
Red Maple	30	Pole/Log	9	
Bigtooth Aspen	60	Log	14	88
Red Pine	2	XLog	22	
Balsam Fir	3	Pole/Log	9	

Sub-Canopy Species	Density	Avg. Height	Size
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Hazelnut (Beaked)	Low	< 5 feet	Tall Shrub
Balsam Fir	High	Variable	Sapling
White Pine	Low	Variable	Sapling

This portion of stand 59 was excluded from harvest; most of it is within the Roy Creek RMZ. The harvested portion was merged with stand 65. Carried forward the original parent stand data & comments from Feb 2014 field inventory: Overmature BTA (age from previous inventory) with RM, small amounts of oak, balsam fir & paper birch, and scattered supercanopy RP & WP. The understory has moderate to full cover in balsam fir.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																				
60	4130 - Aspen	Poletimber Well	19.1	27	51-80	N/A	Feb 2014 field comments: Aspen stand was final harvested in 1997 (#025-96). Regenerated back to aspen with scattered open-grown residual WP, BF, RP, and small amounts of oak and RM. The ground is upland overall, but the stand's S1/2 is cut with lowland brush swales. Beaver felling has reduced the canopy in the S-center.																																																				
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61	6220 - Alder/willow	Nonstocked	3.8		Unspecified	No	Feb 2014 edge comments: Stand encompasses a group of small wetlands with salix, ilex, tag alder and encroaching Q/E.																																																				
62	6120 - Lowland Cedar	Sawtimber Well	62.8	128	201+	N/A	Feb 2014 field comments: Cedar swamp bordering Roy Creek. Except for the flood-stressed patch on the east end, the cedar has decent vigor.. Associates include black spruce, RM, paper birch, balsam fir and scattered supercanopy WP. The deciduous component increases on the stand margins by the uplands. Relatively open below in the stand's core, with balsam fir regen mostly along the margins. There is slash from root-tips. Heavy deer use. This stand includes a narrow strip of state land with similar cover on the west side of the powerline corridor. 2024 update: stand 64's boundary-excluded RMZ retention was merged with this stand post-harvest (see Site Condition layer); this added mostly RM to the canopy data & contributing a 2nd age.																																																				
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63	6220 - Alder/willow	Nonstocked	2.3		Unspecified	No	Lowland stretch of cleared powerline corridor with periodically brush-hogged tag alder & salix cover. Roy Creek flows across it, beaver-dammed at both edges of the corridor.																																																				
64	4130 - Aspen	Sapling Poor	22.3	1	Immature	N/A	MD stand on a steep hillside and flats by the swamp was harvested spring 2023 (#017-16), cutting stems 2"+ DBH except RP-WP >18" DBH and retention that boundary-excluded Roy Creek's RMZ. Regenerating to pockets of A3 separated by LDT-D cover. Most of the stump-origin RM-NPO is <3 ft tall and recordable only in the subcanopy. There is dense NPO regen on the hilltop. JP is seeding in on the flats by the swamp. There is a handful of xlog RP-WP scattered across the hillside. The aspen regen is re-leafing after being frosted. With only one growing season in, the regen doesn't pass at this time to stem density or height standards but potential for in-growth is good. Deer browse is very light.																																																				
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65	310 - Herbaceous Openland	Nonstocked	20.2	0	Unspecified	4139 - Aspen, Mixed Deciduous	A-RM stand was harvested summer 2023 (#017-16), cutting stems 2"+ DBH except RP-WP >18" DBH and retention that boundary-excluded Roy Creek's & its tributary's RMZs. Regen is just getting into its first growing season. BTA and traces of RM-NPO are starting to sprout this spring. Kildeers & sandhill cranes occupying the opening, may be nesting. Stand 65's boundary-excluded RMZ retention was shifted to stands 57 & 69 (see Site Condition layer).																																																				
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66	629 - Mixed non-forested wetland	Nonstocked	27.0		Unspecified	No	2014 edge comments: Floodplain of Grey Creek tributary, terraced with beaver dams. Cover alternates between alder-willow-ilex, wet meadow and open water, depending on proximity to each dam and the level of dam maintenance. Patches of ash snags. E/Q encroaching along margins.																																																			
67	4125 - Black, N. Pin Oak	Sapling Well	106.3	15	Immature	N/A	Feb 2014 field comments: JP stand with a significant oak component was final harvested in 2009 (#015-06). Regen is predominantly oak, in both stump-origin clumps and individual stems. The stump sprouts are recruiting fastest, with dominant stems 5-7 feet tall. There is an oak seedling component (<3' tall) with potential to recruit also. Deer browse is occurring but not overwhelming. JP regen increases toward the landing. Larger residual sapling WP, JP, RP & BF are scattered throughout. Small amount of BTA regen along the NW edge. 2024 update: canopy closure has shifted into the 75-100% range as more of the single-stem origin oak has recruited. The oak seedling layer has very little browse. The stump-origin oak from the harvest is starting to show some top die-back.																																																			
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68	6112 - Lowland Aspen	Poletimber Well	55.2	60	81-110	N/A	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". The NE 2 chains along the PVT were cut in 1984 (#79-84-02) & has more B-fir than aspen. The ground is PArVCo with drier & wetter inclusions. The terrain is dotted with small tag alder/ilex wetlands; the lowland brush cover is patchy elsewhere. On the highest ground, fairly complete cutting occurred in the aspen, but the merch & up specs & incomplete access made for a 2nd older age class across most species. 2nd age was on the residual RM; 1st age reflects the post-harvest regen, including a portion of the RM. In addition to the aspen & RM, there is balsam fir, PB, & traces of oak, WP & cherry. Medium-full BF understory. Ash snags common. Recent beaver felling of QA.																																																			
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69	6130 - Fir, Aspen, Maple	Poletimber Poor	73.8	83	1-50	N/A	Feb 2014 field comments: Low ground with mucky seeps and inclusions of marginally drier ground. The core wettest ground has a relatively open canopy of balsam fir & RM over tag alder & ilex, with black & white spruce, paper birch, cedar & aspen associates. The cedar occurs in dense sub-acre patches. The slightly drier ground has less balsam fir in the overstory, more RM & white spruce, and greater canopy closure. Patches on the stand's perimeter have 75-100% canopy closure. The understory has medium-to-high cover in fir & spruce. Large canopy gaps formed from the overmature fir, PB & aspen breaking up are slowly filling in with fir. 2024 update: mortality in the fir & birch, top-dieback in the RM. Part of stand 65's retention was merged into this stand (see Site Condition layer).																																																			
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70	6220 - Alder/willow	Nonstocked	22.4		Unspecified	No	Feb 2014 edge comments: Tag alder, salix, & ilex with patches of beaver meadow. Active lodge. Flooded portion of what was probably the 1960's harvest haul route cuts through it. Dead ash at north end.																																																			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
71	6113 - Lowland Maple	Sawtimber Well	18.3	96	81-110	N/A	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". Only a minor amount of the 1960's cutting occurred in this stand, which is on PARVCo & lower ground with marsh/lowland brush wetland inclusions throughout. Canopy is mostly large cull RM with paper birch, overmature aspen, balsam fir, & traces of WP, elm & balsam poplar. The ash has died out. Seams & poorly-healed branch scars common in the RM. Medium-to-full balsam fir understory is recruiting into the canopy as the overmature PB, aspen & balsam fir components drop out.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Bigtooth Aspen		2	Log	16		Balsam Fir		High	Variable	Sapling	
Quaking Aspen		10	Log/Pole	11		Tag Alder		Low	5 - 10 feet	Tall Shrub	
Red Maple		70	Log/Pole	13	96	Red Maple		Low	10 - 20 feet	Sapling	
Balsam Fir		10	Pole	7		Michigan Holly		Medium	5 - 10 feet	Tall Shrub	
Paper Birch		8	Log/Pole	11							
72	4122 - Oak, Pine	Sapling Poor	79.0	4	1-50	N/A	Dry oak-pine stand was final harvested by spring 2023 (#017-16), cutting stems 2"+ DBH except WP and 5.6 acres in two retention islands (maintained as inclusions within the parent stand, see Site Condition layer). The retention islands have pole-log NPO, JP & WP (the JP & NPO had to be called Log only in order to overcome a MiFI limitation and be able to record it separately from the canopy regen). Residual WP is scattered across the harvested area. 50 acres were harvested by spring of 2020; the regen there passed to the oak-pine objective with vigorous stump-origin oak and minor WP-JP-RP regen. The remaining 20 acres in the NW were cut by spring 2023; there is good oak regen, but after only one growing season, it doesn't pass to the minimum height standard yet. Browse is light and that later-cut portion is expected to recruit; a follow-up regen survey will be prescribed for that area. This stand also includes a forested strip on the west side of the powerline corridor that was not part of the harvest and isn't reflected in the canopy data.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Northern Pin Oak		5	Log	11	104	Jack Pine		Low	< 5 feet	Seeding	
Northern Pin Oak		60	Sapling	1	4	Northern Pin Oak		Medium	< 5 feet	Seeding	
Red Pine		1	Sapling	1		White Pine		Low	< 5 feet	Seeding	
Jack Pine		4	Sapling	1							
White Pine		25	Pole/Log/Sap	9	60						
Jack Pine		5	Log	11	81						
73	6113 - Lowland Maple	Sawtimber Medium	44.6	108	51-80	N/A	Feb 2014 field comments: Long narrow E-type stand between the uplands and the cedar swamp. The canopy is RM-dominated, with paper birch, balsam fir & spruce associates, and small amounts of super-canopy WP & RP, NWC, oak, overmature JP & aspen. The RM is heavy to cull saw. Slash is building as the overmature balsam fir, PB & QA break up. The canopy closure is 75-100% on the transition ground edge, but drops moving east onto the lower ground. The balsam fir & spruce understory is thick on the lower ground, but not enough has recruited to lift the overall canopy closure beyond the 50-75% category. The understory cover is variable, ranging from relatively open, to dense balsam fir & spruce, to lowland brush or patches of tall RM saplings.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Northern White Cedar		5	Log/Pole	12		Red Maple		Low	>20 feet	Sapling	
Black Spruce		5	Pole	7		Black Spruce		Low	Variable	Sapling	
Red Maple		60	Log/Pole	12	108	White Pine		Low	Variable	Sapling	
Paper Birch		5	Log/Pole	10		Michigan Holly		Low	5 - 10 feet	Tall Shrub	
Balsam Fir		15	Pole/Sap/Log	6	87	Tag Alder		Low	10 - 20 feet	Tall Shrub	
White Pine		10	Pole/Log/XLog	8		Balsam Fir		High	Variable	Sapling	
74	6222 - Shrub-Carr	Nonstocked	3.7		Unspecified	No	Feb 2014 edge comments: Ilex & tag alder with <25% cover in large sap/small pole RM, PB, BF, NWC.				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																													
75	6122 - Black Spruce	Poletimber Well	10.4	61	81-110	N/A	March 2014 field comments: The largest of several patches cut along the swamp edge between 1961 & 1963 (#76-61A, spec'd to remove merch balsam fir, black spruce, NWC & JP, along with minor amounts of hemlock, RM & PB). Regen from the cut is dense pole-sapling spruce & fir with aspen, RM, PB & WP. The deciduous component is mostly along the west edge. Residual from the cut includes scattered NWC saw & super-canopy WP. Stand age was set to the harvest completion year, but the regen continued to fill in over the next few years (5" DBH spruce cored 46 years), and the merch cuttings specs left a minor component of older residual.																																																													
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76	6220 - Alder/willow	Nonstocked	2.6		Unspecified	No	Feb 2014 edge comments: The ash cover died off, shifting this stand into the non-forested category. Cover is tag alder & ilex with <25% canopy in large sap/small pole RM, PB & BF.																																																													
77	6113 - Lowland Maple	Sawtimber Medium	23.8	99	51-80	N/A	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". Patches of the 1960's cutting occurred in this stand, which is on PArVCo & lower ground, but there is more post-harvest residual (1st age) than regen (2nd age) across the designated-cut species. Terrain is dissected with lowland brush swales. Overstory is mostly poor-quality RM with balsam fir, paper birch, aspen & small amounts of NWC, black spruce & super-canopy WP. Canopy closure drifts off either end of 50-75%. Canopy gaps formed where overmature PB, balsam fir & QA died-out are filling in with balsam fir. The south polygon cut off by the beaver-dammed stream is a roughly 3-acre island that appears to have similar ground and tree cover. Did not visit that poly.																																																													
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78	310 - Herbaceous Openland	Nonstocked	9.9		Unspecified	No	Cleared powerline corridor. NPO regen filling in the edges.																																																													



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																									
79	4310 - Pine, Oak Mix	Sapling Well	213.6	25	1-50	N/A	Feb 2014 field comments: JP-O-A stand was final harvested in 1999 (#035-96). Canopy is majority regen from the harvest, with an older residual small pole class across all species. WP is the only species with most of its stems pole-sized or larger. The stand has a mix of JP, WP, oak, RM & BTA, with small amounts of BC, fir and RP. Species distribution varies. WP is scattered throughout and concentrated on the steeper hillsides. The RM is mostly in the NE along the swamp edge. The BTA occurs in a few small clones. The older residual JP pole component is heaviest on the stand's W & S edges. The stand has one dissimilar inclusion that was not factored into the stand data: a narrow strip of state land on the west side of the powerline corridor that was managed with the adjacent USFS lands (cut & trenched to the KW weave pattern by 2012). 2024 update: regen from the cut is still predominantly sapling-sized but the growing pole-log residual is close to tipping the stand past the 30% threshold for calling the stand Pole overall. Top die-back is starting to occur in the stump-origin oak. This stand's concentrated WP residual around stand 86 blurs into that W7 type, differentiated by only a 10-year gap in harvest entries.																																																									
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80	6122 - Black Spruce	Poletimber Well	5.6	61	81-110	N/A	March 2014 field comments: One of several patches cut along the swamp edge between 1961 & 1963 (#76-61A, spec'd to remove merch balsam fir, black spruce, NWC & JP, along with minor amounts of hemlock, RM & PB). Regen from the cut is dense pole-sapling spruce & fir with aspen, RM, PB & WP. Residual from the cut includes scattered NWC saw & super-canopy WP. Stand age was set to the harvest completion year, but the regen continued to fill in over the next few years, and the merch cutting spec left a minor component of older residual. An acre in the stand's NE is a patch of cedar windthrow that wasn't part of the original cut. Because the blow-down happened more recently, the balsam fir and spruce regen within it is much younger.																																																									
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81	6120 - Lowland Cedar	Poletimber Well	103.9	124	171-200	N/A	2014 field comments: Dense cedar cover with minor spruce, fir, RM, PB & hemlock components, and traces of tamarack, balsam poplar & supercanopy WP. A lot of deer use this winter. Open below where the canopy is closed; heavy balsam fir understory in canopy gaps. The cedar is relatively healthy & vigorous, but there is an area of stressed trees in the SE by a couple acres of root-tipped cedar. Amongst the tangled of downed trees, there are cedar and paper birch saplings. Some of the cedar regen is from layering, but even the apparent seed-origin stems are vigorous and unbrowsed. On the transition ground to the uplands, the cedar diameter gets larger but it's canopy representation decreases as the RM/E increases. Patches of concentrated RM saplings occur there also.																																																									
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82	6233 - Wet Meadow	Nonstocked	17.8		Unspecified	No	Feb 2014 edge call: Large beaver meadow behind dams. Tag alder, salix & spiraea colonizing the edges.																																																									



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
83	6122 - Black Spruce	Poletimber Well	5.9	61	81-110	N/A	<p>March 2014 field comments: One of several patches cut along the swamp edge between 1961 & 1963 (#76-61A, spec'd to remove merch balsam fir, black spruce, NWC & JP, along with minor amounts of hemlock, RM & PB). Regen from the cut is dense pole-sapling spruce & fir with WP, RM, aspen & PB. Residual from the cut includes scattered NWC saw & super-canopy WP. Stand age was set to the harvest completion year, but the regen continued to fill in over the next few years, and the merch cutting specs left a minor component of older residual. 2nd age estimate on the NWC was drawn from the adjacent cedar stand.</p>				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Northern White Cedar		10	Log/Pole	12	124	Balsam Fir		Medium	Variable	Sapling	
White Pine		10	Pole/Log	7							
Red Maple		5	Pole/Sapling	6	61						
Paper Birch		2	Sapling/Pole	4	61						
Quaking Aspen		3	Pole	7	61						
Black Spruce		60	Pole/Sapling	6	61						
Balsam Fir		10	Pole/Sapling	6	61						
84	6112 - Lowland Aspen	Poletimber Well	21.5	60	111-140	N/A		<p>The stand was within a large timbersale (#078-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". The ground is PARVCo with drier & wetter inclusions. The terrain is dotted with small tag alder/ilex wetlands; the lowland brush cover is sparse elsewhere. On the highest ground, fairly complete cutting occurred in the aspen, but the merch cutting specs & incomplete access made for a 2nd older age class across the designated-cut species. 2nd age was on the residual RM. In addition to the aspen & RM, there is balsam fir, PB, & traces of oak, NWC & balsam poplar. The stand's NW has a more open canopy where the ash died out, leaving mostly RM & balsam fir. The stand's NE has a higher proportion in older residual stems. 2023 tsale prep volume data was used to inform canopy edits for this stand, currently on contract 72-036-23.</p>			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height	Size
Red Oak		2	Log/XLog	18		Balsam Fir			High	Variable	Sapling
Paper Birch		5	Pole	6		Tag Alder			Low	5 - 10 feet	Tall Shrub
Balsam Fir		10	Pole	6							
Bigtooth Aspen		20	Log/Pole	10							
Quaking Aspen		45	Pole/Log	9	60						
Red Maple		18	Pole/Log	9	85						
85	42220 - Natural Jack Pine	Poletimber Well	10.4	51	51-80	N/A	<p>JP along with some marked RP & WP sawtimber were salvaged after a fire in 1973 (#028-73). Residual from the salvage included super-canopy WP & RP bordering the lowland edge, and scattered JP & poor-quality oak that survived the fire. Regen that filled in post-salvage is the majority cover across the stand's interior: JP & WP small pole material. The WP regen is heaviest along the stand's margins, where the RM also occurs. The canopy is at the low end of 75-100% closure and there is a sparse inclusion in the north-center. The stand's second age was on the residual JP saw; due to a MiFI limitation, that 2nd age was applied to the RP canopy record as a surrogate.</p>				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height	Size
Red Maple		3	Pole/Log	9		White Pine		Low	Variable	Sapling	
White Oak		2	Pole/Sap/Log	8		Northern Pin Oak		Low	5 - 10 feet	Sapling	
Northern Pin Oak		10	Pole/Sapling	6							
White Pine		15	Pole/Log/XLog	8							
Jack Pine		65	Pole	7	51						
Red Pine		5	Log/Pole/XLog	11	74						



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86	42200 - Natural White Pine	Sawtimber Medium	60.1	57	51-80	N/A	Mixed pine-oak stand was harvested in 2009 (#015-06), cutting 2"+ DBH except RP-WP and a 4-acre island in the N end (noted as an old burned area w/ good WP regen). The stand's WP-RP residual is the featured canopy. The WP ranges from large saplings to xlog, but most land in the small saw class (1st age). The WP large saw component increases towards the stand's perimeter (WP 2nd age was applied to the RP canopy record as a surrogate because a MiFI limitation won't allow listing the older WP separately). The minor RP component is scattered throughout. The small amounts of JP & oak are mainly in the north island. Canopy closure drifts off either end of the 50%. The understory has vigorous stump-origin oak regen 10-20' tall & single-stem oak 5-10' tall. BTA has locally high cover in the stand's SE. Understory WP & RP coverage is low. Deer browse on the oak regen was light. Regen passes to the oak-pine-aspen objective.																																																																							
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87	42290 - Natural Mixed Pine	Sawtimber Well	43.1	71	111-140	N/A	"Old growth JP" was cut in 1961 (#029-61A), and a small amount of RP & WP saw were marked to cut in 1965 (#053-64). The JP is two-aged (mature poles in their 60's and overmature saw in their 80's). The overmature JP & NPO have been dropping out while the WP component has been increasing. Stand is developing multi-age WP cover. There is a minor RP component, and traces of BTA, RM, WO, spruce & fir. Species distribution varies across the stand. The understory has medium-high WP cover. 2nd age on the JP was 83 but couldn't be listed separately due to a MiFI limitation so it was applied to the RP canopy record as a surrogate.																																																																							
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88	6220 - Alder/willow	Nonstocked	4.1		Unspecified	No	String of wetlands with tag alder, ilex, patches of marsh, dead ash. Encroaching fir, maple & aspen on the perimeter.																																																																							
89	6113 - Lowland Maple	Sawtimber Medium	31.5	126	81-110	N/A	The stand was within a large timbersale (#078-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC w/in aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". Dispersed cutting occurred on the highest of this stand's PARVCo & lower ground, generally leaving more post-harvest residual (1st age) than regen (2nd age) across the designated-cut species. That incomplete cutting made the stand highly variable in terms of species, age, and diameter distribution. Pronounced tip-up mound topography with lowland brush swales. Overstory is mostly poor-quality RM with balsam fir, WP, PB, aspen, patches of NWC & hemlock, & xlog RP. Canopy closure averages at the high end of 50-75%, with sparser areas where the ash died out. Canopy gaps that formed where overmature PB, balsam fir & aspen broke up are filling in with balsam fir, WP & RM. 2023 tsale prep volume data was used to inform canopy edits for this stand, currently on contract 72-036-23.																																																																							
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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90	4199 - Other Mixed Upland Deciduous	Sawtimber Well	40.6	127	81-110	N/A	Feb 2014 field comments: Most of this mature oak stand was on land acquired from the USFS in 1986. The stand's perimeter near the lowlands has more large NRO, but the drier interior has poorer quality hybridized oak, white oak & overmature JP. Canopy closure is at the low end of 75-100% there, with WP poles & large saplings filling in. The aspen occurs in small clones scattered across the stand. Most of the aspen is overmature saw, but the stand's southeast 6 acres were within timbersale #78-60A (merch aspen, RM, PB, & JP were cut; oak was left) resulting in patches of younger pole aspen (second age, cutting record) mixed into the mature oak overstory there. 2024 update: tsale volume data was used to inform canopy edits for this stand, currently on contract 72-020-21.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Oak	10	Log/XLog	18		Balsam Fir	Low		Variable	Sapling
Red Maple	10	Pole	7		White Pine	Medium		Variable	Sapling
Bigtooth Aspen	25	Log/Pole	14	60	Witch Hazel	Low		5 - 10 feet	Tall Shrub
Black/Red (Hybrid) Oak	40	Log/XLog	16	127					
White Pine	5	Pole/Log	8						
Red Pine	2	Log/XLog/Pole	16						
White Oak	5	Log	14						
Jack Pine	3	Log/Pole	11						

91	4125 - Black, N. Pin Oak	Sapling Medium	1.1	25	Immature	N/A	Old notes indicated this was a landing cleared in 1999 for harvest #035-96. Opening filling in with oak, WP & JP. Handful of mature oak around the deer season campsite.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
White Pine	15	Sapling/Pole	4		Black/Red (Hybrid) Oak	Low		< 5 feet	Seeding
Black/Red (Hybrid) Oak	70	Sapling	3	25					
Jack Pine	10	Sapling	4						
White Oak	5	Sapling	2						

92	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	14.5	108	81-110	N/A	Feb 2014 field comments: Lowland swale hemmed in by uplands W & E, and running from the cedar swamp at the N end down to the Duval Creek floodplain at the S end. RM is the common thread, but canopy cover varies greatly with the ground conditions. The N end is wettest, with a more open canopy, smaller-diameter RM, significant spruce-fir-tamarack components, and patches of NWC. Moving south, the ground isn't as saturated. The canopy closure & RM component increases, and large oak & overmature BTA occur on the transition ground margins. The stand's S end is on a couple old terraces above Duval Creek and encompasses a small tributary. The ground is wet-mesic, and has a mix of supercanopy WP & RP, cedar, hemlock, RM, large red oak & BTA, & a trace of sugar maple. The balsam fir understory is heaviest along the creek.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Balsam Fir	10	Pole	7		Michigan Holly	Low		5 - 10 feet	Tall Shrub
Tamarack	2	Log	12		Black Spruce	Low		Variable	Sapling
Paper Birch	7	Log/Pole	12		White Pine	Medium		Variable	Sapling
Bigtooth Aspen	3	Log	15		Tag Alder	Low		5 - 10 feet	Tall Shrub
Black Spruce	6	Pole	7		Balsam Fir	High		Variable	Sapling
Northern White Cedar	7	Log/Pole	12	133					
Red Oak	2	Log/XLog	18						
Red Pine	3	XLog/Log	22						
Red Maple	50	Log/Pole	12	108					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																										
93	4139 - Aspen, Mixed Deciduous	Poletimber Well	18.4	60	111-140	N/A	Feb 2014 field comments: The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". This upland stand had good access and was cut close to specs, resulting in a fairly uniform regen event for the designated species. The majority pole bigtooth aspen cover has RM and small amounts of QA & paper birch in the same cohort. Residual from the harvest includes large oak, RP & WP, often super-canopy in stature. A few dozen RP & WP saw were cut in 1964 (#32-64). The stand's perimeter near the lowlands has heavy subcanopy balsam fir, but only low-medium cover in WP saplings interior. The second age estimate was based on the adjacent mature upland oak stand, likely in the same cohort as this stand's residual oak. 2024 update: tsale volume data was used to inform canopy edits for this stand, currently on contract 72-020-21.																																																										
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94	6220 - Alder/willow	Nonstocked	2.4		Unspecified	No	Feb 2023 edge comments: Duval Creek floodplain: tag alder with patches of marsh, cattail.																																																										
95	4130 - Aspen	Sapling Well	12.7	15	Immature	N/A	Jan 2014 field comments: Was final harvested 2"+ DBH except hemlock & NWC, and WP 25"+ DBH in 2009 (#031-07). Regenerated well to quaking & bigtooth aspen, with minor amounts of red maple & balsam fir. Residual hemlock, NWC & xlog WP are scattered above. A lot less RM regen than expected, given the volume removed; what did sprout is seeing deer browse. The stand has small poorly-stocked inclusions, most of them low ground swales, but the ground is upland overall. 2024 update: Beaver are reducing the aspen cover in a wide swath along the streams; WP & fir are slowly filling in those non-forested zones.																																																										
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96	6112 - Lowland Aspen	Sapling Medium	16.7	15	Immature	N/A	Jan 2014 field comments: Was final harvested 2"+ DBH except hemlock & NWC, and WP 25"+ DBH in 2009 (#031-07). Patchy distribution of quaking & bigtooth aspen regen with traces of balsam poplar. Residual includes hemlock, xlog WP, and a few NWC. Most of the hemlock is concentrated in a sub-acre patch in the stand's S-center. There is a narrow uncut swath bordering the S private line where most of the balsam fir is. The stand has poorly-stocked inclusions scattered throughout, occurring mostly on the lowest ground. While the stand has ground dry enough to support bigtooth aspen, the stand is majority lowland. Narrow drainage valleys border and cut through the stand. 2024 update: Dense well-established aspen clones are separated by lowland shrub openings. Beaver are reducing the aspen cover in a wide swath along the streams; WP & fir are slowly filling in those non-forested zones.																																																										
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97	3302 - Low Density Conifer Trees	Nonstocked	2.9	0	Unspecified	No	Was part of a red pine plantation final harvested 2"+ DBH in 2009 (#031-07). This area of borrow-pit topo is slowly filling in with WP, RP, fir, NPO & aspen cover. The south half of the original stand 97 that successfully regenerated to aspen was merged with stand 99 at re-inventory.																																																										



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																														
98	6239 - Mixed Emergent Wetland	Nonstocked	1.6	0	Unspecified	No	This portion of stand 100 is now non-forested due to loss of the ash, leaving scattered NWC, balsam poplar, box elder & patches of lowland shrub cover above ostrich fern, canary grass & cattail.																																																														
99	6112 - Lowland Aspen	Sapling Medium	10.9	15	Immature	N/A	Was final harvested 2"+ DBH except for hemlock & NWC in 2009 (#031-07). Regenerated to dense aspen clones with two upland openings in the NE & SE and a marsh inclusion on the center-W edge. Those non-forested inclusions drag the overall canopy closure just below 75%. The stand's core is on lowland ground but the north 3 acres and the south 1 acre are on upland ground. Balsam poplar continues to fill in on the lowest ground. The scattered residual hemlock & NWC are mostly on that lower ground also.																																																														
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100	6130 - Fir, Aspen, Maple	Sawtimber Medium	28.1	94	81-110	N/A	Jan 2014 field comments: The stand occupies the floodplain and first terrace of the Pine River and the narrow valleys of three tributaries. The ground is majority lowland but includes drier transition ground on the steep risers, along with isolated ridges in the SE. The lowest ground where most of the black & green ash grew is shifting to non-forested/sparse cover. The NWC is concentrated along the river and stream corridors. The drier transition ground to the uplands has the densest cover and is heavier to RM, balsam fir, aspen & paper birch. Minor associates include hemlock, basswood and WP. Boxelder, prickly ash and riverbank grape occur along the Pine. 2024 update: the overmature aspen has largely died out. The SW stream corridor was split off as stand 101 after the canopy there was flood-killed.																																																														
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101	500 - Water	Nonstocked	3.0	0	Unspecified	No	Most of the tree cover in this portion of stand 100 has been flood-killed. Terraced with beaver dams. Mostly open water, with some floating aquatic plants, marsh grass, and patches of lowland shrub.																																																														
102	500 - Water	Nonstocked	2.3	0	Unspecified	No	Pine River																																																														
103	6220 - Alder/willow	Nonstocked	10.5		Unspecified	No	Split off from stand 82. This portion of the beaver meadow has been colonized by lowland shrub cover (tag alder, salix & spiraea).																																																														