



Compartment Review Presentation

Pigeon River Country Forest Management Unit

Compartment 53052

Entry Year 2026

Acreage: 1,589

County Otsego

Management Area: Wolverine Moraines

Stand Examiner: Greg Rekowski

Legal Description:

T31N R01W, Sections 25, 26, 27, 35, and 36

Identified Planning Goals:

Maintain current species mix and apply appropriate management techniques to mature stands of timber that are in need of treatment.

Soil and topography:

Upland soils are a mix of sands and loams with Kalkaska sands being the most prevalent, with smaller amounts of the following types; Lindquist sand, East Lake-Rubicon sand, Mancelona-Rubicon sand, Blue Lake loamy sand, and Ossineke fine sandy loam. Lowland soils are mostly Tawas-Lupton mucks.

The area south of Johnson's Crossing Road is steep terrian dominated by upland oak, hardwoods, and aspen types. The north portion of the compartment is flat and occupied mostly by swamp conifer types.

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

The Compartment itself is comprised of a solid block of State ownership, however most of the boundaries are adjacent to private lands. Heavy Antrim gas development has taken place in and around this compartment.

Unique Natural Features:

The headwaters of the Black River are found within this Compartment. Numerous springs, seeps, and small streams come to surface at the upland/lowland transition north of Johnson's Crossing Road. There has been a documented occurrence of red-shouldered hawk within this Compartment.

MNFI has documented natural community element occurrences of a northern wet meadow and rich conifer swamp in this Compartment.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

A Special Conservation Area (SCA) encompasses the majority of the swamp conifer complex within the Compartment.

A rich conifer swamp ecological reference area (ERA) has been identified in this Compartment.

The far eastern end of the Compartment is under designation as Eastern Massasauga Managed Land due to the potential for this snake to occur in the area.

Watershed and Fisheries Considerations:

The Black River, a coldwater trout stream, flows through this Compartment.

Wildlife Habitat Considerations:

A Wildlife Division representative will be available to participate in the formal Compartment review.

Mineral Resource and Development Concerns and/or Restrictions

No known potential exists for commercial metallic mineral production in this part of the State. No known active sand & gravel pits exist in the area. There appears to be some potential for sand & gravel within the Compartment on the uplands, but development could be inhibited by oil & gas infrastructure. The Compartment is within the Antrim Shale and northern Silurian reef hydrocarbon plays, and the Compartment has seen extensive development, primarily associated with Antrim Shale gas production. All State-owned mineral rights in the Compartment are currently leased and held by production. Potential for additional future Antrim development is considered low. There may be potential for additional future reef discoveries beneath the Compartment, and there may be future potential for gas storage (CH4 and CO2). Any decisions

on future mineral exploration and development within the Compartment shall be consistent with the Concept of Management for the Pigeon River Country.

Vehicle Access:

There is good vehicle access throughout this Compartment.

Survey Needs:

None needed at this time.

Recreational Facilities and Opportunities:

Johnson's Crossing Equestrian Group Camp is located in Section 26. In addition, the North Spur of the Shore to Shore horse trail passes through this Compartment.

Fire Protection:

Wildfire potential is relatively low in this Compartment due to the lack of conifers in upland areas. Access is good if fire suppression activities are needed.

Additional Compartment Information:

Numerous experimental cedar harvests were conducted in the past with no current evidence of successful cedar regeneration in any of the stands.

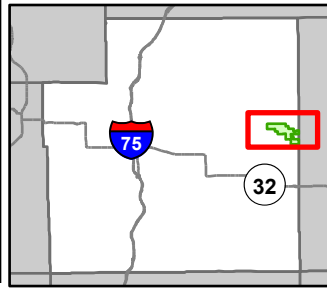
The following reports from the Inventory are attached:

- 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**

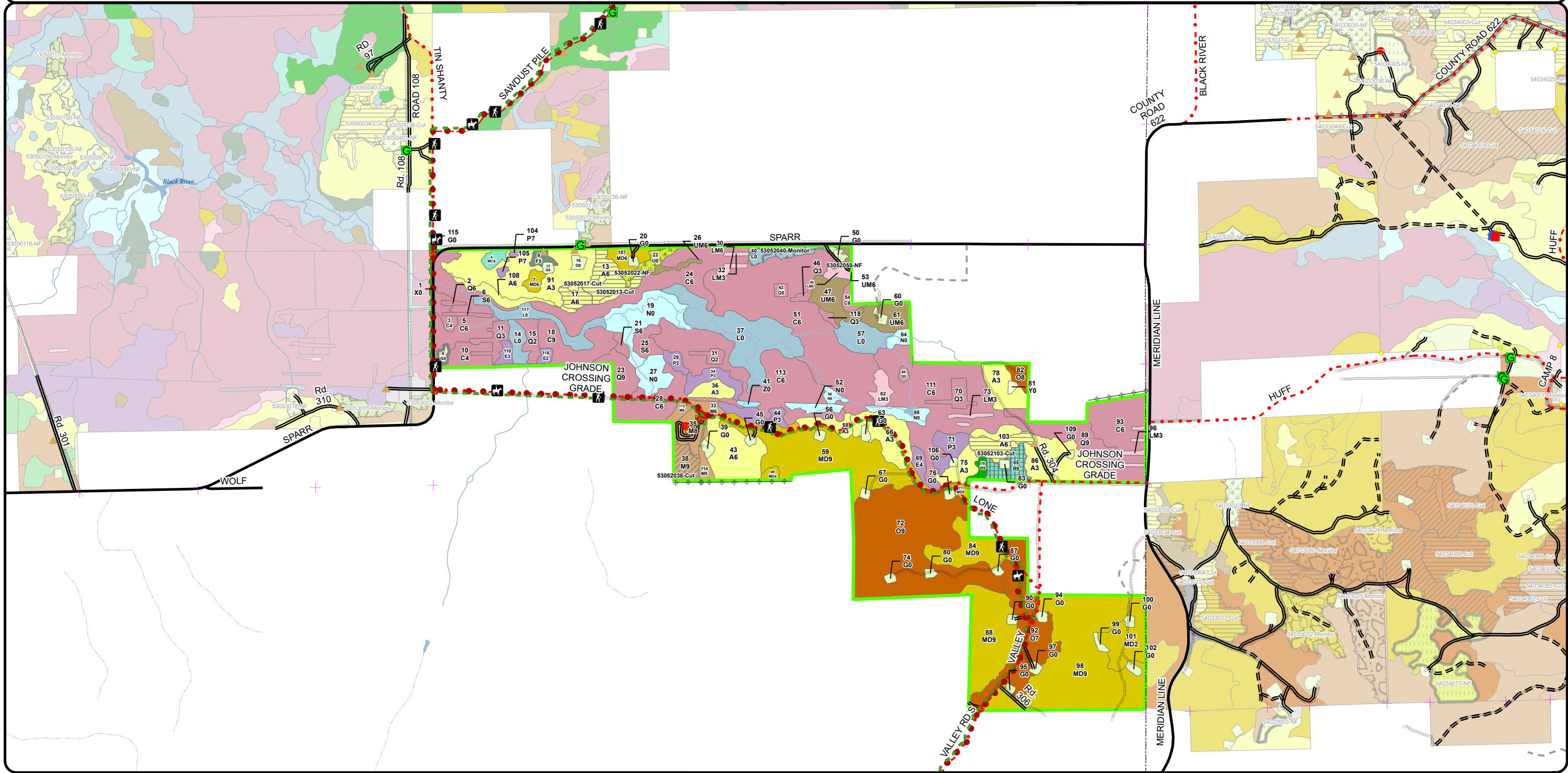
Cover Type & Treatments Map



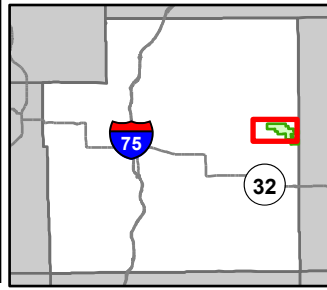
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Compartment: 53052
 T31N, R1W, Sec: 25-27, 35, 36
 County: Otsego
 Unit: Pigeon River Country
 Mgmt Area: Wolverine Moraines
 YOE: 2026
 Acres: 1589.5 GIS Calculated
 Examiner: Greg Rekowski
 Map Revised: 08/27/2024
 Map Phase: Post Review

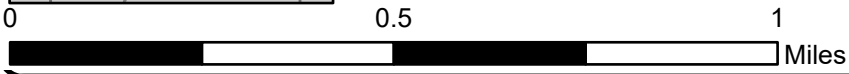
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|------------------------------|---------------------------------------|--------------------------------|-----------------------------------|---------------------------------|---------------------------|
| Cabin | Hiking Trails | DNR - Management Access | Clearcut (w/Reserves) | 421 - Planted Pines | 310 - Herbaceous Openland |
| House | Horse Trails | Intermittent Stream | Seed Tree (w/Reserves) | 422 - Natural Pines | 330 - Low Density Trees |
| Berms | Designated Equestrian Trails | Lake/Pond | Thinning (Crown, Low, Systematic) | 423 - Other Upland Conifers | 500 - Water |
| Gate | DNR - Secondary Forest Road | Perennial River | Regeneration Survey | 430 - Upland Mixed Forest | 622 - Lowland Shrub |
| Culvert | DNR - Forest Access Route | Lakes and Rivers | Opening Maintenance | 611 - Lowland Deciduous Forest | 623 - Emergent Wetland |
| Campground | Federal / State / County - Paved Road | Pipeline | 411 - Northern Hardwood | 612 - Lowland Coniferous Forest | 710 - Sand/Soil |
| Sign | County - Gravel Road | Powerline | 412 - Oak Types | 613 - Lowland Mixed Forest | |
| Survey Grade Corners | County - Dirt Road (Seasonal) | Compartment Boundary | 413 - Aspen Types | 122 - Roads/Parking Lot | |
| Remonumented Section Corners | Private - Dirt / Gravel Road | Other Treatment - See Comments | 419 - Mixed Upland Deciduous | | |



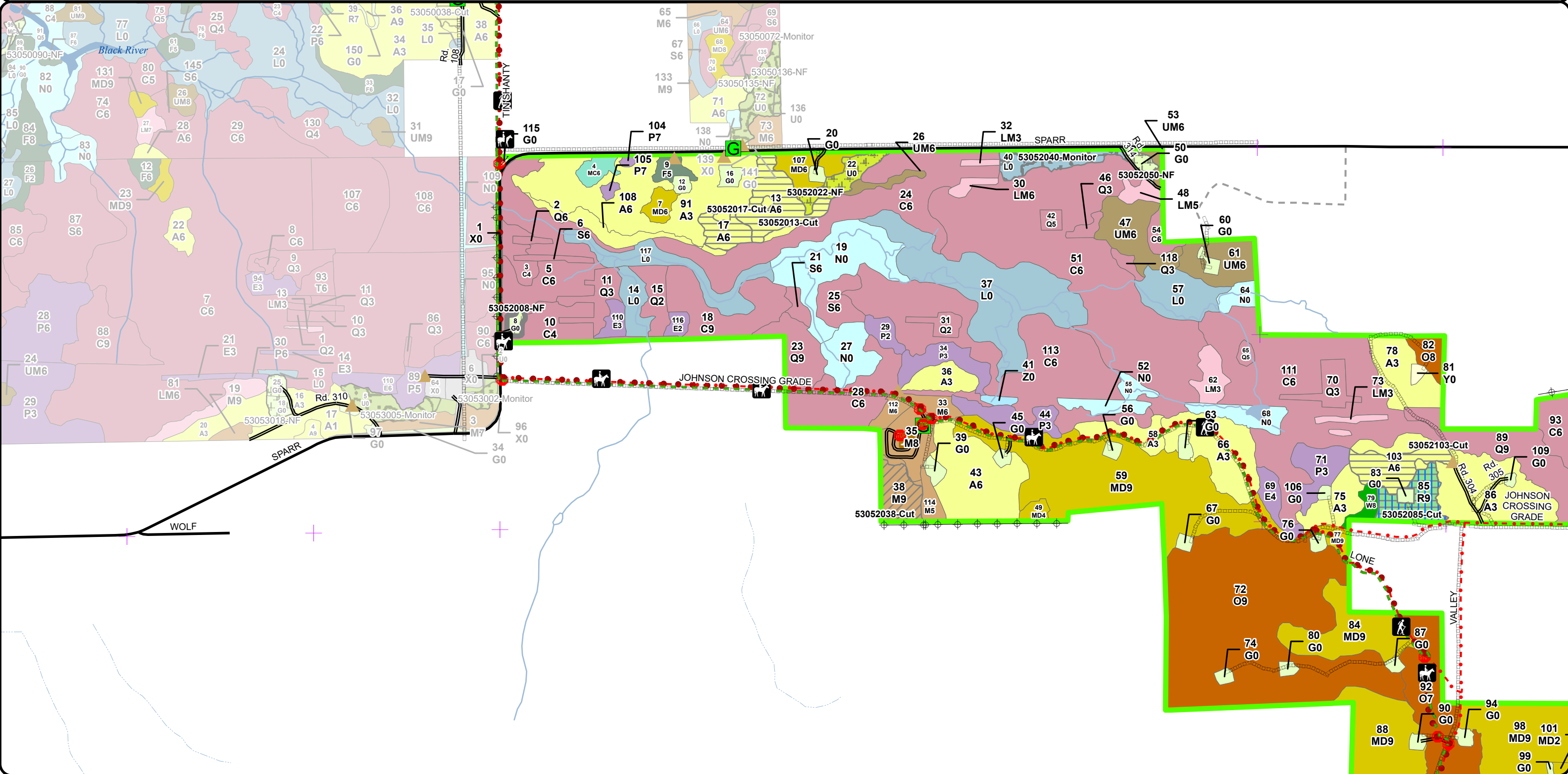
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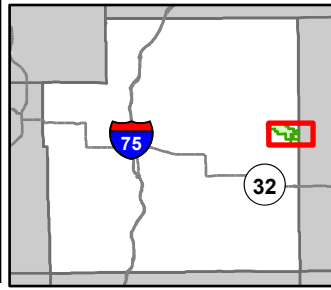
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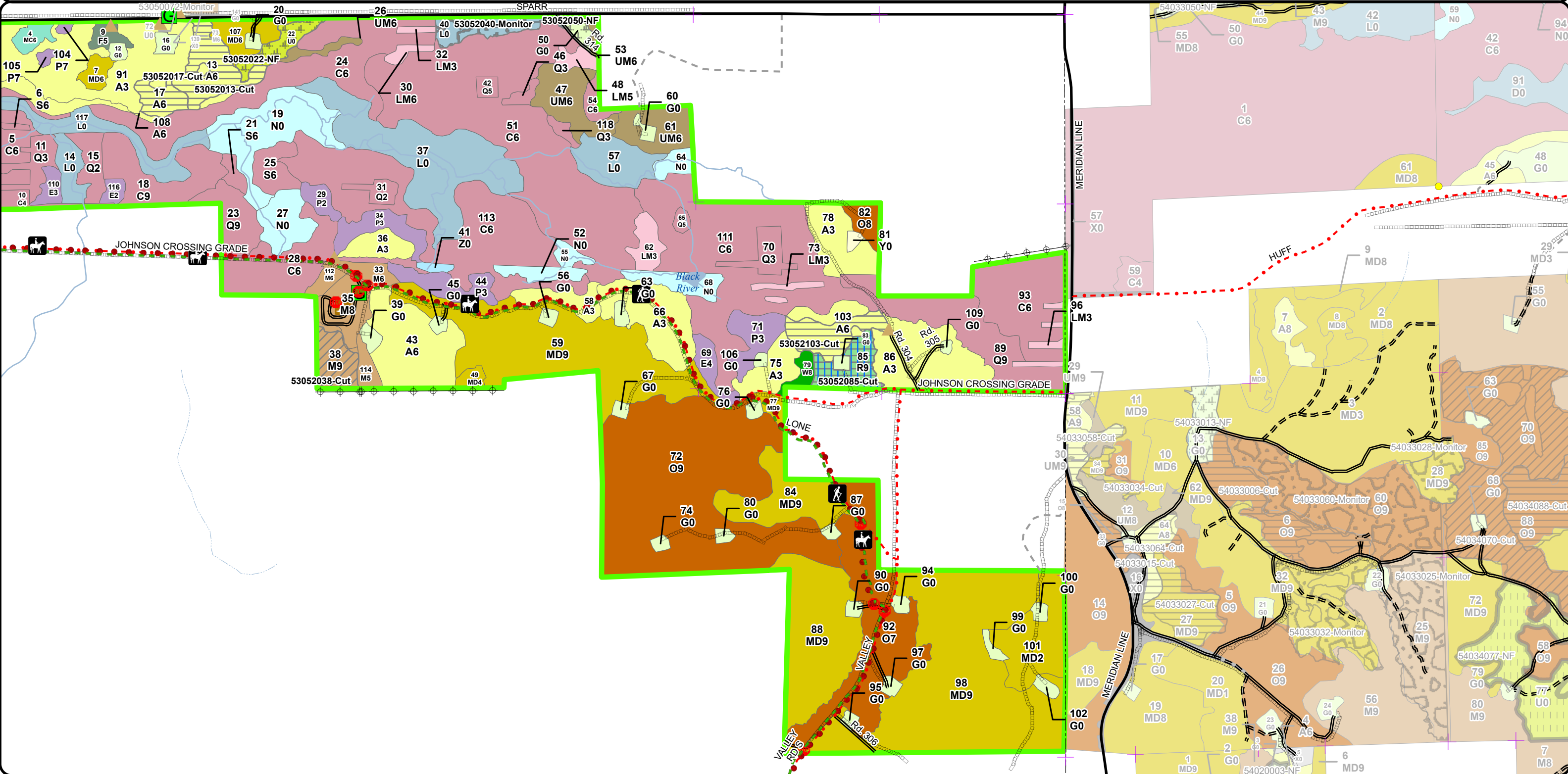
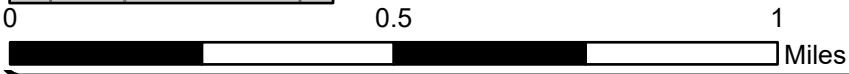
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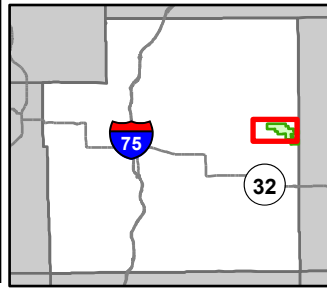
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Stand Boundary Map

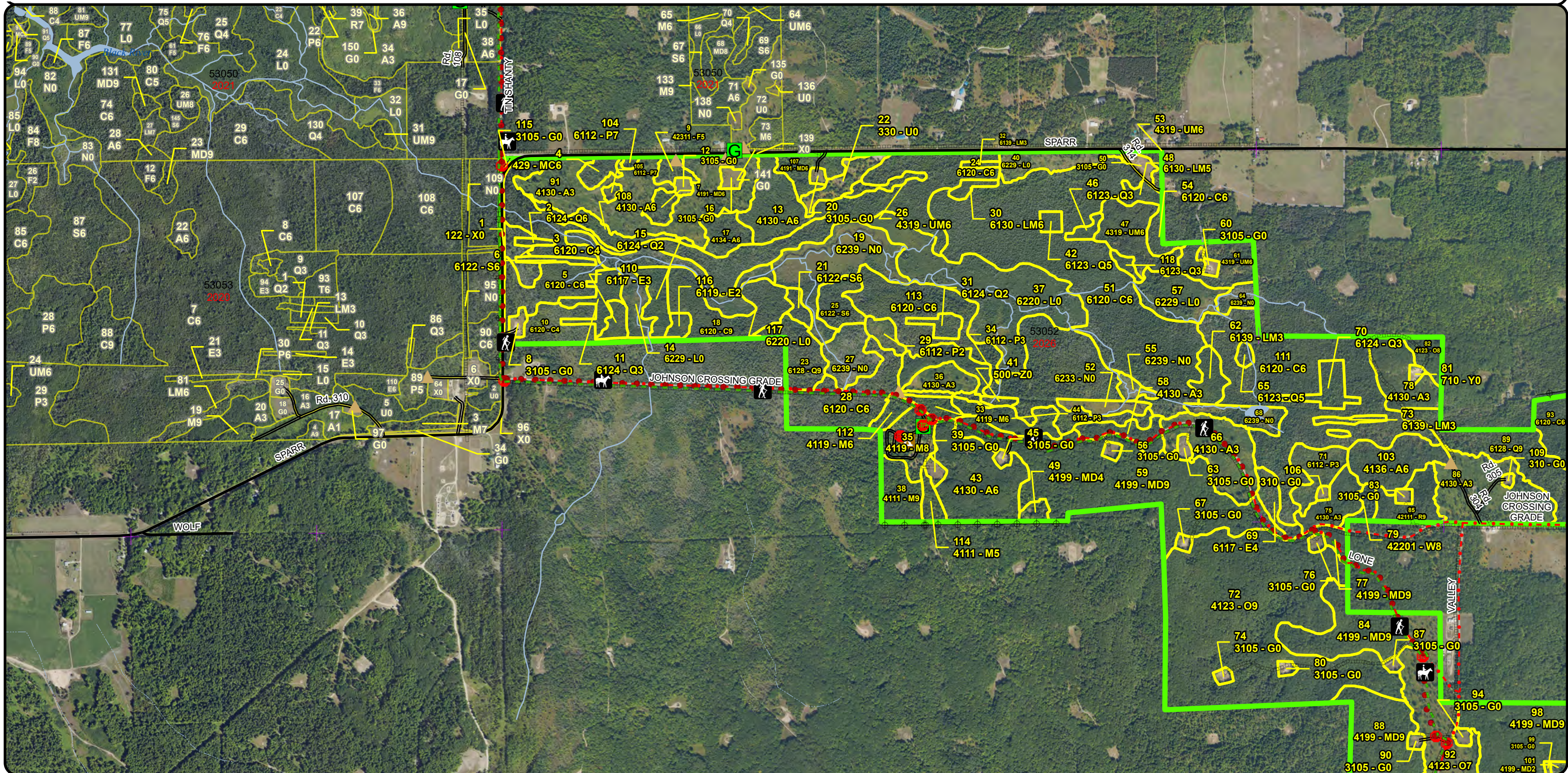


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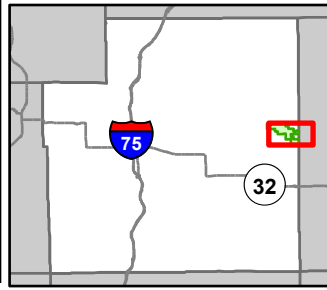


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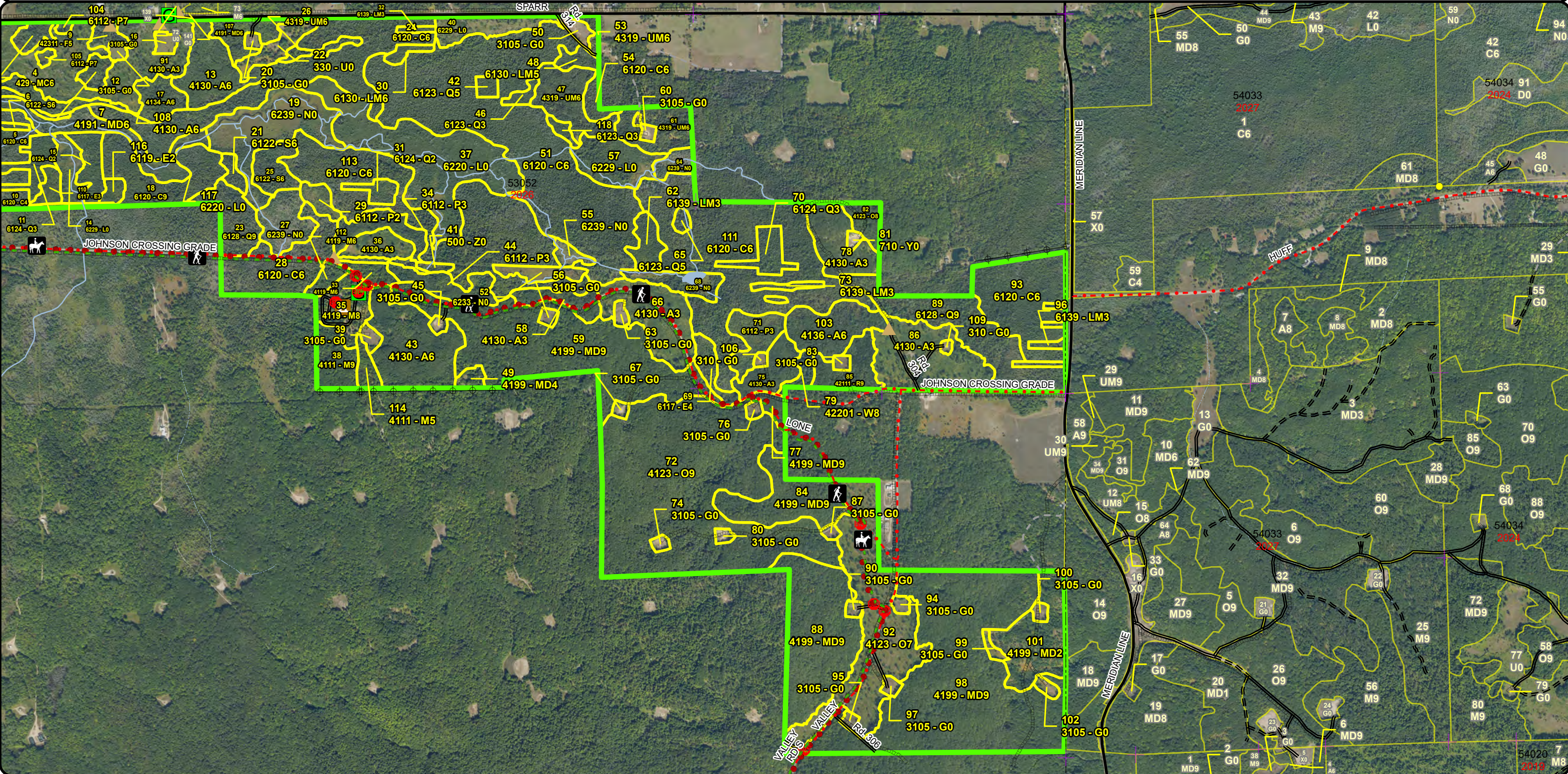
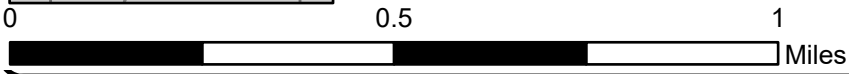
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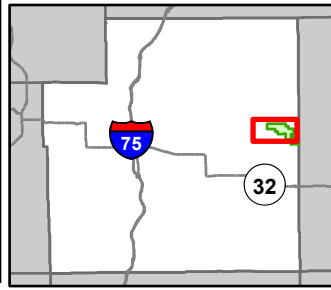
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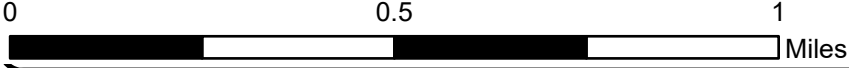
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**Special Conservation Areas
& Site Conditions Map**



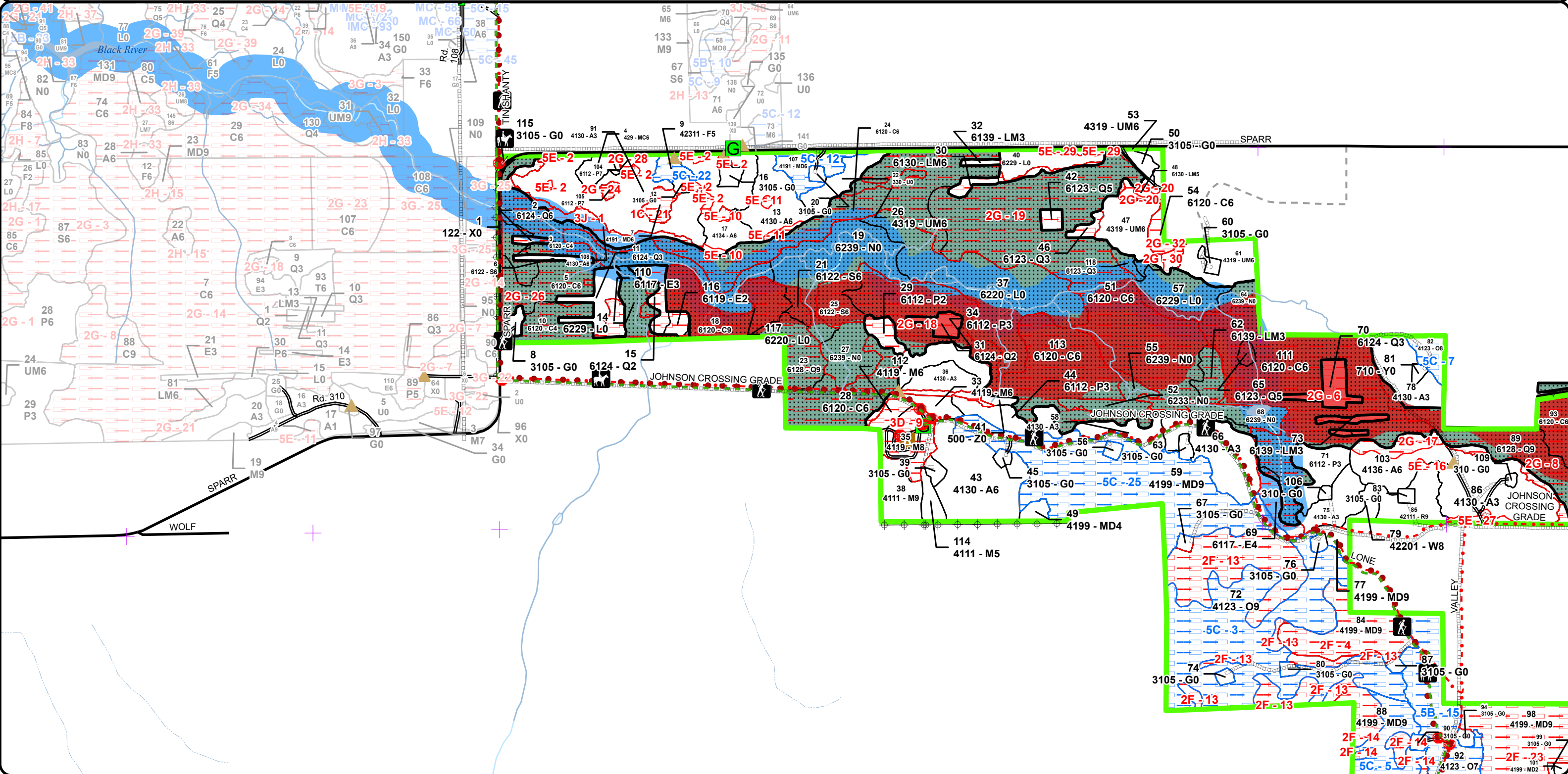
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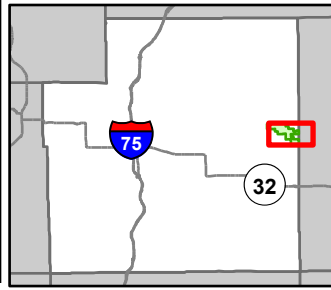
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- Compartment Boundary
- SCA
- Available w/ Constraints
- Unavailable

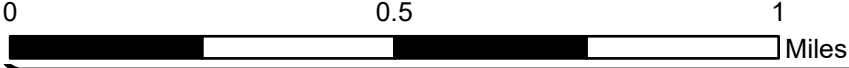
- 1C: Other dept or div proc/practices
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 3D: Recreational / Scenic values
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Ecological Reference Areas
- Cold Water Streams
- High Priority Trout Stream Buffer
- Vernal Pool



Special Conservation Areas & Site Conditions Map



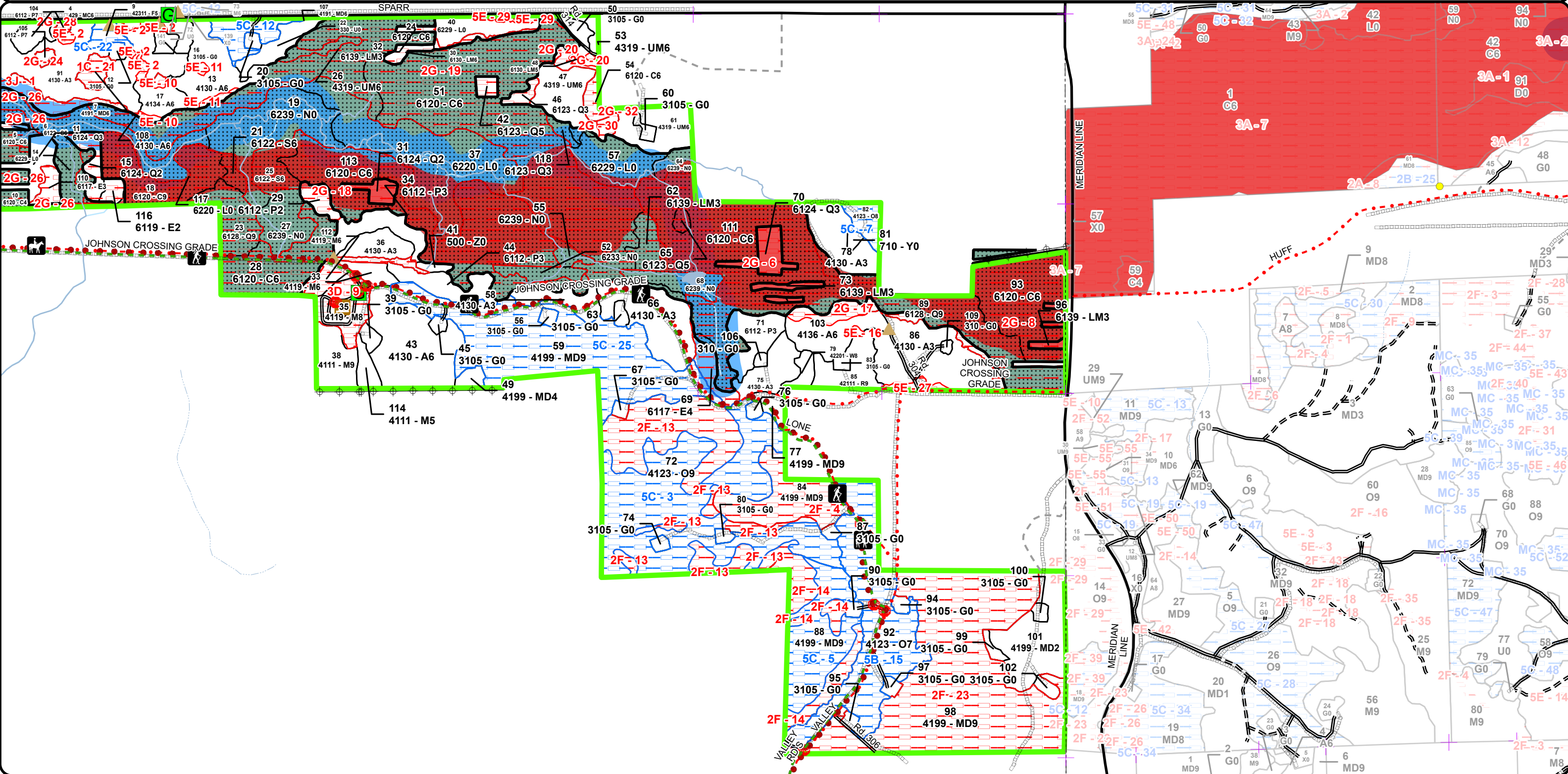
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- SCA
- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes

- 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)
- 3D: Recreational / Scenic values
- 3J: Water quality / BMPs (stream, river, or lake)
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Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	109	0	32	29	17	33	0	0	0	0	0	0	0	0	0	0	0	219
Cedar	0	0	0	0	0	0	0	0	0	0	0	26	310	107	0	0	0	0	443
Herbaceous Openland	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Low-Density Trees	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Lowland Aspen/Balsam Poplar	0	0	0	32	0	0	2	0	0	0	0	0	0	0	0	0	0	0	34
Lowland Conifers	0	0	0	0	4	29	0	2	0	0	0	12	32	0	0	0	0	0	79
Lowland Deciduous	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	10
Lowland Mixed Forest	0	0	0	0	3	15	0	0	0	0	0	0	0	0	0	0	0	0	18
Lowland Shrub	98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98
Lowland Spruce/Fir	0	0	0	0	0	2	0	0	0	0	11	0	0	0	0	0	0	0	12
Marsh	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
Mixed Upland Deciduous	0	0	0	23	2	0	0	0	9	117	70	76	0	0	0	0	0	0	296
Northern Hardwood	0	0	0	0	0	0	0	0	0	15	18	0	0	0	0	0	0	0	33
Oak	0	0	0	0	0	0	0	0	0	0	54	134	0	0	0	0	0	0	188
Red Pine	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	10
Sand, Soil	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Upland Conifers	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4
Upland Mixed Forest	0	0	0	0	28	0	0	0	5	0	0	0	0	0	0	0	0	0	33
Upland Spruce/Fir	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Urban	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White Pine	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
Total	201	109	0	87	66	68	52	7	17	132	153	248	342	107	0	0	0	0	1586



Report 2 – Treatment Summary

Acres of Harvest

Commercial Harvest - 53
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	33	0	0	0	0	0	0	0	0	33
Northern Hardwood	0	0	0	0	0	9	0	0	0	9
Red Pine	0	0	0	10	0	0	0	0	0	10
Total	33	0	0	10	0	9	0	0	0	53

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Pruning	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	53	0	0	0	0	10	0	11		74
Next Step	0	0	0	0	0	44	0	0		44
Total	53	0	0	0	0	53	0	11		118



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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:

8	53052008-NF	1.7	3105 - Mixed Upland Herbaceous	Nonstocked		Unspec ified	NonForestMgt	Herbaceous/Crop /Grass Planting	310 - Herbaceous Openland	No
<p><u>Prescription</u> Maintain the non-forested condition of this stand either through burning, planting, herbicide, or mechanical means.</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>										
13	53052013-Cut	15.7	4130 - Aspen	Poletimber Well	51	141-170	Harvest	Clearcut with Retention	413 - Aspen Even-Aged	No
<p><u>Prescription</u> Clearcut. Leave all incidental basswood, white pine, and birch. Leave all cherry over 5" DBH. Mark to leave large diameter aspen or maple as cut and leave trees for drumming logs and hare habitat.</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> Fully-stocked stand of aspen regeneration with any additional mix of species being acceptable.</p> <p><u>Other Comment:</u> See site condition layer for desired retention area locations; one will be at the south edge in the area where beavers removed most of the aspen, the other area will be in the interior near an area of hardwoods and conifers.</p> <p>Winter only harvest to avoid conflicts with the EMR active season.</p> <p><u>Site Condition</u></p> <p>Proposed Start Date: 10/1 /2025</p>										
17	53052017-Cut	6.1	4134 - Aspen, Spruce/Fir	Poletimber Well	51	111-140	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir Even-Aged	No
<p><u>Prescription</u> Clearcut. Do not cut any incidental white pine, red pine, birch, or basswood. Mark poor quality aspen as cut and leave trees for drumming logs and hare habitat. Add area retention to the small clump of hardwoods on the north edge, including some spruce and fir on the edges, and at the south end of the stand where there are some steep slopes.</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> Fully-stocked stand of aspen regeneration with any additional mix of species being acceptable.</p> <p><u>Other Comment:</u> Watch for stick nests, particularly in the northwest corner of the stand where there is an old record for a nest, and apply appropriate buffers and specs if found.</p> <p>Winter only harvest to avoid conflicts with the EMR active season.</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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22	53052022-NF	7.2	330 - Low-Density Trees	Nonstocked		Unspecified	NonForestMgt	Other - Specify	3205 - Mixed Upland Shrub	No
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Prescription Maintain the non-forested condition of this stand through prescribed fire, mechanical, planting, or chemical means. Leave the option open for
Specs: the planting of hard or soft mast.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Site Condition

Proposed Start Date: 10/1 /2025

40	53052040-Monitor	9.7	6229 - Mixed lowland shrub	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Intermediate)	612 - Lowland Coniferous Forest	Even-Aged	No
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Prescription Continue to monitor regen success in this stand. Reference previous regen survey data in MiFI.
Specs:

Next Step
Treatments:

Acceptable Fully-stocked stand of mixed lowland conifers with any additional mix of species being acceptable.
Regen:

Other
Comment:

Site Condition

Proposed Start Date: 10/1 /2028

50	53052050-NF	2.5	3105 - Mixed Upland Herbaceous	Nonstocked		Unspecified	NonForestMgt	Other - Specify	310 - Herbaceous Openland	No
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Prescription Maintain the non-forested condition of this stand through prescribed fire, planting, mechanical, or chemical means. Leave the option open for
Specs: the planting of hard or soft mast.

Next Step
Treatments:

Acceptable
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
85 53052085-Cut	10.3	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	54	171-200	Harvest	Seed Tree	4133 - Aspen, Mixed Pine	Two-Aged	No
<p><u>Prescription</u> Seed-tree leaving 10-20 square feet of red pine. Mark to leave a few clumps of red pine (2-3 trees) in areas of heavier red pine without much aspen. Leave all white pine over 10" DBH, all cherry over 5" DBH, and all birch and oak of any size. Mark cut and leave trees for drumming logs and hare habitat. Protect serviceberry.</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> Medium to fully-stocked consisting of red pine, white pine, and aspen. Any additional species in the mix will be acceptable as well.</p> <p><u>Other Comment:</u> Winter only harvest to avoid conflicts with EMR.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										
103 53052103-Cut	11.5	4136 - Aspen, Mixed Conifer	Poletimber Well	46	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Clearcut. Do not cut incidental white pine, cedar, hemlock, oak, and paper birch. Mark clumps of aspen and red maple as cut and leave trees for drumming logs and winter habitat. Winter only cut to avoid disturbing adjacent massasauga habitat and also to protect wet soils.</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> Fully-stocked stand of aspen with any additional mix of species being acceptable.</p> <p><u>Other Comment:</u> Exclude all wet areas along the north edge, expect this boundary to change somewhat from what has already been excluded. A small interior retention area has been added to an area that holds water seasonally.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										

Approved Treatments:

38 53052038-Cut	9.4	4111 - S.Maple, Hard Mast Association	Sawtimber Well	91	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	No
<p><u>Prescription</u> Crown thin to 80-90 square feet. Do not mark underrepresented species in the stand (yellow birch and paper birch). Stay off of steep slopes.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2023</p>										

Total Treatment Acreage Proposed: 74.1



Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions								
		With Condition	Not Available		5B	5C	1C	2F	2G	3D	3J	5E	
220	199	0	21	Aspen					5			8	9
445	0	0	445	Cedar					445				
32	32	0	0	Herbaceous Openland									
7	7	0	0	Low-Density Trees									
34	28	0	6	Lowland Aspen/Balsam Poplar					6				0
77	10	0	68	Lowland Conifers					68				
11	0	0	11	Lowland Deciduous					11				
18	1	0	17	Lowland Mixed Forest					17				
98	96	0	1	Lowland Shrub									1
13	0	0	13	Lowland Spruce/Fir					13				
59	59	0	0	Marsh									
296	28	111	157	Mixed Upland Deciduous		111	4	153					
33	18	0	15	Northern Hardwood						15			
188	0	142	47	Oak	54	87		47					
11	11	0	0	Red Pine									
1	1	0	0	Sand, Soil									
4	4	0	0	Upland Conifers									
33	31	0	2	Upland Mixed Forest					2				
3	0	3	0	Upland Spruce/Fir		3							
3	3	0	0	Urban									
1	1	0	0	Water									
3	3	0	0	White Pine									
1,590	533	256	801	Total Forested Acres	54	201	4	200	565	15	8	10	
	34%	16%	50%	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	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)	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions



2	Unavailable	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	82	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	2F: Too steep	23	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	26	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	95	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							



8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	67	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	3D: Recreational / Scenic values	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Johnson's Crossing campground.							
10	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Desired retention areas for the harvest in stand 17.							
11	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	2F: Too steep	47	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Areas of ground that are too steep for harvesting operations. This is a "best guess" using the topo map imagery. There are additional areas in the stand that are too steep.							
14	Unavailable	2F: Too steep	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							



15	Available	5B: Maintain for regeneration purposes	54	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
18	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	156	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments: This site condition covers numerous stands that are too wet to harvest. Numerous small streams, all tributaries to the Black River, pass through these stands as well.							
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	177	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
20	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							



21	Unavailable	1C: Other dept or div proc/practices	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
23	Unavailable	2F: Too steep	113	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
24	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Wetland inclusion, cattail dominated.							
25	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	76	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
26	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	58	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							



27	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
28	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Wetland pocket							
29	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: These two areas were excluded from the adjacent lowland cut and can be considered retention. There are also pockets of very wet ground in these two areas which is why they were originally excluded from the sale.							
30	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
32	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							



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
Black River Headwaters SCA	Spring Wetlands Riparian Area	Spring Seep	SCA	657
Comments				
Examiner approved 9/12/2013				



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.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																										
1	122 - Road/Parking Lot	Nonstocked	3.0		Unspecified	No	Sparr Road and associated cleared right-of-way.																																																										
2	6124 - Lowland Spruce-Fir	Poletimber Well	1.2	44	81-110	N/A	Old cedar strip cut, no cedar regenerated instead it was mostly spruce and fir. The deciduous species component increases in the west half. Average ba/acre from 4 plots = 100 square feet.																																																										
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3	6120 - Lowland Cedar	Poletimber Poor	5.4	128	51-80	N/A	Heavy cedar dieback and decline due to water drainage issues on the Black River. Most of the remaining live mature timber is along the west edge near Sparr Road. A very wet stand with standing water in places. The "fingers" of the stand going east away from the road have filled in with a mix of lowland conifer species, enough that this may be a Q5 or Q6 next entry, assuming water drainage issues don't result in more mortality. Average ba/acre from 6 plots = 54 square feet.																																																										
4	429 - Mixed Upland Conifers	Poletimber Well	3.8	57	81-110	N/A	Apparently the spruce was planted but many areas of the stand do not resemble a plantation due to the other species that are mixed in. Scattered white spruce mortality but not a significant amount. The central part of the stand lies in a slight depression but doesn't appear to be wet, at least at this time. Other species that were present but rare include red pine (log) and red oak (log). Average ba/acre from 5 plots = 96 square feet. Do not manage this entry due to this stands value as a visual buffer for the adjacent clearcut. Consider managing next entry.																																																										
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5	6120 - Lowland Cedar	Poletimber Well	32.4	129	141-170	N/A	Cedar dominated stand that is mostly good quality, although there are some areas of decline in the southwest and northeast parts of the stand where the ground is very wet. The portion of the stand north of the Black River has some upland ground mixed in and also more species diversity. Some of the white pine are legacy tree size. Both species of spruce are present in the stand, white spruce tends to be more numerous in the north half of the stand. Trace of hemlock (pole/log), balsam poplar (log), quaking aspen (log/pole), and red pine (log) in the overstory. Average ba/acre from 8 plots = 162 square feet. In addition to the Black River flowing through the stand, there is a small stream in the southeast part of the stand that flows north. No management due to the wet ground and water influences.																																																										
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
6	6122 - Black Spruce	Poletimber Well	2.0	44	81-110	N/A	Old cedar strip cut, no cedar regeneration is present, although spruce did grow in well and is good quality. Average ba/acre from 4 plots = 108 square feet.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
White Spruce		5	Pole/Sapling	5		Black Spruce		
Paper Birch		5	Sapling/Pole	3		Balsam Fir		
Balsam Fir		15	Sapling/Pole	3		Willow spp.		
Black Spruce		68	Pole/Sapling	5	44	Density		
Quaking Aspen		1	Pole	6		Avg. Height		
Tamarack		3	Pole/Sap/Log	7		Size		
Balsam Poplar		3	Pole/Sapling	6				
7	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	3.6	86	81-110	N/A	Odd stand that has a lot of variation. The north half of the stand is mostly hardwoods while the south half transitions to a mix of aspen, spruce, fir, and birch. Average ba/acre from 7 plots = 104 square feet. All along the east and south edges of the stand are a series of large pits, some of which have water in them. There is also a small, flat open area at the southwest corner with an old road leading out of it to the northeast. The areas with pits and mounds have younger trees growing in them. The 98DOQ imagery shows these areas well. Not sure of the history as there are no old notes indicating what this area was in the past, possibly old borrow pits when the adjacent well pad to the north was cleared?	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Quaking Aspen		14	Log/Pole	11		Black Cherry		
Ironwood		4	Pole/Sapling	5		Leatherwood		
White Spruce		12	Pole/Log	9		White Spruce		
Basswood		18	Log/Pole	10		Ironwood		
Red Maple		2	Pole	6		Balsam Fir		
Paper Birch		5	Pole/Log	8		Sugar Maple		
Sugar Maple		20	Log/Pole	11	86	Density		
Black Cherry		8	Pole	7		Avg. Height		
Balsam Fir		11	Pole/Log	8		Size		
8	3105 - Mixed Upland Herbaceous	Nonstocked	1.7		Unspecified			
Sub-Canopy Species		Density	Avg. Height	Size				
Balsam Poplar		Trace	Variable	Sapling				
White Spruce		Trace	Variable	Sapling				
Paper Birch		Trace	>20 feet	Sapling				
Balsam Fir		Trace	Variable	Sapling				
Mixed Grasses		High	Unspecified	Non-Wood				
Cattail spp.		Trace	Unspecified	Non-Wood				
9	42311 - Planted Spruce, Mixed Deciduous	Poletimber Medium	3.4	57	81-110	N/A	Small stand of planted white spruce with some aspen mixed in. Generally limby white spruce, although quality does improve in the more densely stocked parts of the stand. Some areas of blowdown are present along the west/southwest edge as a result of the recent clearcut, and some younger aspen has sprouted in these areas. An old road enters the stand from Sparr Road and splits into two routes, leading to the old well pad to the south. There are some areas of wetter ground in these old roads and some BAM and white spruce saplings are present. Average ba/acre from 6 plots = 88 square feet. No reason to manage at this time as it is serving well as a visual buffer for the recent clearcut. Consider managing next entry.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Black Cherry		7	Pole/Log	8		Quaking Aspen		
White Spruce		71	Pole/Log	9	57	Balsam Poplar		
Balsam Poplar		2	Pole	8		Black Cherry		
Quaking Aspen		20	Log/Pole	11		White Spruce		
						Density		
						Avg. Height		
						Size		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
10	6120 - Lowland Cedar	Poletimber Poor	13.1	129	1-50	N/A	Poorly-stocked, wet stand with dead and dying cedar throughout, some of which has blown over. The southwest part of the stand transitions to somewhat drier ground and is where most of the white spruce component is located. Heavy deer pressure in the stand with many heavily browsed black ash seedlings. Average ba/acre from 4 plots = 48 square feet. No management due to the wet soils.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Paper Birch	4	Pole/Log	9		Paper Birch	Trace		>20 feet	Sapling
Balsam Poplar	2	Log/Pole	10		Balsam Poplar	Low		Variable	Sapling
Northern White Cedar	53	Pole/Log	9	129	White Spruce	Low		5 - 10 feet	Seeding
Balsam Fir	10	Pole	6		Tamarack	Trace		>20 feet	Sapling
Red Maple	6	Pole	7		Black Ash	High		10 - 20 feet	Sapling
White Spruce	25	Log/Pole/XLog	12	102	Balsam Fir	Low		Variable	Sapling
11	6124 - Lowland Spruce-Fir	Sapling Well	7.7	40	111-140	N/A		Old cedar clearcut that was harvested in several small chunks from 1982-1986. Objective was to feed deer. No cedar regeneration but spruce and fir have grown in well and are densely stocked in most places. Both species of spruce are present, difficult to distinguish between the two in some areas. Average ba/acre from 6 plots = 122 square feet. Old logging roads are still easily visible in the stand, with one running north-south along the entire western edge of the "main" part of the stand. The ground doesn't appear very wet in all places of the stand making it likely available for management again in the future.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density			Avg. Height
Tamarack	2	Pole	6		Black Spruce	Low	Variable		Sapling
Balsam Fir	35	Sapling/Pole	3		Black Ash	Trace	Variable		Sapling
Black Spruce	40	Pole/Sapling	5	40	Tag Alder	Trace	10 - 20 feet		Tall Shrub
Balsam Poplar	2	Pole	7		Balsam Fir	Medium	Variable		Sapling
White Spruce	9	Pole/Sapling	5						
Paper Birch	8	Sapling/Pole	4						
Red Maple	4	Sapling/Pole	3						
12	3105 - Mixed Upland Herbaceous	Nonstocked	1.3		Unspecified	No	Plugged in 2008. St Charlton 3-27, Merit Energy		
Sub-Canopy Species	Density	Avg. Height	Size						
Mixed Grasses	Full	Unspecified	Non-Wood						
Balsam Fir	Trace	Variable	Sapling						
White Spruce	Trace	Variable	Sapling						
13	4130 - Aspen	Poletimber Well	17.3	51	141-170	N/A	Nice aspen stand. Lots of coarse woody debris in the north half from recent blowdown and fir mortality. Some scattered hardwoods are present, more in the north half, and are a mix of larger residual stems and newer ingrowth. Rolling terrain in the south half of the stand. Along the southern edge is a strip of mostly fir and spruce without much aspen due to beaver activity many years ago. Trace of black spruce (pole) and white pine (log) in the canopy. Average ba/acre from 12 plots = 142 square feet.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Paper Birch	3	Pole/Log	8		Ironwood	Trace		Variable	Sapling
Basswood	1	Pole/Log	9		Black Cherry	Trace		Variable	Tall Shrub
Balsam Fir	7	Pole	7		Red Maple	Trace		>20 feet	Sapling
Bigtooth Aspen	33	Pole/Log	9	51	White Ash	Trace		>20 feet	Sapling
White Spruce	2	Pole/Log	8		White Spruce	Low		Variable	Sapling
Quaking Aspen	44	Pole/Log	9	51	Balsam Fir	Medium		Variable	Sapling
Red Maple	5	Pole/Log	8						
Black Cherry	1	Pole	6						
Sugar Maple	4	Pole/Log	8						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments					
14	6229 - Mixed lowland shrub	Nonstocked	6.8		Unspecified	No	Old cedar clearcut along with adjacent stands 11, 15, 110, and 116. This stand did not regenerate well although there are a couple scattered clumps of decent regen. Alder is more prevalent in the south half. Scattered wet pockets with cattails without many trees or alder. A stream flows through the length of the stand and is currently dammed by beavers at the north end. With continued growth, this stand may have enough tree cover to be a forested stand next entry (Q4).					
								Sub-Canopy Species	Density	Avg. Height	Size	
								White Pine	Trace	Variable	Sapling	
								White Spruce	Low	Variable	Sapling	
								Sedges	Medium	Unspecified	Non-Wood	
								White Pine	Trace	>20 feet	Pole	
								Tag Alder	Medium	10 - 20 feet	Tall Shrub	
								White Spruce	Low	>20 feet	Pole	
								Black Spruce	Low	Variable	Sapling	
								Tamarack	Trace	>20 feet	Pole	
								Balsam Fir	Low	Variable	Sapling	
								Northern White Cedar	Trace	>20 feet	Log	
								Cattail spp.	Low	Unspecified	Non-Wood	
								Tamarack	Trace	Variable	Sapling	
Willow spp.	Trace	Variable	Tall Shrub									
Balsam Fir	Low	>20 feet	Pole									
15	6124 - Lowland Spruce-Fir	Sapling Medium	7.2	40	51-80	N/A	Old cedar clearcut that was harvested in small blocks over the years of 1982-1986. Virtually no cedar regeneration observed except for a handful of severely browsed seedlings. Spruce and fir has regenerated the best. A nice pocket of birch regeneration can be found in the middle of the stand. BAM is mostly at the southern end. A few areas of this stand were previously flooded but the water has since receded and some conifers have started to fill in (see 98DOQ imagery). Not an overly wet stand in all areas, there may be some upland ground mixed in.					
								Canopy Species	% Cover	Size Class	DBH	Age
								White Spruce	18	Sapling/Pole	4	
								Balsam Poplar	6	Sapling/Pole	3	
								Paper Birch	10	Sapling/Pole	3	
								Balsam Fir	44	Sapling/Pole	3	40
								Red Maple	6	Pole/Sapling	5	
								Black Spruce	15	Sapling/Pole	4	
								White Pine	1	Sapling/Pole	3	
								Sub-Canopy Species	Density	Avg. Height	Size	
Balsam Fir	Medium	5 - 10 feet	Sapling									
Tag Alder	Medium	10 - 20 feet	Tall Shrub									
16	3105 - Mixed Upland Herbaceous	Nonstocked	2.0		Unspecified	No	Previously this was an unsuccessful Niagaran oil pad, plugged in 1995. Some conifers were planted in the stand and are mostly healthy, although damage to the boles of the stems from elk have killed a few trees.					
								Sub-Canopy Species	Density	Avg. Height	Size	
								Mixed Grasses	Full	Unspecified	Non-Wood	
								White Spruce	Low	10 - 20 feet	Sapling	
Balsam Fir	Trace	Variable	Sapling									



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																										
17	4134 - Aspen, Spruce/Fir	Poletimber Well	7.5	51	111-140	N/A	Moderate quality aspen stand although there are areas in the interior where the aspen is poor quality and in decline. White spruce is common throughout, both individually and in clumps. Most of the spruce is poletimber, sawtimber-sized stems are relatively rare. A small clump of hardwoods is present along the north edge. A very large white pine (30"+ DBH) is at the southwest side of the stand. There is a lot of coarse woody debris in the stand, some from blowdown due to the adjacent clearcut and also from fir and spruce mortality. Previous report for a stick nest in the northwest part of the stand but was not found during this inventory. Undulating terrain throughout the stand with a few short, steep slopes near the swamp edge on the south side. Trace of paper birch (pole), red pine (log/xlog), basswood (pole/log), and white ash (pole) in the overstory. Average ba/acre from 8 plots = 114 square feet.																																																										
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18	6120 - Lowland Cedar	Sawtimber Well	21.8	127	201+	N/A	High quality, very dense, and healthy cedar stand. The understory is barren in most places of the stand due to the dense stocking. Only a few small areas of cedar decline noted at the northeast and southwest corners. Scattered small pockets of blowdown throughout, although it appears to be from many years ago. Terrain gently slopes down to the north and there appears to be numerous seeps in this stand, along with at least one stream. Trace of white pine (log/xlog) and red maple (log/pole) in the overstory. Average ba/acre from 10 plots = 249 square feet. Old logging roads run throughout the west half of the stand (visible on 98DOQ imagery) and are still largely free of any new growth. A small cedar log deer blind, that is in disrepair, can be found on one of the old roads. No management.																																																										
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19	6239 - Mixed Emergent Wetland	Nonstocked	29.1		Unspecified	No																																																											
20	3105 - Mixed Upland Herbaceous	Nonstocked	1.1		Unspecified		Active gas well in stand. Lots of spotted knapweed.																																																										
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21	6122 - Black Spruce	Poletimber Well	2.6	97	81-110	N/A	Good quality, well-stocked spruce stand except for the south half which has some areas of older blowdown and as a result of that there are some areas of lower BAs. Thick balsam fir understory along the east 1/2 of the stand. Average ba/acre from 4 plots = 88 square feet. No management possible. Borders a stream to the east.																																																										
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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22	330 - Low-Density Trees	Nonstocked	7.2		Unspecified	No						
							Sub-Canopy Species	Density	Avg. Height	Size		
							Quaking Aspen	Trace	>20 feet	Pole		
							Balsam Fir	Low	>20 feet	Log		
							Red Maple	Trace	>20 feet	Sapling		
							Red Oak	Trace	>20 feet	Pole		
							Balsam Fir	Medium	>20 feet	Pole		
							Red Oak	Low	>20 feet	Log		
							Black Cherry	Medium	Variable	Tall Shrub		
							Red Maple	Low	>20 feet	Log		
							Mixed Grasses	High	Unspecified	Non-Wood		
							Witch Hazel	Trace	10 - 20 feet	Tall Shrub		
							White Pine	Low	>20 feet	Log		
							Red Maple	Medium	>20 feet	Pole		
							Quaking Aspen	Trace	5 - 10 feet	Sapling		
							White Spruce	Trace	Variable	Sapling		
							Balsam Fir	Low	Variable	Sapling		
							White Pine	Trace	Variable	Sapling		
Bracken Fern	Medium	Unspecified	Non-Wood									
Cladonia (Reindeer moss)	High	Unspecified	Non-Wood									
Paper Birch	Trace	>20 feet	Pole									

Scattered clumps of trees mixed in with non-forested openings. White pine is mostly in a dense clump in the middle part of the stand. A borderline forested stand with an average ba/acre from 9 plots of 28 square feet. Rolling terrain that slopes down to the southeast. Heavy deer and elk pressure as even some of the younger fir and white pine are showing browse damage.

23	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	12.1	106	81-110	N/A				
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Canopy Species	% Cover	Size Class	DBH	Age
White Spruce	9	Log/Pole	11	
Northern White Cedar	30	Log/Pole	11	106
Quaking Aspen	5	Log	13	
Red Maple	5	Log/Pole	12	
Black Spruce	22	Pole/Log	9	
Paper Birch	14	Log/Pole	10	
Balsam Fir	15	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
White Spruce	Low	Variable	Sapling
Balsam Fir	Low	Variable	Sapling
Black Ash	Low	10 - 20 feet	Sapling
White Ash	Low	Variable	Sapling
Black Spruce	Trace	Variable	Sapling
Black Ash	Medium	< 5 feet	Seeding
Tag Alder	Low	10 - 20 feet	Tall Shrub

Wet lowland stand that does have some variability in composition. Cedar is scattered throughout the stand but is most common in the middle, where there are a few dense clumps. Most of the cedar is large diameter and healthy. The northern end of the stand is a mix of good quality spruce, fir, and cedar. Portions of the south half, particularly along the west/southwest edge have low BAs as a result of blowdown that seems to have occurred many years ago. Deciduous species tend to be more common in the south half of the stand as well. Black and white spruce are both present and I found it difficult to distinguish between the two in many places. Heavy deer use as many black ash seedlings are severely browsed, looking like a stunted shrub. Trace of white ash poletimber that is alive and there is a large diameter elm (~16" DBH) in the middle of the stand that still looks alive. Average ba/acre from 7 plots = 106 square feet. A very wet drainage flows north through the NW part of the stand. The majority of this stand is too wet to support any type of harvesting equipment, do not manage.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																			
24	6120 - Lowland Cedar	Poletimber Well	48.6	117	81-110	N/A	<p>Mostly a wet lowland stand, about 2/3rds of which borders the Black River. There are some areas of upland on the north edge and there is typically more species diversity on this transition. A couple of old blowdown areas that have nice paper birch and BAM regen. This is old data from last inventory, did not visit the stand other than the edges during this YOE.</p>																																																																			
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25	6122 - Black Spruce	Poletimber Well	7.9	97	111-140	N/A	<p>Nice black spruce stand, although diameters tend to vary and become much smaller in the northeast part of the stand. Sphagnum hummocks throughout most of the stand. Cedar is more common along the edges. Some small areas of older blowdown near the north and south ends of the stand. Trace of red maple (log/pole) in the canopy. Average ba/acre from 4 plots = 123 square feet.</p>																																																																			
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26	4319 - Mixed Upland Forest	Poletimber Well	2.8	76	81-110	N/A	<p>Upland ridge extending into the adjacent swamp. Some areas of lower stocking in the west half but the east half is mostly well-stocked. Possibly had a partial harvest many years ago as some of the aspen appears younger. Average ba/acre from 4 plots = 83 square feet. Old trash piles are present at the west end of the stand. No management at this time.</p>																																																																			
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27	6239 - Mixed Emergent Wetland	Nonstocked	11.1		Unspecified	No	<p>A stream passes through this stand which was dammed and flooded by beavers many years ago. Beavers are no longer active in the stand and the water has since subsided, leaving a stand of dead cedar, much of which has fallen over, making it nearly impossible to get through some areas. Scattered clumps of invasive phragmites are present throughout, one near the SW corner, the other near the SE corner, and one in the middle portion of the stand. The phragmites was sprayed in the summers of 2016-18, but is still persisting in the stand, although at lower amounts. Much of the stand is regenerating to trees, particularly in the north half and along the edges, at next entry this will likely be a Q1 or Q2 if the water levels do not rise again. I only viewed this stand from several places along the edges.</p>																																																																			
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
28	6120 - Lowland Cedar	Poletimber Well	26.3	102	141-170	N/A	A high quality cedar stand that is also interspersed with numerous pockets of cedar dieback and decline south of the road (visible on 2020NAIP imagery), presumably due to water drainage issues. A stream and several other drainages run north through the stand and appear to be getting backed up by the road, although a newly installed culvert may help to alleviate these problems. The ground transitions to upland along the east edge and is where more of the deciduous tree species can be found. A few small pockets of spruce and tamarack can be found in the west/southwest part of the stand. Trace of balsam poplar (log) and white spruce (log) in the overstory. Average ba/acre from 9 plots = 169 square feet. No management due to the wet soils and water features that are present.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Black Spruce	11	Pole/Log	8		Tag Alder	Trace		Variable	Tall Shrub
Balsam Fir	4	Pole	7		Black Ash	Low		Variable	Sapling
Paper Birch	4	Pole/Log	8		Balsam Fir	Low		Variable	Sapling
Quaking Aspen	2	Log	14						
White Pine	1	XLog/Log	20						
Northern White Cedar	72	Pole/Log	8	102					
Hemlock	1	Pole	7						
Red Maple	3	Pole/Log	9						
Tamarack	2	Pole/Log	8						
29	6112 - Lowland Aspen	Sapling Medium	3.8	25	Immature	N/A		This stand was cut in 1999 in the sale Swamp Edge Aspen Blocks (#53-012-96-01), cut by A.J.D. Cut stumps indicate this was previously a cedar stand. Aspen regenerated moderately well but beavers removed a lot of it from along the west half of the stand. This area is now filling in with spruce and fir. Some areas of poor stocking scattered throughout. Very wet ground in the west and northwest parts of the stand with areas of cattails. Trace of red pine (pole) and white pine (sap) in the stand.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density			Avg. Height
Black Spruce	2	Sapling	3		Cattail spp.	Medium	Unspecified		Non-Wood
White Spruce	18	Sapling/Pole	3		Black Spruce	Trace	5 - 10 feet		Sapling
Balsam Fir	20	Sapling	3		Balsam Fir	Low	5 - 10 feet		Sapling
Quaking Aspen	60	Sapling/Pole	3	25	White Spruce	Low	5 - 10 feet		Sapling
30	6130 - Fir, Aspen, Maple	Poletimber Well	2.1	44	111-140	N/A	Old cedar strip cut that regenerated to a mix of species. Much wetter soils than the strip cut to the north. Some areas of lower stocking, particularly in the southwest part of the stand. Trace of residual cedar. Average ba/acre from 4 plots = 130 square feet.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Quaking Aspen	3	Pole/Sapling	6		Balsam Fir	Medium		Variable	Sapling
Balsam Poplar	36	Pole/Sap/Log	7	44	Tag Alder	Medium		Variable	Tall Shrub
Red Maple	1	Pole/Sapling	5						
Balsam Fir	38	Pole/Sapling	5	44					
Black Spruce	4	Pole/Sapling	6						
Paper Birch	15	Sapling/Pole	4						
Tamarack	3	Pole/Sapling	6						
31	6124 - Lowland Spruce-Fir	Sapling Medium	3.5	40	51-80	N/A		Old cedar cut but no cedar regeneration was observed. Spruce and fir dominate the canopy in most places although the west finger of stand has nice paper birch regeneration. The northeast portion of the stand is not well-stocked and has a thick component of alder. Very wet ground throughout most of the stand.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height		Size
Paper Birch	9	Sapling	3		Tag Alder	High	10 - 20 feet		Tall Shrub
Black Spruce	24	Sapling/Pole	4		Balsam Fir	High	Variable		Sapling
Tamarack	1	Pole/Sapling	5		Black Spruce	Low	Variable		Sapling
Quaking Aspen	4	Pole/Sapling	6		Red Maple	Low	Variable		Sapling
Red Maple	13	Sapling/Pole	4						
Balsam Fir	46	Sapling/Pole	3	40					
White Spruce	3	Pole/Sapling	5						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
32	6139 - Mixed Lowland Forest	Sapling Well	1.1	44	81-110	N/A	Old cedar strip cut that has regenerated to a mix of species, including an excellent amount of paper birch. No cedar regeneration was observed however. Very close to being a poletimber stand. Average ba/acre from 3 plots = 107 square feet. Lowland but not an overly wet stand in most places.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Balsam Fir		34	Sapling/Pole	4		Balsam Fir		Medium	>20 feet	Sapling	
Black Spruce		5	Sapling/Pole	4		Tag Alder		Low	Variable	Tall Shrub	
Tamarack		15	Pole/Sapling	5							
Quaking Aspen		4	Pole/Log	8							
Paper Birch		42	Sapling/Pole	4	44						
33	4119 - Mixed Northern Hardwoods	Poletimber Well	3.9	94	81-110	N/A	Decent quality mixed hardwood stand. No sign of a recent treatment in the stand. Average ba/acre from 4 plots = 95 square feet.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Paper Birch		14	Pole/Log	9		Black Cherry		Trace	Variable	Tall Shrub	
Quaking Aspen		11	Log/Pole	11		Ironwood		High	>20 feet	Sapling	
Balsam Fir		3	Pole	7		Balsam Fir		Trace	Variable	Sapling	
Sugar Maple		36	Pole/Log	8	94	White Ash		Low	< 5 feet	Seeding	
Basswood		16	Log/Pole	12							
Red Maple		16	Pole/Log	8							
Red Oak		4	Log/XLog	16							
34	6112 - Lowland Aspen	Sapling Well	9.0	27	Immature	N/A	Aspen stand that is a mix of upland and lowland in the west half, becoming all lowland in the east half. Clearcut in 1997 in the sale Swamp Edge Aspen Blocks (#53-012-96), bought by AJD. Well-stocked throughout the entire stand. A few poletimber-sized ash have grown into the canopy and appear uninfected by EAB at this time. Nice component of black cherry in some places, most that have made it to the canopy have good form. Trace of red oak (sap/pole), balsam fir (sap), and white spruce (sap) in the overstory.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
White Ash		2	Sapling/Pole	4		White Ash		Low	Variable	Sapling	
Quaking Aspen		68	Sapling/Pole	4	27	Black Cherry		Medium	Variable	Tall Shrub	
Bigtooth Aspen		5	Pole/Sapling	5		Red Maple		Medium	Variable	Sapling	
Red Maple		10	Pole/Sapling	5		Black Ash		Low	Variable	Sapling	
Black Cherry		5	Pole/Sapling	5		Balsam Fir		Trace	Variable	Sapling	
Balsam Poplar		10	Sapling/Pole	4		White Spruce		Trace	Variable	Sapling	
						Tag Alder		Medium	10 - 20 feet	Tall Shrub	
						Serviceberry (Juneberry)		Trace	Variable	Tall Shrub	
35	4119 - Mixed Northern Hardwoods	Sawtimber Medium	11.8	89	51-80	N/A	Johnson's Crossing Campground lies in this stand. Generally poor quality hardwoods.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Red Oak		6	Log	14		Ironwood		Medium	Variable	Sapling	
Quaking Aspen		11	Log/Pole	12		White Ash		Low	< 5 feet	Seeding	
Ironwood		5	Pole	7							
Bigtooth Aspen		3	Log	14							
Sugar Maple		50	Log/Pole	10	89						
Basswood		13	Log/Pole	13							
Paper Birch		4	Log/Pole	11							
Red Maple		8	Pole/Log	8							



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																					
36	4130 - Aspen	Sapling Well	7.1	8	Immature	N/A	Stand harvested in December 2016/January 2017 in the sale Outhouse Aspen, #53-008-16-01. Whole-tree, flail harvest done by Tulgestka. Stand becomes wet the further east you go and there were a few instances of rutting due to a major warmup during the time. They tried fixing some of them which was moderately successful. The remainder of the stand has regenerated very well to aspen with the exception of the landing area, little to no browse impacts on the aspen. Very little other species diversity in the stand other than aspen.																																																					
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37	6220 - Alder/willow	Nonstocked	50.3		Unspecified	No	Only visited the edges of this stand. The Black River and multiple tributaries flow through this stand.																																																					
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38	4111 - S.Maple, Hard Mast Association	Sawtimber Well	10.0	91	111-140	N/A	Nice hardwood/red oak stand. The red oak in particular is very high quality. The stand was set up for an ash salvage in 2014 but was never bid on. White ash was formerly around 20% of the canopy and is now all dead due to EAB. Some, but not all of it, has fallen over. Rolling terrain with some short, steep slopes. Trace of paper birch (pole/log), yellow birch (pole), and elm (pole) in the overstory. Average ba/acre from 7 plots = 119 square feet. BAs decrease to the north and northeast as that is where a lot of the ash was located.																																																					
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39	3105 - Mixed Upland Herbaceous	Nonstocked	1.8		Unspecified		Gas well. U around the edges.																																																					
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40	6229 - Mixed lowland shrub	Nonstocked	9.7	0	Unspecified	612 - Lowland Coniferous Forest	Cut in the late summer and early fall of 2018 during drought conditions by Mike Demaestri of Diversified Forestry. Skidding took place during the winter. Sale was Hackmatack Heaven, #53-009-15-01. Mike did a great job of taking his time on the sale and limiting soil damage. No instances of rutting. However, he had to build up main skid trails with significant amounts of slash in order to stay afloat. A few small areas of saplings and dead trees were left where the ground was very wet. Scattered clumps of leave trees, mostly tamarack but a few black spruce and cedar, were left throughout the stand. 2024 regen survey update - Water table has been raised following the cut and cattails are abundant. Alder has regenerated heavily in the west half of the stand. Tamarack seedlings are present throughout the stand, but in somewhat of a "boom or bust" pattern meaning some areas have a lot of seedlings whereas other areas are nonstocked. A few clumps of quaking aspen regeneration at the east and west ends on drier ground. Some clumps of BAM saplings are present in the west end. Red maple regen only observed at the far east end. Regen survey results: tamarack 525 TPA (1' avg height), balsam poplar 75 TPA (3' avg height), red maple 30 TPA (2' avg height), quaking aspen 13 TPA (3.5' avg height). Regen survey seemed to overestimate red maple and underestimate quaking aspen. This stand passes minimum guidelines for mixed conifer regeneration. Continue to monitor in the future.																																																																												
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41	500 - Water	Nonstocked	1.3	0	Unspecified	No	This stand is currently flooded by beavers and under water. Previously it was a roughly 40 year old stand dominated by paper birch, fir, and spruce. It had been one of the small cedar strip cuts that was done throughout this Compartment. The old Johnson's Crossing railroad grade is the northern edge of the stand and that is where the beavers have built the dam. A small stream did pass through the middle of the stand, flowing north through the grade and into the adjacent lowland stand.																																																																												
42	6123 - Lowland Fir	Poletimber Medium	1.9	44	51-80	N/A	Old cedar cut, however no cedar has regenerated. Regeneration is almost all fir and paper birch and is not well-stocked in all places of the stand. A very wet site with a thick component of alder. Average ba/acre from 4 plots = 65 square feet.																																																																												
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43	4130 - Aspen	Poletimber Well	29.2	37	81-110	N/A	Moderate quality aspen stand. Diameters tend to vary, with some areas still having smaller diameter stems. This variation is likely a result of the differing slopes and aspects throughout the stand. A few of the slopes are very steep yet all were able to be harvested. A few scattered larger diameter (8-12" DBH) sugar maple and beech were left from the previous harvest. Well developed sugar maple understorey in most places of the stand. All of the red oak in the stand is new in-growth and is not residual. There are some areas of aspen decline and mortality in the middle of the stand, it looks like it was primarily quaking aspen, and these areas are filling in with ironwood and white ash. A small non-forested area is present near the north end, likely a result of heavy browse. Trace of white spruce (pole) and white ash (pole) in the canopy. Average ba/acre from 12 plots = 97 square feet. This stand will be ready for a harvest next entry.																																																																												
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44	6112 - Lowland Aspen	Sapling Well	9.3	27	Immature	N/A	Aspen stand that starts as upland on the south edge but transitions to lowland as you move north. Clearcut in 1997 in the sale Swamp Edge Aspen Blocks (#53-012-96), bought by AJD. Mostly a fully-stocked stand except for the northeast area which had the aspen removed by beavers years ago and has filled in somewhat with spruce and fir. Trace of white spruce (sap/pole), red oak (pole/log), and paper birch (sap/pole) in the overstory. Some of the cherry is decent quality and has reached the canopy, although the majority appears to be only "shrub" quality.																																																																															
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45	3105 - Mixed Upland Herbaceous	Nonstocked	1.1		Unspecified	Gas well																																																																																
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46	6123 - Lowland Fir	Sapling Well	2.0	31	Immature	N/A	Small cedar clearcut from 1993 in the sale Black River East Cedar(#53-004-93-01), cut by James Burkhart of Onaway. Other than a handful of seedlings, no cedar regeneration observed. Regeneration has come back well to fir and spruce, although there are some scattered areas of lower stocking with a heavy component of alder. Close to being a poletimber stand. Average ba/acre from 5 plots = 70 square feet. Many areas of this stand are very wet with future operability in question due to the lack cold winters we now receive.																																																																															
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47	4319 - Mixed Upland Forest	Poletimber Well	15.3	39	111-140	N/A	Aspen/fir stand that is mostly well-stocked except for a few small open areas scattered throughout the south half. Clearcut in 1985 by Gary Haskill (#53-024-84). Heavy conifer mix without much aspen along the south/southwest edge. Mostly an upland stand except for along the lowland edges and at the southeast end which is very wet with standing water in places. Trace of white pine (pole/log), red maple (residual log trees), paper birch (pole/sap), and red oak (log/xlog) in the canopy. Average ba/acre from 14 plots = 119 square feet. Very high deer use in the stand, there are game trails everywhere. Barren understory in many places, with some areas only having moss at the ground level. Potentially ready for a treatment next entry. Manage together with stand 61 to the east. Protect all water features.																																																																															
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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48	6130 - Fir, Aspen, Maple	Poletimber Medium	3.3	39	51-80	N/A	Variable stand that is about 60% lowland and 40% upland. Upland ground is mostly along the northern stand edge and an east-west running ridgeline through the middle of the stand. The remainder of the stand is very wet, poorly-stocked, and has a large amount of alder. The upland areas appear to have been cut at the same time as when stand 47 to the south was clearcut. An old road runs south through the middle of the stand, which provided the access to stand 47. Trace of red oak poletimber on the north edge. Average ba/acre from 5 plots = 88 square feet. The upland areas are available for management in the future, although acreage is very small.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Northern White Cedar		2	Log/Pole	12		Tag Alder		High	10 - 20 feet	Tall Shrub	
Paper Birch		3	Pole	7		Balsam Fir		Medium	Variable	Sapling	
Black Cherry		4	Pole	6		Black Spruce		Trace	Variable	Sapling	
Balsam Fir		47	Pole/Sapling	6	39	Black Cherry		Low	Variable	Tall Shrub	
Black Spruce		1	Pole	6		Red Maple		Trace	Variable	Sapling	
Balsam Poplar		2	Pole	6							
Tamarack		1	Pole	5							
Quaking Aspen		35	Pole/Sapling	7	39						
Red Maple		5	Pole	6							

49	4199 - Other Mixed Upland Deciduous	Poletimber Poor	2.3	37	1-50	N/A	Scattered clumps of timber mixed in with non-forested areas. Clearcut at the same time as the adjacent aspen stand to the west but did not successfully regenerate due to browse. There are a couple of nice clumps of red oak, mainly in the middle of the stand. The browse pressure is still high, as evidenced on smaller saplings that have been held back by browse, specifically ironwood at the west end of the stand. Two log-size residual sugar maple are present in the stand.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Ironwood		24	Pole/Sapling	5		Sugar Maple		Low	Variable	Sapling	
Sugar Maple		16	Pole/Sapling	5		Striped Maple		Low	10 - 20 feet	Sapling	
Bigtooth Aspen		10	Pole/Log	8		Ironwood		Medium	Variable	Sapling	
Black Cherry		1	Pole	7		Beech		Low	5 - 10 feet	Sapling	
Beech		2	Pole/Sapling	5		Black Cherry		Trace	Variable	Tall Shrub	
Red Oak		47	Pole/Log	8	37						

50	3105 - Mixed Upland Herbaceous	Nonstocked	2.5		Unspecified	No	There was apparently an old well site that was a dry hole and was plugged in 1985. The north end of the stand has a large area of exposed sand.
Sub-Canopy Species		Density	Avg. Height	Size			
Balsam Fir		Trace	5 - 10 feet	Sapling			
Mixed Grasses		High	Unspecified	Non-Wood			
Spotted Knapweed		High	Unspecified	Non-Wood			
Cladonia (Reindeer moss)		Medium	Unspecified	Non-Wood			
Paper Birch		Trace	>20 feet	Log			
Black Cherry		Trace	Variable	Tall Shrub			
Bracken Fern		Medium	Unspecified	Non-Wood			
Balsam Poplar		Trace	5 - 10 feet	Sapling			
Red Maple		Trace	>20 feet	Log			
Quaking Aspen		Trace	>20 feet	Log			
White Pine		Trace	10 - 20 feet	Sapling			
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																									
51	6120 - Lowland Cedar	Poletimber Well	115.3	117	111-140	N/A	Moderate to low quality cedar stand with areas where the cedar is in decline, although there are a few areas of better quality in the south half. Spruce and tamarack are mixed in throughout the north half. Did not visit the middle of the stand but from imagery this area looks very wet and more poorly-stocked than the remainder of the stand. There are a few small upland inclusions, mostly along the edges, but for the most part this is a very wet stand. Trace of white pine (log/xlog), quaking aspen (log), and balsam poplar (log) in the overstory. Average ba/acre from 10 plots = 125 square feet.																																																									
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52	6233 - Wet Meadow	Nonstocked	4.8		Unspecified	No																																																										
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53	4319 - Mixed Upland Forest	Poletimber Well	2.1	74	81-110	N/A	Moderate quality, mixed species stand. Fir is more common in the north half of the stand, with a few dense clumps, but there has also been a lot that has blown over. Birch can also be found mostly in the north half. The south half is not as well-stocked and has some scattered semi-open areas. Other species that were present in the canopy but rare include red pine, white spruce, and sugar maple. Average ba/acre from 5 plots = 96 square feet.																																																									
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54	6120 - Lowland Cedar	Poletimber Well	3.5	128	171-200	N/A	Moderate to low quality cedar stand, with much of the cedar in decline. Cedar decline was noted during the last inventory cycle as well but there doesn't appear to be a lot of mortality so perhaps the cedar will continue to persist in this state for many more years. Stocking decreases as you move north in the stand with a thick component of alder. Very wet stand with sphagnum hummocks. Average ba/acre from 3 plots = 173 square feet.																																																									
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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55	6239 - Mixed Emergent Wetland	Nonstocked	2.7		Unspecified	No	Standing dead cedar throughout. Two streams converge in this stand.				
								Sub-Canopy Species	Density	Avg. Height	Size
								Tag Alder	Low	10 - 20 feet	Tall Shrub
								Balsam Fir	Low	Variable	Sapling
								Sedges	Full	Unspecified	Non-Wood
								Black Spruce	Trace	Variable	Sapling
Northern White Cedar	Trace	>20 feet	Pole								

56	3105 - Mixed Upland Herbaceous	Nonstocked	1.2		Unspecified		Gas well				
								Sub-Canopy Species	Density	Avg. Height	Size
								Spotted Knapweed	Medium		Non-Wood
								Mixed Grasses	Full		Non-Wood
Blackberry/Raspberry	Low		Tall Shrub								

57	6229 - Mixed lowland shrub	Nonstocked	14.4		Unspecified	No	The Black River, just a small stream at this point, flows through the stand. The northwest part of the stand is forested with a mix of mature cedar and younger spruce and fir, this area could likely be split out as its own stand next entry. The remainder of the stand has a thick component of alder with scattered lowland conifers of various sizes. Only looked at this stand from along the north edge, using imagery to infer the rest.				
								Sub-Canopy Species	Density	Avg. Height	Size
								Tag Alder	High	10 - 20 feet	Tall Shrub
								Northern White Cedar	Low	>20 feet	Pole
								Tamarack	Trace	Variable	Sapling
								Black Spruce	Trace	>20 feet	Pole
								Black Spruce	Trace	Variable	Sapling
								White Pine	Trace	>20 feet	Pole
								Balsam Fir	Low	Variable	Sapling
								Balsam Fir	Low	>20 feet	Pole
								White Pine	Trace	Variable	Sapling
								Tamarack	Trace	>20 feet	Pole

58	4130 - Aspen	Sapling Well	7.5	27	Immature	N/A	Aspen stand that was clearcut in 1997 in the sale Swamp Edge Aspen Blocks (#53-012-96-01) bought by AJD. Mostly upland although the ground does transition to lowland as you get closer to the northern edge. There are a few places along the northern edge where beavers removed most of the aspen years ago. Both black and white ash are present in the stand, although white ash is more prevalent. The bigtooth aspen component is mostly in the portion of the stand south of the road. A handful of large diameter oak were left as residual along the road and there is also some younger oak ingrowth.									
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
								Red Oak	2	Pole/Sap/Log	5		White Ash	High	Variable	Sapling
								Quaking Aspen	71	Sapling/Pole	4	27	Red Maple	Medium	Variable	Sapling
								Paper Birch	1	Sapling/Pole	4		Ironwood	Trace	Variable	Sapling
								Balsam Fir	4	Pole/Sapling	5		Beech	Trace	Variable	Sapling
								Black Cherry	3	Sapling/Pole	4		Balsam Fir	Low	Variable	Sapling
								Bigtooth Aspen	8	Pole/Sapling	5		Black Cherry	Medium	Variable	Tall Shrub
								White Ash	2	Sapling	3		Tag Alder	Trace	5 - 10 feet	Tall Shrub
								Red Maple	9	Sapling/Pole	4		Black Ash	Low	Variable	Sapling



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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59	4199 - Other Mixed Upland Deciduous	Sawtimber Well	75.9	101	81-110	N/A	High quality red oak/mixed hardwood stand. Thinned in 2009 in the sale Oak Hills Revisited (#53-009-01-01.) Numerous areas in the stand were excluded from the harvest because of steep slopes. Average ba/acre from 17 plots = 95 square feet. This stand may potentially be ready for another thinning next entry. A small stick nest was found in the southwest corner of the stand. There is a 2-3 acre area at the northeast corner adjacent to the gas well (stand #63) that has two-aged structure (older oak with younger maple/oak underneath) that was also excluded from the harvest. This area could potentially be its own stand next entry if desired.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Oak		49	Log/XLog/Pole	15	101	Beech		Low	Variable	Sapling
Bigtooth Aspen		2	Log	14		Ironwood		Medium	Variable	Sapling
Red Maple		17	Log/Pole	10		Sugar Maple		Low	>20 feet	Sapling
Beech		2	Log/Pole	11		Striped Maple		Medium	Variable	Sapling
Basswood		7	Log/Pole	12						
Sugar Maple		21	Pole/Log	8	101					
Paper Birch		2	Pole/Log	9						

60	3105 - Mixed Upland Herbaceous	Nonstocked	1.3		Unspecified	Active gas well
Sub-Canopy Species		Density	Avg. Height	Size		
Bracken Fern		Low	Unspecified	Non-Wood		
Spotted Knapweed		High	Unspecified	Non-Wood		
Mixed Grasses		Full	Unspecified	Non-Wood		

61	4319 - Mixed Upland Forest	Poletimber Well	12.6	39	81-110	N/A	Mixed species stand of varying quality and stocking. Clearcut in 1985 by Gary Haskill. East of the well pad is all upland ground with rolling terrain. This part of the stand has scattered areas of poor stocking with a patchy aspen component, a few clones look good but others are small diameter and appear unhealthy, with some mortality noticed. The fir in this part of the stand also appears unhealthy and has been impacted by spruce budworm (looks like older damage as no current mortality is present?). The part of the stand west and south of the well pad transitions to wetter ground and these areas are generally fully-stocked, with less aspen and more conifers. Average ba/acre from 11 plots = 95 square feet. Autumn olive is present in the northeast part of the stand. Very heave deer use throughout the entire stand as there are numerous game trails and an obvious browse line on the fir in the east half. This stand will likely be ready for a treatment next entry and management should strive for a mixed conifer objective as aspen appears to do very poorly on this site.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
White Pine		7	Pole/Log	9		Autumn Olive		Low	Variable	Tall Shrub
White Spruce		2	Pole	6		Black Spruce		Trace	Variable	Sapling
Tamarack		2	Pole	8		Black Cherry		Low	Variable	Tall Shrub
Red Oak		2	XLog/Log	18		Balsam Fir		Medium	Variable	Sapling
Red Maple		4	Pole	6						
Quaking Aspen		30	Pole/Sapling	6	39					
Bigtooth Aspen		7	Pole/Sap/Log	7						
Black Spruce		5	Pole/Log	8						
Balsam Fir		35	Pole/Sapling	6	39					
Red Pine		6	Log/Pole	10						

62	6139 - Mixed Lowland Forest	Sapling Well	6.1	44	81-110	N/A	A lot of old cedar blowdown in this stand makes it difficult to navigate through. No evidence of a past harvest in the stand. Cedar seedlings are present in a few areas but are severely browsed. Nice representation of paper birch. Did not visit in 2024 inventory, used old data but bumped up the diameters an inch. Multiple streams in surrounding stands effectively cut this stand off from any potential management in the future, although the ground is likely too wet anyways.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Paper Birch		35	Sapling/Pole	4		Balsam Fir		Medium	Variable	Sapling
Balsam Poplar		5	Pole/Sapling	5		Tag Alder		Medium	10 - 20 feet	Tall Shrub
Balsam Fir		45	Sapling/Pole	4	44					
Black Spruce		6	Sapling/Pole	4						
Willow spp.		2	Sapling	4						
Northern White Cedar		7	Log/Pole	10						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																	
63	3105 - Mixed Upland Herbaceous	Nonstocked	1.4		Unspecified		Gas well.																	
								Sub-Canopy Species	Density	Avg. Height	Size													
								Spotted Knapweed	High		Non-Wood													
Mixed Grasses	Full		Non-Wood																					
64	6239 - Mixed Emergent Wetland	Nonstocked	4.0		Unspecified	No	Standing dead cedar throughout with the exception of the northeast and southwest corners which have clumps of live cedar and mixed conifers. It appears this stand was formerly flooded but has since started to slowly fill back in with regeneration. Next entry this may be a forested stand, either a Q1 or Q4, if water levels continue to stay low. The Black River, just a small stream at this point, flows through the middle of the stand. Heavy sedge component. Cattails are mostly in the middle of the stand.																	
								Sub-Canopy Species	Density	Avg. Height	Size													
								Northern White Cedar	Trace	>20 feet	Pole													
								Willow spp.	Trace	Variable	Tall Shrub													
								Tag Alder	Medium	Variable	Tall Shrub													
								Black Spruce	Trace	Variable	Sapling													
								Sedges	Full	Unspecified	Non-Wood													
								Tamarack	Low	Variable	Sapling													
								Balsam Fir	Trace	>20 feet	Pole													
								Balsam Fir	Low	Variable	Sapling													
								White Spruce	Trace	Variable	Sapling													
								Cattail spp.	Medium	Unspecified	Non-Wood													
								Paper Birch	Trace	Variable	Sapling													
65	6123 - Lowland Fir	Poletimber Medium	1.5	62	81-110	N/A	Small acreage stand of primarily fir. Most trees in this stand, other than the cedar, are younger than the surrounding lowland, although there isn't evidence of a previous harvest. It possibly originated following a blowdown event many years ago as there are a few larger aspen stems scattered throughout. Lowland but not overly wet. Average ba/acre from 3 plots = 103 square feet. A stream borders																	
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size								
								Northern White Cedar	18	Log/Pole	11		Balsam Fir	Medium	Variable	Sapling								
								Quaking Aspen	8	Pole	8		Tag Alder	Low	Variable	Tall Shrub								
								Balsam Fir	59	Pole/Sapling	7	62	Striped Maple	Trace	10 - 20 feet	Sapling								
								Paper Birch	5	Pole/Log	9		Black Spruce	Trace	Variable	Sapling								
								Red Maple	5	Pole	7		Black Cherry	Trace	Variable	Tall Shrub								
								Black Spruce	5	Pole/Sapling	5		White Ash	Trace	Variable	Sapling								
													Autumn Olive	Trace	5 - 10 feet	Tall Shrub								
													White Spruce	Trace	Variable	Sapling								
								66	4130 - Aspen	Sapling Well	22.5	8	Immature	N/A	Stand harvested in December of 2016 in the sale Outhouse Aspen, #53-008-16-01. Whole-tree, flail harvest done by Tulgestka. No issues within the sale during the harvest. Main skids trails were heavily compacted and some still have little regen at this point. The remainder of the stand has regenerated very well to aspen. Some browse impacts on the /south/southwest edge of the stand. Red oak of various sizes were left as residual as well as a couple white pine (log) and paper birch (pole/sap). An active beaver dam is present in the west side of the adjacent wetland stand (#68) and some aspen is being removed from the north edge of this stand, although not too severe at this time.									
																Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
																Quaking Aspen	60	Sapling	1	8	Serviceberry (Juneberry)	Trace	Variable	Tall Shrub
																Balsam Fir	1	Sapling	3		Black Cherry	Low	Variable	Tall Shrub
Bigtooth Aspen	33	Sapling	1		Red Oak	Trace	5 - 10 feet									Sapling								
Red Oak	6	Log/Pole/XLog	14																					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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67	3105 - Mixed Upland Herbaceous	Nonstocked	1.0		Unspecified	Gas well				
							Sub-Canopy Species	Density	Avg. Height	Size
							Red Oak	Trace		Sapling
							Blackberry/Raspberry	High		Tall Shrub
							Red Oak	Trace		Seeding
							Spotted Knapweed	Low		Non-Wood
							Bracken Fern	Medium		Non-Wood
Mixed Grasses	High		Non-Wood							

68	6239 - Mixed Emergent Wetland	Nonstocked	7.6		Unspecified	No	The west half of this stand is currently under water due to an active beaver dam which has backed up the small stream which flows through the stand. The east half of the stand is a marsh dominated by sedges.				
								Sub-Canopy Species	Density	Avg. Height	Size
								Balsam Fir	Low	Variable	Sapling
								Sedges	Full	Unspecified	Non-Wood
								Tag Alder	Low	10 - 20 feet	Tall Shrub
Tamarack	Low	Variable	Sapling								

69	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Poor	5.4	64	1-50	N/A	Poorly-stocked, very wet lowland stand. Black ash used to be the most common species in the canopy but they are now all dead from EAB and most have fallen over. Thick sedge component in places of the understory. Timber quality is poor for most species with the exception of the white pine and black spruce. Average ba/acre from 4 plots = 45 square feet. Too wet for management.					
								Canopy Species	% Cover	Size Class	DBH	Age
								Northern White Cedar	3	Log/Pole	10	
								White Pine	5	Log/XLog/Pole	15	
								Paper Birch	15	Pole/Log	8	
								Quaking Aspen	8	Log	13	
								Balsam Fir	15	Pole	7	
								Basswood	1	Pole	9	
								Red Maple	38	Pole/Log	8	64

70	6124 - Lowland Spruce-Fir	Sapling Well	6.7	42	81-110	N/A	Cedar clearcut in 1982. No cedar grew back and no current evidence of any cedar regeneration. Dense balsam fir in many areas. A few XL-sized white pine at the south end. The two "fingers" of the stand tend to have more deciduous species mixed in. Trace of white ash (pole/sap). Average ba/acre from 7 plots = 84 square feet. A wet stand that should not be harvested again in the future unless done using hand-felling labor and not mechanized logging equipment.					
								Canopy Species	% Cover	Size Class	DBH	Age
								Balsam Poplar	4	Pole/Sapling	5	
								White Pine	3	Pole/Log/XLog	8	
								Black Spruce	25	Sapling/Pole	4	
								Quaking Aspen	2	Pole/Sapling	6	
								Paper Birch	9	Sapling/Pole	4	
								Tamarack	4	Pole/Sapling	5	
								Balsam Fir	39	Sapling/Pole	3	42
								Red Maple	14	Pole/Sapling	5	



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71	6112 - Lowland Aspen	Sapling Well	9.9	27	Immature	N/A	Lowland stand with a very good component of paper birch. Clearcut in 1997 in the sale Johnson's Crossing Blocks (#53-015-96-01), cut by Ralph Walker. Some scattered areas that did not regenerate as well but mostly it is a well-stocked stand. Both black and white ash are present in the stand and there is heavy deer browse on the smaller seedlings and saplings. Very wet in most areas of the stand and there are some spots with low amounts of standing water and cattails. A patch of invasive phragmites is present in the middle part of the stand near the north edge, roughly 50x50 feet in size.																																																																																	
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72	4123 - Red Oak	Sawtimber Well	128.9	101	81-110	N/A	Large stand of oak and mixed hardwoods sitting on very hilly terrain. Generally high quality oak however there are some areas, particularly southern aspects and ridgetops, where the oak quality declines. Thinned in 2005 in the sale Oak Hills Again (#53-007-04-02) but many slopes were inoperable and excluded from the harvest. There are also some areas of marked trees remaining that were unable to be cut due to the slopes. During the previous inventory YOЕ, scattered pockets of oak mortality were found throughout the stand. The forest health specialist made a site visit and determined that oak wilt was likely not the cause of mortality, and instead was due to a combination of factors (defoliation, chestnut-borer, etc.). There are not any signs of newer mortality in the stand. Beech bark disease can be found on most beech trees in the stand. White ash used to be a minor component of the canopy (6%) but is now all dead from EAB. Trace of ironwood (pole) and paper birch (pole/log) in the overstory. Average ba/acre from 17 plots = 109 square feet. This stand will likely be ready for another thinning next entry. Exclude all steep slopes during the harvest.																																																																																	
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73	6139 - Mixed Lowland Forest	Sapling Well	2.4	42	81-110	N/A	Cedar clearcut strips cut by Michael Wener in 1982. No cedar has grown back, instead there is a mix of species including a good component of paper birch, especially in the southern segment of this stand. Dense spruce and fir in many places of the northern segment of the stand. Trace of white ash (pole/sap) in the overstory.																																																																																	
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74	3105 - Mixed Upland Herbaceous	Nonstocked	1.0		Unspecified	Gas well																																																																																		
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
75	4130 - Aspen	Sapling Well	9.7	27	Immature	N/A	Fully-stocked stand of aspen. Clearcut in 1997 in the sale Johnson's Crossing Blocks (#53-015-96-01), cut by Ralph Walker. Some red oak stump sprouts made it past the browse and are mostly at the far southern end adjacent to the road. Red maple is more common in the south half of the stand. Good component of shrubs in some areas of the stand. Mostly upland although there is some wetter ground along the north and southwest edges. Trace of tamarack and white pine in the canopy.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Balsam Fir		1	Sapling	3		Balsam Fir		
Paper Birch		1	Sapling	3		Serviceberry (Juneberry)		
White Ash		2	Sapling	3		Nannyberry		
Quaking Aspen		79	Sapling/Pole	4	27	Red Maple		
Bigtooth Aspen		8	Pole/Sapling	5		White Ash		
Red Maple		7	Sapling	3		Paper Birch		
Red Oak		2	Sapling/Pole	4		Black Cherry		
						White Pine		
						White Spruce		
76	3105 - Mixed Upland Herbaceous	Nonstocked	1.2		Unspecified			-Gas well.
Sub-Canopy Species		Density	Avg. Height	Size				
Mixed Grasses		Full		Non-Wood				
Spotted Knapweed		High		Non-Wood				
Bigtooth Aspen		Trace		Sapling				
Blackberry/Raspberry		Trace		Tall Shrub				
77	4199 - Other Mixed Upland Deciduous	Sawtimber Well	3.1	90	111-140	N/A	Mixed stand of oak, aspen, and maple. Oak is more common in the northwest half, aspen is more common in the east/southeast portions. It looks like portions of the stand had a partial harvest at one time as some of the red maple and aspen look younger. Trace of white pine (log) in the canopy. Average ba/acre from 5 plots = 116 square feet.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Balsam Fir		2	Pole	6		Ironwood		
Bigtooth Aspen		30	Log/Pole	10		Red Maple		
Red Oak		36	Log/XLog/Pole	14	90	Beech		
Red Maple		23	Pole/Log	8		Black Cherry		
Sugar Maple		9	Pole	7				
78	4130 - Aspen	Sapling Well	15.0	27	Immature	N/A	Well-stocked aspen stand. Clearcut in 1997 in the sale Johnson's Crossing Block (#53-015-96-01). Almost all of the stand sits on west and south facing slopes, some of which are very steep, yet all areas of the stand were able to be harvested. A small amount of wet ground is present at the southwestern corner, west of the closed road. An illegal ORV trail cuts through this stand, up the slope to the oil pad. The old Johnson's Crossing RR grade borders this stand to the south.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Oak		8	Pole/Sapling	5		White Spruce		
Bigtooth Aspen		67	Sapling/Pole	4	27	Red Oak		
Quaking Aspen		10	Sapling/Pole	4		Black Cherry		
Balsam Fir		3	Sapling/Pole	4		Balsam Fir		
Red Maple		12	Sapling	3		Maple Leaved Viburnum		
						Witch Hazel		
						Red Maple		
						Serviceberry (Juneberry)		
						Striped Maple		
						Autumn Olive		
						Paper Birch		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																		
79	42201 - Natural White Pine, Mixed Deciduous	Sawtimber Medium	3.1	74	81-110	N/A	Semi-open stand of white pine, portions of which had all the aspen removed years ago. The white pine is mostly good quality with some large diameter trees present. Open understory in many areas of the stand. Average ba/acre from 4 plots = 90 square feet. The survey corner is in at the southwest part of the stand.																																																		
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81	710 - Sand, Soil	Nonstocked	1.0		Unspecified		VCP Michigan LLC gas well lying at the top of a slope (Permit # 45036, State Charlton C2-25). There is a lot of exposed blow sand and erosion ongoing. A large pile of shingles can be found at the south end of the stand. An illegal ORV trail runs up to this opening, coming from the adjacent aspen stand.																																																		
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82	4123 - Red Oak	Sawtimber Medium	5.2	104	81-110	N/A	Nice red oak growing on hardwood quality soils. Cut in 1997 in the sale Johnson's Crossing Block (#53-15-96-01), and it looks like everything was removed except for oak and a few hardwoods. Mostly undesirable regeneration except for a little bit of sugar maple regen. Average ba/acre from 4 plots = 95 square feet. Rolling terrain with some steep slopes.																																																		
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84	4199 - Other Mixed Upland Deciduous	Sawtimber Well	22.9	91	111-140	N/A	Oak/mixed hardwood stand, the majority of which lies on very steep slopes. The only areas of operable terrain are in the middle parts of the stand and along a few of the ridgelines. Red oak quality varies significantly and is generally much lower quality on the south facing aspects. The middle and northern parts of the stand have much better quality stems. Bigtooth aspen is limited to a small pocket at the east end. Average ba/acre from 7 plots = 131 square feet. No management due to the steep slopes.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Basswood		5	Log/Pole	11		Ironwood		
Beech		5	Pole/Log	8		Medium		
Red Oak		54	Log/Pole/XLog	14	91	Variable		
Bigtooth Aspen		7	Log/XLog	15		Sapling		
Paper Birch		1	Pole/Log	8		Maple Leaved Viburnum		
Sugar Maple		16	Pole/Log	8		Low		
Red Maple		12	Log/Pole	10		< 5 feet		
						Tall Shrub		
85	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	10.3	54	171-200	N/A	Red pine plantation with a significant component of aspen scattered throughout both individually and in small clones. Good quality red pine in those areas where it isn't overtopped by aspen. No signs of a past treatment in this stand. Trace of black cherry (pole) and paper birch (pole) in the canopy. Average ba/acre from 8 plots = 180 square feet.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Oak		3	Log/XLog	15		Beech		
Bigtooth Aspen		12	Pole/Log	8		Trace		
Balsam Fir		2	Pole	6		5 - 10 feet		
Red Pine		61	Log/Pole	12	54	Sapling		
White Pine		4	Log/Pole/XLog	13		Variable		
Red Maple		6	Pole/Log	8		Sapling		
Quaking Aspen		12	Pole/Log	8		Ironwood		
						Trace		
86	4130 - Aspen	Sapling Well	29.3	8	Immature	N/A	Stand cut in December of 2016 in the sale Outhouse Aspen, #53-008-16-01. Whole-tree, flail harvest. Regen has come back very well with the exception of where the flail pile was located as well as a few areas affected by browse. Otherwise the regen looks very good. All oak was left as well as some pine.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Oak		12	Log/Pole/XLog	13		Serviceberry (Juneberry)		
Quaking Aspen		75	Sapling	1	8	Trace		
White Pine		2	Log	13		Variable		
Bigtooth Aspen		10	Sapling	1		5 - 10 feet		
Paper Birch		1	Pole/Log	8		Tall Shrub		
87	3105 - Mixed Upland Herbaceous	Nonstocked	1.0		Unspecified	Gas well		
Sub-Canopy Species		Density	Avg. Height	Size				
Spotted Knapweed		High		Non-Wood				
Blackberry/Raspberry		Low		Tall Shrub				
Mixed Grasses		Full		Non-Wood				
Red Oak		Trace		Seeding				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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88	4199 - Other Mixed Upland Deciduous	Sawtimber Well	43.6	91	81-110	N/A	Mixed hardwood/red oak stand that sits on a series of ridges and valleys. The oak is generally high quality in most places of the stand. Hardwoods are moderate quality, with the best stems being located in some of the shaded coves/valleys. Trace of paper birch (pole/log) and yellow birch (pole) in the overstory. White ash used to occupy about 10% of the canopy but it is now all dead from EAB. Average ba/acre from 12 plots = 103 square feet, although the BAs tend to vary quite a bit with some well-stocked areas. It's likely that this stand will be ready for a thinning next entry, although total available acreage will decrease dramatically due to the amount of steep terrain.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Sugar Maple		30	Pole/Log	8	91	Striped Maple		Low	Variable	Sapling	
Beech		8	Log/Pole	11		Beech		Medium	Variable	Sapling	
Red Oak		45	Log/XLog	15	91	Sugar Maple		Low	>20 feet	Sapling	
Ironwood		1	Pole	5		Ironwood		High	Variable	Sapling	
Red Maple		10	Log/Pole	10							
Basswood		6	Log/Pole	12							

89	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	31.7	117	171-200	N/A	Diverse lowland stand with most species displaying excellent growth and quality. Most of the cedar is healthy and vigorous. Generally well-stocked although there are some scattered areas of lower stocking along the west edge. There are also some newer areas of blowdown in the central part of the stand, likely a result of the more recent clearcut to the west. Barren understory in most spots as there is evidence of heavy deer use. The south end of the stand has some upland inclusions and is where more of the hemlock is located, along with the oak component. There is also a small inclusion of younger aspen and fir in this general area. At the northwest end, adjacent to the private property, is a small pocket of younger paper birch, fir, and red maple which was the site of an old cedar strip cut. Average ba/acre from 11 plots = 171 square feet. No management due to the wet soils.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
White Pine		9	XLog/Log	20		Balsam Fir		Low	Variable	Sapling	
Hemlock		8	Pole/Log	9		Tag Alder		Trace	Variable	Tall Shrub	
Basswood		1	Log	14		Black Ash		Trace	Variable	Sapling	
Red Oak		2	Log/XLog	15							
Balsam Fir		8	Pole	7							
Red Maple		15	Log/Pole	11							
Quaking Aspen		3	Log/Pole	13							
Northern White Cedar		45	Log/Pole	10	117						
Paper Birch		8	Pole/Log	9							

90	3105 - Mixed Upland Herbaceous	Nonstocked	1.1		Unspecified	Gas well	
Sub-Canopy Species		Density	Avg. Height	Size			
Spotted Knapweed		High	Unspecified	Non-Wood			
Blackberry/Raspberry		Low	< 5 feet	Tall Shrub			
Mixed Grasses		Full	Unspecified	Non-Wood			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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91	4130 - Aspen	Sapling Well	50.1	6	Immature	N/A	<p>2023 update - Very good looking aspen regen, nearly fully-stocked except for some of the main skid trails. Only light browse on the quaking aspen. Bigtooth aspen is being browsed heavily but is relatively uncommon in the stand, being found mostly along the south/southwest edges of the stand. The far east side of this stand, surrounding stand 16 (G type), was formerly a separate stand, a white spruce plantation with aspen mixed in. It has regenerated well to aspen with only a few areas of lower stocking. Species diversity in the regeneration is low, the only other deciduous species noted were some black cherry sprouts. White spruce seedlings were observed in some of the areas without much aspen regen.</p> <p>07/13/2018 - Stand cut in early summer of 2018 in the sale Old Homestead Aspen SBW, #53-003-16-01. Roundwood job cut by a Precision crew. Scattered spruce, red pine, and white pine left throughout. All cherry, paper birch, and basswood left as well, which there was quite a bit of in the area on the northwest side of stand 7 (MD6 stand). Two small instances of rutting, one on the east side of the G type, stand 12, and the other on the north side of the L type, stand 105. Slash was scattered in these areas and they were somewhat smoothed out.</p>
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Canopy Species	% Cover	Size Class	DBH	Age
Basswood	1	Log	14	
Balsam Poplar	10	Sapling	1	
Bigtooth Aspen	10	Sapling	1	
White Pine	1	XLog	22	
Black Cherry	2	Pole/Log	8	
White Spruce	2	Log	14	
Quaking Aspen	74	Sapling	1	6

92	4123 - Red Oak	Sawtimber Poor	54.3	96	1-50	N/A	<p>2023 regen survey update - See attached document for TPA numbers. White ash and ironwood regen is dominant. Most species are still below 4 feet tall at this time. Some oak stump sprouts have surpassed the browse line, but not many overall. In general, browse pressure is moderate in this stand and appears to be mostly from deer, rather than elk. The further you get away from the roads, the more intense the browse becomes. Despite the browse, I would estimate canopy coverage of the regen to be at least 75% at this time. A heavy layer of blackberry is present throughout most of the stand. Per the regen survey treatment, oak will not reach the desired 25% of the canopy coverage and ironwood will likely become dominant in the stand. Initiate next steps treatments of interplanting white pine and white oak. This treatment will require a variance. Add another monitoring treatment for 4 years from now to reassess the regeneration.</p> <p>Stand was harvested in the summer and fall of 2018 in the sale Valley Oak, #53-004-16-01. Cut by a roundwood crew from Precision. No rutting or residual damage issues. Processors did a good job of getting the ironwood regen knocked down although there are a few scattered clumps here and there in the north half. Average residual ba/acre from 50 plots = 13 square feet.</p> <p>Prior to harvesting, low quality oak and hardwoods. Stand almost appears as if it were highgraded. A few pockets of nice sugar maple regen, however ironwood dominates the regeneration and is very dense throughout the stand.</p>
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Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	1	Log	11	96
Red Oak	96	Log	14	96
Basswood	2	Log	11	
Paper Birch	1	Log/Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
White Ash	High	< 5 feet	Seeding
Red Oak	Low	< 5 feet	Seeding
Bigtooth Aspen	Low	< 5 feet	Seeding
Red Maple	Low	< 5 feet	Seeding
Ironwood	High	< 5 feet	Seeding
Red Oak	Low	5 - 10 feet	Sapling
Quaking Aspen	Low	< 5 feet	Seeding
Sugar Maple	Low	< 5 feet	Seeding
Common Blackberry	High	< 5 feet	Tall Shrub



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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93	6120 - Lowland Cedar	Poletimber Well	31.7	121	201+	N/A	High quality, densely stocked cedar in the interior of the stand with areas of decline along most of the northern edge as well as some areas along the road. Barren understory in most places due to the high stocking. Evidence of heavy deer use throughout. Average ba/acre from 5 plots = 272 square feet. At least one stream passes through this stand, with several areas of wet ground as well. No management.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Tamarack		2	Pole/Log	8		Tag Alder		Trace	10 - 20 feet	Tall Shrub	
White Pine		1	Log/XLog	17		Black Ash		Trace	Variable	Sapling	
Hemlock		2	Log/Pole	12		Balsam Fir		Trace	Variable	Sapling	
Paper Birch		4	Pole/Log	8							
Northern White Cedar		76	Pole/Log	9	121						
Red Maple		4	Pole/Log	9							
Balsam Fir		3	Pole	7							
Black Spruce		8	Pole/Log	8							

94	3105 - Mixed Upland Herbaceous	Nonstocked	1.2		Unspecified		Gas well
Sub-Canopy Species		Density	Avg. Height	Size			
Mixed Grasses		Full		Non-Wood			
Spotted Knapweed		High		Non-Wood			
Blackberry/Raspberry		Low		Tall Shrub			

95	3105 - Mixed Upland Herbaceous	Nonstocked	1.0		Unspecified		Gas well
Sub-Canopy Species		Density	Avg. Height	Size			
Mixed Grasses		Full		Non-Wood			

96	6139 - Mixed Lowland Forest	Sapling Well	3.5	40	51-80	N/A	This stand is a series of 4 small cedar cuts that were done in the mid 1980's. No evidence of any cedar regeneration. Heavy deer use in all units and a browse line is evident on many of the fir. Good component of paper birch in the most southern unit. Average ba/acre from 10 plots = 74 square feet. Close to being a poletimber stand. A small stream running north cuts through the middle of the northern three stands. No management in the future.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Balsam Poplar		1	Pole	5		Black Spruce		Low	5 - 10 feet	Sapling	
Paper Birch		28	Sapling/Pole	3		Tamarack		Trace	Variable	Sapling	
Balsam Fir		36	Sapling/Pole	3	40	Black Ash		Low	Variable	Sapling	
Red Maple		21	Sapling/Pole	3		Tag Alder		Trace	Variable	Tall Shrub	
Black Spruce		10	Sapling/Pole	4		Willow spp.		Trace	>20 feet	Tall Shrub	
Black Ash		1	Sapling	3		Balsam Fir		Medium	Variable	Sapling	
Tamarack		3	Sapling/Pole	4		Serviceberry (Juneberry)		Trace	>20 feet	Tall Shrub	

97	3105 - Mixed Upland Herbaceous	Nonstocked	1.3		Unspecified		Gas well
Sub-Canopy Species		Density	Avg. Height	Size			
Mixed Grasses		Full		Non-Wood			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
98	4199 - Other Mixed Upland Deciduous	Sawtimber Well	113.4	85	111-140	N/A	Red oak/mixed hardwood stand sitting on rolling terrain with numerous steep slopes. There are also a few sinkhole-like formations in the southeast part of the stand. Red oak quality is generally high but does vary somewhat based on slope and aspect. South and west facing slopes tend to have lower quality oak and smaller diameter trees, as do some of the ridgetops. Site quality increases in the south half of the stand with a higher amount of sugar maple and basswood in the canopy. Trace of white pine in the overstory (log/pole). Most red pine is in the northwest part of the stand. Some larger hemlock are present in the southeast corner. Average ba/acre from 21 plots = 113 square feet. Quite a few rocks in the soil, a rarity in the PRC. Although there are a few coves and ridgelines that are operable, the vast majority of this stand has slopes that are too steep for management.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Oak		50	Log/Pole/XLog	13	85	Hemlock		
Basswood		3	Log/Pole	11		Ironwood		
Bigtooth Aspen		3	Log	14		Beech		
Sugar Maple		14	Pole/Log	8		Striped Maple		
Red Pine		1	Log/Pole	13		Sugar Maple		
Paper Birch		4	Pole/Log	8		White Pine		
Red Maple		21	Pole/Log	8				
Beech		4	Pole/Log	8				
99	3105 - Mixed Upland Herbaceous	Nonstocked	1.3		Unspecified	No		Opening sitting in a small valley with slopes on all sides. Lots of elk use in the stand.
Sub-Canopy Species		Density	Avg. Height	Size				
Witch Hazel		Trace	5 - 10 feet	Tall Shrub				
Bigtooth Aspen		Trace	>20 feet	Sapling				
Mixed Grasses		Full	Unspecified	Non-Wood				
Beech		Low	Variable	Sapling				
Black Cherry		Low	Variable	Tall Shrub				
Ironwood		Low	Variable	Sapling				
100	3105 - Mixed Upland Herbaceous	Nonstocked	1.2		Unspecified	Gas well		
Sub-Canopy Species		Density	Avg. Height	Size				
Spotted Knapweed		Medium	Unspecified	Non-Wood				
Mixed Grasses		Full	Unspecified	Non-Wood				
101	4199 - Other Mixed Upland Deciduous	Sapling Medium	22.7	22	Immature	N/A	Clearcut in 2002 in the sale Johnson's Crossing Blocks 2 (#53-007-01-01). Some oak was left as residual, more common in the south half of the stand. Regeneration has come back to mixed deciduous species but there are numerous areas that have been severely impacted by browse and the regen has been kept below 5 feet tall. Some oak stump sprouts did make it past the browse level (canopy % is a mix of residual and new in-growth, roughly a 50/50 split). Aspen is only present in a few scattered clumps, most numerous at the south end. Trace of paper birch and white ash saplings. Rolling terrain with a few very steep slopes	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Quaking Aspen		8	Sapling	3		Maple Leaved Viburnum		
Beech		4	Sapling	2		Striped Maple		
Red Maple		38	Sapling	3	22	White Pine		
Ironwood		3	Sapling	2		Red Maple		
Striped Maple		2	Sapling	2		Ironwood		
Bigtooth Aspen		21	Sapling/Pole	4	22	Beech		
Red Oak		20	Pole/Sap/Log	5				
White Pine		4	Log/Pole	11				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																	
102	3105 - Mixed Upland Herbaceous	Nonstocked	1.5		Unspecified		Gas well. Some red oak saplings and white pine of various sizes on the west end. There is a noticeable browse line on the smaller white pine saplings.																	
								Sub-Canopy Species	Density	Avg. Height	Size													
								Mixed Grasses	Full	Unspecified	Non-Wood													
								White Pine	Low	Variable	Sapling													
								White Pine	Low	>20 feet	Pole													
								Red Oak	Trace	Variable	Sapling													
								Black Cherry	Trace	Variable	Tall Shrub													
White Pine	Trace	>20 feet	Log																					
103	4136 - Aspen, Mixed Conifer	Poletimber Well	16.7	46	81-110	N/A	Moderate quality aspen stand. Aspen diameters are largest at the south end of the stand and decrease as you move north, with some areas still having submerchantable stems. The ground becomes progressively wetter as you move north, which may explain the decrease in diameter growth. Pit and mound topography is common throughout the wet areas and heavily browsed black ash seedlings are abundant. Scattered larger diameter residual red maple, red oak, cedar, birch, and white pine can be found throughout the stand. Many white pine are legacy tree size. A few hemlock are mixed in with the white pine in the northeast corner. Some younger red oak (as old as the aspen) can be found in the stand. Average ba/acre from 10 plots = 141 square feet.																	
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size								
								Balsam Fir	17	Pole	6		Balsam Fir	Medium	Variable	Sapling								
								Quaking Aspen	58	Pole/Sap/Log	8	46	Red Maple	Low	>20 feet	Sapling								
								Red Oak	2	Log/Pole	14		Beech	Trace	5 - 10 feet	Sapling								
								Paper Birch	1	Pole/Log	8		White Ash	Trace	5 - 10 feet	Sapling								
								White Pine	2	XLog/Log	20		Serviceberry (Juneberry)	Trace	>20 feet	Tall Shrub								
								Red Maple	19	Pole/Log	8		Black Ash	Medium	< 5 feet	Seeding								
								Northern White Cedar	1	Log/Pole	11		Black Cherry	Trace	Variable	Tall Shrub								
								104	6112 - Lowland Aspen	Sawtimber Poor	0.8	57	1-50	N/A	Small non-forested wetland with a buffer of trees along the edges.									
																Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
																American Elm	2	Pole	7		Tag Alder	Medium	10 - 20 feet	Tall Shrub
																Balsam Fir	5	Log/Pole	11		Michigan Holly	Medium	5 - 10 feet	Tall Shrub
Red Maple	21	Log/Pole	12		White Spruce	Low	Variable									Sapling								
Quaking Aspen	60	Log/Pole	12	57	Balsam Poplar	Trace	>20 feet									Sapling								
White Spruce	12	Log/Pole/XLog	13		American Elm	Trace	>20 feet									Sapling								
105	6112 - Lowland Aspen	Sawtimber Poor	1.0	57	1-50	N/A	Small wetland that was protected when the surrounding stand was cut, a small buffer of trees was included around the edges for retention purposes.																	
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size								
								Quaking Aspen	71	Log/Pole	11	57	Michigan Holly	Medium	5 - 10 feet	Tall Shrub								
								Red Maple	20	Pole/Log	8		White Spruce	Trace	Variable	Sapling								
								Balsam Fir	4	Pole	7		Red Maple	Low	>20 feet	Sapling								
								White Spruce	5	Pole/Log	8		Tag Alder	Low	10 - 20 feet	Tall Shrub								
													Balsam Fir	Trace	Variable	Sapling								
													Cattail spp.	Medium	Unspecified	Non-Wood								
								106	310 - Herbaceous Openland	Nonstocked	0.8	0	Unspecified											



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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107 4191 - Mixed Upland Deciduous with Conifer Poletimber Well 8.5 72 111-140 N/A

Diverse mixed species stand. There was likely a partial harvest years ago in the stand as there are a handful of younger aspen clones mixed in; specifically a bigtooth aspen clone on the east side of the gas well. A younger component of oak is also present in the stand. Hardwoods are good quality but tend to be scattered throughout in small clumps. Paper birch is mostly near Sparr Road and abundant in some areas. Fir and spruce is mostly in the southwest part of the stand. Trace of red pine (log), beech (log), and black cherry (pole) in the overstory. Average ba/acre from 12 plots = 120 square feet. No management at this time. Let grow and manage for a mixed hardwood stand.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	15	Pole/Log	9	
White Spruce	4	Pole/Log	8	
Sugar Maple	31	Pole/Log/XLog	8	72
Red Oak	3	Log/Pole	11	
Paper Birch	6	Pole/Log	8	
White Pine	1	Log/XLog	15	
Red Maple	10	Pole/Log	8	
Basswood	8	Log/Pole	11	
Ironwood	2	Pole/Sapling	5	
Quaking Aspen	10	Log/Pole	11	51

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	Variable	Sapling
Ironwood	Medium	>20 feet	Sapling
White Spruce	Low	Variable	Sapling
Paper Birch	Trace	>20 feet	Sapling
Black Cherry	Low	>20 feet	Tall Shrub

108 4130 - Aspen Poletimber Well 7.7 51 111-140 N/A

This stand was originally a part of adjacent stand 91 to the north but was excluded from that harvest due to its proximity to the Black River and steep slopes. Canopy %'s are largely an estimate from edge observations.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	7	Pole	6	
Paper Birch	3	Pole	7	
Quaking Aspen	25	Pole/Log	8	51
Balsam Fir	10	Pole	7	
White Spruce	6	Pole/Log	8	
Sugar Maple	3	Pole	7	
Ironwood	2	Pole/Sapling	5	
Bigtooth Aspen	44	Pole	8	51

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling
White Spruce	Medium	Variable	Sapling

109 310 - Herbaceous Openland Nonstocked 0.6 0 Unspecified Well pad.

110 6117 - Lowland Deciduous, Mixed Coniferous Sapling Well 3.3 40 111-140 N/A

Old cedar clearcut that was harvested in several small chunks from 1982-1986. Objective was to feed deer. This portion of the cut regenerated well to paper birch. Close to being a poletimber stand. A few areas with larger trees along the east edge, mostly cedar with a few spruce, fir, and red maple. Trace of basswood (pole/log) in the overstory. Average ba/acre of the stand from 4 plots = 120 square feet.

Canopy Species	% Cover	Size Class	DBH	Age
Black Spruce	2	Sapling/Pole	4	
Paper Birch	38	Sapling/Pole	4	40
Northern White Cedar	1	Log	12	
Balsam Fir	21	Sapling/Pole	3	
White Ash	1	Sapling	3	
American Elm	1	Pole	6	
Red Maple	30	Sapling/Pole	4	
White Spruce	2	Sapling/Pole	3	

Sub-Canopy Species	Density	Avg. Height	Size
Black Ash	Low	10 - 20 feet	Sapling
Red Maple	Low	10 - 20 feet	Sapling
Balsam Fir	Medium	Variable	Sapling
Tag Alder	Trace	Variable	Tall Shrub



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
111	6120 - Lowland Cedar	Poletimber Well	78.5	117	201+	N/A	Very dense, high quality stand of cedar. Most cedar is healthy and vigorous except for a few scattered areas of decline, typically in areas that are the wettest, such as along the south edge and in the northwest part of the stand, where a small stream is located. The interior middle part of the stand has the best quality cedar and highest stocking, with some areas having BAs at or above 300 square feet. Stocking declines in the southern "finger" of the stand and composition transitions to more of a mixed lowland type. The understory is barren in most places of the stand, except for where stocking declines. Trace of balsam poplar (log/pole) in the overstory. Average ba/acre from 13 plots = 229 square feet. No management due to wet ground and the inability to re-grow cedar.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
White Spruce		1	Log	14		Tag Alder		Low	Variable	Tall Shrub	
Black Spruce		10	Pole/Log	9		Balsam Fir		Low	Variable	Tall Shrub	
Paper Birch		4	Pole	8							
Red Maple		3	Log/Pole	10							
Hemlock		2	Log/Pole	10							
White Pine		2	XLog/Log	19							
Quaking Aspen		1	Log	13							
Northern White Cedar		72	Pole/Log	8	117						
Balsam Fir		5	Pole	7							
112	4119 - Mixed Northern Hardwoods	Poletimber Well	3.4	84	51-80	N/A		Mixed hardwood stand adjacent to Johnson's Crossing Equestrian Campground. The east half of the stand is more of a typical hardwood stand with red maple, sugar maple, and some red oak mixed in while the west half transitions to more of a red maple, aspen, birch type. Mostly upland but there is some slightly wet ground along the western edge. Some areas of lower stocking where some of the larger aspen have fallen over. Generally poor quality timber overall except for the red oak component. Average ba/acre from 4 plots = 80 square feet. Leave unmanaged due to the proximity to the campground.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height	Size
Balsam Fir		8	Pole	8		White Spruce			Trace	Variable	Sapling
Red Maple		48	Pole/Log	8	84	White Ash			Low	Variable	Sapling
Sugar Maple		14	Pole/Log	8		Red Oak			Trace	>20 feet	Sapling
White Spruce		1	Pole	6		Ironwood			Low	Variable	Sapling
Paper Birch		9	Pole/Log	8		Black Cherry			Low	Variable	Tall Shrub
Quaking Aspen		13	Log	13		Beech			Low	Variable	Sapling
Red Oak		7	Log/XLog	15		Striped Maple			Low	Variable	Sapling
						Red Maple			Low	>20 feet	Sapling
						Balsam Fir			Trace	Variable	Sapling
						Sugar Maple			Trace	>20 feet	Sapling
113	6120 - Lowland Cedar	Poletimber Well	68.0	117	171-200	N/A	Lowland cedar stand with many areas of very high quality, densely stocked cedar, typically in the interior parts of the stand. However, there are also scattered areas of lower quality cedar and some pockets that are in decline, most common along the edges of the stand. The middle part of the stand near the railroad grade is more of a mixed species type and also has some drier ground. Trace of tamarack (pole/log) and white pine (log/xlog) in the overstory. Average ba/acre from 14 plots = 177 square feet. At least two streams flow north through the stand. No management.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Paper Birch		5	Pole/Log	9		Tag Alder		Low	Variable	Tall Shrub	
Balsam Fir		10	Pole/Log	8		Black Spruce		Trace	Variable	Sapling	
Quaking Aspen		2	Log	12		Balsam Fir		Low	Variable	Tall Shrub	
White Spruce		2	Log/XLog	14							
Black Spruce		8	Pole/Log	9							
Red Maple		5	Log/Pole	12							
Hemlock		1	Log/Pole	14							
Northern White Cedar		67	Pole/Log	9	117						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																					
114	4111 - S.Maple, Hard Mast Association	Poletimber Medium	3.6	91	51-80	N/A	Low quality and poorly-stocked hardwood stand. No sale records were found but evidence of a partial harvest is noticeable on the 98DOQ imagery and the stand looks 2-aged in many places as a younger component of ironwood is prominent throughout the stand. It's likely that the harvest took place at the same time as the aspen clearcut to the east. Most of the residual hardwoods are small diameter and short in height, only the oak and basswood show decent quality. White ash used to be common at the south end of the stand but is now all dead from EAB. Average ba/acre from 5 plots = 60 square feet.																																																					
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115	3105 - Mixed Upland Herbaceous	Nonstocked	0.3		Unspecified	No	Small grassy area between Sparr and Tin Shanty Roads.																																																					
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116	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	2.2	40	51-80	N/A	This stand was cut at the same time as stand 15 to the west but regenerated to mainly birch and BAM. Previously it was a cedar stand but no cedar regeneration was currently observed. Trace of elm and black spruce saplings in the canopy. Trace of quaking aspen poletimber. A very wet stand.																																																					
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117	6220 - Alder/willow	Nonstocked	16.4		Unspecified	No	The Black River flows through the length of this stand. A lot of dead cedar. A few areas with young conifer regeneration in the west half. Only looked at this stand from a few spots along the edges.																																																					
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118	6123 - Lowland Fir	Sapling Well	1.8	35	81-110	N/A	Small lowland conifer stand that doesn't appear to have been cut in the past, rather it looks like it regenerated naturally as a result of cedar windthrow. It's likely that the cedar blew over after adjacent stand 47 to the east was clearcut. Close to being a poletimber stand. Average ba/acre from 4 plots = 98 square feet. The far south end is an upland knob with larger red maple and spruce growing on it.																																																					
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