



Compartment Review Presentation

Pigeon River Country Forest Management Unit

Compartment 53048

Entry Year 2024

Acreage: 1,851

County Otsego

Management Area: Pigeon River Country

Stand Examiner: Greg Rekowski

Legal Description:

T31N - R01W Sections 2, 11, and 14

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:

Rolling topography throughout most of the Compartment with a mix of sands and sandy-loam soils dominated by the Menominee-Bamfield-Blue Lakes Complex. Lowlands are primarily in Section 14 with either Tawas-Lupton or Tawas-Leafriver mucks as the primary soils.

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

Entirely state-owned lands. Private land borders the southern edge of Section 14.

Unique Natural Features:

An active red-shouldered hawk nest has been documented within the Compartment. Several additional stick nests have been found in the Compartment. Pine marten are known to inhabit hardwood stands in this area. Little brown bat and wood turtle have the potential to occur in this Compartment.

Archeological, Historical, and Cultural Features:

None identified.

Special Management Designations or Considerations:

Hardwood stands 8, 37, 51, and 63 along the west edge of the Compartment are a part of the larger Tin Shanty Dedicated Habitat Area (DHA), which extends west and north into adjacent Compartments.

Watershed and Fisheries Considerations:

Tubb's Creek originates at the southwest end of Section 14 and flows northeast, with additional small tributaries joining at various locations. Tubb's Creek is known to hold brook trout but is currently impounded by several beaver dams.

Wildlife Habitat Considerations:

A Wildlife Biologist will be available for comment at the Compartment Review.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of coarse-textured glacial till and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift are the Devonian Berea Sandstone and Bedford and Antrim Shales. The Antrim is quarried for clay/shale and cement products elsewhere in the State. The nearest gravel pit is one and one-half miles to the northwest, and potential is considered good on the upland areas. This area is partially leased for oil and gas development with production from the Niagaran reef trend. Additional Niagaran reefs are likely in the Compartment. The Antrim Shale has been developed and is producing to the south of the Compartment. Natural gas is being drained from State minerals. There is excellent oil and gas potential for known producing formations in this Compartment. However, the entire Compartment is in the Consent Order area and, as provided on page 33 of the Concept of Management, no new leases will be issued in this Area.

Vehicle Access:

The only wheeled vehicle access throughout this Compartment is by way of Sawdust Pile Road, which passes through Section 14 and a small portion of Section 11. All other roads have been closed to the public.

Survey Needs:

None required.

Recreational Facilities and Opportunities:

The North Spur of the Shore-to-Shore equestrian trail as well as the Midland to Mackinaw hiking trail both follow Sawdust

Pile Road through the Compartment.

Fire Protection:

Access is generally good in case of any fire suppression efforts, although wildfire risk is generally low throughout the Compartment. Most road systems are closed with berms.

Additional Compartment Information:

Deer and elk browse has had significant impacts on successful forest regeneration throughout this Compartment since at least the 1970's and shows no signs of getting better. 244 acres of aspen and hardwood stands that were clearcut between the 1970's and today have been converted to non-forested stands. 45 acres of recently clearcut stands are being severely browsed and will likely result in very poorly-stocked stands in the future.

The following reports from the Inventory are attached:

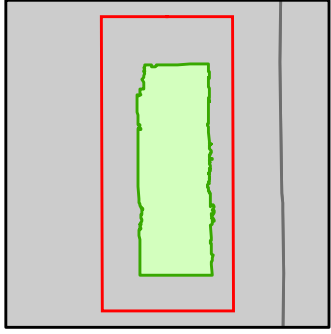
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

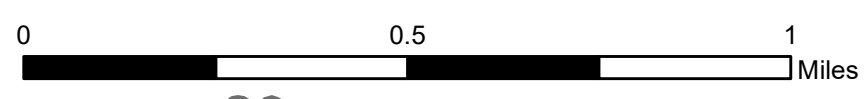
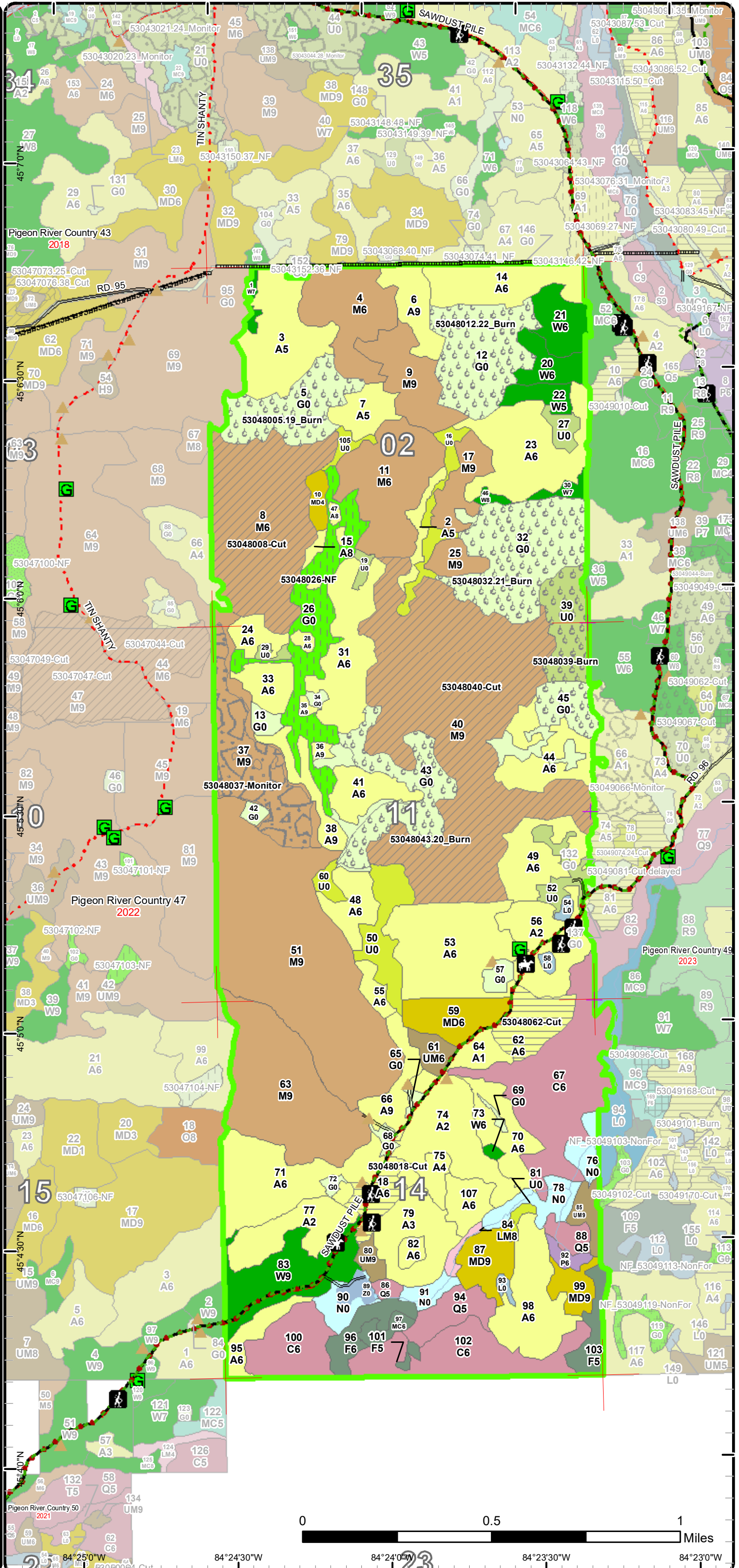
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 48
 T31N, R01W, Sec. 02, 11, 14
 County: Otsego
 Unit: Pigeon River Country
 Mgmt Area: Pigeon River Country
 YOE: 2024
 Acres: 1851.5 GIS Calculated
 Examiner: Greg Rekowski
 Map Revised: 6/15/2022
 Map Phase: Web-Post



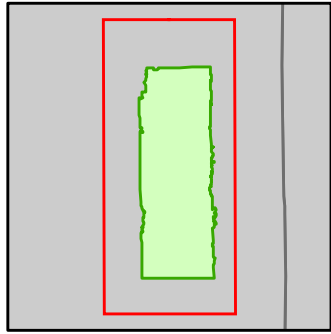
- Miris Corners
- + Remonumented Section Corners
- Counties
- DNR - Secondary Forest Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Hiking Trails
- Bike Trails
- Horse Trails
- Ski Trails
- Designated Hiking Trails
- Designated Bicycle Trails
- Designated Equestrian Trails
- Designated Multi-Use Trails
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Berms
- G Gate
- Pipeline
- Compartment Boundary
- Clearcut (w/Reserves)
- Prescribed Burn
- Thinning (Crown, Low, Systematic)
- Regeneration Survey
- Opening Maintenance
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 211 - Cropland
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland



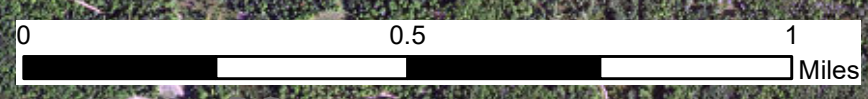
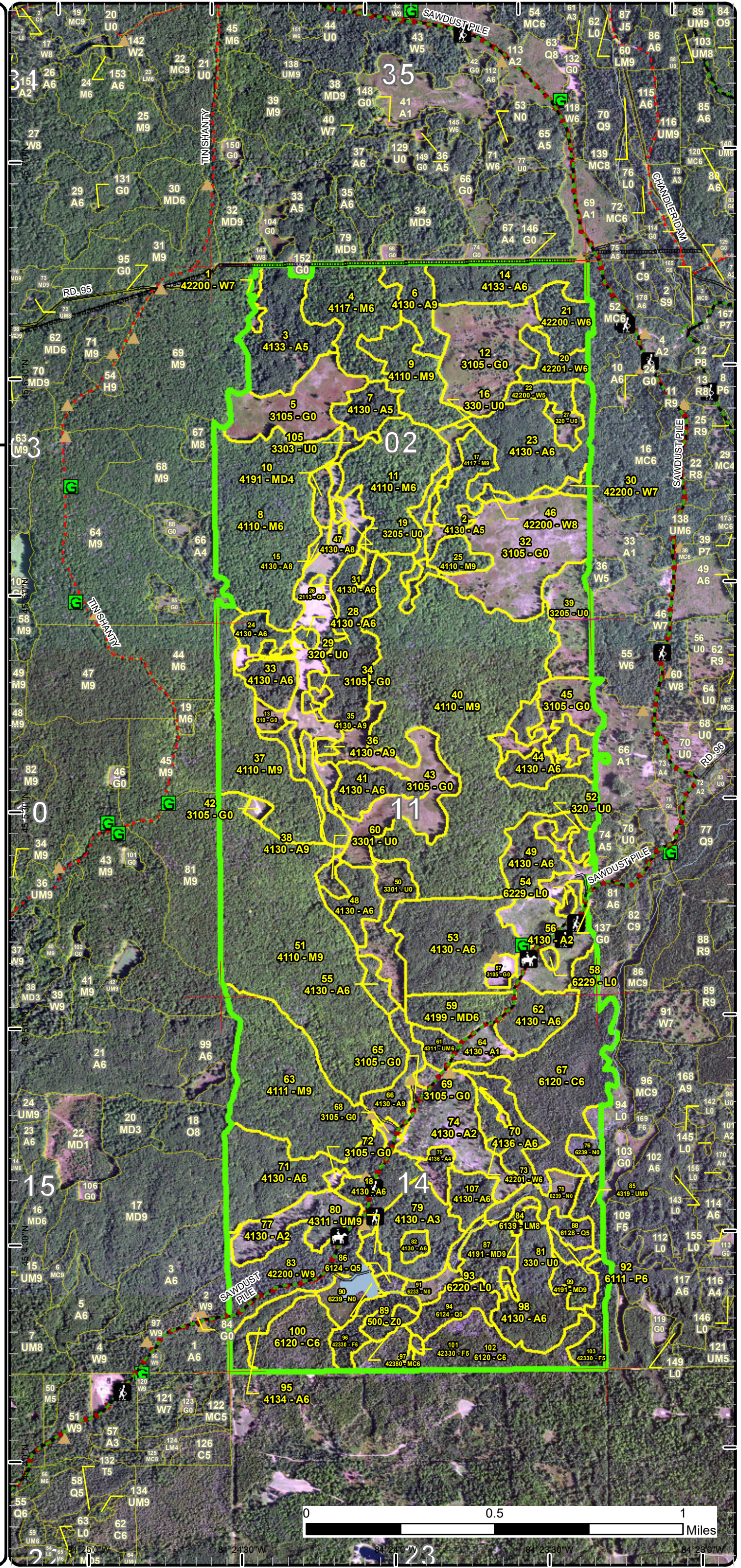
84°25'0"W 84°24'30"W 84°24'0"W 84°23'30"W 84°23'0"W

Stand Boundary Map

Compartment: 48
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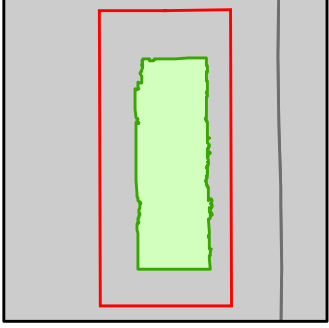
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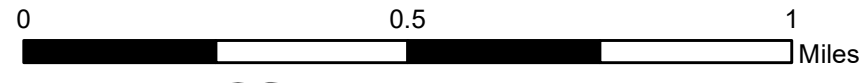
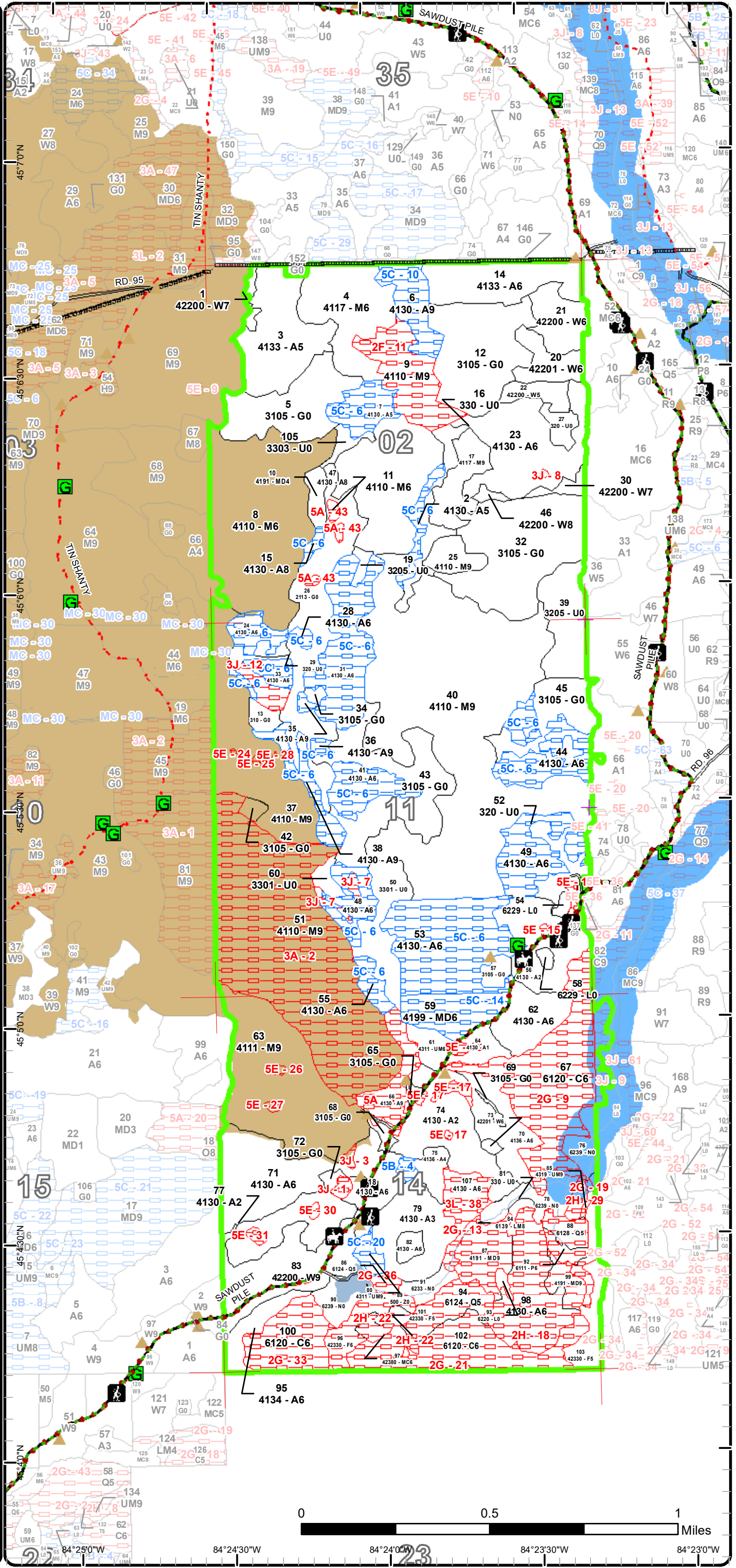
84° 24' 30" W 84° 24' 30" W 84° 24' 30" W 84° 24' 30" W

Special Conservation Areas

Compartment: 48
T31N, R01W, Sec. 02, 11, 14
County: Otsego
Unit: Pigeon River Country
Mgmt Area: Pigeon River Country
YOE: 2024
Acres: 1851.5 GIS Calculated
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- Perennial River
- Lakes and Rivers
- Berm
- Gate
- Pipeline
- Compartment Boundary
- Available w/ Constraints
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3A: Conservation Values incompatible with harvest at this time
- 3J: Water quality / BMPs (stream, river, or lake)
- 3L: Other wildlife concerns
- 5A: Not able to obtain desirable regeneration
- 5E: Long-Term Retention
- Stand Boundaries
- Forest Habitat Core Interior
- Cold Water Streams
- High Priority Trout Stream Buffer



84°25'0"W 84°24'30"W 84°24'0"W 84°23'30"W 84°23'0"W

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	86	0	30	322	16	100	4	26	0	0	0	0	0	0	0	0	0	582
Cedar	0	0	0	0	0	0	0	0	0	0	36	0	0	22	61	0	0	0	119
Cropland	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
Herbaceous Openland	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	196
Low-Density Trees	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
Lowland Aspen/Balsam Poplar	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Lowland Conifers	0	0	0	0	0	0	0	0	15	5	0	0	0	0	0	0	0	0	20
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Lowland Shrub	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Marsh	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Mixed Upland Deciduous	0	0	0	0	5	0	0	0	25	0	14	0	0	0	0	0	0	0	44
Northern Hardwood	0	0	0	0	0	0	0	0	0	24	118	481	0	0	0	0	0	0	623
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	0	0	6	0	10	0	0	0	0	0	0	0	0	0	16
Upland Shrub	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Upland Spruce/Fir	0	0	0	0	10	0	0	12	0	0	0	0	0	0	0	0	0	0	22
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	1	16	0	11	10	34	0	0	0	0	0	0	0	0	72
Total	345	86	0	30	338	35	110	27	71	73	175	481	0	22	61	0	0	0	1852



Report 2 – Treatment Summary

Acres of Harvest

Commercial Harvest - 288
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	27	0	0	0	0	0	0	0	0	27
Northern Hardwood	0	0	0	0	0	261	0	0	0	261
Total	27	0	0	0	0	261	0	0	0	288

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	288	0	0	0	186	0	36	0	40	551
Next Step	0	0	0	0	0	0	214	0	0	214
Total	288	0	0	0	186	0	250	0	40	765



Standard

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	53048008-Cut	77.8	4110 - Sugar Maple Association	Poletimber Well	96	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	No
<p><u>Prescription</u> Thin to 80-90 square feet. Focus on removing suppressed poletimber stems. Do not thin multi-stemmed trees, either take them all or do not mark any of them. Cut all beech but leave any large diameter wildlife trees or those that appear resistant from BBD. Do not mark any aspen, oak, white pine, elm, or birch. Leave a few small unmarked pockets in areas that have more aspen. If found, protect stick nests and vernal pools with appropriate buffers.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> <u>Treatments:</u></p> <p><u>Acceptable</u> <u>Regen:</u></p> <p><u>Other</u> No new roads. Use the closed road network from the west and south. Deck wood along the edges of the openings to the north and east. <u>Comment:</u> Winter only harvest to minimize damage to the maintained openings.</p> <p><u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2023</p>											
18	53048018-Cut	10.7	4130 - Aspen	Poletimber Well	53	111-140	Harvest	Clearcut	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Clearcut. Leave all oak and any incidental birch. Leave all red pine and white pine greater than 20" DBH. Mark 1-2 large diameter (>10" DBH), poor quality maple and aspen per acre as cut and leave trees to serve as drumming logs. Protect small poletimber and sapling-sized oak. Winter cut only to try and alleviate browse damage.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Intermediate) <u>Treatments:</u></p> <p><u>Acceptable</u> Fully-stocked stand dominated by aspen with any additional mix of species being acceptable. <u>Regen:</u></p> <p><u>Other</u> Add trail specs as the Shore to Shore trail falls on Sawdust Pile Road. <u>Comment:</u> Keep the treatment line 100 feet east of the large pond in the portion of the stand west of the road. This area has already been excluded from the treatment boundary. Exclude the area dominated by birch, oak, and maple saplings at the far northeast corner of the stand. This area has already been excluded but will likely change somewhat when sale prep is completed on the ground.</p> <p><u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2023</p>											
26	53048026-NF	40.4	2113 - Forage Crops Nonstocked			Unspecified	NonForestMgt	Herbaceous/Crop /Grass Planting	310 - Herbaceous Openland		No
<p><u>Prescription</u> Maintain the non-forested condition of this stand using either fire, chemical, or mechanical methods. <u>Specs:</u></p> <p><u>Next Step</u> <u>Treatments:</u></p> <p><u>Acceptable</u> <u>Regen:</u></p> <p><u>Other</u> <u>Comment:</u></p> <p><u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2023</p>											



Standard

Standard	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
39	53048039-Burn	32.8	3205 - Mixed Upland Shrub	Nonstocked		Unspecified	Burn	Opening	310 - Herbaceous Openland		No
<p><u>Prescription Specs:</u> Burn to convert these stands into non-forested G types. These two stands were previously forested but browse eliminated most regeneration after both stands were clearcut.</p> <p><u>Next Step Treatments:</u> Monitoring, Natural Regen (Re-Inventory)</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>											
40	53048040-Cut	183.4	4110 - Sugar Maple Association	Sawtimber Well	103	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	No
<p><u>Prescription Specs:</u> Thin to 80-90 square feet. Focus on removing suppressed poletimber stems and poor quality sawlog stems. Do not thin multi-stemmed trees, either take them all or do not mark any of them. Mark most of the ironwood to cut but leave scattered stems for diversity purposes. Cut all beech but leave any large diameter wildlife trees or those that appear resistant from BBD. Do not mark any aspen, oak, red pine, hemlock, white pine, elm, or birch. There are several areas of lower BA scattered throughout that will not need to be marked in. If found, protect stick nests and vernal pools with appropriate buffers.</p> <p><u>Next Step Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u> A few steep slopes at the northwest and southeast sides may need to be excluded from the treatment boundary. No new roads, utilize the existing road network. Use adjacent openings for landings but deck the wood along the edges. Winter only harvest to minimize damage to the openings.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2023</p>											
62	53048062-Cut	16.5	4130 - Aspen	Poletimber Well	52	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	No
<p><u>Prescription Specs:</u> Clearcut. No area retention due to the small size of the stand. Leave any incidental white pine, basswood, or red oak. Protect oak saplings, most of which are by the road. Mark to leave 3 larger diameter sugar maple along the west edge of the stand next to the road. Mark 1-2 poor quality aspen per acre as cut and leave trees to serve as drumming logs. Winter cut only to try and alleviate browse damage, although it likely won't make a difference here.</p> <p><u>Next Step Treatments:</u> Monitoring, Natural Regen (Intermediate)</p> <p><u>Acceptable Regen:</u> Fully-stocked stand dominated by aspen with any additional mix of species being present. If browse results in a less than fully-stocked stand then initiate next step discussions about interplanting or re-starting the stand and planting to red pine.</p> <p><u>Other Comment:</u> Add trail specs as the Shore to Shore trail falls on Sawdust Pile Trail.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2023</p>											

Approved Treatments:

5	53048005.19_Burn	30.0	3105 - Mixed Upland Herbaceous	Nonstocked		Unspecified	Burn	Opening	310 - Herbaceous Openland		No
<p><u>Prescription Specs:</u> Prescribe burn to maintain opening</p> <p><u>Next Step Treatments:</u> Monitoring, Other - Specify</p> <p><u>Acceptable Regen:</u></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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Other Comment:
Site Condition
Proposed Start Date: 10/1 /2023

12	53048012.22_ Burn	40.2	3105 - Mixed Upland Herbaceous	Nonstocked		Unspecified	Burn	Opening	310 - Herbaceous Openland	No
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Prescription Burn to maintain opening
Specs:

Next Step Monitoring, Other - Specify
Treatments:

Acceptable Grass and forbs
Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

32	53048032.21_ Burn	51.9	3105 - Mixed Upland Herbaceous	Nonstocked		Unspecified	Burn	Opening	310 - Herbaceous Openland	No
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Prescription Burn to maintain opening
Specs:

Next Step Monitoring, Other - Specify
Treatments:

Acceptable Grass and forbs
Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

37	53048037- Monitor	36.3	4110 - Sugar Maple Association	Sawtimber Well	100	81-110	Monitoring	Natural Regen (Re-Inventory)	4110 - Sugar Maple Association	Uneven-Aged	No
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Prescription
Specs:

Next Step
Treatments:

Acceptable -Aspen and hardwoods would be expected to fill in the canopy gaps.
Regen:

Other Percent to Treat = 100%
Comment:

Site Condition

Proposed Start Date: 10/1 /2021



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
43 53048043.20_ Burn	31.4	3105 - Mixed Upland Herbaceous	Nonstocked		Unspec ified	Burn	Opening	310 - Herbaceous Openland		No
<p><u>Prescription</u> Burn to maintain opening</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Other - Specify</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Grass and forbs</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2023</p>										

Total Treatment 551.4
Acreage Proposed:

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit

Compartment: 48

Greg Rekowski : Examiner

Year of Entry: 2024

Availability for Management

Total Acres **Acres Avail** Acres
 Acres Available **With Condition** Not Available

Dominant Site Conditions

					5B	5C	2F	2G	2H	3A	3J	3L	5A	5E
582	302	209	71	Aspen	2	207			30		10	9	15	7
119	0	0	119	Cedar				113			6			
40	40	0	0	Cropland										
196	196	0	0	Herbaceous Openland										
36	36	0	0	Low-Density Trees										
3	0	0	3	Lowland Aspen/Balsam Poplar				3						
20	0	0	20	Lowland Conifers				20						
2	0	0	2	Lowland Mixed Forest				2						
4	4	0	0	Lowland Shrub										
30	30	0	0	Marsh										
43	5	17	22	Mixed Upland Deciduous		17		2	20					
622	466	0	156	Northern Hardwood			24			131				2
4	0	0	4	Upland Conifers					4					
16	9	4	4	Upland Mixed Forest		4		1	3					
38	38	0	0	Upland Shrub										
22	10	0	12	Upland Spruce/Fir					12					
1	1	0	0	Water										
72	72	0	0	White Pine										
1,851	1,209	229	414	Total Forested Acres	2	228	24	141	69	131	16	9	15	9
	65%	12%	22%	Relative Percent										

*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Buffer for large pond.							

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit

Compartment: 48

Greg Rekowski : Examiner

Year of Entry: 2024

2	Unavailable	3A: Conservation Values incompatible with harvest at this time	131	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This stand is a part of the Tin Shanty DHA. MNFI staff have visited this stand and indicated that it would qualify as an ERA (mesic hardwoods).							
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Vernal pools							
4	Available	5B: Maintain for regeneration purposes	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This area has a lot of oak, birch, and maple advanced regen and should be excluded from the harvest in stand 18.							
5	Unavailable	5A: Not able to obtain desirable regeneration	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Deer and elk browse is too high in this area to successfully regenerate this stand. Let convert to hardwoods over time.							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	193	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Deer and elk browse is too high in this area to successfully regenerate these stands at this time. Previous clearcuts in this area have resulted in the conversion of hundreds of acres of forested stands into non-forested stands. Several of the smaller stands have nice hardwood understories and should be allowed to convert to hardwoods. Look at opportunities to harvest some of these stands in the future if browse pressure is reduced or if they can be lumped together into a larger harvest with adjacent stands.							
7	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This site condition covers a pond and intermittent stream/drainage.							

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit

Compartment: 48

Greg Rekowski : Examiner

Year of Entry: 2024

8	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Vernal pool buffer							
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	55	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Cut next entry with stand 14 to the east.							
11	Unavailable	2F: Too steep	24	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This site condition covers 3 separate ponds along with wet drainages connecting all 3.							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
15	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
18	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	50	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
Site condition covers stands 88 and 92, as well as wet drainages which pass through stands 85 and 99.							

Report 4 – Site Conditions

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Greg Rekowski : Examiner

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20	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
21	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	48	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
24	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stick nest buffer							
25	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stick nest buffer							
26	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Seep buffer							
27	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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28	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
29	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
30	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
31	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
33	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	22	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
36	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
38	Unavailable	3L: Other wildlife concerns	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
Originally a part of stand 74 to the north but was excluded from that harvest due to an active stick nest.							

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit

Compartment: 48

Greg Rekowski : Examiner

Year of Entry: 2024

43	Unavailable	5A: Not able to obtain desirable regeneration	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Small isolated stands that would have no chance of regenerating if cut due to current browse levels.							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																		
1	42200 - Natural White Pine	Sawtimber Poor	2.4	48	1-50	N/A	Semi-open stand that is filling in with white pine. There are still areas that are basically non-forested, especially the south end. Trace of red oak poletimber. Average ba/acre from 3 plots = 43 square feet. This was likely cut at the same time as adjacent stand 3 to the east and did not regenerate well.																																																																		
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2	4130 - Aspen	Poletimber Medium	5.3	35	81-110	N/A	This stand was clearcut in 1987 in the sale Sawdust Pile Aspen (#53-004-84), bought by Champion. It was cut along with adjacent stand 16, but unlike that stand, aspen did successfully regenerate, although there are a few non-forested areas mixed in. The aspen is generally good quality as this stand sits on productive soils. The far north end is pretty much a clump of witch hazel and ironwood saplings. There used to be some white ash poletimber in the stand but it is now all dead from EAB. Trace of basswood sawtimber. Average ba/acre from 6 plots = 85 square feet. Rolling terrain that slopes down to the east.																																																																		
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3	4133 - Aspen, Mixed Pine	Poletimber Medium	34.2	35	81-110	N/A	This stand was clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84), bought by Champion. Aspen regenerated moderately well but past inventory notes indicate that elk browse was severe which has resulted in numerous non-forested areas and areas of low stocking. White pine is common throughout the stand, typically occurring in clumps. Based on its size, I'm guessing the white pine stems are residual that weren't cut during the original harvest. Most of the sugar maple appear to be residual stems as well. White ash poletimber used to be a component of the stand but it is now all dead from EAB. Trace of beech, paper birch, and red oak poletimber in the overstory. Average ba/acre from 9 plots = 88 square feet. Autumn olive is abundant in some localized areas, more so at the north and south ends. Rolling terrain. This stand needs at least another 10 years before it will be ready for a harvest but consideration should be made to the high browse pressure in this area which impacted the stand significantly the last time it was clearcut. Manage together with stand 33 to the north in Compartment 43.																																																																		
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4	4117 - Mixed N. Hardwood - Pine	Poletimber Well	32.6	92	81-110	N/A	Diverse stand dominated by hardwoods. Hardwood quality is not great although there are quite a few large diameter (18"+) sugar maple seed trees. White pine occurs throughout the stand both individually and in dense clumps. All size classes of white pine are present. Red pine is mostly at the far southern end of the stand in a small clump that looks planted. Aspen is mostly in the northwestern 1/3rd of the stand and there appears to be two age classes present; a younger age class of trees that range from 7-11" DBH and then an older age class that is more prevalent and ranges in diameter from 13-18". A small pocket of blowdown is present at the far northwestern corner adjacent to the G type. Beech is more common along the east side of the stand with most having BBD and appearing close to death. Trace of large diameter quaking aspen and red oak in the overstory. Average ba/acre of the stand from 12 plots = 98 square feet. Terrain is flat in the middle of the stand but slopes down on both the east and west sides, with some steep slopes on the east side. No even-aged management due to the high browse pressure in the area. Let the white pine continue to develop and thin when BAs reach an appropriate level.																																																																		
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																												
5	3105 - Mixed Upland Herbaceous	Nonstocked	30.0		Unspecified	No	This was formerly a mixed aspen/hardwood stand that was clearcut in 1997 in the sale Sawdust Pile Aspen Blocks (#53-002-95), bought by Alan Lamberson. Subsequent regeneration failed due to intense browse pressure and this stand has been converted to a non-forested condition. It is now burned periodically to maintain it as an opening, in the Joe's Opening prescribed burn complex. This stand sits on hardwood quality soils.																																												
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6	4130 - Aspen	Sawtimber Well	13.8	76	81-110	N/A	Stand of moderate quality, large diameter aspen. Several aspen with a lot of rot and serving as good wildlife trees. Hardwoods are mixed in throughout. White pine is often in clumps and more common in the north half of the stand. Trace of red oak and paper birch. Average ba/acre from 5 plots = 104 square feet. Rolling terrain with some steep slopes but none that are inoperable. Heavy deer and elk use. Due to its small size and species mix, this stand would almost certainly be browsed to a non-forested condition if clearcut on its own. Cut next entry with stand 14 to the east, or let the aspen die and manage for the understory red maple.																																												
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7	4130 - Aspen	Poletimber Medium	11.0	35	81-110	N/A	This stand was clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84), bought by Champion. Aspen regenerated moderately well although there are scattered open areas that are a result of previous browse damage. The aspen is decent quality although it doesn't appear healthy in all areas. The east half of the stand has a nice understory of sugar maple, and in some areas it is free to grow as there are spots without many aspen in the overstory. White pine is mostly along the western edge of the stand. Autumn olive mostly along the south edge. Average ba/acre from 6 plots = 87 square feet. Terrain gradually slopes up to the east. Due to current browse pressure, it is unlikely that this stand will successfully regenerate. Hold off on harvesting until, or if, the browse pressure is ever reduced in this area.																																												
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
8	4110 - Sugar Maple Association	Poletimber Well	77.8	96	111-140	N/A	Moderate to high quality hardwood stand. Quality and BAs are generally higher in the north half of the stand, the south half tends to have lower BAs and a lot of multi-stemmed trees. There are no records of a past harvest in this stand. As a result, there are a lot of suppressed sugar maple poletimber stems. Large diameter aspen is scattered throughout and is more numerous in the north half of the stand with a few small clumps present. Much of the aspen is in decline and providing good wildlife habitat. White ash used to occupy around 5% of the canopy but it is now all dead from EAB and most have fallen over. Beech is relatively rare and BBD can be found on most. A second age class of large diameter, old sugar maple is present but rare. Trace of white pine, red maple, and elm in the overstory. Average ba/acre from 16 plots = 113 square feet. Some gradual slopes in the stand but nothing that is inoperable.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Paper Birch	1	Pole/Log	9		White Ash	Medium		< 5 feet	Seeding
Sugar Maple	55	Pole/Log	9	96	Ironwood	Medium		>20 feet	Sapling
Basswood	29	Log/Pole	12		Leatherwood	Low		< 5 feet	Tall Shrub
Bigtooth Aspen	7	Log/XLog	15		Ironwood	Medium		< 5 feet	Seeding
Quaking Aspen	2	Log/XLog	15		Beech	Low		< 5 feet	Seeding
Beech	3	Log/Pole/XLog	11		Sugar Maple	Trace		>20 feet	Sapling
Red Oak	1	Log/XLog	16						
Ironwood	2	Pole	5						
9	4110 - Sugar Maple Association	Sawtimber Well	23.8	83	81-110	N/A	Moderate quality hardwoods sitting on undulating terrain with most areas of the stand on slopes that are too steep for harvesting (see topo imagery). Basal areas tend to vary significantly. A few small clumps of aspen are present. Trace of red oak and paper birch in the overstory. Average ba/acre from 7 plots = 93 square feet.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Beech	2	Log/Pole	10		Striped Maple	Low		Variable	Sapling
Basswood	39	Log/Pole	11	83	Beech	Trace		Variable	Sapling
White Pine	1	Pole/Log	8		Ironwood	Medium		>20 feet	Sapling
Bigtooth Aspen	8	Log/XLog	14						
Quaking Aspen	1	Log/XLog	14						
Ironwood	3	Pole	5						
Sugar Maple	46	Log/Pole	10	83					
10	4191 - Mixed Upland Deciduous with Conifer	Poletimber Poor	4.6	38	1-50	N/A		This stand was clearcut but did not regenerate well due to browse. The sugar maple stems are residual left over from the harvest and are not new in-growth. There used to be elm and ash in the stand but most are dead, however I did see a few ash stems that appear to still be alive. Limited understory development due to browse, grass has taken over in many areas. Average ba/acre from 3 plots = 43 square feet.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height		Size
White Pine	20	Pole/Log	8		Ironwood	Medium	Variable		Sapling
Black Cherry	10	Pole	6		Black Cherry	Low	Variable		Tall Shrub
White Ash	1	Pole	7		White Pine	Trace	Variable		Sapling
Ironwood	29	Pole/Sapling	5	38	Autumn Olive	Trace	5 - 10 feet		Tall Shrub
Sugar Maple	25	Pole/Log	8						
11	4110 - Sugar Maple Association	Poletimber Well	42.1	102	51-80	N/A	This stand was thinned in the winter of 2017-18 as part of the Hidden Valley Hardwoods timber sale, #53-009-14-01, bought by Tulgetska. Very nice job on the sale with minimal residual damage and no rutting. Moderate to low quality hardwoods. Quality is best in the southern 1/3rd of the stand. A strip of quaking aspen and white pine along the west edge was excluded from the sale. Also, an area of lower BAs at the northeast corner of the stand was excluded from the sale. Canopy gaps have virtually nothing growing in them as the browse pressure is so high in this area. Ironwood seedlings are abundant in areas outside of canopy gaps. Average residual ba/acre = 76 square feet. Autumn olive seems to have been stimulated by the ground disturbance that logging created as new ingrowth was noted in several areas, browse does not seem to be impacting the young growth.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Sugar Maple	50	Pole/Log/XLog	9	102	Ironwood	Medium		>20 feet	Sapling
Basswood	32	Log/Pole	10		Sugar Maple	Trace		>20 feet	Sapling
White Pine	4	Log/XLog/Pole	14		White Ash	Trace		>20 feet	Sapling
Beech	2	Pole/Log/XLog	8		Autumn Olive	Low		< 5 feet	Tall Shrub
Ironwood	3	Pole	6		Beech	Low		< 5 feet	Seeding
Red Maple	1	Pole	8		White Pine	Trace		Variable	Sapling
Quaking Aspen	8	Log/XLog	14		Leatherwood	Low		< 5 feet	Tall Shrub
					Striped Maple	Trace		< 5 feet	Seeding
					Ironwood	High		< 5 feet	Seeding



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																	
12	3105 - Mixed Upland Herbaceous	Nonstocked	40.2		Unspecified	No	This was previously an aspen/hardwood/pine stand that was clearcut in the 1997 in the sale Sawdust Pile Aspen Blocks (#53-002-95), bought by Alan Lamberson. Browsing eliminated aspen and most other tree species regeneration. Now it is burned every couple of years to maintain it as an opening, as part of the Joe's Opening prescribed burn complex. Heavily used by elk. Rolling terrain. Trace of spotted knapweed in the NE corner where the closed road enters the stand.																	
								Sub-Canopy Species	Density	Avg. Height	Size													
								Autumn Olive	Trace	5 - 10 feet	Tall Shrub													
								Red Oak	Trace	>20 feet	Log													
								Bracken Fern	High		Non-Wood													
								White Pine	Low	>20 feet	Log													
								White Pine	Medium	>20 feet	Pole													
								White Pine	Trace	Variable	Sapling													
								Mixed Grasses	Full		Non-Wood													
								Quaking Aspen	Trace	Variable	Sapling													
								Spotted Knapweed	Trace		Non-Wood													
								Black Cherry	Medium	5 - 10 feet	Tall Shrub													
Blackberry/Raspberry	Trace	< 5 feet	Tall Shrub																					
13	310 - Herbaceous Openland	Nonstocked	3.3		Unspecified	No	Small G stand with a lot of little bluestem. This stand is not maintained as a food plot. There are areas of wet ground that look like drainages, see imagery. Lots of undulating terrain, possibly old tip-up mounds or a result of previous stump pulling.																	
								Sub-Canopy Species	Density	Avg. Height	Size													
							Little Bluestem	High	Unspecified	Non-Wood														
14	4133 - Aspen, Mixed Pine	Poletimber Well	26.4	36	81-110	N/A	Moderate quality aspen stand sitting on a long, gradual east-facing slope. Stand cut in 1986 in the sale Sawdust Pile Aspen (53-009-84), bought by Champion. Site quality becomes much better as you move westward in the stand. BTA more common in the west, QA more common in the east side. QA is generally low quality and smaller in diameter, and barely merchantable in the eastern 1/3rd of the stand. White pine tends to occur in clumps and looks like residual stems that were left from the previous harvest. Average ba/acre from 9 plots = 94 square feet. Other overstory species that were present but rare included; jack pine, red pine, paper birch, red oak, and white ash. A few scattered open areas that did not regenerate well. A few areas where quaking aspen is heavily affected by hypoxylon canker. Autumn olive is taking over the understory in many places in the west half of the stand. An old railroad grade runs N-S along the eastern edge of the stand. This stand is not ready for a treatment yet due to the small size on the QA, but should be ready next entry. Manage together with adjacent stand 6 to the west.																	
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size								
								Red Maple	2	Pole/Sapling	5		Autumn Olive	Medium	5 - 10 feet	Tall Shrub								
								Bigtooth Aspen	42	Pole	7	36	Ironwood	Medium	Variable	Sapling								
								White Pine	20	Pole/Log	8		White Ash	Low	>20 feet	Sapling								
								Quaking Aspen	36	Pole/Sapling	6		White Pine	Low	Variable	Sapling								
													Black Cherry	Medium	Variable	Tall Shrub								
													Witch Hazel	Low	5 - 10 feet	Tall Shrub								
													Red Maple	Medium	>20 feet	Sapling								
								15	4130 - Aspen	Sawtimber Medium	1.8	67	51-80	N/A	Poorly-stocked stand that is a transition between hardwoods to the west and the opening to the east. Non-forested areas mixed in throughout. Other species that were present but rare include sugar maple and white pine. Average ba/acre from 2 plots = 53 square feet.									
																Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
																Quaking Aspen	86	Log/Pole	10	67	Black Cherry	Low	Variable	Tall Shrub
Basswood	10	Log/XLog	14		Ironwood	Medium	Variable									Sapling								
Black Cherry	2	Pole	6																					
Ironwood	2	Pole	6																					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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16 330 - Low-Density Trees Nonstocked 10.3 Unspecified No

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	>20 feet	Sapling
Sugar Maple	Trace	>20 feet	Sapling
Bigtooth Aspen	Low	>20 feet	Pole
Sugar Maple	Trace	>20 feet	Pole
White Pine	Low	Variable	Sapling
Black Cherry	Trace	Variable	Tall Shrub
White Pine	Trace	>20 feet	Log
Witch Hazel	Low	5 - 10 feet	Tall Shrub
White Pine	Low	>20 feet	Pole
Beech	Trace	< 5 feet	Seeding
Bracken Fern	High	Unspecified	Non-Wood
Ironwood	Trace	< 5 feet	Seeding

This stand was clearcut in 1987 in the sale Sawdust Pile Aspen (#53-004-84), bought by Champion. It was cut along with adjacent stand 2 to the west but did not successfully regenerate due to browse. Heavy browse pressure is still ongoing as pretty much anything growing under 5 feet has browse damage. Scattered clumps of ironwood saplings are the only thing that made it past the browse along with a couple aspen and white pine. There used to be some white ash poletimber in the stand but it is now all dead from EAB. Rolling terrain that slopes down to the east. Did not visit the far north or south ends of the stand.

17 4117 - Mixed N. Hardwood - Pine Sawtimber Well 13.5 106 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	23	Log/Pole/XLog	11	
Bigtooth Aspen	3	Log/Pole	13	
Sugar Maple	47	Log/Pole	10	106
Basswood	20	Log/Pole/XLog	12	
Beech	4	Log/Pole	10	
Quaking Aspen	2	Log	13	
Ironwood	1	Pole	5	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	Variable	Sapling
Ironwood	Medium	Variable	Sapling
Beech	Low	< 5 feet	Seeding
Ironwood	Medium	< 5 feet	Seeding

Diverse stand but hardwood quality is poor to mediocre. White pine is better quality and scattered throughout in clumps. All of the beech has BBD. Average ba/acre from 6 plots = 87 square feet. Rolling terrain.

18 4130 - Aspen Poletimber Well 13.8 53 111-140 N/A

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	62	Pole/Log	8	53
Red Pine	8	Log/XLog/Pole	15	
White Pine	2	Pole/Log/XLog	8	
Sugar Maple	3	Pole/Log	8	
Red Maple	12	Pole/Log	8	
Paper Birch	1	Pole	6	
Quaking Aspen	8	Pole	7	
Red Oak	4	Log/Pole/XLog	14	

Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	Trace	>20 feet	Sapling
Red Maple	Low	>20 feet	Sapling
Ironwood	Low	Variable	Sapling
Black Cherry	Low	Variable	Tall Shrub
White Pine	Low	Variable	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Beech	Trace	Variable	Sapling
Sugar Maple	Trace	Variable	Sapling

Moderate quality aspen stand with some variation in diameters. The northeast part of the stand adjacent to stand 75 has a good representation of younger birch, maple, and red oak. Large diameter oak, red pine, and white pine can be found scattered throughout, along with a couple of larger maple stems. A lot of the larger maple stems are poor quality with a lot of rot. Some of the residual pine are legacy tree size. A large pond is present in the portion of the stand west of the road, with a few larger sawlog trees around the perimeter of it. Other species that were present in the overstory of the stand but rare include balsam fir and basswood. Average ba/acre from 6 plots = 123 square feet. Most of the stand sits on a slight west-facing slope.

It looks like a wildfire may have went through this stand at one time as there appears to be an old trench line meandering through the stand.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments									
19	3205 - Mixed Upland Shrub	Nonstocked	1.9		Unspecified	No	Small open stand that did not regenerate due to browse following a clearcut in 1987. Heavy browse still persists as even the smaller ironwood seedlings show browse damage.									
								Sub-Canopy Species	Density	Avg. Height	Size					
								Black Cherry	Low	>20 feet	Tall Shrub					
								Wild Bergamont	Low	Unspecified	Non-Wood					
								Blackberry/Raspberry	Medium	< 5 feet	Tall Shrub					
								Quaking Aspen	Low	>20 feet	Pole					
								Beech	Trace	Variable	Sapling					
								Bracken Fern	Medium		Non-Wood					
								Ironwood	Low	>20 feet	Pole					
								White Pine	Trace	>20 feet	Pole					
Ironwood	Medium	>20 feet	Sapling													
Ironwood	Low	< 5 feet	Seeding													
20	42201 - Natural White Pine, Mixed Deciduous	Poletimber Well	10.4	70	81-110	N/A	White pine dominated stand with a variety of diameters, although poletimber is most common. Unlike the adjacent white pine stands to the north and south, this stand did not have an aspen/maple species removal. Oak and maple are primarily along the west edge of the stand. A few scattered XL-sized aspen are present, mostly along the east side. 6 basal area plots taken with an average of 93 sq. ft. per acre. Old fire-charred white pine stumps scattered throughout.									
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
								White Pine	61	Pole/Log/XLog	8	70	White Pine	Medium	>20 feet	Sapling
								Red Pine	1	Log	12		Red Maple	Low	>20 feet	Sapling
								Red Oak	8	Log/XLog	15	90	Black Cherry	Trace	Variable	Tall Shrub
								Red Maple	7	Pole	6		Autumn Olive	Trace	5 - 10 feet	Tall Shrub
								Bigtooth Aspen	14	Pole/Log	9					
								Quaking Aspen	5	Pole	8	51				
21	42200 - Natural White Pine	Poletimber Well	13.5	48	81-110	N/A	Moderate quality white pine stand with a lot of small stems. Stocking varies quite a bit due to a past aspen/maple species removal in 1986. Scattered small open areas throughout with little to no regeneration. Red pine is mostly along the northwest edge. Average ba/acre from 7 plots = 100 square feet.									
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
								Red Pine	6	Pole/Log	8		Black Cherry	Medium	5 - 10 feet	Tall Shrub
								Bigtooth Aspen	2	Pole	7		Autumn Olive	Trace	5 - 10 feet	Tall Shrub
								White Pine	90	Pole/Sap/Log	7	48	White Pine	Medium	>20 feet	Sapling
								Quaking Aspen	2	Pole	6					
22	42200 - Natural White Pine	Poletimber Medium	6.5	60	81-110	N/A	Moderate quality white pine of varying sizes. This stand appears to have had an aspen/red maple species removal at one time, but neither regenerated well after that harvest. It is now a mix of open areas and more dense forested areas. Open, park-like understory in many places. Old fire-charred white pine stumps are present throughout. Heavy elk use. Average ba/acre from 6 plots = 90 square feet.									
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
								Quaking Aspen	5	Pole	7	35	White Pine	Medium	>20 feet	Sapling
								Ironwood	1	Pole	5		Black Cherry	Trace	Variable	Tall Shrub
								White Pine	94	Pole/Log	8	60				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
23	4130 - Aspen	Poletimber Well	38.9	36	81-110	N/A	<p>Developing stand of nearly pure aspen with limited overstory diversity. The narrow east side of the stand is flat and lower site quality, and consists mostly of smaller diameter quaking aspen that is barely merchantable in places. The remainder of the stand has good quality aspen and is on rolling terrain. There are some steep slopes but none that are inoperable. White pine can be found mostly along the stand edges. There appears to be a vernal pool in the southeast part of the stand (see site conditions layer). Autumn olive is mostly at the north/northeast end of the stand. Trace of red oak saplings and poletimber. Average ba/acre from 13 plots = 85 square feet. This stand was last cut in 1986 in the sale Sawdust Pile Aspen (#53-009-84) bought by Champion. It will be ready for a harvest next entry.</p> <p>2021 Update - If this stand is ready for a harvest next entry, then group with stand 10 to the east in Compartment 49, which has been approved and has a delayed start date.</p>		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Bigtooth Aspen	52	Pole	8	36	White Pine	Trace		Variable	Sapling
Red Maple	4	Pole	5		Striped Maple	Medium		Variable	Sapling
White Pine	4	Pole/Log	8		Witch Hazel	Trace		5 - 10 feet	Tall Shrub
Quaking Aspen	40	Pole/Sapling	6		Sugar Maple	Low		>20 feet	Sapling
					Autumn Olive	Low		5 - 10 feet	Tall Shrub
					Ironwood	Medium		Variable	Sapling
					Beech	Trace		Variable	Sapling
					Black Cherry	Low		Variable	Tall Shrub
24	4130 - Aspen	Poletimber Well	7.1	35	51-80	N/A		<p>Moderate quality, still developing stand that is dominated by quaking aspen. Clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84), bought by Champion. There are a few areas of nearly pure ironwood along the north and northeastern edges. Some black cherry is mixed in with the ironwood and actually has good form. Residual sugar maple stems were left over from the previous harvest, more prevalent in the northwestern part of the stand. White ash used to be a component of the overstory but most appear dead from EAB, although a few may still be hanging on. There may be some seasonally wet ground in the middle part of the stand, it's difficult to tell with the snow on the ground. Trace of white pine and basswood in the overstory. Average ba/acre from 6 plots = 65 square feet. Gently rolling terrain. This stand will be ready for a final harvest next entry but the deer and elk browse pressure is too high in this area to allow for successful regeneration.</p>	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height		Size
Quaking Aspen	76	Pole	7	35	Black Cherry	Low	Variable		Tall Shrub
Ironwood	4	Pole/Sapling	5		Ironwood	Medium	Variable		Sapling
Paper Birch	1	Pole	7		Ironwood	High	< 5 feet		Seeding
Bigtooth Aspen	7	Pole/Log	8		Autumn Olive	Trace	5 - 10 feet		Tall Shrub
Black Cherry	4	Pole	5		Beech	Low	< 5 feet		Seeding
Sugar Maple	8	Pole/Log	8		White Ash	High	< 5 feet		Seeding
25	4110 - Sugar Maple Association	Sawtimber Well	7.3	94	81-110	N/A	<p>Moderate quality hardwoods. A lot of stump sprouts, not as many single stems. Basal areas tend to vary quite a bit, possibly from a harvest long ago? Trace of XL-sized white pine in the overstory. Five basal area plots were recorded with an average of 84 sq. ft. per acre.</p>		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density			Avg. Height
Basswood	30	Log/Pole	12		Ironwood	High		>20 feet	Sapling
Beech	2	Pole/Log	9						
Ironwood	4	Pole	5						
Quaking Aspen	1	Log	14						
Bigtooth Aspen	3	Log/XLog	15						
Sugar Maple	60	Log/Pole/XLog	10	94					
26	2113 - Forage Crops	Nonstocked	40.4		Unspecified	Managed Opening	<p>-This is a maintained wildlife opening that is planted annually.-Multiple clumps of aspen that are less than one acre are scattered throughout.</p>		
Sub-Canopy Species	Density	Avg. Height	Size						
Quaking Aspen	Low		Pole						
American Elm	Trace		Log						
White Ash	Trace		Log						
Rye (annual)	Full		Non-Wood						
Basswood	Trace		Log						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
27	320 - Upland Shrub	Nonstocked	4.4		Unspecified	No	From imagery it looks like this stand was cut at the same time as adjacent stand 23, but did not regenerate well, likely due to browse. A few scattered clumps of trees are present. The cherry is mostly small except for a few over 3" DBH. Flat terrain.	
		Sub-Canopy Species		Density	Avg. Height	Size		
		White Pine		Trace	Variable	Sapling		
		Red Pine		Trace	>20 feet	Pole		
		Black Cherry		Medium	Variable	Tall Shrub		
		Wild Bergamont		Low	Unspecified	Non-Wood		
		Cladonia (Reindeer moss)		Low		Non-Wood		
		Quaking Aspen		Low	>20 feet	Pole		
		White Pine		Trace	>20 feet	Log		
		Mixed Grasses		Full		Non-Wood		
		Bracken Fern		High		Non-Wood		
		Little Bluestem		Medium	Unspecified	Non-Wood		
		White Pine		Low	>20 feet	Pole		
28	4130 - Aspen	Poletimber Well	1.7	35	51-80	N/A	Small aspen stand, surrounded by a maintained wildlife opening. The aspen is mostly poor quality. The middle of the stand is in somewhat of a draw and appears seasonally wet. A small vernal pond is located on the northern edge of the stand. Heavy browse on all understory seedlings. Trace of paper birch in the overstory. Average ba/acre from 2 plots = 70 square feet. Deer and elk browse pressure is too high in this area to recommend a regeneration harvest.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Ironwood		4	Pole	5		Ironwood		
Quaking Aspen		95	Pole/Log	8	35	Beech		
Sugar Maple		1	Pole/Log	8		Basswood		
						Autumn Olive		
						Serviceberry (Juneberry)		
						Black Cherry		
						Ironwood		
						Ironwood		
29	320 - Upland Shrub	Nonstocked	1.8		Unspecified	No	This was presumably a forested stand at one time but did not regenerate due to browse. The east half of the stand is heavy to black cherry. The west half of the stand is more open with less cherry.	
		Sub-Canopy Species		Density	Avg. Height	Size		
		Quaking Aspen		Trace	>20 feet	Pole		
		Black Cherry		Medium	>20 feet	Tall Shrub		
		Mixed Grasses		High		Non-Wood		
		Basswood		Trace	>20 feet	Log		
		White Pine		Trace	>20 feet	Log		
		Bracken Fern		High	Unspecified	Non-Wood		
		Autumn Olive		Low	5 - 10 feet	Tall Shrub		
		Ironwood		Low	Variable	Sapling		
30	42200 - Natural White Pine	Sawtimber Poor	3.2	60	51-80	N/A	Transition between aspen stand to the north and opening to the south. Very open stand in the west half, becoming more well stocked at the east end. Decent quality white pine in the more dense areas. Average ba/acre from 4 plots = 53 square feet.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Quaking Aspen		7	Pole	6	36	Black Cherry		
White Pine		93	Log/Pole/XLog	12	60	White Pine		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																													
31	4130 - Aspen	Poletimber Well	32.3	35	51-80	N/A	Moderate quality, still developing stand dominated by quaking aspen. Clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84) bought by Champion. The stand did not regenerate well in all areas as there are scattered open areas along the eastern edge of the stand that are either non-forested or have filled in with mainly ironwood. White ash used to be a component of the overstory but is now all dead from EAB. Although rare there are a few sugar maple stems that were left as residual from the previous harvest. Autumn olive is encroaching into the stand, mostly at the southern end. Average ba/acre from 9 plots = 69 square feet. Most of the stand sits on a gradual west-facing slope. This stand will be ready for a harvest next entry but there is not much of a chance for successful regeneration due to the extreme levels of deer and elk browse in this area.																																																																													
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32	3105 - Mixed Upland Herbaceous	Nonstocked	53.1		Unspecified	No	Formerly a mixed hardwood/aspen/pine stand that was clearcut in 1998 in the sale Sawdust Pile Aspen Blocks (#53-002-95, Alan Lamberson) but converted to a non-forested stand due to browse. Now it is burned every couple of years to maintain it as an opening, as part of the Joe's Opening prescribed burn complex. Not much woody vegetation at all. Little bluestem is starting to establish in a few areas but most of the stand is still dominated by bracken fern. Rolling terrain.																																																																													
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33	4130 - Aspen	Poletimber Well	10.1	35	51-80	N/A	Moderate quality aspen stand that is close to a 50/50 mix of upland and lowland. Clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84), bought by Champion. There are ponds at the northwest corner of the stand, in the middle, and along the east side. Wet drainages connect all three (see leaf off imagery). Diameters on the aspen vary quite a bit. A clump of very large basswood is present along the east side. Autumn olive is abundant along the east edge and is starting to encroach into the stand. Basswood is attempting to regenerate in the understory but the browse is knocking it back. Trace of white pine. Average ba/acre from 6 plots = 57 square feet. Successful regeneration is unlikely if a regeneration harvest is ever prescribed due to the very high deer and elk browse in this area. Protect the ponds and drainages if a harvest is ever prescribed.																																																																													
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35	4130 - Aspen	Sawtimber Well	1.1	72	81-110	N/A	Small clump of log-size quaking aspen. Not great quality. Average ba/acre from 2 plots = 100 square feet. Autumn olive has completely taken over the understory of this stand. Manage with the adjacent stand to the east.																																																																					
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36	4130 - Aspen	Sawtimber Well	1.4	53	81-110	N/A	Small stand of aspen, decent quality. Clump of large basswood at the northeast corner. Autumn olive has taken over the understory of this stand. Average ba/acre from 2 plots = 100 square feet. Cannot recommend cutting due to the small size of the stand and the likelihood that browsing would eliminate any regeneration.																																																																					
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37	4110 - Sugar Maple Association	Sawtimber Well	46.6	100	81-110	N/A	Nice hardwood stand. A second age class of larger, older sugar maple is present. Stand thinned in the winter of 2017-18 as part of the Hidden Valley Hardwoods timber sale, #53-009-14-01. Bought and cut by Tulgetska. Very nice job on the sale with minimal damage to the residual. A few canopy gaps were created but browse has eliminated all desirable regeneration. Invasive thistle and sedges are prevalent in the canopy gaps, autumn olive is also starting to encroach. Average residual ba/acre = 85 square feet. Areas of lower stocking along the eastern and northern edges were excluded from the treatment boundary. Most of the aspen can be found along the eastern edge. Scattered wet areas/vernal pools are present in the stand and were protected with retention during the harvest. This stand may be ready for another harvest next entry. Maintain the large, old trees.																																																																					
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38	4130 - Aspen	Sawtimber Well	10.6	71	51-80	N/A	Small strip of quaking aspen with a heavy understory of hardwood regeneration. Sugar maple regeneration is abundant in most places. Average ba/acre from 8 plots = 78 square feet. Autumn olive is encroaching into the understory from the opening edges, especially along the northern edges. Difficult to tell with the snow on the ground, but there may be a few seasonally wet areas in this stand. The aspen is starting to die in some places creating good snag habitat for wildlife. Recommend letting this stand senesce and convert to hardwoods. Deer and elk browse pressure is extremely high in this area and would not result in successful regeneration if clearcut.																																																																					
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
39	3205 - Mixed Upland Shrub	Nonstocked	20.8		Unspecified	4199 - Other Mixed Upland Deciduous	This stand was clearcut in 2005 in the sale Pudding Aspen (#53-020-04, AJD) and was formerly a mixed hardwood stand with some aspen and pine mixed in. Browsing has eliminated almost all regeneration. The existing white pine saplings and poletimber in the stand appear to be residual protected during the harvest. A few small clumps of ironwood and red maple saplings were also leftover. Otherwise, all new in-growth is primarily ironwood and black cherry. Most of the ironwood is below 5 feet tall and appears to be getting browsed. Black cherry is also being browsed in places. Some of the most intense browse I've seen in the PRC, there is even a white spruce sapling that has its lower branches browsed. Another productive forest turned into a wasteland. Scattered leave trees from the previous harvest, mostly just a few large diameter aspen, a few birch, and an elm.

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	< 5 feet	Seeding
Sugar Maple	Trace	>20 feet	Pole
Red Maple	Trace	>20 feet	Sapling
Paper Birch	Trace	>20 feet	Pole
White Pine	Low	Variable	Pole
White Pine	Trace		Log
Red Maple	Trace	>20 feet	Pole
Bigtooth Aspen	Trace	>20 feet	Log
Autumn Olive	Trace	5 - 10 feet	Tall Shrub
Black Cherry	Medium	5 - 10 feet	Tall Shrub
White Pine	Trace		Seeding
Ironwood	Trace	Variable	Sapling
White Pine	Medium	Variable	Sapling

40	4110 - Sugar Maple Association	Sawtimber Well	183.4	103	111-140	N/A	Moderate to high quality hardwood stand. Sugar maple quality is generally good although there are a lot of multi-stemmed trees throughout the stand. The only treatment on record is a species removal in 1985, where all aspen, paper birch, and ironwood were removed. As a result, stocking is highly variable in areas of the stand, with some spots of much lower BAs that have since filled in with primarily ironwood, some of which is now in the poletimber size class. White ash used to be a moderate component of the stand, around 5-10% of the canopy, but is now all dead and most have fallen over. Most beech observed had BBD. Other species that were present in the canopy but rare include red oak, red pine, white pine, elm, quaking aspen, bigtooth aspen, paper birch, and hemlock. Average basal area per acre from 21 plots = 111 square feet. Some moderate east-facing slopes in the east half of the stand but none that will impact operability other than perhaps the far southeast corner and far northern end of the stand (see topo map). No wet areas observed although it's possible there are some vernal pools in the stand.
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Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	54	Pole/Log	9	103
Basswood	40	Log/Pole	12	
Beech	2	Pole/Log	9	
Ironwood	4	Pole	5	

Sub-Canopy Species	Density	Avg. Height	Size
Leatherwood	Low	< 5 feet	Tall Shrub
Ironwood	Medium	Variable	Sapling
Beech	Low	Variable	Sapling

41	4130 - Aspen	Poletimber Well	13.2	48	81-110	N/A	Nice developing aspen stand. Clearcut in 1974 by Gary Haskill. Ironwood is the predominant species in the understory but there are some areas with a nice component of sugar maple saplings as well. Most of the basswood and sugar maple in the overstory are residual stems left over from the last time the stand was cut, including a couple very large sugar maple (20"+). White ash used to be a large component of the overstory, around 10%, but it is nearly all dead from EAB, although a few stems appear to be hanging on. Other overstory species that were present but rare include white spruce, white pine, and elm. Average ba/acre from 8 plots = 100 square feet. Mostly flat terrain except for the west end which is on a slight slope. No treatment should be prescribed here due to the very high browse pressure in this area which has converted many productive stands to a non-forested condition. Let the aspen senesce and convert to hardwoods.
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Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	61	Pole/Log	8	48
Paper Birch	1	Pole	7	
Ironwood	5	Pole	5	
Basswood	1	Log/Pole	11	
White Ash	1	Pole	8	
Quaking Aspen	25	Pole/Log	8	
Sugar Maple	5	Log/Pole/XLog	11	
Black Cherry	1	Pole	5	

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	< 5 feet	Seeding
White Spruce	Trace	< 5 feet	Seeding
Red Oak	Trace	>20 feet	Sapling
Black Cherry	Low	Variable	Tall Shrub
Autumn Olive	Trace	5 - 10 feet	Tall Shrub
Ironwood	High	Variable	Sapling
Sugar Maple	Low	>20 feet	Sapling
White Ash	Medium	< 5 feet	Seeding
White Ash	Trace	Variable	Sapling
Serviceberry (Juneberry)	Trace	Variable	Tall Shrub



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments					
42	3105 - Mixed Upland Herbaceous	Nonstocked	2.0		Unspecified		-Charlton gas well #2-11 is located in this opening (still operable).					
								Sub-Canopy Species	Density	Avg. Height	Size	
								White Pine	Trace		Seeding	
								Mixed Grasses	Full		Non-Wood	
								Spotted Knapweed	Low		Non-Wood	
43	3105 - Mixed Upland Herbaceous	Nonstocked	37.4		Unspecified	No	This stand was clearcut in the 1997 in the sale Sawdust Pile Aspen Blocks (#53-002-95, Alan Lamberson) but browsing has eliminated all regeneration. This stand sits on hardwood quality soils. It is now periodically burned to maintain it as an opening, as part of the Joe's Opening prescribed burn complex. Little bluestem is starting to establish in a few areas. Most black cherry is below 5 feet but there are a few taller than that. A few elm, basswood, and aspen at the northwest corner of the stand, outside of the burn boundary. Rolling terrain.					
								Sub-Canopy Species	Density	Avg. Height	Size	
								Ironwood	Trace	< 5 feet	Seeding	
								Bracken Fern	High		Non-Wood	
								Leatherwood	Trace	< 5 feet	Tall Shrub	
								Beech	Trace	< 5 feet	Seeding	
								Little Bluestem	Medium	Unspecified	Non-Wood	
								Black Cherry	Medium	< 5 feet	Tall Shrub	
44	4130 - Aspen	Poletimber Well	20.5	36	51-80	N/A	Moderate quality stand dominated by quaking aspen and sitting on hardwood quality soils. This stand was clearcut in 1986, along with adjacent stand 45, in the sale Sawdust Pile Aspen (#53-009-84, Champion). Aspen diameters tend to vary quite a bit. Hardwood regeneration is abundant in the understory, with ironwood being ubiquitous throughout, while sugar maple is a little more sporadic. There are some areas with a light aspen overstory and a nearly pure overstory of ironwood sapling/poletimber, the southwest corner is one such example. White ash poletimber used to be common throughout but almost all of it is now dead from EAB, but there may still be a few stems hanging on. Other overstory species that were present but rare include paper birch, white pine, white spruce, and elm. Average ba/acre from 13 plots = 58 square feet. Gently rolling terrain. Successful regeneration is very doubtful due to the high deer and elk browse pressure in this area.					
								Canopy Species	% Cover	Size Class	DBH	Age
								Quaking Aspen	84	Pole	8	36
								Bigtooth Aspen	8	Pole/Log	9	
								Ironwood	7	Pole/Sapling	5	
								Sugar Maple	1	Pole	7	
								Sub-Canopy Species	Density	Avg. Height	Size	
								Red Maple	Low	>20 feet	Sapling	
								Autumn Olive	Trace	5 - 10 feet	Tall Shrub	
								Witch Hazel	Trace	5 - 10 feet	Tall Shrub	
								White Ash	Trace	>20 feet	Sapling	
								Ironwood	High	Variable	Sapling	
								Sugar Maple	Medium	>20 feet	Sapling	
Black Cherry	Low	Variable	Tall Shrub									



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments					
45	3105 - Mixed Upland Herbaceous	Nonstocked	19.0		Unspecified	No	This was formerly a forested stand and was cut at the same time as adjacent stand 44 in 1986 in the sale Sawdust Pile Aspen (#53-009-84, Champion), however browsing eliminated almost all regeneration in the stand. A few scattered clumps of aspen are all that survived. This stand sits on hardwood quality soils. Heavy elk browse is still noted on any tree trying to grow in the stand, even some of the black cherry show browse damage. Little bluestem is prevalent throughout, there looks to be some beebalm (wild bergamot) mixed in too.					
								Sub-Canopy Species	Density	Avg. Height	Size	
								Blackberry/Raspberry	Trace	< 5 feet	Tall Shrub	
								Quaking Aspen	Trace	< 5 feet	Seeding	
								White Pine	Trace	>20 feet	Pole	
								Bracken Fern	Medium		Non-Wood	
								Quaking Aspen	Low	>20 feet	Pole	
								Witch Hazel	Trace	5 - 10 feet	Tall Shrub	
								Ironwood	Trace	< 5 feet	Seeding	
								Bigtooth Aspen	Trace	>20 feet	Log	
								White Pine	Trace	>20 feet	Log	
								Black Cherry	Medium	Variable	Tall Shrub	
								Ironwood	Trace	Variable	Sapling	
								Cladonia (Reindeer moss)	Trace		Non-Wood	
								Little Bluestem	High	Unspecified	Non-Wood	
White Pine	Trace	Variable	Sapling									
Autumn Olive	Trace	5 - 10 feet	Tall Shrub									
46	42200 - Natural White Pine	Sawtimber Medium	1.5	60	51-80	N/A	Semi-open stand with a few small clumps of denser white pine. White pine quality is decent in the more dense areas.					
								Canopy Species	% Cover	Size Class	DBH	Age
								White Pine	100	Log/Pole/XLog	12	60
Sub-Canopy Species	Density	Avg. Height	Size									
Black Cherry	Trace	Variable	Tall Shrub									
White Pine	Low	>20 feet	Sapling									
47	4130 - Aspen	Sawtimber Medium	2.1	67	51-80	N/A	This stand encompasses three small bubbles of aspen that are separated by a maintained food plot. All are somewhat similar in that they are dominated by quaking aspen. The southern bubble is nearly all aspen. The middle bubble has aspen, cherry, ironwood, and one paper birch. The northern bubble is where all of the pine is located. The aspen in the two northern bubbles is in decline. Average ba/acre from 3 plots = 55 square feet. Heavy browse on the understory in each bubble, even on ironwood seedlings. The middle bubble has a lot of autumn olive and a few clumps of barberry. Do not manage these stands as the browse pressure is too high in this area to get successful regeneration.					
								Canopy Species	% Cover	Size Class	DBH	Age
								Black Cherry	6	Pole	6	
								Quaking Aspen	73	Log/Pole	11	67
								Ironwood	7	Pole	6	
								Red Pine	1	Log	12	
								Paper Birch	3	Log/Pole	11	
								White Pine	10	Log/XLog/Pole	14	
								Sub-Canopy Species	Density	Avg. Height	Size	
								White Pine	Medium	Variable	Sapling	
Ironwood	Medium	Variable	Sapling									
Autumn Olive	Low	5 - 10 feet	Tall Shrub									
Black Cherry	Medium	Variable	Tall Shrub									
Japanese Barberry	Trace	< 5 feet	Tall Shrub									
Beech	Low	< 5 feet	Seeding									
Ironwood	Medium	< 5 feet	Seeding									



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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48 4130 - Aspen Poletimber Well 12.4 35 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age
White Ash	1	Pole	8	
Ironwood	3	Pole/Sapling	5	
Paper Birch	1	Pole	8	
Red Maple	2	Pole/Log	8	
Quaking Aspen	79	Pole	7	35
Bigtooth Aspen	10	Pole	8	
Sugar Maple	3	Pole	6	
Red Oak	1	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
White Ash	Low	Variable	Sapling
Serviceberry (Juneberry)	Trace	Variable	Tall Shrub
Black Cherry	Low	Variable	Tall Shrub
Hawthorn (spp.)	Trace	5 - 10 feet	Tall Shrub
Ironwood	High	Variable	Sapling
Alternate-leaved Dogwood	Trace	5 - 10 feet	Tall Shrub
Tag Alder	Trace	5 - 10 feet	Tall Shrub
American Elm	Trace	Variable	Sapling
Sugar Maple	Medium	>20 feet	Sapling
Hazelnut (American)	Low	5 - 10 feet	Tall Shrub
White Ash	High	< 5 feet	Seeding
Ironwood	High	< 5 feet	Seeding

This stand was clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84), bought by Champion. It is now a moderate quality aspen stand that is still developing. Some areas of the stand have a nice understory of sugar maple regeneration. Well developed shrub layer in places, especially along the west side adjacent to the road. White ash used to be a large component of the overstory, maybe 15%, but it is now mostly dead, although a few stems appear to be hanging on. Average ba/acre from 8 plots = 98 square feet. A large pond is present in the north part of the stand. A wet drainage/intermittent stream runs north to south along the base of a steep slope in the west half of the stand (see imagery). This drainage starts as a pond on the west side of the road, at the NW corner of the stand.

No treatment should be prescribed here as successful regeneration is unlikely due to the very high deer and elk browse pressure, see adjacent stand 50 for evidence of that. Treatment acreage would also be significantly reduced to protect the pond and drainage. Let the aspen senesce over time and manage for hardwoods.

The old road that runs east/west through the north part of the stand has signage for a buried electric line?

49 4130 - Aspen Poletimber Well 21.1 35 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Pole/Sapling	5	
Quaking Aspen	35	Pole/Sapling	6	
Bigtooth Aspen	60	Pole/Sap/Log	7	35

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Trace	Variable	Sapling
Witch Hazel	Trace	5 - 10 feet	Tall Shrub
Black Cherry	Medium	Variable	Tall Shrub
White Pine	Trace	Variable	Sapling
Ironwood	Low	Variable	Sapling
Maple Leaved Viburnum	Low	< 5 feet	Tall Shrub
Leatherwood	Low	< 5 feet	Tall Shrub
Red Maple	Medium	Variable	Sapling

This stand was clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84), bought by Champion. Regeneration came back spotty with scattered open areas that didn't regenerate well due to browse. Adjacent stand #52 was formerly a part of this stand but was completely browsed to the point of being non-forested. Overall the aspen in the stand is good quality as the stand sits on hardwood quality soils. Diameters vary considerably with areas of lower stocking having larger diameters. Rolling terrain with some steep slopes but none that are inoperable. Little to no overstory tree diversity with just a trace of white pine and sugar maple. There used to be some white ash in the stand but it is now all dead. Average ba/acre from 7 plots = 81 square feet.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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50 3301 - Low Density Deciduous Trees Nonstocked 17.5 Unspecified No

Sub-Canopy Species	Density	Avg. Height	Size
Bracken Fern	Medium		Non-Wood
Little Bluestem	Medium	Unspecified	Non-Wood
Black Cherry	High	Variable	Tall Shrub
Ironwood	Trace	>20 feet	Pole
Blackberry/Raspberry	Low	< 5 feet	Tall Shrub
Hazelnut (American)	Trace	5 - 10 feet	Tall Shrub
Sugar Maple	Trace	>20 feet	Pole
Bigtooth Aspen	Trace	>20 feet	Log
Quaking Aspen	Medium	>20 feet	Pole
Sugar Maple	Trace	>20 feet	Sapling
White Pine	Trace	Variable	Sapling
Ironwood	Medium	Variable	Sapling
Spotted Knapweed	Trace		Non-Wood
Autumn Olive	Trace	5 - 10 feet	Tall Shrub
Beech	Trace	Variable	Sapling
Red Oak	Trace	>20 feet	Log

This was previously a forested stand that was clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84), bought by Champion. It did not successfully regenerate due to deer and elk browse. A few clones of aspen and clumps of ironwood saplings made it past the browse but that's it. New ironwood and beech ingrowth is being severely browsed. High quality soils capable of supporting hardwoods. Little bluestem is established in a few areas. Spotted knapweed is present along the road that passes through the stand. Rolling terrain.

51 4110 - Sugar Maple Association Sawtimber Well 130.7 104 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age
Basswood	32	Log/Pole/XLog	12	
Red Oak	2	Log/XLog	16	
Beech	4	Log/XLog/Pole	15	135
Bigtooth Aspen	1	Log	13	
Sugar Maple	61	Log/Pole/XLog	10	104

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Medium	Variable	Sapling
Ironwood	High	Variable	Sapling
White Ash	Low	< 5 feet	Sapling

High quality northern hardwood stand with a second age class of larger, older hardwoods. These older trees are more prevalent in the northern half of the stand. Undulating ridges and valleys along the east side of the stand with some of the slopes being very steep. White ash used to be a moderate component of the stand, around 10 square feet of BA, but it is now all dead. Most beech has BBD, beech is mostly in the north half of the stand. The only records of a past harvest were from 1985-87, where all aspen, birch, and ironwood were removed. A few of these species still remain in the stand but are rare. Elm, white pine, and hemlock are also present but in trace amounts. Average ba/acre from 15 plots = 102 square feet. Stocking is somewhat variable, highest in the interior of the stand and lower along the slopes on the east and west sides. A few vernal pools and seasonally wet drainages are present in the stand. This stand is starting to display old-growth characteristics and should be left unmanaged as part of the Tin Shanty DHA. The 134 age was verified from an 18" DBH sugar maple.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
52	320 - Upland Shrub	Nonstocked	8.9		Unspecified	No	This stand was forested at one time, and a part of stand 49, but did not regenerate following a clearcut in 1987 (Sawdust Pile Aspen, #53-009-84, Champion) due to browse. A portion of this stand (along the east edge) was burned in a wildfire in 2013 and extended into the G type (stand 132) in Comp 49. The middle part of this stand where the road ends is more of a G type and is a popular camping area.	
		Sub-Canopy Species		Density	Avg. Height	Size		
		Black Cherry	Medium	Variable	Tall Shrub			
		Balsam Fir	Trace		Sapling			
		Witch Hazel	Trace	5 - 10 feet	Tall Shrub			
		Mixed Grasses	Full		Non-Wood			
		White Pine	Trace		Sapling			
		Sweet Fern	Low	< 5 feet	Tall Shrub			
		White Pine	Trace	>20 feet	Pole			
		Bigtooth Aspen	Low	>20 feet	Pole			
		White Spruce	Trace	>20 feet	Pole			
53	4130 - Aspen	Poletimber Well	46.0	54	81-110	N/A	High quality aspen stand with an excellent component of hardwoods that are starting to recruit into the overstory. Specifically, areas dominated by quaking aspen tend to be heavier to hardwoods as the quaking aspen appears to be in decline. The quaking aspen is not nearly as good of quality as the bigtooth aspen. Overall, this stand sits on very productive soils and is appropriate for hardwoods. White ash used to be a large component of the stand, particularly at the north end of the stand, but it is now all dead. Other species that were present in the overstory but rare included white pine and red oak. Average ba/acre from 12 plots = 106 square feet. Rolling terrain with steep slopes along the east side of the stand. Last entry there was an active goshawk nest in the eastern portion of the stand, check during the breeding season to see if it is still active. This stand should be managed on a longer rotation due to its hardwood component and the fact it grows on very good soils. The very high browse pressure in this area should also be noted, as the portion of this stand that was cut last entry to the east (stand 56), has been significantly browsed and is converting to a non-forested condition.	
		Canopy Species		% Cover	Size Class	DBH		Age
		American Elm	1	Pole/Sapling	6			
		White Ash	1	Pole/Sapling	6			
		Paper Birch	3	Pole/Sapling	6			
		Bigtooth Aspen	53	Pole/Log	8	54		
		Basswood	4	Pole/Sapling	7			
		Red Maple	5	Pole/Sapling	6			
		Quaking Aspen	20	Pole/Log	9			
		Sugar Maple	12	Pole/Sapling	6			
		Ironwood	1	Pole/Sapling	5			
		Sub-Canopy Species		Density	Avg. Height	Size		
		Basswood	Trace	>20 feet	Sapling			
		White Ash	Low	>20 feet	Sapling			
		Ironwood	Low	Variable	Sapling			
		Paper Birch	Low	>20 feet	Sapling			
		Red Maple	Medium	>20 feet	Sapling			
		Sugar Maple	Medium	>20 feet	Sapling			
		Beech	Trace	Variable	Sapling			
		Black Cherry	Trace	Variable	Sapling			
54	6229 - Mixed lowland shrub	Nonstocked	1.4		Unspecified	No	-Possible bog, couldn't tell with the snow on the ground.	
		Sub-Canopy Species		Density	Avg. Height	Size		
		Tamarack	Trace		Sapling			
		Leatherleaf	Medium		Tall Shrub			
		White Pine	Trace		Pole			
		Broom Sedge	High		Non-Wood			
55	4130 - Aspen	Poletimber Well	4.8	35	81-110	N/A	Small stand of moderate quality quaking aspen, sitting on a slight east-facing slope. Heavy ironwood understory. Sugar maple regeneration is present in some areas but is not abundant throughout. Trace of elm and paper birch. Average ba/acre from 4 plots = 82 square feet. This stand was clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84), bought by Champion. Still small diameters for a harvest but regardless a harvest should not be prescribed due to the very high deer and elk browse pressure in this area.	
		Canopy Species		% Cover	Size Class	DBH		Age
		Ironwood	10	Pole/Sapling	5			
		Sugar Maple	1	Pole	7			
		Bigtooth Aspen	10	Pole/Log	8	35		
		Quaking Aspen	79	Pole	7	35		
		Sub-Canopy Species		Density	Avg. Height	Size		
		Red Oak	Trace	>20 feet	Sapling			
		Sugar Maple	Low	>20 feet	Sapling			
		White Ash	Trace	>20 feet	Sapling			
		Ironwood	Full	Variable	Sapling			
		Black Cherry	Low	Variable	Tall Shrub			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																		
56	4130 - Aspen	Sapling Medium	26.6	6	Immature	N/A	Stand cut in the winter of 2015-16 as part of Tubb's Creek Aspen (#53-008-14-01). Bought and cut by Tulgetska. Whole-tree flail job. One small area of rutting in the SE portion of the stand, this area is now mostly non-forested with a wetland sedge growing in abundance. Overall, regeneration came back pretty well, especially adjacent to the road, but as you get farther away from the road the browse intensity picks up, particularly in the far NW part of the stand which is being converted to a non-forested condition. A few scattered residual oak, pine, and spruce were left. Retention areas were left around the two lowland areas as well as a pocket left along the road.																																																																		
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57	3105 - Mixed Upland Herbaceous	Nonstocked	3.5		Unspecified		-There is a well pad in this opening. State North Charlton 1-11. Vegetation looks mostly like knapweed and reed canary grass, although there does appear to be an area of little bluestem on the west side slope.																																																																		
58	6229 - Mixed lowland shrub	Nonstocked	1.3		Unspecified	No	A ring of quaking aspen was left as a buffer around the edges of this lowland when the surrounding stand was clearcut.																																																																		
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59	4199 - Other Mixed Upland Deciduous	Poletimber Well	16.6	78	81-110	N/A	Moderate to low quality hardwoods with a significant component of aspen. The aspen tends to be more numerous along the western and southern edges. There are two age classes of aspen in the stand; the majority are younger and in the 8-11" size classes and then there are some larger, older trees scattered infrequently throughout. This must be the result of a past species removal which removed most, but not all, of the aspen. White pine is mostly along the south edge. Trace of white spruce. Average ba/acre from 7 plots = 96 square feet. Rolling terrain. Historical occurrence of a stick nest along the east side (see OFS layer). This stand would be best managed in an even-aged manner but the browse pressure is too high in this area for successful regeneration. The aspen will hold for many more years if browse pressure is ever reduced.																																																																		
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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60	3301 - Low Density Deciduous Trees	Nonstocked	3.2		Unspecified	No	Small stand that is almost forested with scattered clumps of trees, and sitting in somewhat of a valley. The southeastern end of the stand is on a steep side slope. White pine should continue to fill in over time.
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Sub-Canopy Species	Density	Avg. Height	Size
Blackberry/Raspberry	Low	< 5 feet	Tall Shrub
White Pine	Low	>20 feet	Log
Bracken Fern	Medium		Non-Wood
White Pine	Trace	>20 feet	Pole
Black Cherry	Medium	Variable	Tall Shrub
White Pine	Trace	Variable	Sapling
Quaking Aspen	Low	>20 feet	Pole
Ironwood	Low	Variable	Sapling
Mixed Grasses	High	Unspecified	Non-Wood
Paper Birch	Low	>20 feet	Pole

61	4311 - Pine, Aspen Mix	Poletimber Well	5.9	53	81-110	N/A	Mix of pine and aspen. The aspen is very poor quality. There are a few scattered, older aspen stems mixed in. Several areas are heavier to white pine. A couple of XL-sized white pine are present. Trace of paper birch. Average ba/acre from 5 plots = 104 square feet. Let this stand convert to white pine as the understory is fully developed with white pine poles and saplings.
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Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	43	Pole/Log	8	53
Quaking Aspen	8	Pole/Log	8	
White Pine	43	Pole/Log	8	
Red Maple	3	Pole	7	
Sugar Maple	1	Pole	7	
Balsam Fir	1	Pole	5	
Red Oak	1	Log	14	

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	< 5 feet	Seeding
Black Cherry	Low	Variable	Tall Shrub
Sugar Maple	Low	5 - 10 feet	Sapling
Beech	Low	< 5 feet	Seeding
White Pine	High	>20 feet	Sapling

62	4130 - Aspen	Poletimber Well	16.5	52	51-80	N/A	Moderate quality aspen stand that is still developing. The stand slopes gently down to the east and site quality declines the further down the slope you travel. Most of the quaking aspen is along this eastern side and is small diameter and unhealthy. Scattered open areas are also present along this eastern edge. A few scattered log-size residual hardwoods are present, mostly along the west edge. Other species that were present in the overstory but rare include paper birch, white pine, white spruce, and basswood. Trace of red oak saplings near the road. Average ba/acre from 7 plots = 70 square feet. Browse is a concern for regeneration success, as evidenced in adjacent stand 64.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	4	Pole	6	
Quaking Aspen	20	Pole	6	
Bigtooth Aspen	73	Pole/Log	8	52
Sugar Maple	2	Pole/Log	8	
Balsam Fir	1	Pole	6	

Sub-Canopy Species	Density	Avg. Height	Size
Red Oak	Trace	>20 feet	Sapling
Ironwood	Low	< 5 feet	Seeding
White Pine	Trace	Variable	Sapling
Balsam Fir	Low	Variable	Sapling
White Spruce	Trace	Variable	Sapling
Red Maple	Low	>20 feet	Sapling
Beech	Low	< 5 feet	Seeding



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																	
63	4111 - S.Maple, Hard Mast Association	Sawtimber Well	64.1	104	81-110	N/A	Nice northern hardwood stand with a component of very high quality red oak. This stand was thinned in the winter of 2017-18 as part of the Hidden Valley Hardwoods timber sale, #53-009-14-01. Bought and cut by Tulgetska. Very nice job on the sale with minimal damage to the residual. A few canopy gaps were created but the only signs of regeneration at this point are ironwood and striped maple. Heavy elk use and browse in the stand, including in the canopy gaps where sedge appears to be taking over due to the elk and deer. A few small areas were left unthinned as retention. A small seep/vernal pool is present in the middle of the stand and was also excluded using retention (see site conditions layer). Most of the stand sits on a series of ridges and valleys on an eastern aspect. Most slopes are operable. Average ba/acre from 7 plots = 100 square feet. The far north end has a second age class of very large and old sugar maple. Continue to monitor canopy gaps for browse damage.																																																																	
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64	4130 - Aspen	Sapling Poor	7.0	6	Immature	N/A	Stand cut in the winter of 2015-16 as part of Tubb's Creek Aspen (#53-008-14-01). Bought and cut by Tulgetska. Whole-tree flail job. Retention pocket left along the road. Regeneration is being heavily impacted by browse. A few pockets near the road look in good shape but the remainder of the regeneration does not and I'm not sure how much will survive. All of the residual paper birch that were left are now dead.																																																																	
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65	3105 - Mixed Upland Herbaceous	Nonstocked	1.5		Unspecified	No	Small opening with a lot of bluestem. Not a managed opening and it shouldn't be due to the amount of beneficial native species. Popular camping spot at the north end near the berm.																																																																	
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66	4130 - Aspen	Sawtimber Well	12.5	53	81-110	N/A	Nice aspen stand with an excellent understory of hardwoods, particularly sugar maple, which is present throughout the entire stand. Aspen diameters vary somewhat with some areas with larger stems. Other species that were present in the overstory but rare included paper birch, elm, and balsam fir. Average ba/acre from 6 plots = 102 square feet. Regeneration success if very unlikely due to the high browse pressure in the area. Let the aspen senesce and convert to hardwoods.																																																																	
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
67	6120 - Lowland Cedar	Poletimber Well	60.6	138	111-140	N/A	Generally healthy cedar stand except for the middle part of the stand where there is some decline. Some areas of decent quality along the upland edge but most of the stand is only middling quality cedar on very wet soils. Several seasonal streams run through the stand, joining with Tubbs Creek to the east.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Black Spruce		10	Pole	7		Balsam Fir		
Tamarack		4	Log	10		White Spruce		
Red Maple		2	Pole/Log	8				
Balsam Poplar		2	Log	10				
Quaking Aspen		1	Log	15				
Balsam Fir		4	Pole/Sapling	6				
White Spruce		4	Pole/Log	9				
Northern White Cedar		73	Pole/Log	8	138			
68	3105 - Mixed Upland Herbaceous	Nonstocked	2.4		Unspecified	No	Small open area. Both sides of the road were used as landings in the past couple of years for separate timber sales. The west end near the berm is a popular camping spot.	
Sub-Canopy Species		Density	Avg. Height	Size				
Black Cherry		Trace	Variable	Tall Shrub				
Spotted Knapweed		Medium		Non-Wood				
Mixed Grasses		Full		Non-Wood				
69	3105 - Mixed Upland Herbaceous	Nonstocked	0.9		Unspecified	No		
Sub-Canopy Species		Density	Avg. Height	Size				
Balsam Fir		Trace	>20 feet	Pole				
White Spruce		Trace	>20 feet	Pole				
Mixed Grasses		Full		Non-Wood				
White Pine		Trace	Variable	Sapling				
Bracken Fern		Medium		Non-Wood				
Blackberry/Raspberry		Low		Tall Shrub				
Balsam Fir		Trace	Variable	Sapling				
Black Cherry		Low	Variable	Tall Shrub				
70	4136 - Aspen, Mixed Conifer	Poletimber Well	16.9	35	81-110	N/A	Moderate quality aspen stand that is just reaching merchantability. This stand was clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84), bought by Champion. This stand varies considerably in terrain and species composition. The east/northeast half of the stand is a mix of upland ridges dominated by quaking aspen and fir, and lowland troughs that weren't cut and have mainly cedar. The west/southwest half of the stand is primarily upland on rolling terrain. Bigtooth aspen, red maple, and white pine are mostly in this area. Aspen diameters overall vary considerably, with some areas still being sub-merchantable. Trace of paper birch, red oak, and tamarack in the overstory. Average ba/acre from 8 plots = 85 square feet.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Bigtooth Aspen		32	Pole/Sapling	6		Black Cherry		
White Spruce		1	Pole	8		Red Maple		
White Pine		3	Pole	6		Balsam Fir		
Red Maple		9	Pole/Log	8		Tag Alder		
Black Spruce		1	Pole	6				
Balsam Fir		11	Pole/Sapling	6				
Northern White Cedar		8	Pole/Log	8				
Quaking Aspen		35	Pole/Sapling	5	35			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																												
71	4130 - Aspen	Poletimber Well	39.1	35	51-80	N/A	<p>This stand was clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84), bought by Champion. It has developed into a nice stand with a good mix of other species. The sugar maple component is more prominent along the northern stand edge. Red oak regenerated well in areas, most prevalent in the southwest 1/2 of the stand. White pine is mostly present in a few veins (see imagery). Aspen diameters vary considerably, they tend to be much larger along the north half of the stand, ranging anywhere from 7-10" DBH, while they're much smaller in the south half, ranging about 4-6" DBH. Witch hazel becomes abundant along the southern edge of the stand. Average ba/acre of the stand from 11 plots = 79 square feet. Rolling terrain with some steep slopes but none that are inoperable. Two vernal pools at the far eastern end of the stand (see site conditions). This stand may be ready for a treatment next entry, but more likely in two entries. Reserve the young oak and pine component. Manage together with stands 3 and 5 in adjacent Compartment 47.</p>																																																												
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72	3105 - Mixed Upland Herbaceous	Nonstocked	1.4		Unspecified	No	<p>Used as a landing when stand 77 was cut. Mostly grass, bracken fern, and knapweed. Appears to be somewhat of a degraded site.</p>																																																												
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73	42201 - Natural White Pine, Mixed Deciduous	Poletimber Well	1.0	35	111-140	N/A	<p>Small pocket dominated by white pine. A couple of larger red maple mixed in. 2 large red oak at the north end of the stand. Average ba/acre from 2 plots = 125 square feet. Stand sits on a slight side-slope.</p>																																																												
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74	4130 - Aspen	Sapling Medium	32.3	6	Immature	N/A	<p>Stand cut in the winter of 2015-16 as part of Tubb's Creek Aspen (#53-008-14-01). Bought and cut by Tulgetska. Whole-tree flail job. All oak, birch, and pine left as well as some scattered poor-quality aspen. The few birch that were left are still healthy and alive. Red oak saplings were protected as well, mostly along the western ridgeline. Three retention pockets; one along the road, one along a steep ridgeline to the north, and one small interior pocket. Regeneration is being hammered by browse in most places. At this point a lot of it still appears alive but a few more years of heavy browse will likely kill it all. Prior to cutting this was a very high quality aspen stand, see retention pockets and stand 107 for what it used to look like.</p>																																																												
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75	4136 - Aspen, Mixed Conifer	Poletimber Poor	5.6	25	1-50	N/A	This stand was clearcut in 1997 in the sale Old Grade Aspen Blocks (#53-004-95, Kare Logging) but browsing severely impeded regeneration success. The east half of the stand has a few aspen clones that survived, but the west half is mostly devoid of regeneration except for some bushy white pine that are starting to fill in. Some smaller residual oak can be found in the western half as well. Red maple and ironwood seedlings are present and trying to recruit, but both species are being heavily browsed. Unfortunately this is what the aftermath of an aspen clearcut in the PRC now typically looks like.																																																											
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76	6239 - Mixed Emergent Wetland	Nonstocked	6.5		Unspecified	No	Tubbs Creek flows through this stand. An old beaver dam is present in the narrow middle part of the stand. This stand has been flooded at various times due to beavers, see 98 DOQ imagery for the last major flooding, which resulted in the mortality of lots of cedar which used to grow in the stand. A small clump of invasive phragmites was found in the southwest part of the stand, in an area of heavy cedar mortality.																																																											
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77	4130 - Aspen	Sapling Medium	20.5	6	Immature	N/A	Stand cut in the winter of 2015-16 as part of Tubb's Creek Aspen (#53-008-14-01). Bought and cut by Tulgetska. Whole-tree flail job. Residual oak and pine left, most of which is located in the narrower strip in between the two retention pockets. Regeneration in the east half of the stand looks pretty good and is heavier to quaking aspen. Browse intensity picks up in the west half of the stand and is negatively impacting regeneration success. As of now this stand passes aspen regeneration stocking guidelines but should be continually monitored to see if the browse pressure subsides.																																																											
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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78 6239 - Mixed Emergent Wetland Nonstocked 10.5 Unspecified No Tubbs Creek runs through this stand. A small tributary to Tubbs Creek also runs south to north through the east part of the stand. From older imagery it looks like much of this stand was flooded at one time due to beavers.

Sub-Canopy Species	Density	Avg. Height	Size
Willow spp.	Trace	Variable	Tall Shrub
Balsam Poplar	Trace	Variable	Sapling
Sedges	Full	Unspecified	Non-Wood
Tag Alder	Medium	5 - 10 feet	Tall Shrub
White Spruce	Trace	< 5 feet	Seeding
Cattail spp.	Trace	Unspecified	Non-Wood
Balsam Fir	Trace	< 5 feet	Seeding

79 4130 - Aspen Sapling Well 23.8 25 Immature N/A This stand was clearcut in 1997 in the sale Old Grade Aspen Blocks (#53-004-95, Kare Logging), paper birch, aspen, and maple was the primary cut volume. While birch regeneration is absent there is pretty good looking aspen regeneration throughout the stand. Fir and spruce becomes common along the far southern edge of the stand, with less aspen, which is likely due to beavers many years ago. White pine regen is common in this area too, as well as along the western side of the stand. Scattered clumps of mature red oak, white pine, and red pine are mixed in throughout, with oak mostly being in the north half of the stand. Heavy browse on red maple seedlings in some places. This stand slopes down to the south with there appearing to be some seasonally wet areas the closer you get to the southern edge. Trace of tamarack poletimber and saplings.

Canopy Species	% Cover	Size Class	DBH	Age
White Spruce	4	Pole/Sapling	5	
Red Oak	5	Log/XLog/Pole	16	
Bigtooth Aspen	63	Sapling/Pole	4	25
White Pine	10	Pole/Sap/Log	5	
Red Pine	1	Log/XLog	15	61
Balsam Fir	2	Sapling	3	
Quaking Aspen	15	Sapling	3	

Sub-Canopy Species	Density	Avg. Height	Size
White Spruce	Low	Variable	Sapling
White Pine	High	Variable	Sapling
Red Pine	Trace	Variable	Sapling
Black Cherry	Low	Variable	Tall Shrub
Ironwood	Low	Variable	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Balsam Fir	Low	Variable	Sapling

80 4311 - Pine, Aspen Mix Sawtimber Well 3.7 78 111-140 N/A Mix of aspen and white pine, although pine is dominant. The aspen is mostly poor quality with crooked stems and lots of rot, the pine is much better quality. A variety of white pine diameters are present including some trees close to legacy size. Some pockets of nice advanced white pine regen are present in the south half. The far south end of the stand has most of the fir and red pine. Trace of sugar maple, white spruce, red oak, and paper birch. Average ba/acre from 5 plots = 134 square feet. The north half of the stand sits on a relatively steep west-facing slope.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	8	Pole	6	
Quaking Aspen	10	Log/Pole	10	
Balsam Fir	2	Pole	6	
Red Pine	5	Pole/Log	8	
Bigtooth Aspen	26	Log/Pole	11	
White Pine	49	Log/Pole/XLog	10	78

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



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
81	330 - Low-Density Trees	Nonstocked	1.8		Unspecified	No	This stand was used as the main landing when stand 98 was cut. It has since filled in with scattered trees. There are signs of old road excavation at the north end where they crossed Tubbs Creek.	
		Sub-Canopy Species		Density	Avg. Height	Size		
		Quaking Aspen		Low	>20 feet	Pole		
		White Spruce		Low	Variable	Sapling		
		Mixed Grasses		High	Unspecified	Non-Wood		
		Red Maple		Trace	>20 feet	Pole		
		Bracken Fern		Medium	Unspecified	Non-Wood		
		Black Cherry		Low	Variable	Tall Shrub		
		White Pine		Low	Variable	Sapling		
		Balsam Fir		Medium	>20 feet	Pole		
		White Spruce		Trace	>20 feet	Log		
		Balsam Fir		Medium	Variable	Sapling		
		Balsam Poplar		Trace	5 - 10 feet	Sapling		
82	4130 - Aspen	Poletimber Well	3.1	49	81-110	N/A	Small stand of aspen poletimber that wasn't cut when the surrounding stand was cut. The stand sits on a moderate south-facing slope. Average ba/acre from 3 plots = 110 square feet. Manage this stand together with stand 79. Old inventory notes indicate this stand may have originated following a wildfire.	
		Canopy Species		% Cover	Size Class	DBH		Age
		Quaking Aspen		10	Pole/Log	8		
		Red Oak		4	Log/Pole	13		
		Bigtooth Aspen		77	Pole/Log	8		49
		Red Maple		9	Pole	7		
		Sub-Canopy Species		Density	Avg. Height	Size		
		Black Cherry		Low	5 - 10 feet	Tall Shrub		
		Witch Hazel		Low	5 - 10 feet	Tall Shrub		
		Red Maple		Low	>20 feet	Sapling		
		White Pine		Medium	5 - 10 feet	Sapling		
83	42200 - Natural White Pine	Sawtimber Well	33.5	80	81-110	N/A	White pine dominated stand with variable stocking and species composition. The white pine is generally good quality with all four size classes present (sap/pole/log/xl), including numerous legacy trees. In general, diameters tend to be largest at the east end of the stand. This end of the stand may have been thinned at one time as there is less of an understory and mostly just pine and aspen in the overstory (or possibly burned in a wildfire). Quaking aspen is generally poor quality and in decline, with lots of conks and rot. Terrain throughout the stand is mostly flat to gently rolling. Other species that were present in the overstory but rare include red oak and paper birch. Average ba/acre of the stand from 12 plots = 105 square feet. Previously, an active goshawk nest was identified in the east end of the stand, west of Sawdust Pile Road. No need for management at this time. Let the aspen continue to die and benefit cavity nesting wildlife species. Look at a potential thinning treatment next entry if basal areas have increased enough.	
		Canopy Species		% Cover	Size Class	DBH		Age
		Quaking Aspen		18	Log/Pole	11		
		White Pine		69	Log/Pole/XLog	12		80
		Bigtooth Aspen		2	Log	12		
		White Spruce		1	Log/Pole	10		
		Balsam Fir		5	Pole	6		
		Red Pine		2	Log	12		
		Red Maple		3	Pole/Log	8		
		Sub-Canopy Species		Density	Avg. Height	Size		
		White Pine		Medium	Variable	Sapling		
		Black Cherry		Trace	Variable	Tall Shrub		
		White Spruce		Trace	Variable	Sapling		
		Witch Hazel		Trace	5 - 10 feet	Tall Shrub		
		Balsam Fir		Medium	Variable	Sapling		
		Red Maple		Trace	Variable	Sapling		
84	6139 - Mixed Lowland Forest	Sawtimber Medium	2.3	90	51-80	N/A	-Tubb's Creek runs through this stand.	
		Canopy Species		% Cover	Size Class	DBH	Age	
		Quaking Aspen		9	Log	11		
		Northern White Cedar		5	Log	12		
		White Spruce		40	Log	12	90	
		White Pine		2	XLog/Log	18		
		Paper Birch		18	Pole	9		
		Red Maple		26	Pole/Log	9		
		Sub-Canopy Species		Density	Avg. Height	Size		
		White Spruce		Low	< 5 feet	Sapling		
		Tag Alder		Medium	10 - 20 feet	Tall Shrub		
		Balsam Fir		Low	Variable	Sapling		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
85	4319 - Mixed Upland Forest	Sawtimber Well	6.6	73	81-110	N/A	Mixed species stand with several age classes present. The eastern edge of the stand has a few clumps of younger aspen that were likely cut at the same time as stand 109 to the east in Compartment 49. The remainder of the aspen in the stand is large diameter and old, including a few trees over 25" DBH. Fir is heavy in the understory and starting to recruit into the overstory in places, eventually it will be the dominant species in the stand. Average ba/acre of the stand from 8 plots = 96 square feet. This stand is split into two sections by a wet drainage in a small ravine that flows north through the middle of the stand. The east half of the stand could be available to manage with adjacent stands in Compartment 49 but may be better left alone to discourage beaver activity on Tubbs Creek.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	16	Log/Pole	14		Balsam Fir	Full		Variable	Sapling
Paper Birch	4	Log/Pole	10		Tag Alder	Trace		10 - 20 feet	Tall Shrub
Balsam Fir	28	Pole/Sap/Log	6		White Spruce	Low		Variable	Sapling
White Spruce	14	Pole/Log	9						
Black Spruce	3	Pole	6						
Bigtooth Aspen	5	Log/XLog	15						
Quaking Aspen	30	Log/Pole/XLog	12	73					
86	6124 - Lowland Spruce-Fir	Poletimber Medium	2.1	87	51-80	N/A	Wet stand with several areas of low stocking. Much of the cedar is in decline except for along the north and south edges. Lots of blowdown in the interior. Some nicer quality spruce along the north and south edges. Black ash used to be a component of the stand but is now all dead. Average ba/acre from 3 plots = 57 square feet. Tubbs Creek flows through the middle of the stand. No management.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Quaking Aspen	8	Pole/Log	9		Tag Alder	High		10 - 20 feet	Tall Shrub
Balsam Fir	30	Pole	7		Balsam Fir	Medium		Variable	Sapling
Northern White Cedar	20	Log/Pole	10		White Spruce	Trace		Variable	Sapling
Red Maple	4	Log	12						
Balsam Poplar	7	Pole	8						
White Spruce	31	Log/Pole	10	87					
87	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	13.8	90	81-110	N/A	Mixed species stand with some good quality red maple and birch. Some birch decline noted but the majority are still healthy. Bigtooth aspen occurs mostly in a single clone at the north end of the stand. A few of the quaking aspen are very large (20"+ DBH) with many in decline and providing good wildlife habitat. Trace of sugar maple in the overstory. Average ba/acre from 8 plots = 84 square feet. Mostly an upland stand except for transitional ground adjacent to some of the lowland stands nearby. Browse pressure is too high in this area for a successful regeneration harvest, let the stand progress naturally. There is currently no access to this stand anyways as a bridge and significant road investments would be needed to cross Tubbs Creek.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Bigtooth Aspen	12	Log/Pole	11		Balsam Fir	Medium		Variable	Sapling
Balsam Fir	14	Pole	6		White Pine	Trace		Variable	Sapling
White Spruce	8	Log/Pole	12		Black Cherry	Low		Variable	Tall Shrub
Paper Birch	30	Log/Pole	11	90	Tag Alder	Trace		10 - 20 feet	Tall Shrub
White Pine	1	Log/XLog	13		Michigan Holly	Trace		5 - 10 feet	Tall Shrub
Red Maple	23	Pole/Log	9		White Spruce	Trace		Variable	Sapling
88	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	5.3	93	81-110	N/A	Mixed species lowland stand. Black ash used to be a large component of this stand but it is now all dead. The northern parts of this stand resemble more of a Q3 with a sparse overstory of larger trees. A stream flows north through the western part of the stand, eventually joining with Tubbs Creek. Did not visit the part of the stand west of this creek. Average ba/acre from 3 plots = 87 square feet.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Paper Birch	8	Pole	8		Balsam Fir	Medium		Variable	Sapling
Balsam Poplar	6	Log/Pole	11		Black Ash	Trace		Variable	Sapling
Black Spruce	20	Pole/Log	8		Tag Alder	Medium		10 - 20 feet	Tall Shrub
Balsam Fir	18	Pole/Sapling	5		Black Spruce	Low		Variable	Sapling
Quaking Aspen	7	Pole	8		Balsam Poplar	Trace		Variable	Sapling
White Spruce	2	Log/Pole	11		Paper Birch	Trace		>20 feet	Sapling
Northern White Cedar	31	Pole/Log	9	93	Willow spp.	Trace		Variable	Tall Shrub



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																								
89	500 - Water	Nonstocked	1.0		Unspecified	No	Current beaver flooding of Tubbs Creek.																																																																								
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90	6239 - Mixed Emergent Wetland	Nonstocked	8.4		Unspecified	No	Past beaver flooding, water has resided in recent years but nearly half of the stand is still under water.																																																																								
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91	6233 - Wet Meadow	Nonstocked	4.9		Unspecified	No	Old beaver flooding that has dried up and is now a wetland/meadow. Lots of reed canary grass.																																																																								
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92	6111 - Lowland Balsam Poplar	Poletimber Well	3.1	44	81-110	N/A	Lowland popple stand sitting on very wet soils. A drainage from stand 99 to the south enters this stand and continues north into stand 92. The stand appears 2-aged, with older aspen and balsam poplar in the east end, but becoming smaller and younger as you move west. No evidence of previous cutting, perhaps the multiple age classes are a result of past beaver flooding in the stand. Scattered clumps of cedar, more common in the middle of the stand. Black ash used to be a large component of the stand but it is now all dead. Average ba/acre from 4 plots = 93 square feet.																																																																								
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments									
93	6220 - Alder/willow	Nonstocked	1.3		Unspecified	No	Very wet stand, possibly standing water as I seemed to be walking on ice while traversing the stand.									
								Sub-Canopy Species	Density	Avg. Height	Size					
								Balsam Poplar	Trace	>20 feet	Pole					
								Black Spruce	Trace	>20 feet	Pole					
								Quaking Aspen	Trace	>20 feet	Pole					
								Willow spp.	Low	Variable	Tall Shrub					
								Tag Alder	High	10 - 20 feet	Tall Shrub					
								Cattail spp.	High	Unspecified	Non-Wood					
								Northern White Cedar	Trace	>20 feet	Pole					
								Balsam Poplar	Trace	Variable	Sapling					
								Paper Birch	Trace	Variable	Sapling					
								Balsam Fir	Trace	>20 feet	Pole					
Quaking Aspen	Trace	Variable	Sapling													
94	6124 - Lowland Spruce-Fir	Poletimber Medium	12.5	87	51-80	N/A	Lowland stand with some veins of drier upland ground. Stocking is better in these upland areas and tends to have more of the aspen and white spruce. Wetter lowland areas are poorly-stocked and have more of the fir and a thick alder component. My spruce ID isn't perfect but from what I see both species are present in the stand. Trace of white pine in the overstory and I saw one ash poletimber tree that is alive, likely green ash. Average ba/acre from 6 plots = 63 square feet. A small stream enters the stand at the southwest corner and flows northeast through the stand, eventually draining into stand 91. Too wet to harvest, difficult access, BMP concerns with the stream.									
								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
								Northern White Cedar	18	Log/Pole	11		Tag Alder	High	10 - 20 feet	Tall Shrub
								Paper Birch	1	Pole/Log	9		Balsam Fir	Medium	Variable	Sapling
								Balsam Poplar	1	Pole/Log	8		Michigan Holly	Low	5 - 10 feet	Tall Shrub
								Balsam Fir	29	Pole/Sapling	6		Black Spruce	Trace	Variable	Sapling
								White Spruce	29	Pole/Log	9	87				
								Black Spruce	10	Pole/Log	8					
								Red Maple	1	Pole/Log	8					
								Quaking Aspen	11	Log/XLog	14					
								95	4134 - Aspen, Spruce/Fir	Poletimber Well	8.9	35	111-140	N/A	Clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84, Champion). Regeneration came back well through most of the stand. A small non-forested area is present in the southwest part of the stand but it looks like the old landing. Ground is a mix of upland and lowland with wet pockets along the east edge of the stand. There is also a lowland trough running southwest to northeast through the middle of the stand. A few small patches of nearly pure fir and spruce along the east side and at the far southern end. A few black cherry with good form and will be merchantable in the future. Trace of red pine, tamarack, and black spruce saplings/poletimber. Trace of residual red maple and cedar sawlog-sized trees. Average ba/acre from 7 plots = 111 square feet. Diameters are barely merchantable in many places so it will likely be 2 entries before this stand is ready for a harvest. Manage together with stand 1 to the west in Compartment 47.	
																Canopy Species
Black Cherry	2	Pole	6		Black Cherry	Medium	Variable									Tall Shrub
White Pine	1	Pole/Sapling	5		Tag Alder	Low	10 - 20 feet									Tall Shrub
White Spruce	4	Sapling/Pole	4		White Spruce	Low	Variable									Sapling
Balsam Poplar	3	Pole/Sapling	6		Red Maple	Trace	Variable									Sapling
Quaking Aspen	70	Pole/Sapling	5	35	Balsam Fir	Medium	Variable									Sapling
Balsam Fir	20	Pole/Sapling	5													



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
96	42330 - Upland Fir	Poletimber Well	10.9	67	81-110	N/A	Nice stand of spruce and fir. Diameters tend to vary significantly, especially on the fir. All of the aspen was removed from this stand in 1997 in the sale Old Grade Aspen Blocks (#53-004-95, Kare Logging). Except for a few small pockets, aspen did not regenerate well. As a result, there are some scattered open areas throughout with lower stocking. Some aspen that did regenerate near the old road has been taken down by beavers. Trace of white pine and paper birch in the overstory. Average ba/acre from 8 plots = 84 square feet. Ground is mostly dry upland but there are a few scattered pockets of wetter ground. No access exists to this stand as the old road is currently flooded to the north by beavers.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Black Spruce		6	Pole/Log	8		Balsam Poplar		Trace	>20 feet	Sapling	
Balsam Fir		71	Pole/Sap/Log	7	67	Black Cherry		Low	Variable	Tall Shrub	
White Spruce		20	Log/Pole/XLog	12		Tag Alder		Low	10 - 20 feet	Tall Shrub	
Red Maple		1	Log	12		White Spruce		Low	Variable	Sapling	
Northern White Cedar		2	Log	12		Balsam Fir		Medium	Variable	Sapling	
						Quaking Aspen		Trace	>20 feet	Sapling	
97	42380 - Non Pine Upland Conifer, Mixed Deciduous	Poletimber Well	4.4	55	51-80	N/A	This stand had all the aspen removed in 1997 in the sale Old Grade Aspen Blocks (#53-004-95, Kare Logging). All other species were left. The resulting stand is a mix of aspen regeneration and residual fir and spruce of varying sizes. Aspen is most abundant east of the old road. Ground is a mix of upland and lowland. Average ba/acre from 6 plots = 80 square feet. No access to this stand as the old road is currently part of an active beaver flooding to the north.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Balsam Fir		46	Pole/Sap/Log	7	55	White Spruce		Trace	Variable	Sapling	
Paper Birch		1	Pole	7		Black Cherry		Medium	Variable	Tall Shrub	
Northern White Cedar		5	Log	13		Tag Alder		Low	10 - 20 feet	Tall Shrub	
Balsam Poplar		5	Pole/Sapling	6		Balsam Fir		Medium	Variable	Sapling	
Quaking Aspen		30	Sapling/Pole	4	25						
Red Maple		1	Pole/Log	8							
98	4130 - Aspen	Poletimber Well	30.3	35	81-110	N/A	Nice developing aspen stand with diameters that tend to vary and some areas just reaching merchantability. Clearcut in 1987 in the sale Sawdust Pile Aspen (#53-009-84, Champion). All species were cut except for cedar, which can be found mostly at the south end. There are also a couple of scattered red maple and white spruce, as well as a few clumps of fir, that look like residual as well. Numerous wet pockets exist throughout the stand (see 98DOQ imagery) and were not protected from harvesting damage. The southeast corner of the stand appears to be a large drainage system, which flows into the west side of stand 99. Trace of white pine in the overstory as well as a few poletimber stems of either white ash or green ash that are still alive. Average ba/acre from 9 plots = 101 square feet. There is no current access to this stand from a harvesting perspective. The previous harvest was accessed from the north, crossing Tubbs Creek. It is unclear how they crossed, likely with a portable bridge? Tubbs Creek may have been flooded by beavers at that time so perhaps they froze in a road over the flooding? A significant monetary investment will have to be made to access this stand again in the future. If it is ever prescribed for a harvest, protect all lowland pockets with buffers and exclude the drainage system to the southeast.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Balsam Fir		8	Pole/Sapling	6		Balsam Fir		Low	Variable	Sapling	
Red Maple		3	Pole/Sap/Log	7		Red Maple		Medium	>20 feet	Sapling	
Northern White Cedar		2	Log/Pole	12		Tag Alder		Trace	10 - 20 feet	Tall Shrub	
Bigtooth Aspen		5	Pole	7		Black Cherry		Trace	Variable	Tall Shrub	
Quaking Aspen		63	Pole/Sapling	7	35	Black Ash		Trace	Variable	Sapling	
Balsam Poplar		18	Pole/Sapling	6							
White Spruce		1	Pole/Log	8							



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																													
99	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	8.3	78	111-140	N/A	Mixed species stand with some good quality birch, red maple, and spruce. Fir is heavy in the understory and starting to recruit into the overstory, eventually it will be dominant in the stand. Trace of XL-sized red maple. A few of the aspen are very large (20"+ DBH). Two drainages pass north through this stand, joining with stand 92 to the north, one near the west end and one along the eastern stand boundary. The drainage on the east side starts in a small ravine at the south end, eventually flattening out as it heads north. The two drainages make harvesting of this stand impractical and was the reason given by previous stand examiners as to why it wasn't harvested when adjacent stand 98 was clearcut.																																																													
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100	6120 - Lowland Cedar	Poletimber Well	22.4	121	141-170	N/A	Cedar dominated stand with a thick understory of fir. The cedar is in decline in many areas which can likely be attributed to the recent road creation in the deer ranch to the south, which has obviously altered the hydrology in the area. To see the difference, compare the 98DOQ imagery prior to development where the stand is completely healthy versus recent imagery where wet pockets have resulted in numerous areas of cedar decline and death. The adjacent beaver flooding to the northeast has likely not helped either. The only areas where cedar is of better quality and remains healthy is along the east edge. Black ash used to be a component of the stand but is all dead now from EAB. Trace of tamarack in the overstory. I only looked at the south half of this stand but from imagery it looks like the north half has a component of larger diameter trees, likely white spruce. Average ba/acre of the stand from 6 plots = 147 square feet. This stand appears to be the main headwaters for Tubbs Creek.																																																													
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101	42330 - Upland Fir	Poletimber Medium	1.4	63	51-80	N/A	Small inclusion of sparsely stocked, upland spruce-fir type surrounded by lowland swamp conifer types. This stand was harvested in 1995 in the sale Old Grade Aspen Blocks (#53-004-95, Kare Logging), where all the aspen was cut out. Only a small amount of aspen regeneration is present today. Trace of cedar in the overstory. Average ba/acre from 3 plots = 53 square feet.																																																													
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102	6120 - Lowland Cedar	Poletimber Well	35.6	95	171-200	N/A	Cedar stand of varying quality. There are several areas of very wet ground where the cedar is in decline. There are also areas of slightly higher ground where the cedar is still healthy and very high quality, mostly in the middle part of the stand and the eastern end. Trace of quaking aspen and white spruce in the overstory. Average ba/acre from 8 plots = 179 square feet. At least two small streams flow north through this stand. A small patch of invasive phragmites (50ftx50ft) was found in the middle part of the stand near the northern stand edge, in a large area of cedar decline. Much of the cedar decline in this stand can likely be attributed to the recent road creation in the deer ranch to the south, which has obviously altered the hydrology in the area. To see the difference, compare the 98DOQ imagery prior to development where the stand is completely healthy versus recent imagery where wet pockets have resulted in numerous areas of cedar decline and death.																																																													
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
103	42330 - Upland Fir	Poletimber Medium	9.7	36	51-80	N/A	All aspen and hardwoods were cut out of this stand in 1998 in the sale Old Grade Aspen Blocks (#53-004-95, Kare Logging), while all the existing fir and spruce were left uncut. Fir and spruce quality is generally good although there are a lot of small stems. Aspen did not regenerate well and there are now scattered non-forested areas throughout the stand, although spruce and fir is starting to fill in a few of these areas. Red maple seedlings are present too in many areas but are very heavily browsed which is keeping them below 1-2 feet tall. Trace of XL-sized white spruce. Trace of tamarack and black spruce in the overstory. Trace of autumn olive at the south end. Average ba/acre from 7 plots = 54 square feet. A small ravine with a drainage in it passes east to west through the middle part of the stand.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Quaking Aspen		5	Sapling/Pole	3	24	Tag Alder		
White Spruce		15	Pole/Log/Sap	8	75	Autumn Olive		
Red Maple		1	Pole	6		Balsam Fir		
Balsam Fir		78	Pole/Sap/Log	6	36	Red Maple		
Balsam Poplar		1	Pole/Sapling	6		White Spruce		
						Quaking Aspen		
						Red Maple		
						Beech		
						Balsam Poplar		
105	3303 - Mixed Low Density Trees	Nonstocked	2.9		Unspecified	No	Autumn olive along the east edges. Very heavy browse on ironwood seedlings.	
Sub-Canopy Species		Density	Avg. Height	Size				
White Pine		Medium	>20 feet	Pole				
Quaking Aspen		Trace	>20 feet	Pole				
Beech		Trace	< 5 feet	Seeding				
Blackberry/Raspberry		Trace	< 5 feet	Tall Shrub				
Ironwood		Low	< 5 feet	Seeding				
Bigtooth Aspen		Trace	>20 feet	Pole				
Black Cherry		Trace	Variable	Tall Shrub				
Bracken Fern		Medium	Unspecified	Non-Wood				
White Pine		Medium	Variable	Sapling				
Mixed Grasses		High	Unspecified	Non-Wood				
Autumn Olive		Low	5 - 10 feet	Tall Shrub				
107	4130 - Aspen	Poletimber Well	9.5	52	81-110	N/A	This stand was excluded from the adjacent harvest to the north because an active red-shouldered hawk nest was found in this stand (see OFS layer). Very high quality aspen stand and close to an A9. This is what stand 74 looked like prior to harvest. A few larger red and sugar maple along the north edge. A couple of white pine sawlog-sized trees as well. Some red oak saplings, poletimber, and sawtimber along the northwest edge. Average ba/acre from 7 plots = 110 square feet.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Balsam Fir		2	Pole	6		White Spruce		
Quaking Aspen		13	Pole/Log	8		Balsam Fir		
Bigtooth Aspen		82	Pole/Log	9	52	Red Maple		
White Spruce		1	Pole	6		White Pine		
Red Maple		2	Pole/Log	8				