



Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32260

Entry Year: 2027

Acreage: 798

County: Marquette

Management Area: Suomi Till and Outwash Plain

Stand Examiner: Kyle Gould

Legal Description:

T45N, R27W, Sec. 13, and 14.

Identified Planning Goals:

Vegetative management in the Chain Lake management area will provide a variety of timber products; maintain or enhance wildlife habitat; protect areas with unique characteristics; and provide for forest based recreational uses.

Soil and topography:

Topography ranges from relatively level creek bottoms, swamp conifer, tag alder, and bog/ marshlands, to upland which is only rolling to moderately hilly (a few steep slopes in west end).

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

State ownership here is generally blocked in quite well to the north and east, but does border some relatively small private forest holdings on the southwest side of the compartment, mostly non-industrial private owners with recreational objectives. Also this compartment is bordered on the west by the Michigan Northwoods Club with holdings of approx 10,000 acres. In addition to being a hunting club, they actively manage their forest resource with professional advisement and management. Development is very limited with a few seasonal cottages or hunting camps widely distributed.

Unique Natural Features:

Hay Lake and it's outlet creek and other tributaries, creeks, and beaver ponds all emptying into the Middle Branch of the Escanaba River, make up the unique natural features on State land here.

Archeological, Historical, and Cultural Features:

None known.

Special Management Designations or Considerations:

None Known.

Watershed and Fisheries Considerations:

This compartment contains headwater reaches of Bear Creek which serves as a tributary to the Cataract Basin within the Middle Branch Escanaba River. Bear Creek is a designated Type 1 trout stream less than 50-ft wide and has a predicted mean July water temperature of 61.2°F (cold stream). A 300-ft buffer is recommended for headwater reaches of Bear Creek in riparian areas susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration, a minimum 100-foot, plus 5 feet per 1% increase in slope, Riparian Management Zone is recommended to protect these areas in accordance with Best Management Practices.

Wildlife Habitat Considerations:

This compartment is found within the Suomi Till and Outwash Management Area, on a Disintegration Moraine in Southwestern Marquette County. The dominant Natural Communities are dry mesic northern forests, poor conifer swamps, and mesic northern forests. This management area offers opportunities to increase diversity and perhaps long-term oak sustainability through underplanting white and red pine. Another priority is to maintain or increase wildlife corridors, especially along riparian corridors. Wildlife management issues in the management area are mast (hard and soft); habitat fragmentation; mature forest conditions; mesic conifer; course woody debris; and retention or development of large living and dead standing trees (for cavities). This management area represents approximately ¼ of the oak resource on WUP state forest. The following have been identified as featured species for the Suomi Till and Outwash Management Area: Blackburnian Warbler, Golden-winged Warbler, Kirtland's Warbler, Red Crossbill, Black-backed Woodpecker, Ruffed Grouse, American Marten, White-tailed Deer, Black Bear.

Mineral Resource and Development Concerns and/or Restrictions

Sections 13-14, T45N R27W, Marquette County No known potential exists for commercial oil & gas production in this part of the state. No active sand/gravel operations are known to exist in the area. There is some potential for production of sand & gravel within the compartment on the uplands, but the compartment may be too far from populated areas

(commercial markets) for any aggregate resources to have significant value beyond use for local road maintenance. No past metallic mineral mining has occurred in this area, and there has been no known ground-based exploration. Potential for metallic and/or critical minerals beneath the compartment is relatively unknown but is considered low at this time. There is no current mineral leasing activity involving State-owned mineral rights in the area. The State does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, the surface owner must provide the owner of the mineral rights reasonable access to the surface for mineral exploration and development.

Vehicle Access:

The Hemmings Lake Road to the north and the Chain of Lakes Road (Co.Rd PX–gravel, leading east to M-35) to the southeast, are the two main access routes to reach this compartment. Various internal two track, narrow roads (some of which are bermed), complete the access network for this compartment. Temporary roads are established for timber removal, but these are bermed, and often seeded for wildlife, or obliterated following timber sale completion.

Survey Needs:

None needed for this inventory cycle.

Recreational Facilities and Opportunities:

The Bass Lake ORV Trail passes through the southeast portion of this compartment. In addition to this, recreational opportunities for activities such as hunting, trapping, hiking, mushroom & berry picking, etc. exist in this compartment.

Fire Protection:

This area is dominated by aspen, with fair access. Large fire potential is low as a result. There are some camps in the area that would provide added complexity to fire suppression.

Additional Compartment Information:

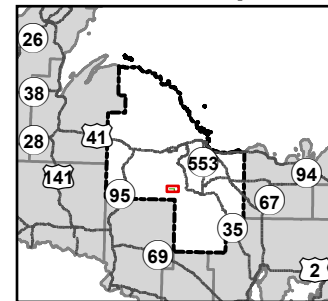
The following reports from the Inventory are attached:

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

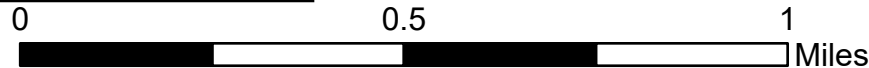
The following information is displayed, where pertinent, on the attached compartment maps:

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

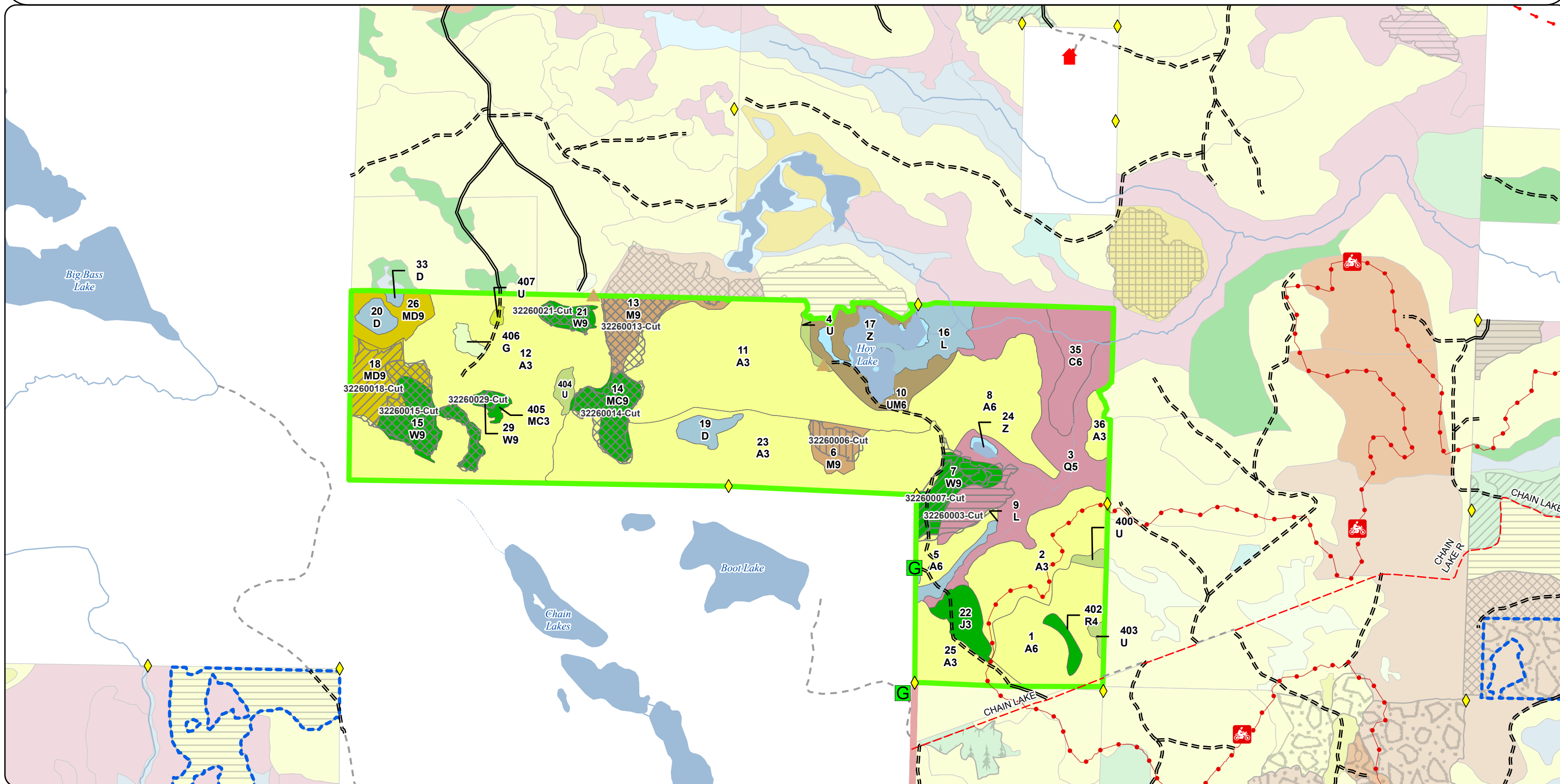
Cover Type & Treatments Map



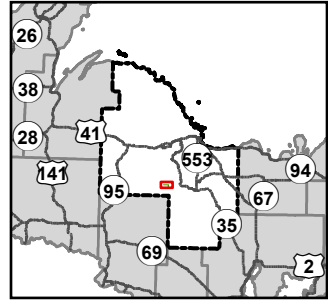
Compartment: 32260
T45N R27W Sec 13 & 14
County: Marquette
Unit: Gwinn
Mgmt. Area: Suomi Till and Outwash Plain
YOE: 2027
Acres: 798 GIS Calculated
Examiner: Kyle Gould
Date Exported: 08/19/2025
Map Phase: Web Post



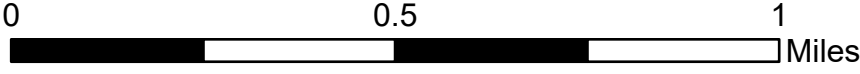
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|------------------------------|-------------------------------|---------------------------------|---------------------------------|
| Survey Grade Corners | County - Gravel Road | Clearcut | 422 - Natural Pines |
| Cabin | County - Dirt Road (Seasonal) | Selection | 430 - Upland Mixed Forest |
| Berms | Private - Dirt / Gravel Road | Shelterwood | 500 - Water |
| Gate | Intermittent Stream | Thinning | 612 - Lowland Coniferous Forest |
| Designated Motorcycle Trails | Perennial River | Treatments with Site Conditions | 310 - Herbaceous Openland |
| DNR - Secondary Forest Road | Lakes and Rivers | 411 - Northern Hardwood | 320 - Upland Shrub |
| DNR - Forest Access Route | Counties | 413 - Aspen | 330 - Low Density Trees |
| | Compartment Boundary | 419 - Mixed Upland Deciduous | 622 - Lowland Shrub |



Stand Boundary
Map



Compartment: 32260
T45N R27W Sec 13 & 14
County: Marquette
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Mgmt. Area: Suomi Till and Outwash
Plain
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- Survey Grade Corners

Cabin

Berms

Gate

Designated Motorcycle Trails

DNR - Secondary Forest Road
- DNR - Forest Access Route

County - Gravel Road

County - Dirt Road (Seasonal)

Private - Dirt / Gravel Road

Intermittent Stream

Perennial River

Lakes and Rivers
- Counties

Compartment Boundary

411 - Northern Hardwood

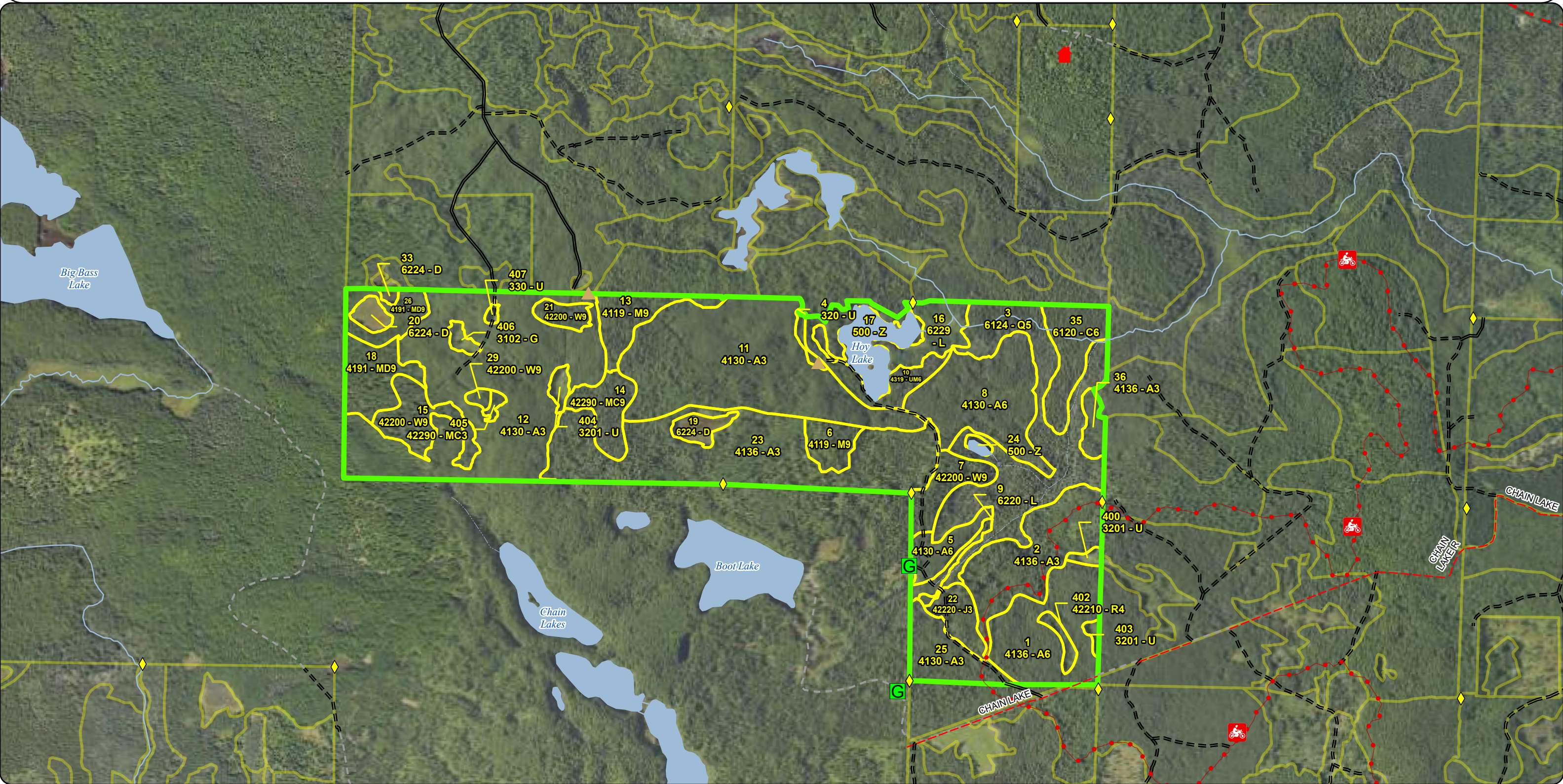
413 - Aspen

419 - Mixed Upland Deciduous

422 - Natural Pines

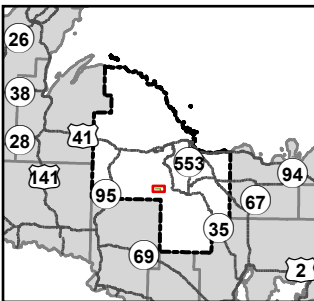
430 - Upland Mixed Forest

- 500 - Water
- 612 - Lowland Coniferous Forest
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 622 - Lowland Shrub



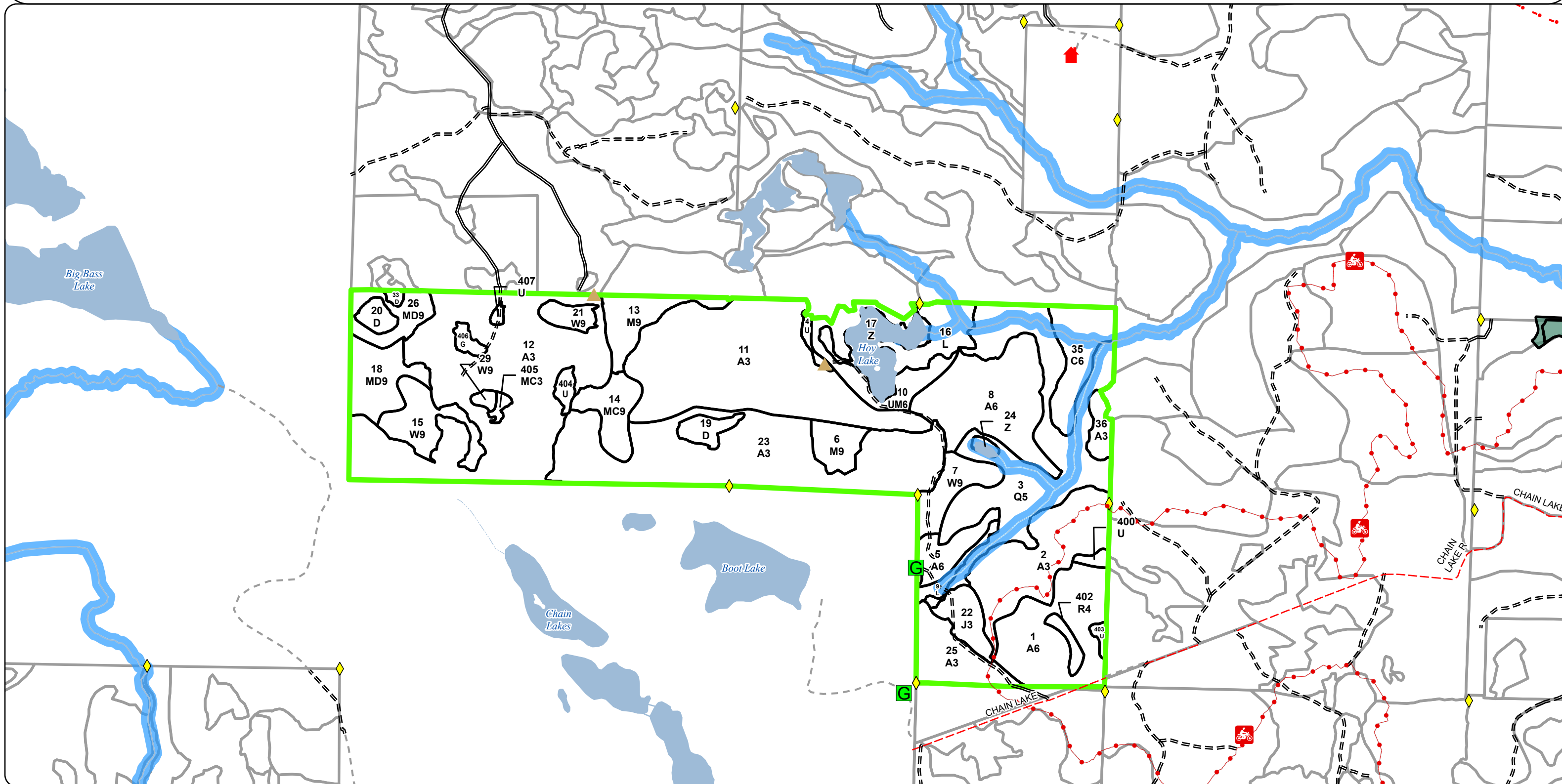
Special Conservation Areas & Site Conditions Map

Compartment: 32260
T45N R27W Sec 13 & 14
County: Marquette
Unit: Gwinn
Mgmt. Area: Suomi Till and Outwash
Plain
YOE: 2027
Acres: 798 GIS Calculated
Examiner: Kyle Gould
Date Exported: 08/19/2025
Map Phase: Web Post



0 0.5 1 Miles

- | | | | |
|------------------------------|-------------------------------|----------------------|-----------------------------------|
| Survey Grade Corners | DNR - Secondary Forest Road | Intermittent Stream | Stand Boundaries |
| Cabin | DNR - Forest Access Route | Perennial River | SCA |
| Berms | County - Gravel Road | Lakes and Rivers | Cold Water Streams |
| Gate | County - Dirt Road (Seasonal) | Counties | High Priority Trout Stream Buffer |
| Designated Motorcycle Trails | Private - Dirt / Gravel Road | Compartment Boundary | Vernal Pool |



Report 1 – Total Acres by Cover Type and Age Class

Compartment 260 Year of Entry 2027



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	147	120	228	0	0	0	0	0	0	0	0	0	0	0	0	0	495
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	20
Herbaceous Openland	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Jack Pine	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Low-Density Trees	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76	76
Lowland Shrub	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	12	31
Natural Mixed Pines	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	14	16
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	15	25
Red Pine	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Treed Bog	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Upland Mixed Forest	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	21
Upland Shrub	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Water	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
White Pine	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	37	39
Total	64	0	147	132	231	0	0	21	0	2	29	0	0	0	0	0	0	175	799



Report 2 – Treatment Summary

Gwinn Mgt. Unit
Year of Entry: 2027

Acres of Harvest

Compartment 260
Total Compartment Acres: 798

Commercial Harvest - 176
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
Lowland Conifers	15	0	0	0	0	0	0	0	0	15
Mixed Upland Deciduous	0	0	0	0	0	13	0	0	0	13
Natural Mixed Pines	0	15	0	0	0	0	0	0	0	15
Northern Hardwood	0	15	0	0	6	0	0	0	0	21
White Pine	0	26	0	0	0	9	0	0	0	34
Total	15	56	0	0	6	22	0	0	0	98

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	98	0	0	0	0	0	0	0	0	98
Next Step	0	0	0	0	0	0	77	0	0	77
Total	98	0	0	0	0	0	77	0	0	175



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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Approved Treatments:

3	32260003-Cut	15.4	6124 - Lowland Spruce-Fir	5	45	1-50	Harvest	Clearcut	613 - Lowland Mixed Forest	Planting Record	No
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Prescription Clearcut leaving only Cedar and Hemlock
Specs:

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

Acceptable a mix of current species
Regen:

Other
Comment:

Site Condition:

Proposed Start Date: 10/01/2016

6	32260006-Cut	5.8	4119 - Mixed Northern Hardwoods	9	97	111-140	Harvest	Shelterwood	411 - Northern Hardwood	Planting Record	No
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Prescription Leave 50-60 sq. ft. of hardwood for seed quite hilly site leave the steepest slopes as retention. look at doing overstory removal next entry period.
Specs: Favor oak and white pine though tree selection.

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

Acceptable Maple, birch, oak, basswood, aspen, white pine , and red pine
Regen:

Other
Comment:

Site Condition:

Proposed Start Date: 10/01/2016

7	32260007-Cut	8.8	42200 - Natural White Pine	9	88	141-170	Harvest	Thinning	4220 - Natural White Pine	Planting Record	No
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Prescription Thin stand to about 100 sf mark for best tree in place. Favor hemlock though tree selection, retain some white spruce. Retain legacy trees where they exist within the stand.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Site Condition:

Proposed Start Date: 10/01/2016



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
13	32260013-Cut	15.0	4119 - Mixed Northern Hardwoods	9	88	81-110	Harvest	Selection	4119 - Mixed Northern Hardwoods	Current	No
<u>Prescription</u> Mark stand using complete marker as guide. Leave as much oak as possible for wildlife. Do not cut hemlock or white pine. favor yellow birch <u>Specs:</u> though selection. <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> A mix of maple, oak, yellow birch, hemlock, and white pine <u>Regen:</u> <u>Other</u> Consider cutting stand 33 in compartment 258 with this stand. <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2016											
14	32260014-Cut	15.1	42290 - Natural Mixed Pine	9	88	141- 170	Harvest	Selection	4220 - Natural White Pine	Current	No
<u>Prescription</u> Cut using a selection system. Cut high risk trees, as well as trees of poor form. Mark all trees for harvest. Release advanced white pine <u>Specs:</u> regeneration and create some new gaps. leave some aspen for cavity trees. Target BA including gaps is 90 square feet. <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> White pine, red pine, oak <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2016											
15	32260015-Cut	21.0	42200 - Natural White Pine	9	88	51-80	Harvest	Selection	4220 - Natural White Pine	Current	No
<u>Prescription</u> Cut using a selection system. Cut high risk trees, as well as trees of poor form. Mark all trees for harvest. Release advanced white pine <u>Specs:</u> regeneration and create some new gaps. leave some aspen for cavity trees. Target BA including gaps is 90 square feet <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> White pine, oak, red pine <u>Regen:</u> <u>Other</u> This treatment will encourage the white pine regeneration allowing for future refuge trees for young black bears. <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2016											
18	32260018-Cut	12.7	4191 - Mixed Upland Deciduous with Conifer	9	93	51-80	Harvest	Thinning	412 - Oak Types	Planting Record	No
<u>Prescription</u> Thin to release best tree in place. Mark all trees for removal do not cut all aspen as the goal is to reduce aspen in the stand. Reduce stand to <u>Specs:</u> around 80 square feet. <u>Next Step</u> <u>Treatments:</u> <u>Acceptable</u> <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2016											

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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
21 32260021-Cut	3.7	42200 - Natural White Pine	9	88	141-170	Harvest	Selection	4220 - Natural White Pine	Current	No
<u>Prescription</u> Cut using a selection system. Cut high risk trees, as well as trees of poor form. Mark all trees for harvest. Release advanced white pine regeneration and create some new gaps. leave some aspen for cavity trees. Target BA including gaps is 90 square feet. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> White pine, red pine, and oak <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2016										
29 32260029-Cut	0.9	42200 - Natural White Pine	9	88	111-140	Harvest	Selection	4220 - Natural White Pine	Current	No
<u>Prescription</u> Cut using a selection system. Cut high risk trees, as well as trees of poor form. Mark all trees for harvest. Release advanced white pine regeneration and create some new gaps. leave some aspen for cavity trees. Target BA including gaps is 90 square feet <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> White pine, red pine, and oak <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2016										

Total Treatment 98.4
Acreage Proposed:

Report 4 – Site Conditions

Gwinn Mgt. Unit
Kyle Gould: Examiner

Compartment: 260
Year of Entry: 2027



Availability for Management

Total Acres	Acres Available	Acres Available With Condition	Acres Not Available
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Dominant Site Conditions

3A 3J

495	495	0	0	Aspen		
20	0	0	21	Cedar	21	
3	3	0	0	Herbaceous Openland		
10	10	0	0	Jack Pine		
1	1	0	0	Low-Density Trees		
64	0	0	64	Lowland Conifers		64
20	20	0	0	Lowland Shrub		
30	19	0	12	Mixed Upland Deciduous		12
16	16	0	0	Natural Mixed Pines		
25	25	0	0	Northern Hardwood		
3	3	0	0	Red Pine		
11	11	0	0	Treed Bog		
21	0	0	21	Upland Mixed Forest		21
8	9	0	0	Upland Shrub		
20	20	0	0	Water		
39	39	0	0	White Pine		
786	669		117	Total Forested Acres	21	96
	85%		15%	Relative Percent		

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

Site No.	Dominant Site Cond	Dominant Site 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)	21	Unspecified	Unspecified	Unspecified	Unspecified
Comments:								
2	Unavailable		3J: Water quality/BMPs (stream, river, or lake)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:								

Report 4 – Site Conditions

Gwinn Mgt. Unit
Kyle Gould: Examiner

Compartment: 260
Year of Entry: 2027



3	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	1	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	64	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	3A: Conservation values incompatible with harvest at this time	21	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!
Year of Entry:

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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				



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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments			
6	4119 - Mixed Northern Hardwoods	Sawtimber Well	9.7	97	111-140	N/A	Very steep slopes in the stand. The operable portion of the stand is marked and under contract. Old aspen type that is converting over to hardwood. This stand is currently under contract #32-103-17 with Holli FP.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Bigtooth Aspen		7		12		Ironwood		Low	5 - 10 feet	5 - 10 feet
Paper Birch		10		13		Balsam Fir		Low	5 - 10 feet	5 - 10 feet
White Pine		2		16		White Pine		Low	5 - 10 feet	5 - 10 feet
Sugar Maple		25		8						
Balsam Fir		2	Seedling	8						
Red Pine		3		14						
Red Oak		3		14						
Red Maple		30		10	97					
Quaking Aspen		10		10						
Basswood		8		12						
7	42200 - Natural White Pine	Sawtimber Well	13.7	88	141-170	N/A	2025 - stand is currently under contract #32-103-17 with Holli FP. The stand has not been cut yet. Stand is mostly a white pine overstory with aspen and red maple underneath and some other species mixed in. Very good diversity here, somewhat unique for this area.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Pine		15		16	88	White Pine		Low	5 - 10 feet	5 - 10 feet
Paper Birch		6		10		Red Pine		Low	5 - 10 feet	5 - 10 feet
Balsam Fir		2	Seedling	8		White Spruce		Low	5 - 10 feet	5 - 10 feet
Quaking Aspen		6	Seedling	8		Balsam Fir		Low	5 - 10 feet	5 - 10 feet
White Pine		60		18	88					
Hemlock		5		12						
Red Maple		4	Seedling	8						
White Spruce		2	Seedling	8						
8	4130 - Aspen	Poletimber Well	47.2	35	51-80	N/A		2025 - The eastern central part of the stand is wetter soil and there is a higher concentration of balsam poplar there and along the northern edge. Was commercially cut in 1989/91 by Milo Palm of Negaunee, permit #016-87-01, "Hay Lake Block". All oak, cedar, hemolck, & cherry was left.		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height
Quaking Aspen		50	Seedling	6	35	Balsam Fir	High		10 - 20 feet	10 - 20 feet
Bigtooth Aspen		25	Seedling	6						
Balsam Fir		7	Sapling	5						
White Spruce		3	Sapling	6						
Balsam Poplar		15	Seedling	6						
9	6220 - Alder/Willow	None	4.5			No	2025 - narrow strip of tag alder with a small stream running through. OPIC - FMD: Was commercially cut 1989/91 by Milo Palm of Negaunee, permit #016-87-01, "Hay Lake Block". All oak, cedar, hemlock, & cherry was left.			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
10	4319 - Mixed Upland Forest	Poletimber Well	21.0	60	81-110	N/A	This stand is on a steep slope dropping down to the shores of Hay Lake. As a result this area will be factor limited for BMPs and water quality. The birch is slowly falling out of the stand and being replaced by fir and red maple.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Black Spruce	5	Seedling	8		Balsam Fir	Medium		5 - 10 feet	5 - 10 feet
Tamarack	10	Seedling	8		White Pine	Low		10 - 20 feet	10 - 20 feet
Red Oak	10		14		Black Spruce	Low		10 - 20 feet	10 - 20 feet
Red Maple	20		10						
White Pine	5		14						
Balsam Fir	30	Seedling	7	60					
Paper Birch	20		10	95					
11	4130 - Aspen	Sapling Well	100.5	25	Immature	N/A		2025 - stand is small pole sized. Mix of quaking and bigtpoth aspen and all looks to be good quality. There's a few large pine and oak that were left during the last harvest. The stand has some good terrain in areas but operable. Was commercially cut in summer of 1999/2000 by St.John Forest Products, Inc. permit #003-97-01, "Hay Lake Sale". All oak, red & white pine, all other softwoods, and birch marked with greenpaint were left.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height		Size
Bigtooth Aspen	25	Pole	4		Red Pine	Low	5 - 10 feet		5 - 10 feet
Red Oak	3		18		White Pine	Low	< 5 feet		< 5 feet
Red Pine	3	Log	1						
White Pine	3	Log	1						
Black Cherry	3	Log	1						
Red Pine	3		18						
Quaking Aspen	50	Seedling	5	25					
Paper Birch	3	Log	1						
White Pine	3		18						
Red Maple	4	Log	3						
12	4130 - Aspen	Sapling Well	127.7	34	Immature	N/A	2025 - most trees look good and healthy and are in the 6-8" DBH range. There are some scattered spots with a little oak and pine. Some red maple and white pine in the understory. The stand will likely be ready for harvest next rotation. Was commercially cut in 1990/91 by Escanaba Paper Co. permit #023-87-01, "Boot Lake Aspen Block". Oak were marked with green paint to leave (approx 5 trees /acre). Terrain has some steep slopes and potholes. Gravel present in places. Access was from the north off Hemmings Lake Road.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
White Pine	3		18		White Pine	Low		5 - 10 feet	5 - 10 feet
White Pine	2	Log	2	34	Red Maple	Low		5 - 10 feet	5 - 10 feet
Red Pine	2	Log	2						
Red Pine	3		18						
Red Oak	4		14						
Red Maple	2	Log	2						
Bigtooth Aspen	22	Pole	3	34					
Quaking Aspen	62	Pole	3	34					
13	4119 - Mixed Northern Hardwoods	Sawtimber Well	15.2	88	81-110	N/A	2025 - Stand was cut using a selection system under the Hay Lake Selection contract # 32-103-17. Was commercially cut in 2000 by St.John Forest Products, Inc., permit #003-97-01, "Hay Lake Sale". All aspen , paper birch, and fir were cut out of this. All other hwdws were left. Access was from the northwest. The residual stand has good species diversity which includes some hemlock & white pine, yellow birch & ironwood. Oak is a dominant component, nearly all of sawlog size. The ground is covered with sugar maple seedlings, and leatherwood shrub is present also.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Oak	20		16		Leatherwood	Low		< 5 feet	< 5 feet
Hemlock	5		8		Sugar Maple	Low		< 5 feet	< 5 feet
White Pine	5		14		Red Maple	Low		< 5 feet	< 5 feet
Red Maple	35		8	88					
Sugar Maple	30		8						
Yellow Birch	5		9						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																					
14	42290 - Natural Mixed Pine	Sawtimber Well	14.4	88	141-170	N/A	2025 - Stand was cut recently by Holli and is still under the Hay Lake Selection contract #32-103-17. There is a nice layer of white pine regeneration under the overstory and very little maple or other regeneration. Stand was selectively cut in 2000 by St.John Forest Products, Inc., permit #003-97-01, "Hay Lake Sale". Some hemlock present here also, high quality white pine logs present here.																																																					
<table><tr><th>Canopy Species</th><th>% Cover</th><th>Size Class</th><th>DBH</th><th>Age</th></tr><tr><td>White Pine</td><td>45</td><td></td><td>18</td><td>88</td></tr><tr><td>Red Maple</td><td>10</td><td></td><td>12</td><td></td></tr><tr><td>Red Pine</td><td>30</td><td></td><td>16</td><td>88</td></tr><tr><td>Red Oak</td><td>5</td><td></td><td>12</td><td></td></tr><tr><td>Hemlock</td><td>2</td><td></td><td>12</td><td></td></tr><tr><td>Paper Birch</td><td>5</td><td></td><td>12</td><td></td></tr><tr><td>Quaking Aspen</td><td>3</td><td></td><td>10</td><td></td></tr></table>		Canopy Species	% Cover	Size Class	DBH	Age		White Pine	45		18	88	Red Maple	10		12		Red Pine	30		16	88	Red Oak	5		12		Hemlock	2		12		Paper Birch	5		12		Quaking Aspen	3		10		<table><tr><th>Sub-Canopy Species</th><th>Density</th><th>Avg. Height</th><th>Size</th></tr><tr><td>White Pine</td><td>Medium</td><td>5 - 10 feet</td><td>5 - 10 feet</td></tr><tr><td>Red Maple</td><td>Low</td><td>5 - 10 feet</td><td>5 - 10 feet</td></tr><tr><td>Red Oak</td><td>Low</td><td>5 - 10 feet</td><td>5 - 10 feet</td></tr></table>		Sub-Canopy Species	Density	Avg. Height	Size	White Pine	Medium	5 - 10 feet	5 - 10 feet	Red Maple	Low	5 - 10 feet	5 - 10 feet	Red Oak	Low	5 - 10 feet	5 - 10 feet
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15	42200 - Natural White Pine	Sawtimber Well	17.7	88	51-80	N/A	2025 - stand was thinned and some gaps were made to release advanced white pine regen . Cut under contact 32-103-17 Hay Lake Selection. There are patches of good white pine regeneration. Nice quality pine residual trees. Was selectively (mostly pine- high risk) cut in 2000 by St.John Forest Products, Inc., permit #003-97-01, "Hay Lake Sale". Aspen was purposely left uncut in 2000 to discourage sprouting following the cut.																																																					
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16	6229 - Mixed Lowland Shrub	None	15.1			No	Lowland tag alder and marshy grass area. A small stream flows out of Hay Lake through this stand.																																																					
17	500 - Water	None	18.0			No	Hay Lake, essentially formed by and old beaver dam. Fresh aspen saplings were cut south of the lake in June of 2005 and dragged north across the road towards Hay Lake. Also, there is a tiny island on Hay Lake, visible from the road, and stocked with cedar trees. The western and southern edge had open water in spots in february indicating springs that feed the lake. Very senic!																																																					
18	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	18.8	93	51-80	N/A	2025 - stand was harvested to 80BA under contact 32-103-17 Hay Lake Selection. There was advanced white pine in patches that looks good. Not much oak regen. Continue to monitor the regeneration. Oak & white pine are dominant species here. Manage all species selectively here. Aspen & birch will disappear. Maple will persist and provide diversity. Red pine present also. White pine regen quite heavy in places, ex on west edge of stand. Some steep slopes on north & south boundaries. Combine with a cut in stand 15.																																																					
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19	6224 - Treed Bog	None	5.7			No	Small bog with some sapling sized spruce. Small "island" in the middle.																																																					
20	6224 - Treed Bog	None	4.4			No	Treed bog. Very steep ridge down to the lowland area.																																																					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
21	42200 - Natural White Pine	Sawtimber Well	5.6	88	141-170	N/A	2025 - stand was selectively cut recently by Holli under the Hay Lake Selection contract #32-103-17. The pine regeneration is a little light but may fill in. The red maple will likely fill in the gaps in the understory. Overall the overstory looks healthy.Selectively cut in 2000 by St.John Forest Products Inc., permit #003-97-01, "Hay Lake Sale".		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Pine	10		16		Hazelnut (American)	Low		5 - 10 feet	5 - 10 feet
Paper Birch	5		9		White Pine	Medium		10 - 20 feet	10 - 20 feet
Red Oak	5		12		Red Oak	Medium		10 - 20 feet	10 - 20 feet
Red Maple	5		10		Quaking Aspen	Low		5 - 10 feet	5 - 10 feet
White Pine	70		17	88	Red Pine	Medium		10 - 20 feet	10 - 20 feet
Quaking Aspen	5		11		Red Maple	Low		5 - 10 feet	5 - 10 feet
22	42220 - Natural Jack Pine	Sapling Well	10.2	24	Immature	N/A	2025 - stand appears healthy. It is not as well stocked as a planted stand but it is filling in with volunteer jack pine and a few other species. Overall the stand looks healthy.Stand was commercially cut during Feb/March of 2001 by Minerick Logging under permit #04-97-01, "Chain Lakes Road Sale". All oak, red & white pine was left. Followed by herbicide treatment on 8/17/2001 by Steve Arkens under FTP #C31-429 using liquid Tordon 101 at the rate of 5 qts/acre. This followed by disk trenching and simultaneous seeding of jack pine on 10/5/2001. See FTP and completion form for details.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Quaking Aspen	5	Pole	3		Red Maple	Low		5 - 10 feet	5 - 10 feet
White Pine	5		20						
Red Pine	5	Pole	3						
Red Pine	10		18						
Jack Pine	70	Pole	4	24					
White Pine	5	Seedling	6						
23	4136 - Aspen, Mixed Conifer	Sapling Well	97.8	14	Immature	N/A	2025 - fully stocked aspen stand with a mixe of other species. Some oak and pine were left in the overstory. East part of stand slopes down to the north. Note that the 1/4 corner between Sec 14/13 is located beneath the east-west private fence line. 2011 Treated by LaFleur under contract # 116-07-01.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Paper Birch	8	Log	3		Red Pine	Low		5 - 10 feet	5 - 10 feet
Balsam Fir	15	Log	3		White Pine	Low		5 - 10 feet	5 - 10 feet
Red Pine	5		10						
White Pine	5		12						
Black Cherry	1	Log	2						
Quaking Aspen	25	Log	3	14					
Red Maple	6	Log	2						
Bigtooth Aspen	28	Log	1	14					
White Spruce	2	Log	1						
Red Oak	5		14						
24	500 - Water	None	1.6			No		2025 - no beaver house visible. Pond looks fairly deep on the CIR photo.Tiny swamp pond. Beaver house present in June 2005. Hydrology map shows an outlet creek on east side, but field check found none. Possibly flows subterraineously through swamp on east side.	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
25	4130 - Aspen	Sapling Well	19.7	24	Immature	N/A	2025 - poor to moderate quality aspen stand. The quaking aspen is a little rougher in the stand than some to the north in the compartment. Stand is fully stocked and is doing well. There are some large pine and oak in the overstory still that were left during the previous harvest. Stand was commercially cut under permit #104-97-01, "Chain Lake Road Sale", by Minerick Logging Inc. during Feb/March 2001. All oak, red & white pine were left, and the Gwinn Unit ORV trail was preserved.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Balsam Fir	3		4		Balsam Fir	Low		5 - 10 feet	5 - 10 feet
Jack Pine	2	Log	4		Witch Hazel	Medium		< 5 feet	< 5 feet
Paper Birch	5	Log	3						
White Pine	5		14						
Red Pine	5		14						
Bigtooth Aspen	25	Pole	4						
Quaking Aspen	55	Pole	4	24					
26	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	11.6	88	51-80	N/A	Steep right off the high ground to the bog at the bottom. Too steep to operate equipment and good buffer for the lowland.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Balsam Fir	3	Seedling	8		White Pine	Medium		5 - 10 feet	5 - 10 feet
Jack Pine	2		10		Balsam Fir	Low		5 - 10 feet	5 - 10 feet
Bigtooth Aspen	10		10		White Spruce	Low		5 - 10 feet	5 - 10 feet
Paper Birch	35		10	88					
Red Pine	3		12						
Black Spruce	3	Seedling	8						
Quaking Aspen	15		10	45					
White Pine	26		14						
White Spruce	3	Seedling	8						
29	42200 - Natural White Pine	Sawtimber Well	1.7	88	111-140	N/A	2025 - Stand was cut recently under contract 32-103-17 Hay Lake Selection. White pine advanced regeneration should grow nicely. Nice quality pine residual trees. Was selectively (mostly pine- high risk) cut in 2000 by St. John Forest Products, Inc., permit #003-97-01, "Hay Lake Sale".		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
White Pine	70		18	88	White Pine	High		10 - 20 feet	10 - 20 feet
Red Oak	15		14		Red Maple	Low		5 - 10 feet	5 - 10 feet
Red Pine	10		16		Red Oak	Medium		5 - 10 feet	5 - 10 feet
Red Maple	5		10						
33	6224 - Treed Bog	None	1.1			No			
35	6120 - Lowland Cedar	Poletimber Well	20.5	88	141-170	N/A	Log sized cedar stand. A mix of other lowland species occur where the cedar is more open. Many of the other species are in bad condition or have fallen out due to age.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Black Spruce	10	Seedling	7		Tag Alder	Medium		5 - 10 feet	5 - 10 feet
Northern White Cedar	60		11	88	Balsam Fir	Low		5 - 10 feet	5 - 10 feet
Balsam Fir	15	Seedling	8		Black Spruce	Low		5 - 10 feet	5 - 10 feet
Paper Birch	3	Seedling	8						
White Ash	3	Seedling	8						
Red Maple	4	Seedling	8						
Tamarack	5	Sapling	7						



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