



Compartment Review Presentation

Gaylord Forest Management Unit

Compartment 52128

Entry Year 2026

Acreage: 1,881

County: Emmet

Management Area: Wolverine Moraines

Stand Examiner: Tricia St. Pierre

Legal Description:

T34N R04W

Sec 25: NW, S1/2NE, W1/2SW, N1/2SE, SESE

Sec 26: E1/2, E1/2NW EXCEPT NENENENW (1.5ac), SWNW, E1/2SW

Sec 35: (all)

Sec 36: W1/2NW, SENW, SW

Identified Planning Goals:

To provide for the protection, integrated management, and responsible use of a healthy, productive, and undiminished forest resource base for the social, recreational, environmental, and economic benefit of the State of Michigan and its residents.

The identification, treatment, and monitoring of invasive species and other threats is a priority with implications for the future health, diversity, and productivity of state forest land. These efforts may be accomplished with DNR personnel or in cooperation with local Cooperative Invasive Species Management Areas (CISMAs) and volunteers.

Soil and topography:

Landtype Associations (LTAs) include Leelanau Loamy-Sand and occasional Blue Lake Loamy-Sand soils. The associated habitat types are AFO and AFOCa, which lend themselves in succession toward Sugar Maple, Beech, and Basswood forests. The compartment was formed by Kamic geomorphology; sand and gravel deposition by running water on stagnant or moving-glacier ice. This formed ice-contact ridges (undulating topography found within the compartment) and a few kettle lakes and bowls. This compartment rests on the highplains of the Vanderbilt Moraines.

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

Compartment 128 has both state- and private-land interfaces on its extremities. There is potential for private development along Hopper Road, while private homes along Heaton are in large blocks of ownership with permanent residency. The compartment is bisected (N-S) by a buried pipeline, doubling as a popular illegal ORV trail resulting in soil degradation and potential threats to the pipeline. The same corridor is used by snowmobilers having less of a negative impact on the site. There is a utility line running E-W along County Line Road on the south edge of the compartment boundary, but recent inquiries into Miss Dig leave this line a mystery, as it appears to be disconnected and has no claimed ownership. This compartment is extensively used by hunters and ORVs (snowmobiles, dirtbikes, ATVs). Some undesignated trails (i.e. old logging roads) and a couple non-forested stands are being abused by ATVs and POVs. While there are no current RDRs, monitoring/mitigating the degradation of forest trails and non-forested stands should occur.

Unique Natural Features:

There is a Mesic northern forest to the northwest. Potential exists for red-shouldered hawk and goshawk throughout the compartment. MNFI known occurrence to the northeast of the compartment, recorded element sighting also to the east, southeast, west, north, and northeast, though no known established occurrences within the compartment.

Archeological, Historical, and Cultural Features:

There are existing Historical concerns within this compartment, primarily originating from circa 1900s settlements, farms, lumber production, and railroads.

Special Management Designations or Considerations:

There are quite a few health concerns and issues to address in this compartment. Beech Bark Disease (BBD), Emerald Ash Borer (EAB), and Black Knot are a few of the plights presently affecting the quality and future of these forests. Special management considerations (pruning, dry/winter harvests only, chipping, etc.) should be kept in mind for minimizing the spread of black knot. Spotted Knapweed, honeysuckle, autumn olive, mullein, and thistle, are abundant in openings and threaten biodiversity. Other stressors on the forest include a forest tent caterpillar outbreak in 2010 over the entire compartment, Gypsy Moth in 2005 (just to the west of the compartment, but a local population regardless), and Oak Wilt detected in Charlevoix County, just to the south. Although oak is extremely rare in this compartment, decisions to plant or encourage oak should be made keeping Oak Wilt hot-spots in mind.

Michigan State University has established long-term plots in the northeast quarter of this compartment to monitor Beech

Bark Disease until the year 2052, in cooperation with the DNR. GPS coordinates and plot specifics are included in the compartment folder (under "Public Correspondence"). These plots should be acknowledged and protected from management activities in/around the study area.

A Hardwood Regeneration plot led by Walters and Roloff at MSU is ongoing within the compartment as well. In this particular stand, the area received a shelterwood treatment and subsequent herbicide application. Results are being monitored.

Heterobasidion Root Disease (HRD) is a concern within red pine plantations, as is Armillaria.

Watershed and Fisheries Considerations:

NLHMU.

Fisheries Concerns: None.

Weber Lake and Little Weber Lake are surface water resources nearest this compartment, more than one-half mile to the east.

Wildlife Habitat Considerations:

Treatments in this compartment will maintain age class diversity in aspen while creating early successional habitat benefiting deer, grouse, and woodcock. Hardwood treatments will provide within stand structural diversity. Openings are prescribed to be maintained in this compartment benefiting deer, turkey, grouse, and woodcock. American marten known to occur in area.

Mineral Resource and Development Concerns and/or Restrictions

Sections 25, 26, 35 and 36, T34N-R4W, Emmet County

Surface sediments consist of ice-contact outwash sand and gravel. The glacial drift thickness varies between 200 and 600 feet. The Devonian Antrim Shale and Traverse Group subcrop below the glacial drift. The Antrim and Traverse are quarried for stone and cement products. Gravel pits are located 1.5 miles to the east and gravel potential appears to be good. The nearest oil and gas production, the Antrim Shale gas play, is located six miles to the south. The Antrim Shale is either thin or missing in this area. This area is leased for potential Collingwood Formation development.

Vehicle Access:

Vehicle access is good throughout this compartment. In the summer months, all main roads are passable, although the pipeline should remain closed to motorized traffic as it is hilly and becoming degraded. There are many forest access routes that are overgrown and/or degraded but may be suitable for future use if rehabilitated. In the winter, only Heaton Road is plowed by the county (via Newson Road off of Mitchell, but not west of Heaton Rd.) down 3/4 of a mile; the rest of Heaton Road to Wilber Hill Road is plowed out by [private] local residence. CCC Road is also plowed up to County Line Road, giving access from the south end.

Survey Needs:

There currently exist no pressing survey needs. However, surveying the 1.5 ac deeded to the School in section 26 could become necessary if management activities (wildlife opening enhancement, harvesting, decking, etc.) are intended in the area. The north quarter-corner of section 26 has been established, including witness trees.

Recreational Facilities and Opportunities:

The Tomahawk Dirtbike Trail goes through the north and south extremes of this compartment. Snowmobile Trail 765 bisects the compartment north to south on Fireline Road and Snowmobile Trail 76 runs along the south edge on County Line Road.

This is a very widely used area by recreationists. Dirtbiking, ORVs, snowmobiling, hunting, and general meandering are extremely popular during the appropriate seasons.

This compartment is just west of the Weber Lake SFC and the Lost Tamarack Pathway.

Fire Protection:

Fire access is pretty good during snow-off conditions. Most of the terrain undulates, but there aren't too many areas that are inaccessible due to topographical constraints. Dense regeneration in areas would be the biggest obstacle in navigation, while a younger pine component in the south and a couple non-forest stands might be the biggest fire risks. Finding a water source would be a complication for this compartment. Weber Lake is the closest water, but access to the lake itself would be difficult.

Springvale Township VFD covers this area. LTBB would like to assist with Rx burns in the future.

Additional Compartment Information:

The following reports from the Inventory are attached:

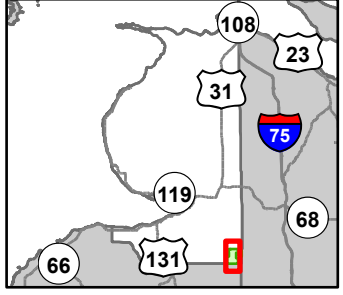
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

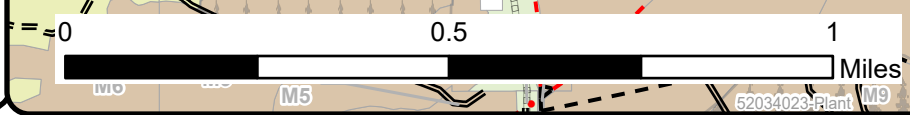
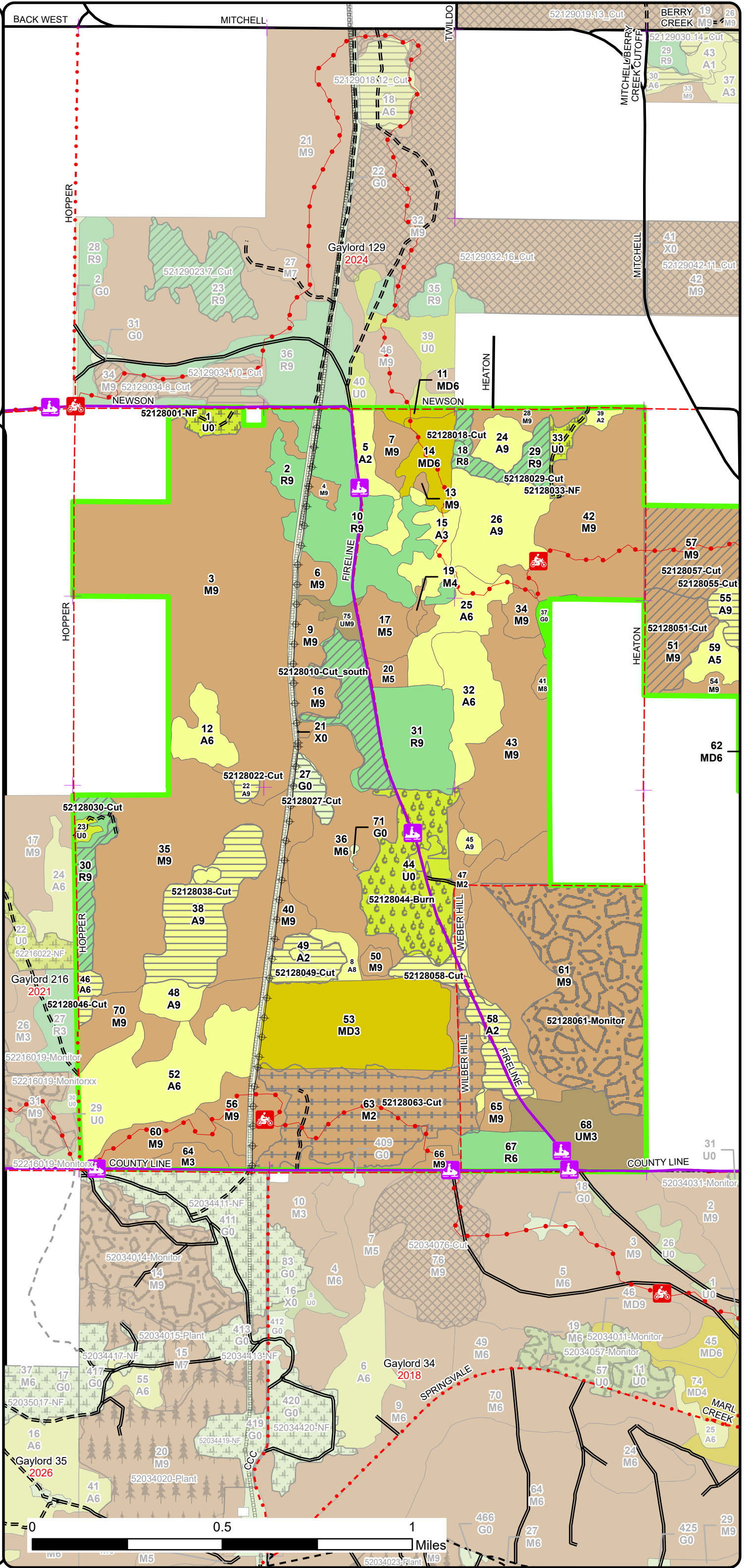
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 52128
 T34N, R4W, Sec: 25, 26, 35, 36
 County: Emmet
 Unit: Gaylord
 Mgmt Area: Wolverine Moraines
 YOE: 2026
 Acres: 1881.1 GIS Calculated
 Examiner: Tricia St. Pierre
 Map Revised: 09/25/2024
 Map Phase: Post Review

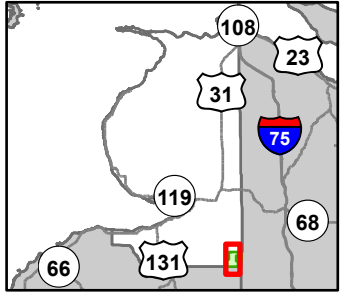


- Remonumented Section Corners
- Motorcycle Trails (DNR License)
- Snowmobile Trails
- ORV License & Trail Permit
- Designated Snowmobile Trails
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Pipeline
- Powerline
- Compartment Boundary
- Other Treatment - See Comments
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Harvest, Overstory Removal
- Prescribed Burn
- Thinning (Crown, Low, Systematic)
- Regeneration Survey
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 430 - Upland Mixed Forest
- 211 - Cropland
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 790 - Other Bare/Sparsely Vegetated

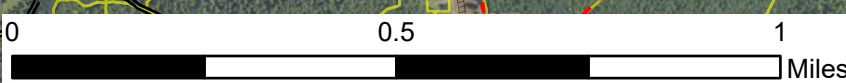
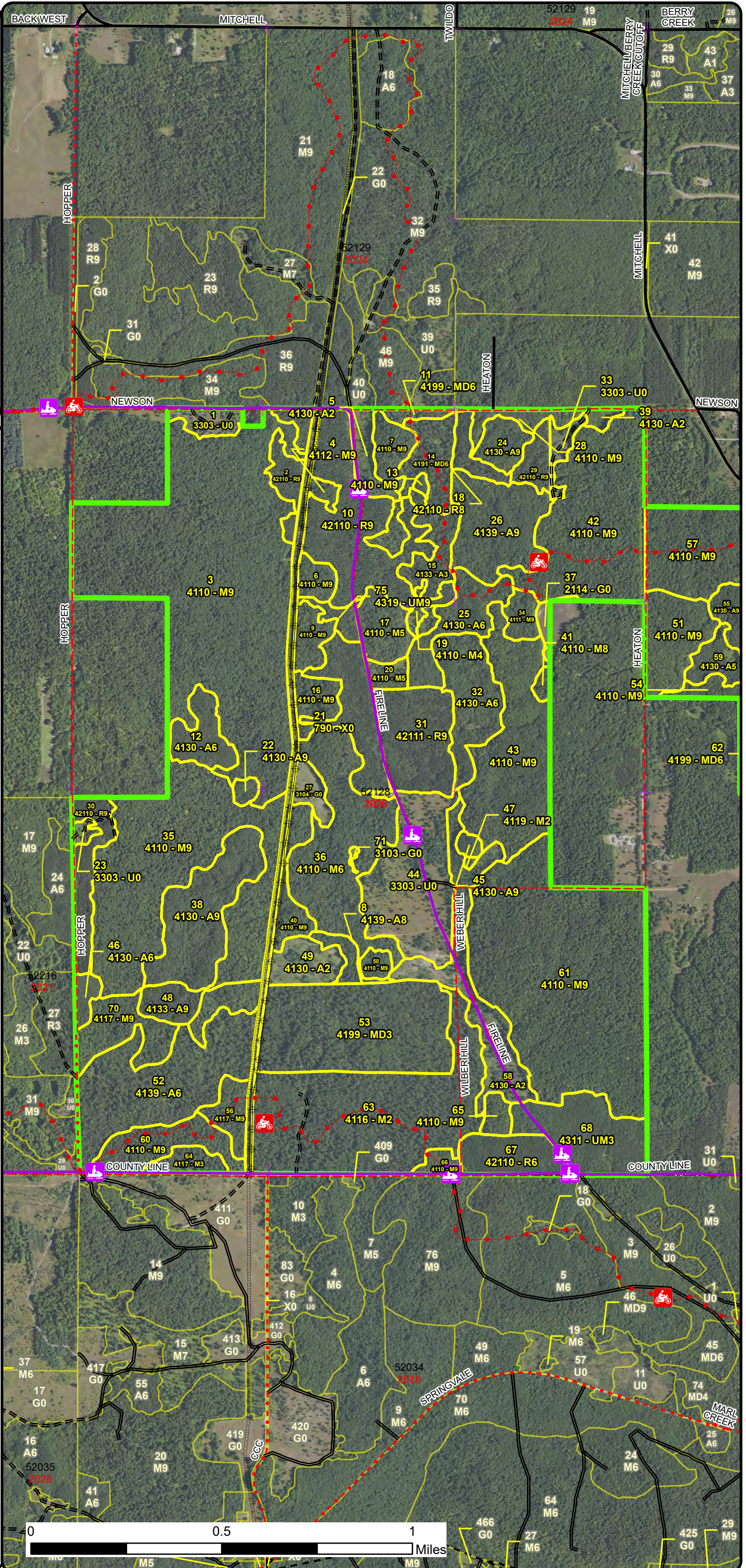


Stand Boundary Map

Compartment: 52128
 T34N, R4W, Sec: 25, 26, 35, 36
 County: Emmet
 Unit: Gaylord
 Mgmt Area: Wolverine Moraines
 YOE: 2026
 Acres: 1881.1 GIS Calculated
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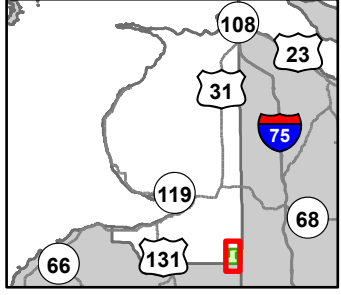


- Remonumented Section Corners
- Motorcycle Trails (DNR License)
- Snowmobile Trails
- ORV License & Trail Permit
- Designated Snowmobile Trails
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Pipeline
- Powerline
- Compartment Boundary
- Stand Boundaries
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 430 - Upland Mixed Forest
- 211 - Cropland
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 790 - Other Bare/Sparsely Vegetated
- State Forests

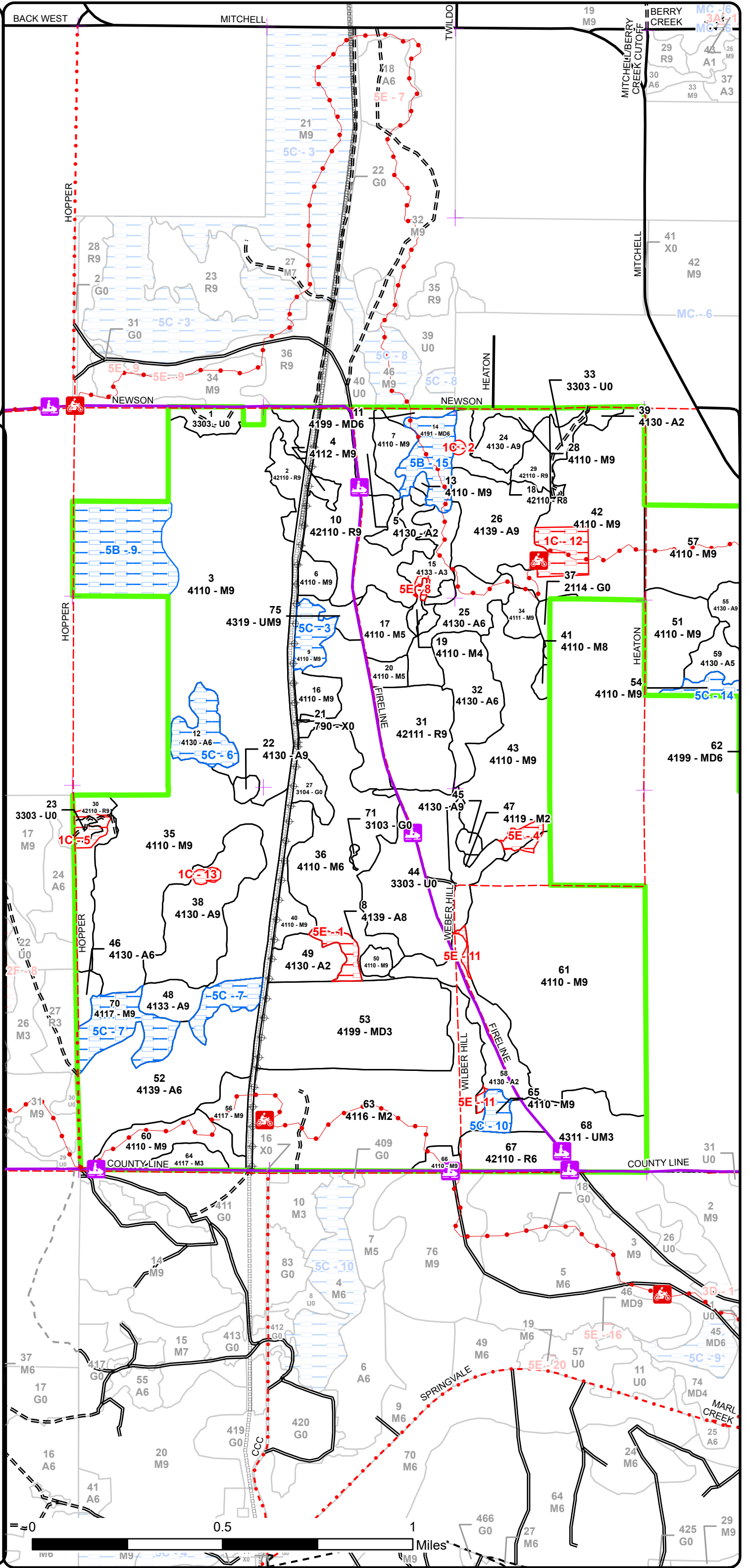


Special Conservation Areas & Site Conditions Map

Compartment: 52128
 T34N, R4W, Sec: 25, 26, 35, 36
 County: Emmet
 Unit: Gaylord
 Mgmt Area: Wolverine Moraines
 YOE: 2026
 Acres: 1881.1 GIS Calculated
 Examiner: Tricia St. Pierre
 Map Revised: 09/25/2024
 Map Phase: Post Review



- Remonumented Section Corners
 - Motorcycle Trails (DNR License)
 - Snowmobile Trails
 - ORV License & Trail Permit
 - Designated Snowmobile Trails
 - DNR - Secondary Forest Road
 - DNR - Forest Access Route
 - Federal / State / County - Paved Road
 - Federal / State - Dirt / Gravel Road
 - County - Gravel Road
 - County - Dirt Road (Seasonal)
 - Private - Dirt / Gravel Road
 - Pipeline
 - Powerline
 - Compartment Boundary
 - Available w/ Constraints
 - Unavailable
- 5B: Maintain for regeneration purposes





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	71	0	109	28	140	0	5	0	0	0	0	0	0	0	0	0	0	353
Bare/Sparsely Vegetated	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Cropland	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Herbaceous Openland	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Low-Density Trees	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68
Mixed Upland Deciduous	0	0	0	74	0	3	9	0	0	17	0	0	0	0	0	0	0	0	102
Northern Hardwood	0	0	19	103	0	0	63	18	269	495	141	4	0	0	0	0	0	0	1112
Red Pine	0	0	0	18	0	0	0	160	0	0	0	0	0	0	0	0	0	0	178
Upland Mixed Forest	0	0	0	34	0	0	0	5	0	0	0	0	0	0	0	0	0	0	39
Total	98	71	19	338	28	143	72	188	269	512	141	4	0	0	0	0	0	0	1882



Report 2 – Treatment Summary

Gaylord Mgt. Unit

Year of Entry: 2026

Acres of Harvest

Compartment 128

Total Compartment Acres: 1,881

Commercial Harvest - 352
 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	104	0	0	0	0	0	0	0	0	104
Herbaceous Openland	7	0	0	0	0	0	0	0	0	7
Northern Hardwood	0	45	0	0	63	82	0	0	0	189
Red Pine	0	0	0	0	53	0	0	0	0	53
Total	111	45	0	0	115	82	0	0	0	352

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Pruning	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	352	0	0	0	48	0	138	0	13	551
Next Step	0	0	0	29	48	0	281	0	0	359
Total	352	0	0	29	97	0	419	0	13	909



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

1	52128001-NF	7.5	3303 - Mixed Low Density Trees	Nonstocked	Unspec ified	NonForestMgt	Other - Specify	320 - Upland Shrub		No
<p><u>Prescription</u> Maintain the nonforested condition of this stand either through prescribed burning, herbicide, or mechanical means. Prune any fruit trees if present.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other</u> Exclude sensitive features from management.</p> <p><u>Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										

18	52128018-Cut	6.6	42110 - Planted Red Pine	Sawtimber Medium	63	81-110	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Marked thinning to 80 BA (removing less than 1/3 of volume) focusing on 16+" stock and poor quality stems. Higher residual Basal Areas will be acceptable in areas where pre-harvest BA is 120 or greater.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other</u> Require HRD spec.</p> <p><u>Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>											

22	52128022-Cut	2.5	4130 - Aspen	Sawtimber Well	48	111-140	Harvest	Clearcut	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest aspen only, protecting residual hardwood. No retention due to small stand size.</p> <p><u>Specs:</u> Include drumming log spec.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Acceptable regeneration will meet minimum stocking requirements for aspen.</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 /2025</p>											



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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29	52128029-Cut	7.9	42110 - Planted Red Pine	Sawtimber Well	63	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
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Prescription Thin to 120. Areas with pre-existing lower BA (<140) may be confidence marked down to 100 BA, providing operators a clear path through the stand.
Specs: Any other species needing to be cut for operability are to be severed and laid flat, not utilized.

Next Step
Treatments:

Acceptable
Regen:

Other Nonforested opening to the east may be used for decking and hauling.
Comment:

Site Condition:

Proposed Start Date: 10/1 /2025

30	52128030-Cut	14.8	42110 - Planted Red Pine	Sawtimber Well	63	171-200	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
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Prescription Thin stand to 120 BA focusing on spacing and quality. Require HRD spec.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Do not skid through nonforested opening or use it for any operations. Wood may be decked on the west side of Hopper Road (52216022) or
Comment: utilize landing to the south if adjacent aspen clearcut has occurred.

Site Condition:

Proposed Start Date: 10/1 /2025

33	52128033-NF	5.3	3303 - Mixed Low Density Trees	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		No
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Prescription Maintain the nonforested condition of this stand either through prescribed burning, herbicide, or mechanical means.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Site Condition:

Proposed Start Date: 10/1 /2025



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
38 52128038-Cut	40.2	4130 - Aspen	Sawtimber Well	46	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest aspen only.</p> <p><u>Specs:</u> Mark a minimum of one hardwood tree per acre to be pushed over into adjacent residual hardwood at a 45-degree or more angle to provide marten habitat and more diverse forest structure. Require a shortwood operation for the purpose of providing increased slash for soil stabilization and potential browse deterrent. Include drumming log spec.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Acceptable regeneratoin will meet minimum stocking requirements for aspen.</p> <p><u>Other Comment:</u> Harvesting aspen only will leave pockets of desirable, diverse intermediate hardwood, primarily in small draws within the stand.</p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										
44 52128044-Burn	48.4	3303 - Mixed Low Density Trees	Nonstocked		Unspec ified	Burn	Opening	330 - Low-Density Trees		No
<p><u>Prescription</u> Wildlife opening maintenance. Rx burn to control establishment of pioneer species. PROTECT (do not burn) pocket of white pine along Fireline Road, especially XL white pine. Continue to maintain the nonforested condition of this stand either through prescribed burning, herbicide, or mechanical means. Caution should be taken to mitigate damage to snowmobile trail and its markers; replacing where necessary.</p> <p><u>Next Step</u> Burn, Opening</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u> Protect sensitive features within stand. Consult locked comments for better direction.</p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										
46 52128046-Cut	4.6	4130 - Aspen	Poletimber Well	48	81-110	Harvest	Clearcut	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest aspen only. No retention due to small stand size. This will be the primary landing for stands 38 and 22.</p> <p><u>Specs:</u> Include drumming log spec.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Acceptable regeneration will meet minimum stocking requirements for aspen. The portion of the stand designated as a landing may become a small herbaceous opening.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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51	52128051-Cut	24.2	4110 - Sugar Maple Association	Sawtimber Well	75	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	No
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Prescription Mark stand to 80 BA. Focus on form and seed producers. Leave beech and aspen to become snags. Do not harvest any underrepresented species such as elm, cherry, or ironwood. Protect standing dead within stand.

Next Step
Treatments:

Acceptable
Regen:

Other Prefer marking sugar maple over basswood, keeping basswood at 40% of residual stand (or higher). Retain diversity. Do not chip - keep tops intact and scattered (not run over). Identify trees to push over to cross/lean/create clumps of leaning trees. Follow legacy tree guidance.

Site Condition:

Proposed Start Date: 10/1 /2025

55	52128055-Cut	20.0	4130 - Aspen	Sawtimber Well	48	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
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Prescription Final harvest. Do not cut any underrepresented species, specifically elm, black cherry, yellow birch, and basswood.

Next Step Monitoring, Natural Regen (Re-Inventory)

Acceptable Acceptable regeneration will meet minimum stocking requirements for aspen.

Other Capture areas of dense maple/hardwood in retention islands.

Site Condition:

Proposed Start Date: 10/1 /2025

57	52128057-Cut	38.4	4110 - Sugar Maple Association	Sawtimber Well	93	81-110	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	No
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Prescription Marked thinning to 80 BA. Focus on form and seed producers. Leave a good representation of Xlog sugar maple (and basswood) for seed production and future wildlife trees. Preserve diversity: do not mark any aspen, cherry, yellow birch, elm, or beech. Sign and protect recreational trail. Identify trees to push over to cross/lean/create clumps of leaning trees. Protect standing dead within stand, follow legacy tree guidance.

Next Step
Treatments:

Acceptable
Regen:

Other Maintain basswood at 40% of stand or greater, preferring to mark sugar maple over basswood.
Comment: Bowl in northern part of stand with steep east slope should be marked with operability in mind, if marked at all. Do not chip. Leave tops intact and scattered. Prefer frozen winter or dry summer harvest. Main haul route through stand is very wet.

Site Condition:

Proposed Start Date: 10/1 /2025



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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57	52128057-GrpSel	44.5	4110 - Sugar Maple Association	Sawtimber Well	93	81-110	Harvest	Group Selection	411 - Northern Hardwood	Two-Aged	No
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Prescription Mark gaps to clearcut from .5 to 3 acres in size at a density of two to three gaps per ten acres, targeting 25% of the stand to regenerate this entry. Do not cut any advanced (>2" dbh) maple or basswood regeneration within gaps. Do not harvest incidental species if found within gaps. This may include cherry, yellow birch, elm, or other species.
Specs: Place two or three gaps adjacent to the aspen stand in an opportunity to expand the aspen. Sign and protect recreational trail.

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

Acceptable Regen: Acceptable regeneration will meet minimum stocking standards for mixed hardwood, not to exceed 50% beech. Regeneration survey may be prolonged an additional cycle if found to be undesirable during initial reinventory.

Other Target 2.5 acres total per 10 acres to accomplish target.

Comment: Consider operability, but harvest areas most affected by BBD/beech brush. Water bars may be required on skid trails on slopes >30% if rutting occurs. Do not chip tops. Leave slash intact. Follow legacy tree guidance, protect standing dead within stand. Identify trees to push over to cross/lean/create clumps of leaning trees.

Site Condition:

Proposed Start Date: 10/1 /2025

61	52128061-Monitor	108.4	4110 - Sugar Maple Association	Sawtimber Well	85	81-110	Monitoring	Natural Regen (Re-Inventory)	411 - Northern Hardwood	Even-Aged	No
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Prescription Monitor regen to assure beech and ironwood do not dominate.

Specs:

Next Step
Treatments:

Acceptable Regen: Acceptable regeneration will meet minimum stocking requirements for northern hardwood.

Other Monitoring treatment extended into 2033/2034 inventory season after failing in 2024. More time needed to determine success of regeneration.
Comment:

Site Condition:

Proposed Start Date: 10/1 /2033

Approved Treatments:

10	52128010-Cut_south	23.5	42110 - Planted Red Pine	Sawtimber Well	63	111-140	Harvest	Systematic Thinning	42110 - Planted Red Pine	Even-Aged	No
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Prescription Third row thin. Mark starting rows and/or "confidence trees" in areas where rows are less obvious. Consider using inclusion in southeast for a landing. Do not cut hardwood within stand unless necessary for operations - deck separately and scale. Clearcut all aspen within sale boundary along Fireline Road - deck separately and scale. Sale occurs along snowmobile trail. Caution should be taken to avoid and/or replace trail markers. Trail should be kept in good condition at all times.
Specs:

Next Step
Treatments:

Acceptable Regen:

Other
Comment:

Site Condition:

Proposed Start Date: 10/1 /2015



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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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27	52128027-Cut	6.5	3104 - Degraded	Nonstocked	0	Unspecified	Harvest	Clearcut with Retention	4116 - Mixed N. Hardwood - Aspen	Even-Aged	No
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Prescription Release elm, restart cherry and aspen: clearcut all trees >2" except for elm, junberry, and log-sized ironwood. Do not cut XL sugar maple.
Specs: No retention due to small stand size and management objectives. Acceptable regeneration includes a mix of aspen, cherry, and mixed deciduous.

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

Acceptable Regen: Acceptable regeneration will meet minimum stocking requirements for mixed aspen, cherry, and other mixed deciduous species.

Other Comment: Consider monitoring for elm survival. Old next step comments: Regen survey to determine adequate stocking levels of aspen and mixed deciduous species.

Site Condition:

Proposed Start Date: 10/1 /2015

49	52128049-Cut	12.2	4130 - Aspen	Sapling Medium	2	Immature	Harvest	Clearcut with Retention	4116 - Mixed N. Hardwood - Aspen	Even-Aged	No
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Prescription Treat west 3/4 of stand, around aspen. Clearcut down to 2" dbh. Do not cut elm, hawthorn, serviceberry, or pine. Leave any trees >18" dbh for wildlife value. Acceptable regeneration includes aspen and mixed deciduous species.

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

Acceptable Regen: Acceptable regeneration will meet minimum stocking levels of aspen and mixed deciduous species.

Other Comment: Old next step comments: Regen survey to determine adequate stocking levels of aspen and mixed deciduous species.

Site Condition:

Proposed Start Date: 10/1 /2015

58	52128058-Cut	24.6	4130 - Aspen	Sapling Medium	2	Immature	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	No
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Prescription Clearcut, leave red pine >18", all white pine, all elm. Avoid damage to hawthorn. Extend boundary into adjacent stand to the east for any merchantable aspen. Be careful not to overlap sale boundary with hardwood thinning. Sale occurs along snowmobile trail. Caution should be taken to avoid and/or replace trail markers. Trail should be kept in good condition at all times.

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

Acceptable Regen: Acceptable regeneration will meet minimum stocking requirements for aspen and mixed hardwood species.

Other Comment: **WITNESS TREE(S) along road - protect and DO NOT CUT. Old next step comments: Regen survey to determine adequate stocking levels. Acceptable regeneration includes a mix of aspen and mixed deciduous and coniferous trees, namely aspen, maple, cherry, and/or jack/red/white pine.

Site Condition:

Proposed Start Date: 10/1 /2015



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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
63 52128063-Cut	81.5	4116 - Mixed N. Hardwood - Aspen	Sapling Medium	27	1-50	Harvest	Overstory Removal	4139 - Aspen, Mixed Deciduous	Even-Aged	No
<p><u>Prescription</u> Overstory removal of red pine. Focus retention along sale edges and around pockets with lower densities of red pine to protect advanced regeneration. Consider flagging or painting skid trails for equipment to minimize damage to regeneration. Sale occurs along snowmobile trail and has a dirtbike trail bisecting it. Caution should be taken to avoid and/or replace trail markers. Trail should be kept in good condition at all times.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Acceptable regeneration will meet minimum stocking requirements for aspen and mixed deciduous species.</p> <p><u>Other Comment:</u> Overstory removal of red pine from fully stocked aspen/mixed hardwood sapling stand.</p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2015</p>										
69 52128069-Monitor	29.1	4110 - Sugar Maple Association	Sawtimber Medium	93	1-50	Monitoring	Natural Regen (Intermediate)	411 - Northern Hardwood	Even-Aged	No
<p><u>Prescription</u></p> <p><u>Specs:</u></p> <p><u>Next Step</u> Seeding, Hand Seed</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> A diverse mix of northern hardwood species.</p> <p><u>Other Comment:</u> Percent to Treat = 100%</p> <p><u>Site Condition:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>										

Total Treatment Acreage Proposed: 550.7

Report 4 – Site Conditions

Gaylord Mgt. Unit
Tricia St. Pierre: Examiner

Compartment: 128
Year of Entry: 2026



Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions			
		With Condition	Not Available		5B	5C	1C	5E
352	329	14	9	Aspen		14	2	7
20	20	0	0	Bare/Sparsely Vegetated				
3	3	0	0	Cropland				
7	7	0	0	Herbaceous Openland				
68	66	0	2	Low-Density Trees			2	
103	87	16	0	Mixed Upland Deciduous	16		0	
1111	1005	91	14	Northern Hardwood	41	50	10	4
177	174	0	3	Red Pine			3	0
39	39	0	0	Upland Mixed Forest				
1,881	1,731	122	29	Total Forested Acres	57	65	17	11
	92%	6%	1%	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	5E: Long-Term Retention	5	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
<p>Comments: Excellent sugar maple stocking in subcanopy, developing into very nice quality canopy stems. This was excluded from adjacent stand 49 with the intent to serve as retention while the stand transitions to hardwood.</p>							
2	Unavailable	1C: Other dept or div proc/practices	1	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments: Area to be excluded from harvest per separate Division request.</p>							
3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
<p>Comments: Delay treatment. Consider thinning with adjacent stand 3 when the time comes.</p>							

Report 4 – Site Conditions

Gaylord Mgt. Unit
Tricia St. Pierre: Examiner

Compartment: 128
Year of Entry: 2026



4	Unavailable	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	1C: Other dept or div proc/practices	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Maintain a 100' buffer and exclude stand from intrusive activities.							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Postpone treatment to maintain diverse aspen age and size classes. Treating a quarter of the aspen this YOY.							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Preserve mature red pine/hardwood mix. Good marten habitat but could use some more coarse woody debris. Could be thinned with the adjacent hardwood stand 35 when it's ready, maintaining compositional structure of SM:BW:RP.							
8	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Long term retention for parent stand 15.							
9	Available	5B: Maintain for regeneration purposes	41	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Some nice advanced sugar maple and occasional basswood in the subcanopy. Pockets of ash and beech, but amount of sugar maple is fairly significant here, at least in comparison to other hardwood stands.							

Report 4 – Site Conditions

Gaylord Mgt. Unit
Tricia St. Pierre: Examiner

Compartment: 128
Year of Entry: 2026



10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Unique stand of basswood prominence + advanced sugar maple regeneration. Delay treatment to thin with other hardwood stands in the area.							
11	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Long term retention for stand 58.							
12	Unavailable	1C: Other dept or div proc/practices	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments: MSU research plot for Long-term BBD Impacts.							
13	Unavailable	1C: Other dept or div proc/practices	2	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments: Unavailable for harvest.							
14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stand composition, density, and size classes are variable. Stand as a whole is not ready for a traditional thinning. Portions may be managed on an even-aged basis with the adjacent aspen stand in the future.							
15	Available	5B: Maintain for regeneration purposes	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Red pine is growing out of merchantability and is nursing along a very nicely diverse subcanopy of mixed hardwood and aspen. Allow red pine to naturally senesce, preserving the condition of the regeneration.							

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
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
1	3303 - Mixed Low Density Trees	Nonstocked	7.5		Unspecified	No	Observed one white spruce. Cherry presence in pole/sap/log; red pine in pole/sap. There's a two track that meanders through the stand back to the hardwood that is little used. Goldenrod and field strawberry present.		
		Sub-Canopy Species	Density	Avg. Height	Size				
		Scotch Pine	Trace	5 - 10 feet	Sapling				
		Juniper	Trace	< 5 feet	Tall Shrub				
		White Pine	Trace	5 - 10 feet	Sapling				
		Honeysuckle (spp.)	Low	Variable	Tall Shrub				
		Little Bluestem	Full	Unspecified	Non-Wood				
		Sugar Maple	Low	Variable	Sapling				
		Black Cherry	Medium	Variable	Pole				
		Red Pine	Low	Variable	Pole				
		Beech	Trace	Variable	Sapling				
		Bracken Fern	Trace	Unspecified	Non-Wood				
		Spotted Knapweed	Trace	Unspecified	Non-Wood				
		Blackberry/Raspberry	Low	< 5 feet	Tall Shrub				
2	42110 - Planted Red Pine	Sawtimber Well	12.9	64	111-140	N/A	Pockets of mortality following timber sale (appears to be pine beetle). Will report to Forest Health. Systematic thinning in 2021, Multifarious Mix (52-120-16). Variable diameters and densities, but more consistent after systematic thinning. Porcupine damage to a few trees in the northwest. The northern half of the stand has slightly lower quality pine. Planted in 1960. Honeysuckle is densest along the utility line edge. Trace elm in canopy. Rare basswood, serviceberry, ironwood, and elm in subcanopy. North edge along Newson Road is mixed hardwood, .5-1 chain deep (<1/2 ac in size).		
		Canopy Species	% Cover	Size Class	DBH	Age			
		Black Cherry	7	Log/Pole	12				
		Red Pine	93	Log/Pole	10	64			
		Sub-Canopy Species	Density	Avg. Height	Size				
		Honeysuckle (spp.)	Medium	Variable	Tall Shrub				
		Blackberry/Raspberry	High	< 5 feet	Tall Shrub				
		Beech	Medium	Variable	Sapling				
		Sugar Maple	Medium	Variable	Sapling				
		Black Cherry	Trace	Variable	Sapling				
3	4110 - Sugar Maple Association	Sawtimber Well	211.4	75	81-110	N/A	Ash is no longer a component of the canopy (drop from 15% to 0% due to EAB between 2013 and 2023). Trace ironwood, yellow birch, paper birch, and red maple in canopy. Rare maple leaved viburnum in subcanopy. Pockets of beech brush; clumpy. Smaller diameters in the north and especially east. Some nice advanced sugar maple saplings in southeast and in the west 40. Thinned in 2007, Hopper Hardwood (52-110-06).		
		Canopy Species	% Cover	Size Class	DBH	Age			
		American Elm	2	Log/XLog	14				
		Beech	4	Log/Pole/XLog	14				
		Sugar Maple	69	Log/Pole	12	75			
		Basswood	20	Log/Pole	14				
		Black Cherry	5	Log	12				
		Sub-Canopy Species	Density	Avg. Height	Size				
		Blackberry/Raspberry	Trace	< 5 feet	Tall Shrub				
		Red Berried Elder	Trace	5 - 10 feet	Tall Shrub				
		Striped Maple	Trace	Variable	Sapling				
		Honeysuckle (spp.)	Trace	< 5 feet	Tall Shrub				
		Basswood	Trace	5 - 10 feet	Sapling				
		American Elm	Trace	Variable	Sapling				
		Sugar Maple	Low	Variable	Sapling				
		Black Cherry	Trace	< 5 feet	Sapling				
		White Ash	Low	Variable	Sapling				
		Prickly Or Wild Gooseberry	Trace	< 5 feet	Tall Shrub				
		Beech	Medium	Variable	Sapling				
		Ironwood	Medium	Variable	Sapling				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments			
4	4112 - Maple, Beech, Cherry Association	Sawtimber Well	2.8	64	81-110	N/A	Some mortality in the red pine. Black cherry boles are a little contorted, a little crooked; red and sugar maple stems are much straighter.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
American Elm		2	Pole/Sapling	6		Ironwood		Low	Variable	Sapling
Ironwood		1	Pole/Sap/Log	5		American Fly Honeysuckle		Low	Variable	Tall Shrub
Basswood		2	XLog/Log	18		Beech		Trace	Variable	Sapling
Black Cherry		63	Log/Pole	12	64	Hazelnut (Beaked)		Trace	5 - 10 feet	Tall Shrub
Sugar Maple		10	Pole/Sapling	6	64	Sugar Maple		Medium	Variable	Sapling
Red Maple		20	Pole/Log	8		Prickly Or Wild Gooseberry		Medium	< 5 feet	Tall Shrub
Red Pine		2	Pole/Log	8	47	Serviceberry (Juneberry)		Low	>20 feet	Sapling
						Black Cherry		Trace	Variable	Sapling
5	4130 - Aspen	Sapling Medium	9.6	2	Immature	N/A	Portion of Payment Unit 2 of Multifarious Mix, 52-120-16, harvested in 2021. The northwest was and remains slightly understocked, more of a non-forested opening (utilized as landing). Trace elm and red maple in canopy. Scattered residual elm/ironwood/red maple saplings (<2% total), jack pine (1%), red pine (2%), and black cherry (1%, accounted for in 6% of canopy sapling). "10% sugar maple" in canopy accounts for 7% residual saplings and 3% new saplings. Rare white pine and gooseberry in subcanopy. Hardwood subcanopy is heavily browsed (thus listed as "shrubs".) Spotted knapweed and honeysuckle dominated northwest opening. Hare present throughout stand.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Serviceberry (Juneberry)		1	Sapling	2		Beech		Trace	< 5 feet	Sapling
Jack Pine		1	Sapling/Pole	3		Blackberry/Raspberry		High	< 5 feet	Tall Shrub
Ironwood		2	Sapling	2		Sugar Maple		Low	< 5 feet	Tall Shrub
Quaking Aspen		78	Sapling	1	2	Ironwood		Low	Variable	Tall Shrub
Black Cherry		6	Sapling/Pole/Log	1		Bracken Fern		Medium	Unspecified	Non-Wood
Red Pine		2	Pole/Sap/Log	7		American Fly Honeysuckle		Medium	Variable	Tall Shrub
Sugar Maple		10	Sapling	2		Red Maple		Low	< 5 feet	Tall Shrub
6	4110 - Sugar Maple Association	Sawtimber Well	6.3	85	81-110	N/A		Scattered dead elm. Lot of wildlife tracks throughout stand. More horizontal structure (coarse woody debris) than most stands. Heavy to sugar maple pole. Increased black cherry on east edge.		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Black Cherry		5	Log/Pole	12		Sugar Maple	Medium		Variable	Sapling
Sugar Maple		70	Log/Pole/XLog	12	85	Beech	Trace		Variable	Sapling
Red Maple		1	Log	16		Black Cherry	Trace		Variable	Sapling
Ironwood		2	Log/Pole	12		Ironwood	Medium		Variable	Sapling
American Elm		2	Log/Pole	10		American Fly Honeysuckle	Trace		< 5 feet	Tall Shrub
Basswood		20	Log/Pole	12	78					
7	4110 - Sugar Maple Association	Sawtimber Well	9.5	83	81-110	N/A	Undesirable subcanopy except for a quarter-acre draw in the east with decent sugar maple. North tip has a very steep northwest facing slope. Highest density honeysuckle along west edge and in north. Two yellow birch snags, trace red maple on north tip. Raspberry density reduced from high to low between 2013 and 2023. 2013 inventory comments remain valid: Hardwood thinning in 2007, May Hardwood (52-115-07; along with stand 42). Note variable diameters of pines. Abundant raspberry and knapweed in skid trails and any canopy gaps. Occasional elm (pole), <2%. Smaller diameters towards the southern end of the stand. West-facing slope on the west edge dropping into the adjacent stand.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height
Red Pine		2	Log	16		Beech		Trace	5 - 10 feet	Sapling
American Elm		1	Log/Pole	10		Prickly Or Wild Gooseberry		Low	< 5 feet	Tall Shrub
Sugar Maple		64	Log/Pole	12	83	Maple Leaved Viburnum		Trace	< 5 feet	Tall Shrub
White Pine		2	Log/XLog	14		Black Cherry		Trace	Variable	Sapling
Black Cherry		6	Log/Pole/XLog	12		Sugar Maple		Low	< 5 feet	Seeding
Basswood		25	Log/Pole	12		Ironwood		Medium	Variable	Sapling
						Sugar Maple		Trace	Variable	Sapling
						American Fly Honeysuckle		Low	< 5 feet	Tall Shrub
						Blackberry/Raspberry	Low	< 5 feet	Tall Shrub	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments			
8	4139 - Aspen, Mixed Deciduous	Sawtimber Medium	5.0	69	1-50	N/A	Unharvested portion of adjacent stand 49 intended to convert to hardwood. A little bit of porcupine damage. Aspen appears two-aged in areas, L (14") and P/S (5").			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Sugar Maple		15	Pole/Log/Sap	6		American Elm		Trace	Variable	Sapling
American Elm		5	Pole/Sapling	6		Beech		Trace	Variable	Sapling
Black Cherry		20	Log/Pole	10	58	Black Cherry		Trace	Variable	Sapling
Basswood		10	Pole/Log	8		Serviceberry (Juneberry)		Trace	10 - 20 feet	Sapling
Quaking Aspen		45	Log/Pole	12	69	Prickly Or Wild Gooseberry		Trace	< 5 feet	Tall Shrub
Ironwood		5	Pole/Sapling	6		Sugar Maple		Full	Variable	Sapling
9	4110 - Sugar Maple Association	Sawtimber Well	9.0	75	111-140	N/A		Trace ironwood, yellow birch in canopy; rare beech in subcanopy. X log elm: 20" and 22" in center of stand. A very rare stand dominated by basswood(!).		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height
Sugar Maple		30	Pole/Log/XLog	8	83	Prickly Or Wild Gooseberry	Trace		< 5 feet	Tall Shrub
American Elm		5	Log/Pole/XLog	12		Maple Leaved Viburnum	Trace		< 5 feet	Tall Shrub
Basswood		50	Log/Pole/XLog	12	75	Sugar Maple	Medium		Variable	Sapling
Black Cherry		15	Log/Pole	12		Ironwood	Low		Variable	Sapling
						Black Cherry	Trace		< 5 feet	Sapling
10	42110 - Planted Red Pine	Sawtimber Well	81.4	63	111-140	N/A	Systematic thinning in 2021, Multifarious Mix (52-120-16). Trace hardwood in canopy (SM, BW, AE), occasional aspen. Subcanopy hardwood was knocked back in thinned rows, now occupied by raspberries and some cherry, some lingering maple whips. Decent quality red pine.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Pine		95	Log/Pole	12	63	Beech		Low	Variable	Sapling
Black Cherry		5	Log/Pole	12		Blackberry/Raspberry		High	< 5 feet	Tall Shrub
						Sugar Maple		Medium	Variable	Sapling
						Black Cherry		Medium	Variable	Sapling
						Hawthorn (spp.)		Trace	< 5 feet	Tall Shrub
11	4199 - Other Mixed Upland Deciduous	Poletimber Well	3.4	42	1-50	N/A		Trace red oak, beech, balsam fir, paper birch, bigtooth, and pin cherry in canopy. Rare red pine, gooseberry, beech, hemlock in subcanopy. Hemlock (canopy and subcanopy) is confined to far west, north edge, along road. West half of stand is heavier to hardwood with a couple aspen. East half is dominated by aspen with a couple pockets of pine. Old skid trail from adjacent hardwood stand comes from west, crossing the dirtbike trail and coming out onto Newson Road.		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Jack Pine		2	Sapling/Pole	4		American Elm	Trace		10 - 20 feet	Sapling
Basswood		3	Sapling/Pole	3		American Fly Honeysuckle	Low		< 5 feet	Tall Shrub
Quaking Aspen		34	Pole/Log/Sap	8	42	White Pine	Trace		Variable	Sapling
Ironwood		4	Sapling/Pole	2		White Ash	Trace		< 5 feet	Sapling
Red Pine		4	Pole/Sapling	6		Sugar Maple	High		Variable	Sapling
Hemlock		1	Pole/Log	8		Basswood	Trace		< 5 feet	Sapling
White Ash		1	Sapling/Pole	3		Black Cherry	Trace		Variable	Sapling
Black Cherry		10	Pole/Sapling	6		Hazelnut (Beaked)	Low		5 - 10 feet	Tall Shrub
Yellow Birch		2	Pole/Sapling	7		Ironwood	Trace		Variable	Sapling
Sugar Maple		25	Sapling/Pole	2		Serviceberry (Juneberry)	Trace		>20 feet	Sapling
Serviceberry (Juneberry)		5	Sapling/Pole	2		Blackberry/Raspberry	Trace		< 5 feet	Tall Shrub
White Pine		7	Log/Pole/Sap	10						
American Elm		1	Sapling	3						
Red Maple		1	Sapling/Pole	3						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
12	4130 - Aspen	Poletimber Well	14.3	48	111-140	N/A	Midcanopy (out-competed) sugar maple, ironwood, beech. Trace white ash, beech, pin cherry, black cherry, and basswood in canopy. Rare striped maple in subcanopy. CETA labor used to accomplish Wildlife sponsored clearcut in 1976, W247-73.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Sugar Maple		2	Pole/Sapling	6		Ironwood		Low	Variable	Sapling	
Red Maple		2	Pole/Sap/Log	8		Black Cherry		Trace	< 5 feet	Sapling	
Bigtooth Aspen		95	Pole/Log	8	48	White Ash		Low	5 - 10 feet	Sapling	
Quaking Aspen		1	Pole/Log	8		Sugar Maple		Low	< 5 feet	Seeding	
						Sugar Maple		Low	>20 feet	Sapling	
						Beech		Low	Variable	Sapling	
13	4110 - Sugar Maple Association	Sawtimber Well	1.0	65	51-80	N/A	Thinned in 2021, Multifarious Mix (52-120-16). Nice residual stems. Trace aspen in canopy.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Black Cherry		2	Log/Pole	12		Sugar Maple		Low	Variable	Sapling	
Basswood		30	Log/Pole	14		Black Cherry		Trace	< 5 feet	Sapling	
White Pine		2	Log	14		Beech		Trace	< 5 feet	Sapling	
American Elm		1	Log	12		Ironwood		Medium	Variable	Sapling	
Sugar Maple		64	Log/Pole	12	65						
Red Pine		1	Log	15	83						
14	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	16.5	83	1-50	N/A	Subcanopy has advanced to be incorporated into the canopy. Nice hardwood regeneration, especially sugar maple. Trace red oak, white pine, pin cherry, and white ash in canopy. Rare alternate leaved dogwood, gooseberry, quaking aspen, and balsam fir in subcanopy. Southwest leg has overall smaller diameters and more pine regeneration; dense honeysuckle. Southeast leg has a very nice, high quality mix of hardwood regeneration. Some porcupine damaged beech. Some of the residual red pine are forked. Residual BA varies 20-90, averaging around 40 or 50. Small opening in the north-center dominated by honeysuckle and raspberry. Stand was direct seeded (herd seeder mounted on ATV) at 1/2 lb of red pine seed per acre. Site was scarified in 1996 during logging, direct seed in March of 1997 over 12-18" of snowpack.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Quaking Aspen		5	Sapling/Pole	4		Red Pine		Trace	10 - 20 feet	Sapling	
Jack Pine		1	Sapling/Pole	4		Sugar Maple		Medium	Variable	Sapling	
Red Maple		5	Pole/Sapling	5		American Fly Honeysuckle		Low	Variable	Tall Shrub	
American Elm		1	Sapling/Pole	4		Black Cherry		Trace	Variable	Sapling	
Black Ash		10	Pole/Sapling	5		Beech		Low	Variable	Sapling	
Beech		2	Sapling	4		Blackberry/Raspberry		Low	< 5 feet	Tall Shrub	
Sugar Maple		25	Sapling/Pole	3	28	Serviceberry (Juneberry)		Low	>20 feet	Sapling	
Paper Birch		1	Pole/Sapling	6		White Pine		Trace	Variable	Sapling	
Red Pine		36	XLog/Log	20	83	Hazelnut (Beaked)		Low	5 - 10 feet	Tall Shrub	
Serviceberry (Juneberry)		2	Sapling	2		Ironwood		Low	Variable	Sapling	
Basswood		2	Pole/Sapling	6		Jack Pine		Trace	>20 feet	Sapling	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
15	4133 - Aspen, Mixed Pine	Sapling Well	18.9	3	1-50	N/A	Portion of Payment Unit 2 of Multifarious Mix (52-120-16), harvested in 2021: clearcut deciduous and marked red pine, except do not cut any elm. Otherwise, white pine and unmarked red pine were to be unharvested. Thistle and mullein present. Scattered residual sugar maple, ironwood, and elm saplings. Nice response from aspen. Some browsing damage. Trace red maple in canopy; rare basswood, maple leaved viburnum in subcanopy. Much higher residual BA of red pine in west unit and southwest of east unit. Better quality hardwood regeneration in the west unit. Residual BAs vary: 10-30 in the east unit (except 60-120 in the southwest) and 40-70 in the west unit. 10-30 in the north.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Beech	2	Sapling	1		Sugar Maple	Medium		Variable	Sapling
Black Cherry	5	Sapling	1		Hazelnut (American)	Low		< 5 feet	Tall Shrub
American Elm	2	Pole/Sapling	5		Beech	Low		Variable	Sapling
White Pine	2	Log/Pole	14		Black Cherry	Medium		Variable	Sapling
Ironwood	3	Sapling	1		Honeysuckle (spp.)	Low		< 5 feet	Tall Shrub
Quaking Aspen	60	Sapling	1	3					
Red Pine	21	Log/Pole/XLog	14	64					
Sugar Maple	5	Sapling	1						
16	4110 - Sugar Maple Association	Sawtimber Well	9.4	67	81-110	N/A		Red pine volunteers in southwest opening with black cherry and honeysuckle. Nice advanced sugar maple sapling and poles through the stand. Southern portion of stand is pole dominated with high sugar maple subcanopy. BA is around 120 within the forested portions of the stand, but 50-80 in the gaps.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height		Size
Basswood	30	Log/Pole	12	58	Black Cherry	Trace	< 5 feet		Sapling
Black Cherry	30	Log/Pole	12	67	Ironwood	Low	Variable		Sapling
Ironwood	5	Pole/Sapling	6		American Fly Honeysuckle	Trace	< 5 feet		Tall Shrub
Red Maple	2	Pole	6		Serviceberry (Juneberry)	Trace	>20 feet		Sapling
Sugar Maple	25	Pole/Sap/Log	8		Prickly Or Wild Gooseberry	Trace	< 5 feet		Tall Shrub
American Elm	8	Pole/Sapling	6		Beech	Trace	< 5 feet		Sapling
					Hawthorn (spp.)	Trace	< 5 feet		Tall Shrub
					Sugar Maple	Medium	Variable		Sapling
17	4110 - Sugar Maple Association	Poletimber Medium	15.6	75	51-80	N/A	Couple rogue red pine in the north tip. Trace ironwood in canopy. Rare alternate leaved dogwood, basswood, white ash in subcanopy. Fairly low quality, crooked black cherry with some black knot. Trace quaking aspen in the east.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
American Elm	3	Pole/Sap/Log	6		Blackberry/Raspberry	Low		< 5 feet	Tall Shrub
Red Maple	10	Pole/Sap/Log	6		Hazelnut (Beaked)	Low		5 - 10 feet	Tall Shrub
Black Cherry	82	Pole/Log	8	75	Serviceberry (Juneberry)	Low		Variable	Sapling
Quaking Aspen	1	Log/Pole	10		Black Cherry	Low		Variable	Sapling
Sugar Maple	1	Pole/Log/XLog	8		Prickly Or Wild Gooseberry	Low		< 5 feet	Tall Shrub
Basswood	3	Log/Pole	10		American Elm	Trace		Variable	Sapling
					Red Pine	Trace		Variable	Sapling
					American Fly Honeysuckle	Medium		Variable	Tall Shrub
					Bracken Fern	Low		Unspecified	Non-Wood



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments															
18	42110 - Planted Red Pine	Sawtimber Medium	7.2	63	81-110	N/A	Trace quaking aspen, sugar maple in canopy. Rare hazelnut, balsam poplar, elm, gooseberry in subcanopy. Pretty limby red pine, but straight. One pocket of decline in the south. Planting record from 1960. Third row thinned in the 1990s.															
	<table border="1"> <thead> <tr> <th>Canopy Species</th> <th>% Cover</th> <th>Size Class</th> <th>DBH</th> <th>Age</th> </tr> </thead> <tbody> <tr> <td>Black Cherry</td> <td>1</td> <td>Log/Pole</td> <td>12</td> <td></td> </tr> <tr> <td>Red Pine</td> <td>99</td> <td>Log/Pole</td> <td>14</td> <td>63</td> </tr> </tbody> </table>		Canopy Species	% Cover	Size Class	DBH		Age	Black Cherry	1	Log/Pole	12		Red Pine	99	Log/Pole	14	63				
	Canopy Species	% Cover	Size Class	DBH	Age																	
Black Cherry	1	Log/Pole	12																			
Red Pine	99	Log/Pole	14	63																		
19	4110 - Sugar Maple Association	Poletimber Poor	2.2	50	1-50	N/A	Trace sugar maple, beech, balsam fir saplings in the far north tip. Overgrown non-forested opening filling in with cherry, honeysuckle, and a couple pine volunteers.															
20	4110 - Sugar Maple Association	Poletimber Medium	4.8	66	1-50	N/A	Trace hardwood on perimeter, but stand is 100% black cherry. Northeast is a small .5 acre non-forested opening dominated by spotted knapweed (fully) with trace red pine volunteers.															
21	790 - Other Bare/Sparsely Vegetated	Nonstocked	20.4		Unspecified		Pipeline. Encroaching trees and shrubs. Couple of wet spots, some steep hills, highly variable flora. Pipeline maintained. Close to motor vehicles but still receives heavy traffic from ORVs and snowmobiles.															
22	4130 - Aspen	Sawtimber Well	2.5	48	111-140	N/A	Trace white ash, elm, red maple, ironwood suppressed into midcanopy. Rare maple leaved viburnum, gooseberry in subcaonpy. Sharp lobed hepatica and sweet cicely ground flora.															
23	3303 - Mixed Low Density Trees	Nonstocked	2.2		Unspecified	No	Mature sugar maple, basswood, ironwood along road (west); pocket of hardwood in east. Goldenrod, field strawberry present. Rare juniper (in northeast). Red pine and black cherry present in S/P, sugar maple in L/P, and apple in P/S.															
24	4130 - Aspen	Sawtimber Well	9.5	46	81-110	N/A	Trace red maple in canopy. Rare beech and white ash in subcanopy. Wildlife cut in 1977, W285-73.															
25	4130 - Aspen	Poletimber Well	20.7	25	1-50	N/A	Trace elm, red maple, basswood, sugar maple in canopy. Rare basswood, beech in subcanopy. Ironwood and serviceberry are beginning to become suppressed. Stand is starting to push pole-sized. BTA is more prominent on south-facing slopes. Rare white ash and pin cherry.															
26	4139 - Aspen, Mixed Deciduous	Sawtimber Well	36.3	47	81-110	N/A	Trace pin cherry in canopy. Hardwood pockets are dominated by black cherry with sugar maple, basswood, elm, and serviceberry. Wildlife cut in 1977, W285-73.															
27	3104 - Degraded	Nonstocked	6.9	0	Unspecified	411 - Northern Hardwood	Very poor response to harvest. <5% considered "forested", >3' regeneration. Severe browse. High stocking of mullein, occasional thistle and knapweed. Trace bam along utility line/southwest. MO: Acceptable regeneration will meet minimum stocking requirements for mixed aspen, cherry, and other mixed deciduous species.															
28	4110 - Sugar Maple Association	Sawtimber Well	7.9	95	81-110	N/A	Trace red maple and beech in canopy (couple white ash snags). Rare red pine and yellow birch in subcanopy. Inconsistent stand; variable species composition/diameters/density, but sugar maple and basswood are consistently present.															



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
29	42110 - Planted Red Pine	Sawtimber Well	7.9	63	141-170	N/A	Rare pole sugar maple and cherry in canopy.
30	42110 - Planted Red Pine	Sawtimber Well	17.4	63	171-200	N/A	Hilly terrain but operable. 10-12" dbh in south, 12" in north. Trace black cherry, bigtooth aspen, and beech in canopy. Rare white pine and basswood in subcanopy. Couple of old apple trees in north along trail in from stand 23 (U0). Couple understocked pockets, but BA warrants a thinning.
31	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	33.0	63	81-110	N/A	Trace black cherry in canopy. Porcupine present. Bracken fern and raspberry in subcanopy. Couple pockets of decline in red pine.
32	4130 - Aspen	Poletimber Well	27.5	38	51-80	N/A	Trace red maple in canopy. Rare basswood, red pine, balsam fir in subcanopy. Rather low quality stand. It sits on Leelanau loamy sand but is low quality aspen lacking any development of the midcanopy except for some advanced sugar maple, black cherry, serviceberry, and rare red maple. Otherwise, the subcanopy is shrub dominated. South leg has more bigtooth aspen and better quality hardwood subcanopy, lacking the abundant honeysuckle (and has trace maple leaved viburnum). Opening in south central portion of stand was utilized as a landing when this stand was cut and again in 2023 as a landing for the adjacent hardwood stand when it was thinned. Full spotted knapweed and scattered mullein in the opening now.
33	3303 - Mixed Low Density Trees	Nonstocked	5.3		Unspecified	No	Slight increase in raspberry in south opening. Hardwood dominated narrow strip between north and south openings with ironwood, sugar maple, beech, basswood, black cherry, and scattered red pine saps.
34	4111 - S.Maple, Hard Mast Association	Sawtimber Well	6.6	77	81-110	N/A	Bowl in northwest dominated by ironwood, sap/pole. Significant beech mortality (20% in 2013 to 10% in 2023); remaining beech still affected by BBD. Generally a west-/northwest- facing stand. Trace elm in canopy.
35	4110 - Sugar Maple Association	Sawtimber Well	112.8	85	81-110	N/A	White ash has been eliminated from the canopy due to EAB. Beech has declined from 10% to 4% with continued BBD on lingering beech. Trace red maple, ironwood, black cherry, balsam poplar, elm, paper birch, and yellow birch in canopy. Rare balsam fir, basswood, red oak (one seedling), hazelnut in subcanopy. Smaller diameters in the northeast, a couple pole-dominated pockets. Little sponginess to some draws. Observed equisetum in one of the draws. Maiden hair fern, helleborine, red berried elder, sharp lobed hepatica, partridgeberry all present. Pipeline Hardwood (52-111-06) thinned in 2007. Northwest (around red pine) was treated in 1975 C241-73, removing 48 sqft/acre of mixed hardwood (30-50 BA residual).



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
36	4110 - Sugar Maple Association	Poletimber Well	60.6	57	81-110	N/A	Stand has grown into log size since last inventory cycle. Highly variable stand structurally and compositionally with very inconsistent diameters and BAs. There are still some areas dominated by poles; some areas with dense pole/sapling sugar maple (and a few significant pockets of very nice advanced sugar maple regeneration). Trace yellow birch in canopy; rare basswood, beech, balsam fir, white ash, and serviceberry in subcanopy. Maple leaved viburnum is clumpy. Observed one hawthorn, one hazlenut along E-W trail in north. Central-far east 7 acres includes log/xlog white pine and is occupied by a mix of black cherry and aspen with pole sugar maple/basswood. Significant porcupine presence.
37	2114 - Other Cropland	Nonstocked	2.8		Unspecified	No	Corner is set and identifiable with a carsomite post. Dense clump of planted spruce and pine (pole/sap) in northwest corner. Ironwood, beech saplings are sort of encroaching on perimeter. One red berried elder mixed in with honeysuckle clump in center of stand.
38	4130 - Aspen	Sawtimber Well	41.8	46	81-110	N/A	White ash declined from approx 10% in 2013 to 1% in 2023 due to EAB. Trace elm, ironwood, basswood, pin cherry, and paper birch in canopy. Rare serviceberry, basswood, gooseberry, black cherry, and elm in the subcanopy. Bedstraw, dutchman's breeches, violet, and sweet cicely ground flora. Railroad grade through stand. Old two track in southwest. South-central band contains a nice mix of pole hardwood. Harvested in 1976 as a wildlife cut, W259-73.
39	4130 - Aspen	Sapling Medium	2.5	2	Immature	N/A	Harvested in 2021, Multifarious Mix (52-120-16). Few cords of hardwood left along road in northeast. Trace scattered residual sugar maple, serviceberry, ironwood, white ash in canopy. Trace basswood and bigtooth, also. Mullein and thistle present. Heavy browsing pressure on stand. Densest next to road, but the back side (south edge) has a 30-foot stretch along the entire perimeter of heavily browsed saplings; next to nothing over 3-feet tall.
40	4110 - Sugar Maple Association	Sawtimber Well	11.9	83	81-110	N/A	Trace serviceberry and yellow birch; rare basswood and gooseberry subcanopy. Variable stand. Quaking aspen, black cherry, and beech are picked up on the edges of the stand (QA and BC along eastern edge, BE along western edge). Understory sugar maple is more advanced than other regenerating species. Lower quality stump sprouts (multi-stemmed) in the south giving way to much higher quality timber as you progress north. Undulating hills. Occasional 14-18" sugar maple. Transition into mostly sugar maple, lower BA, in the north. Presence of conifer (balsam fir, red pine) in the understory on west edge along powerline.
41	4110 - Sugar Maple Association	Sawtimber Medium	2.0	75	81-110	N/A	Stand sits in a bowl. Aspen is in poor condition and much is declining; aspen management is not recommended (poor quality, difficult terrain). Decent sugar maple poles present. Rare striped maple.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
42	4110 - Sugar Maple Association	Sawtimber Well	77.2	85	81-110	N/A	Canopy white ash has all succumbed to EAB. BBD has resulted in about 60% mortality in the beech with significant decline in the remaining stems. Trace red maple in canopy. Trace red pine in far northwest adjacent to stand 33. Rare serviceberry, hemlock (saw only three), alternate leaved dogwood (just saw one), and red berried elder in subcanopy. Clumpy formerly white ash dominated pockets are now occupied by sapling ironwood, hazelnut (occasional), honeysuckle, basswood, and a few advanced sugar maple poles. More beech in southwest. White ash saplings are dense (full) in areas, absent in others. Tagged research plot within southwest corner. May Hardwood, 52-115-07, thinned in 2008 (along with stand 7).
43	4110 - Sugar Maple Association	Sawtimber Well	62.6	85	81-110	N/A	Thinned in 2022, Multifarious Mix (52-120-16). Extreme north tip and far south wedge excluded from thinning. Contractor marked; basswood was heavily marked resulting in over 50% decrease in presence. Pre-thinning, stand was 48% SM to 40% basswood (12% other), post-thinning stand is 80% sugar maple, 15% basswood, and 5% other. Trace quaking aspen, elm, red maple, and beech in canopy. Rare maple leaved viburnum in subcanopy. Inclusion of red and white pine in south and southwest.
44	3303 - Mixed Low Density Trees	Nonstocked	52.9		Unspecified	No	Red and white pine present in pole/sap/log. Wild bergamot present. Burned in the late 2010s (2017 or '18, maybe); on the burn list for 2024. Trace sugar maple and basswood saplings on southwest perimeter, South tip was used as a landing when the stands to the south and far west were harvested. Some heavy slash remains on the landing.
45	4130 - Aspen	Sawtimber Well	2.3	48	141-170	N/A	Clearcut in 1976. Aspen monoculture except for a handful of white pine in the northwest.
46	4130 - Aspen	Poletimber Well	4.6	48	81-110	N/A	Sugar maple and ironwood have been all but outcompeted by the aspen and now exist in the subcanopy. Trace ironwood and beech in canopy; rare serviceberry and white pine subcanopy on road edge in southwest; rare balsam fir and maple leaved viburnum in subcanopy. Witness trees in northwest along road. Supercanopy red and white pine, mostly confined to south. CETA labor to accomplish clearcut in 1975, C227-73.
47	4119 - Mixed Northern Hardwoods	Sapling Medium	11.5	16	1-50	N/A	Sale closed in 2007 (Mammoth Red Pine, 52-108-06)). Formerly red pine plantation, clearcut with 10 - 20 BA of residual red pine. Residual sugar maple, ironwood, elm in pole class now; sapling cohort is still solidly sapling except for a couple cherry pushing pole. Really nice, diverse hardwood regeneration, especially in the south leg. North leg is heavier to black cherry. Northeast leg is heavily browsed with failing regeneration except along the south edge where regeneration is successful. Higher prevalence of serviceberry in north-center portion of stand. Scattered pine volunteers.
48	4133 - Aspen, Mixed Pine	Sawtimber Well	9.2	46	111-140	N/A	Some red pine mortality. Sparse subcanopy with advanced sugar maple, beech, and ironwood (>20'); few sugar maple seedlings. Rare striped maple and basswood in subcanopy. Trace basswood in canopy. Few lingering white ash. Railroad grade through east half of stand (SW-NE).



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
49	4130 - Aspen	Sapling Medium	13.1	2	Immature	N/A	Advanced sugar maple saplings (and scattered poles) in harvested portion of stand are residual from parent stand. Dense mullein and some thistle throughout. Hardwood regeneration is heavily browsed, described as "shrubs <5" in the subcanopy. Long term retention includes red pine, jack pine, black cherry, sugar maple, and basswood. LTR subcanopy: raspberry, serviceberry, hawthorn, honeysuckle, trace white pine, beech, ironwood. Parent stand had full sugar maple subcanopy, variable heights. Subcanopy also included elm, beech, black cherry, serviceberry, and hawthorn. Subcanopy post-harvest is heavily browsed and simplified.
50	4110 - Sugar Maple Association	Sawtimber Well	3.6	106	81-110	N/A	Nice quality hardwood. Scattered basswood. Small pocket in northwest with pole/sap black cherry. Rare red maple in canopy (in sw).
51	4110 - Sugar Maple Association	Sawtimber Well	24.2	75	111-140	N/A	Trace elm, black cherry, ironwood, bigtooth aspen in canopy. Rare white ash, striped maple, black cherry, basswood in subcanopy. Band of sap/pole dominated ironwood in northeast; some nice sapling sugar maple on the south end of the band of ironwood.
52	4139 - Aspen, Mixed Deciduous	Poletimber Well	62.9	27	1-50	N/A	Planted in 1931, seed tree cut in 1996. Some dense red pine regen in landing, ~20' tall. Hardwood dominated areas are generally sugar maple and black cherry dominated, still largely sapling size 2-4" diameters. Observed one white pine sapling, one red oak seedling. Some residual hardwood on steep hillside in northeast. Trace BAM, RO, RM, WA, AE in canopy. Rare hawthorn, willow (in southcentral low spot), red maple, striped maple, and witch hazel.
53	4199 - Other Mixed Upland Deciduous	Sapling Well	74.3	27	1-50	N/A	Trace jack pine, pin cherry, balsam fir, and paper birch in canopy. Rare balsam poplar, witch hazel, maple leaved viburnum, white ash, juniper, white pine, jack pine, and alternate leafed dogwood in subcanopy. A lot of serviceberry lingering in the canopy, but will likely stagnate and be overtaken by aspen and/or hardwood in the next 10 years. Scattered advanced pole/log hardwood and aspen, residual from harvest. Red, jack, and white pine had a more pronounced presence in the subcanopy during the previous inventory cycle and are now lacking. Notable increase in hazelnut (or it was buried beneath the snow in 2013) and gooseberry. Aspen is readily moving into a pole class; black cherry is getting there, too. Other hardwood, especially maple and basswood, are slower to achieve pole-size and are very much in the sapling class still. Increase in hawthorn and honeysuckle in east (especially southeast) and a decrease in black cherry presence.
54	4110 - Sugar Maple Association	Sawtimber Well	7.1	84	111-140	N/A	West half is rather variable with aspen (quaking and bigtooth) and smaller diameter hardwood. East half is much more consistently sugar maple and basswood with scattered beech, aspen, and ironwood. Trace black cherry, red maple, and elm in canopy. Rare honeysuckle, elm in subcanopy.
55	4130 - Aspen	Sawtimber Well	20.0	48	81-110	N/A	Stand was cut in 1976, W221-73. Trace beech, ironwood, elm, pin cherry, basswood, bam, and white ash in canopy. Rather simplified subcanopy. 35-40% slope in northwest.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
56	4117 - Mixed N. Hardwood - Pine	Sawtimber Well	9.6	92	51-80	N/A	Trace red maple, beech, ironwood in canopy. Rare BAM (on SE perimeter), maple leaved viburnum, red berried elder, alternate leaved dogwood in subcanopy. Jack pine, red pine, white pine sap/poles on east edge with sm, bc, iw, ae, bw saps, too. Dirtbike trail through stand. Dolls eyes, maidenhair fern present. Significant JP CWD; scattered red pine and aspen mortality throughout stand, occasionally white pine. Pole dominated hardwood in southern third of stand; log dominated northern 2/3rds. Somewhat clumpy ironwood and sugar maple subcanopy. Decent amount of sugar maple saplings, advanced - more than usual. Observed clumps of sugar maple seedlings <1' beneath snow.
57	4110 - Sugar Maple Association	Sawtimber Well	84.5	93	81-110	N/A	Trace black cherry and yellow birch in canopy. One pin cherry, 10". Yellow birch is on north slope, on north edge of stand. Some decent terrain in northwest. Couple pockets of sugar maple seed/saps in skid trails, heavily browsed. 8-9 stick trees. Raspberry mostly exists in skid trails anymore. A lot of beech mortality and beech brush along the southern half of the stand. Old Guy Hardwood (52-129-07) thinning in 2010. Pothole TSI in 1996. Portions thinned in 1978 (NESE) C-292-73, 1976 (SESE) C291-73, C202-73 (N1/2NE).
58	4130 - Aspen	Sapling Medium	27.1	2	Immature	N/A	Rare hawthorn, alternate leafed dogwood, witch hazel, and hazelnut in the subcanopy. A LOT of mullein in response to disturbance, some thistle. Scattered residual saplings: elm, sugar maple, black cherry, ironwood. Occasional advanced (residual) sugar maple, quaking aspen, ironwood. Heavily browsed hardwood, especially sugar maple and basswood. Aspen is 5-8' (2023 observation). Medium sugar maple subcanopy density in 2013 reduced to low following treatment. Expecting some response from serviceberry in the next cycle based on previous similar treatments. 10-20 BA of residual red and white pine.
59	4130 - Aspen	Poletimber Medium	24.6	26	1-50	N/A	1998 Year of Origin. Raspberry is still lingering in openings and less dense skid trails. Trace white ash and elm in canopy. Rare gooseberry and red pine in subcanopy. Some log-sized aspen around nonforested openings. Three distinct non-forested openings in stand and a couple more on the northwest perimeter.
60	4110 - Sugar Maple Association	Sawtimber Well	20.8	86	81-110	N/A	Select cut in 2006, County Line Hardwood (52-124-06). Trace red/white pine in canopy on northwest edge; trace bigtooth aspen. Rare white pine and honeysuckle in subcanopy. Beech is mostly dead from BBD. Sarsaparilla, maiden hair fern, bedstraw, baneberry, blue cohosh, jack in the pulpit, violet, rose twisted stalk present. Higher beech saplings in west under/near dead canopy beech. Much less desirable regeneration in southwest: ironwood dominated with beech. Some areas with full sugar maple seedlings/saplings <5'; other areas have trace sugar maple under high ironwood sapling densities, 10-20' ironwood. Occasional nice basswood stump sprout (which were heavily browsed during the last inventory cycle).



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																		
61	4110 - Sugar Maple Association	Sawtimber Well	157.2	85	81-110	N/A	Hardwood poles and elm removed in 1978, C324-73. Thinned in 2017, Big Hardwood Two (52-114-13). Trace bigtooth aspen, red pine, white pine, hemlock, and red maple in canopy. Rare white ash, leatherwood, white pine in subcanopy. Decent poletimber throughout stand. Some nice advanced sugar maple regeneration present. BBD. Decent red berried elder in some skid trails, but a lot of dead RBE, too. Fox tracks. High beech brush in south/south-central portion of stand: trace to low elsewhere. Higher ironwood density here, too. Trace red maple in southwest. More black cherry in west/southwest and a higher density of ironwood saplings associated with it. Regeneration is ironwood dominated with pockets of beech domination. There are nice sugar maple seedlings/saplings throughout, though. Area to the north of the road (far north tip) has a very nice quality and composition to it. Pocket in west was excluded when the rest of the stand was thinned and has a slightly higher BA. Leatherwood present here.																																																		
62	4199 - Other Mixed Upland Deciduous	Poletimber Well	9.2	59	51-80	N/A	Aspen has been deteriorating within this stand and hardwood is advancing to take its place in the canopy. Terrific advanced sugar maple regeneration; stand has successfully converted into a pole/sap dominated hardwood stand. Rather hilly stand, some particularly steep. Far southeast has a steep slope with a band of mature hardwood on the top (trace yellow birch and beech included). Rare beech in the subcanopy.																																																		
63	4116 - Mixed N. Hardwood - Aspen	Sapling Medium	103.3	27	1-50	N/A	Overstory Removal in 2023. Very few red and white pine residual. Approximately 50% subcanopy remains, now represented as canopy. Seed tree harvest in 1996, 20-50 BA red pine (super-canopy) left, then direct seeded in 1997 at 1/2 lb red pine seed per acre. Stand originally planted to red pine in the early 1930s. Trace amounts of balsam fir (pole, log). Beech becomes increasingly abundant in the east; beech scale present. Larger overall diameter as you progress southbound through the stand. Some pockets (<1/4 ac each) of snow/ice damage from previous year(s) where trees are bowed and haven't sprung back. Very heavy browsing on basswood (*noted in understory). Pole-sized timber represented in the inventory were left uncut (likely due to unmerchantability) during the seed tree harvest. Payment Unit 4 of Cow Pie Pine, 52-008-96.																																																		
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64	4117 - Mixed N. Hardwood - Pine	Sapling Well	7.2	17	1-50	N/A	Rare serviceberry and pin cherry in the subcanopy. Black walnut along south edge: couple mature individuals with occasional saplings. Multistemmed sugar maple in canopy. Fair amount of red pine poles graduated into midcanopy with pole/sap hardwood. Formerly a red pine plantation, cut in 2006, leaving 20-40BA red pine supercanopy. Payment Unit 3 of Cow Pie Pine, 52-008-96.																																																		
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
65	4110 - Sugar Maple Association	Sawtimber Well	4.8	95	111-140	N/A	Heavy sugar maple poletimber amongst log/Xlog basswood with scattered Xlog sugar maple. One yellow birch in the southwest. One leatherwood in the northeast. Decent quality, high stocking of advanced sugar maple sapling/pole class. Multitemmed basswood.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Basswood		53	Log/XLog/Pole	16	95	Ironwood		
Ironwood		2	Log/Pole	10		Sugar Maple		
Red Pine		5	Log/XLog	16				
White Pine		2	Log/Pole	14				
Sugar Maple		30	Pole/Log/XLog	8				
American Elm		2	Log/Pole	10				
Black Cherry		3	Log	12				
Quaking Aspen		3	Log/XLog	16				
66	4110 - Sugar Maple Association	Sawtimber Well	4.1	97	111-140	N/A	Center of stand is a small hilltop. North-facing slope to the north half of the stand. South half is variable, generally south-facing. Witness tree in southeast. Dirtbike trail runs through stand. Observed one yellow birch sapling (>20') along south edge. Hemlocks are mostly present along south edge. Rare basswood in subcanopy. Beech sun canopy density declined from 2013 to 2023 - mortality or differing evaluation of density?	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Pine		2	Log	16		Ironwood		
Basswood		40	Log/Pole	12	83	Balsam Fir		
Quaking Aspen		1	Log	16		Hemlock		
Sugar Maple		57	Log/Pole	10	97	Sugar Maple		
67	42110 - Planted Red Pine	Poletimber Well	17.8	23	141-170	N/A	"Black cherry 1%" accounts for other miscellaneous hardwood in canopy: trace ironwood, pin cherry, paper birch, red maple, basswood in canopy. Rare sugar maple, hawthorn in subcanopy. Presence of rubus has diminished to unreportable levels (from low in 2013). Red pine crowns are at 30%; 6-8' between rows. Trees are 40-45' tall with 35' of merchantable boles. Observed one hemlock sapling, heavily browsed.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Jack Pine		1	Pole/Sapling	6		Black Cherry		
Quaking Aspen		2	Pole/Sapling	6		White Pine		
Black Cherry		1	Sapling/Pole	3				
Red Pine		96	Pole/Sapling	7	23			
68	4311 - Pine, Aspen Mix	Sapling Well	33.7	23	1-50	N/A	Trace pin cherry, elm, white ash, basswood, bigtooth aspen in canopy. Rare balsam poplar (in south-central landing), white pine, basswood, jack pine in subcanopy. QA and RP are out-competing most hardwood. Planted red pine is just entering pole class. Aspen is pretty much there (pole-sized), but still a lot of sapling present. Next entry might want to break off the aspen/hardwood dominated areas from the red pine; the boundaries are becoming more defined. Some decent slope to east edge of stand and a little bit along the northeast edge, otherwise plant to gently sloping. Trenched and planted in 2000 at 1000tpa - C52-147	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Sugar Maple		3	Sapling/Pole	2		Honeysuckle (spp.)		
Paper Birch		1	Sapling/Pole	4		Blackberry/Raspberry		
Ironwood		3	Sapling	2		Sugar Maple		
Serviceberry (Juneberry)		10	Sapling	2		Beech		
Quaking Aspen		30	Pole/Sapling	6				
Red Maple		1	Sapling	3				
Red Pine		35	Pole/Sapling	5	23			
Black Cherry		7	Pole/Sapling	5				
Jack Pine		10	Pole/Sapling	5	23			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
69	4110 - Sugar Maple Association	Sawtimber Medium	29.5	93	1-50	N/A	<p>Mike Walters Hardwood Research Project. ~50 sq ft of BA was left post harvest as a seed source. Originally part of stand 57. Sprayed 7/24/2020, scarification completed 10/7/2020.</p> <p>Dense rubus response; not much desirable hardwood sapling regeneration; some advanced sugar maple and basswood of mediocre quality. Basswood saplings are mostly stump-sprout origin. No reportable slash on site. One hemlock in northeast.</p> <p>Beech in canopy is mostly dead; <1% alive in canopy. Rare hemlock (one pole) and elm in subcanopy.</p> <p>Red berried elder listed as present from 2013 inventory, but that data was copied from the parent stand. No RBE observed in 2023 - either lost through harvesting and/or herbicide, or was not present in the first place in this portion of the stand.</p>
70	4117 - Mixed N. Hardwood - Pine	Sawtimber Well	29.3	85	111-140	N/A	<p>Stand was broken off from stand 35 to better represent consistency of red pine, averaging close to 30BA here (and lacking in stand 35), although has a wide range of densities.</p> <p>East half of stand is pretty hilly. Old railroad grade through center of stand (SW-NEish). Trace white pine (in west), bigtooth aspen, and beech in canopy. Rare white pine (in west), hazelnut (along trail), gooseberry, and striped maple in subcanopy.</p>
71	3103 - Rubus-Fern	Nonstocked	0.5	0	Unspecified	No	<p>Phenomenal sugar maple sapling regeneration surrounding this non-forested opening. Rare white ash sap in stand. Wild bergamot present.</p>
75	4319 - Mixed Upland Forest	Sawtimber Well	5.1	63	141-170	N/A	<p>Portion of parent stand 10 that was not thinned due to lower stocking of red pine and high prevalence of cherry and subcanopy sugar maple.</p> <p>Trace yellow birch, paper birch, and ironwood in canopy. Rare alternate leaved dogwood in subcanopy. Amazing sugar maple subcanopy slightly less than full in spots, but overall full and pretty nice. Increase in serviceberry subcanopy in east. Aspen clone close to road, absent in back.</p> <p>A pretty moundy stand...</p> <p>Little raspberry along road.</p>