



# Compartment Review Presentation

**Gaylord Forest Management Unit**

**Compartment 52042**

**Entry Year 2020**

**Acreage: 3,065**

**County Charlevoix**

**Management Area: Chandler Hills**

**Revision Date:** 2018-05-09

**Stand Examiner:** Matthew Foster

**Legal Description:**

T33N R04W Sections 22, 23, 24, 25, 27, 34, and 36.

**Identified Planning Goals:**

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

**Soil and topography:**

Leelanau-Emmet and Nester-Emmet Association, also Mancelona Loamy sand and Kalkaska sand.

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

This compartment is split into two large blocks of State ownership. The west portion contains approximately 2000 acres and the east portion contains about 1000 acres. Private land between the blocks is open farmland and wood lots.

**Unique Natural Features:**

The west portion of this compartment is on the upper most slopes of Chandler Hill which has an elevation change of approximately 500 feet in a mile. Very steep slopes of 70% are not unusual. The south eastern corner of the eastern block contains a small portion of Standard (Booth) Lake which is popular for dispersed camping.

**Archeological, Historical, and Cultural Features:**

This compartment has one archeological site, but it is located on private land and should not be impacted by any treatments.

**Special Management Designations or Considerations:**

**Watershed and Fisheries Considerations:**

**Wildlife Habitat Considerations:**

This area is primarily northern hardwoods, oak and beech will be managed to provide mast.

**Mineral Resource and Development Concerns and/or Restrictions**

An active sand/gravel pit is located in Section 33, just west of the compartment, and potential is very good within the compartment for additional sand & gravel resources. Portions of the compartment are currently leased and included within Antrim unitized areas. There are currently no producing wells on state land within the compartment, but there is good potential for additional Antrim development on the state leases, if natural gas prices rise.

**Vehicle Access:**

Access is good throughout the compartment.

**Survey Needs:**

**Recreational Facilities and Opportunities:**

The compartment contains a snowmobile trail, an MCCCT trail and the North Country Hiking Trail.

**Fire Protection:**

**Additional Compartment Information:**

**The following reports from the Inventory are attached:**

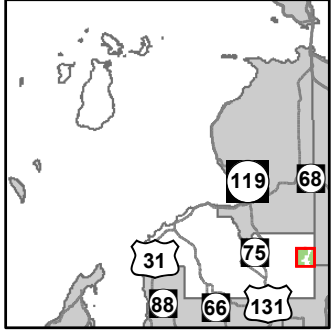
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

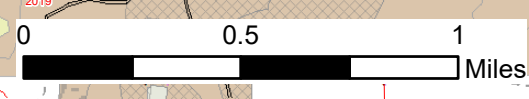
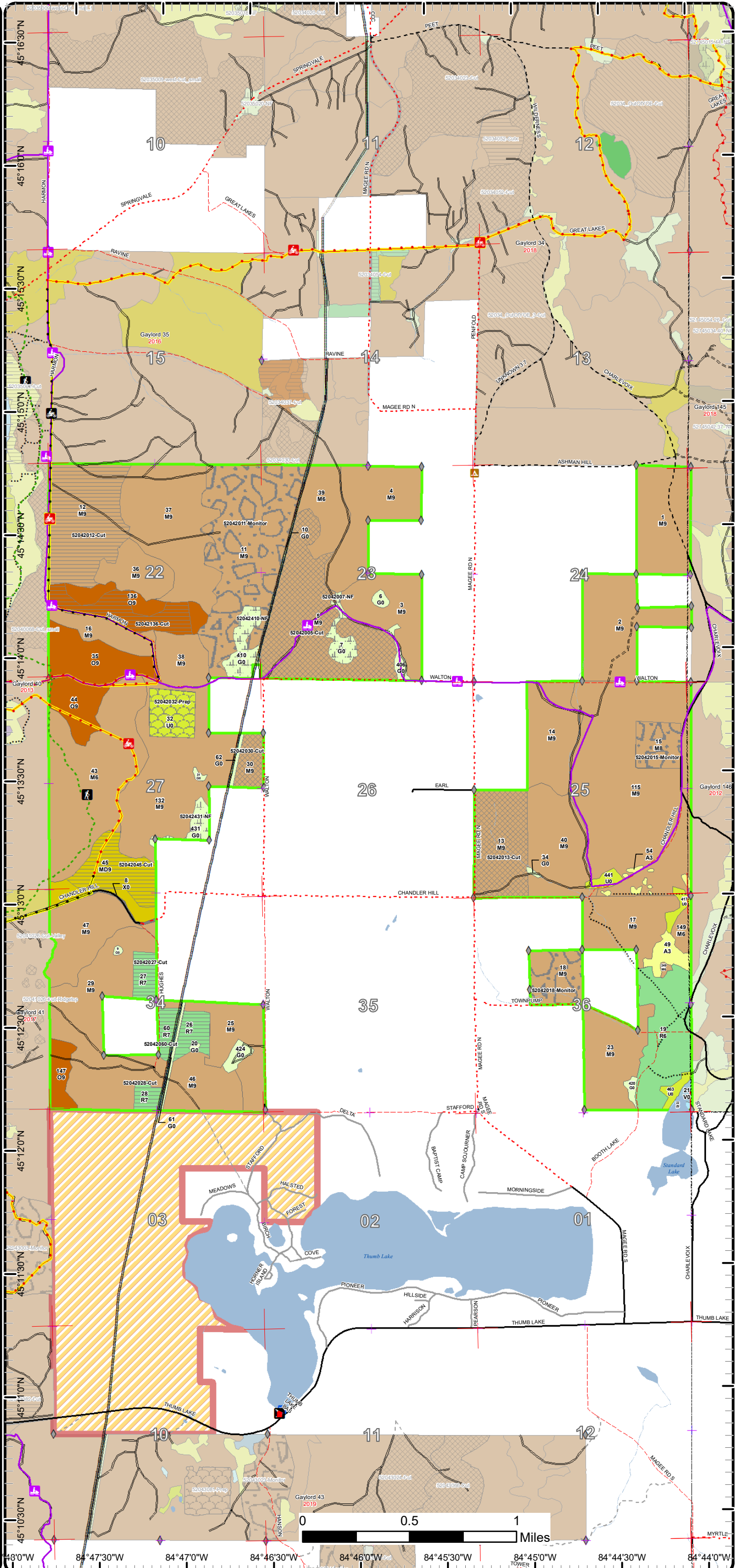
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatments Map

Compartment: 42  
 T33N, R04W, Sec. 22-25, 27, 33, 34, 36  
 County: Charlevoix  
 Unit: Gaylord  
 Mgmt Area: Chandler Hills  
 YOE: 2020  
 Acres: 3,065 GIS Calculated  
 Examiner: Matthew Foster  
 Map Revised: 10/1/2018  
 Map Phase: Post-Review



- Miris Corners
- Remonumented Section Corners
- Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
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- ORV License & Trail Permit
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- Intermittent Stream
- Lake/Pond
- Lakes and Rivers All
- Campground
- Pipeline
- Compartment Boundary
- Other Treatment - See Comments
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Regeneration Survey
- Site Prep
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- Lakes

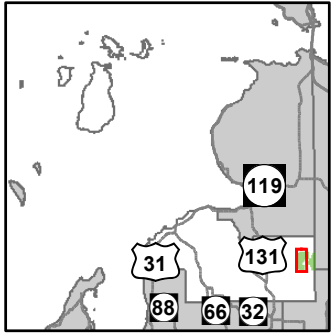


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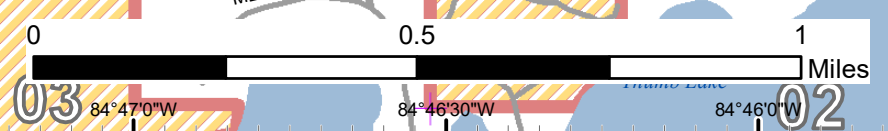
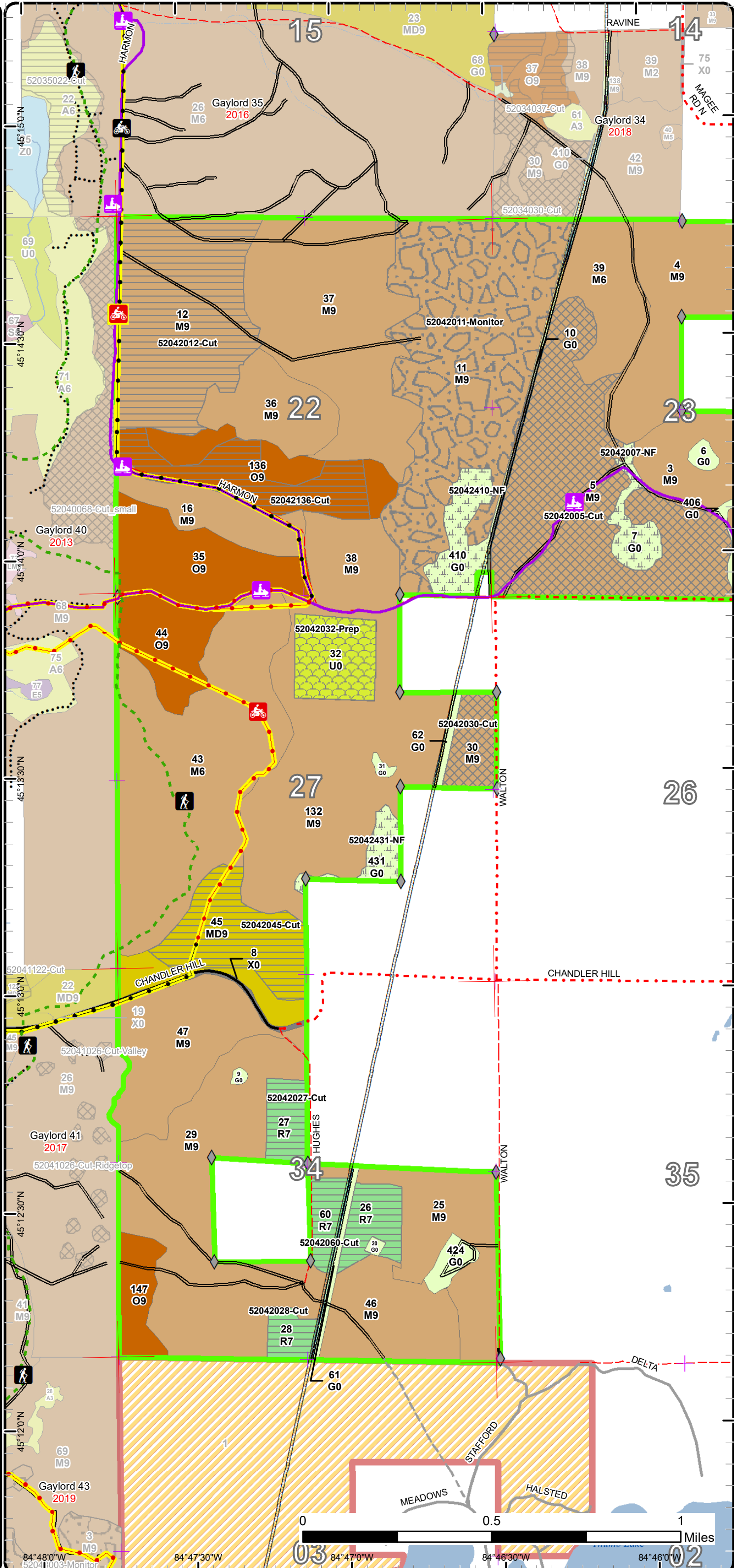


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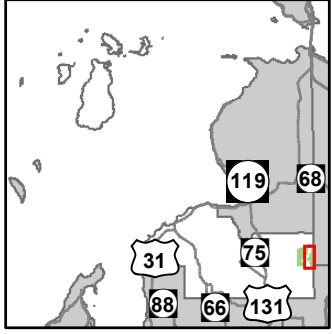


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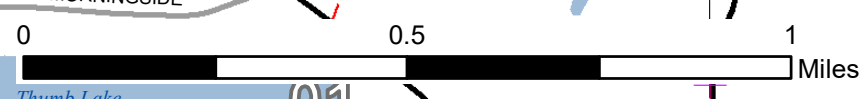
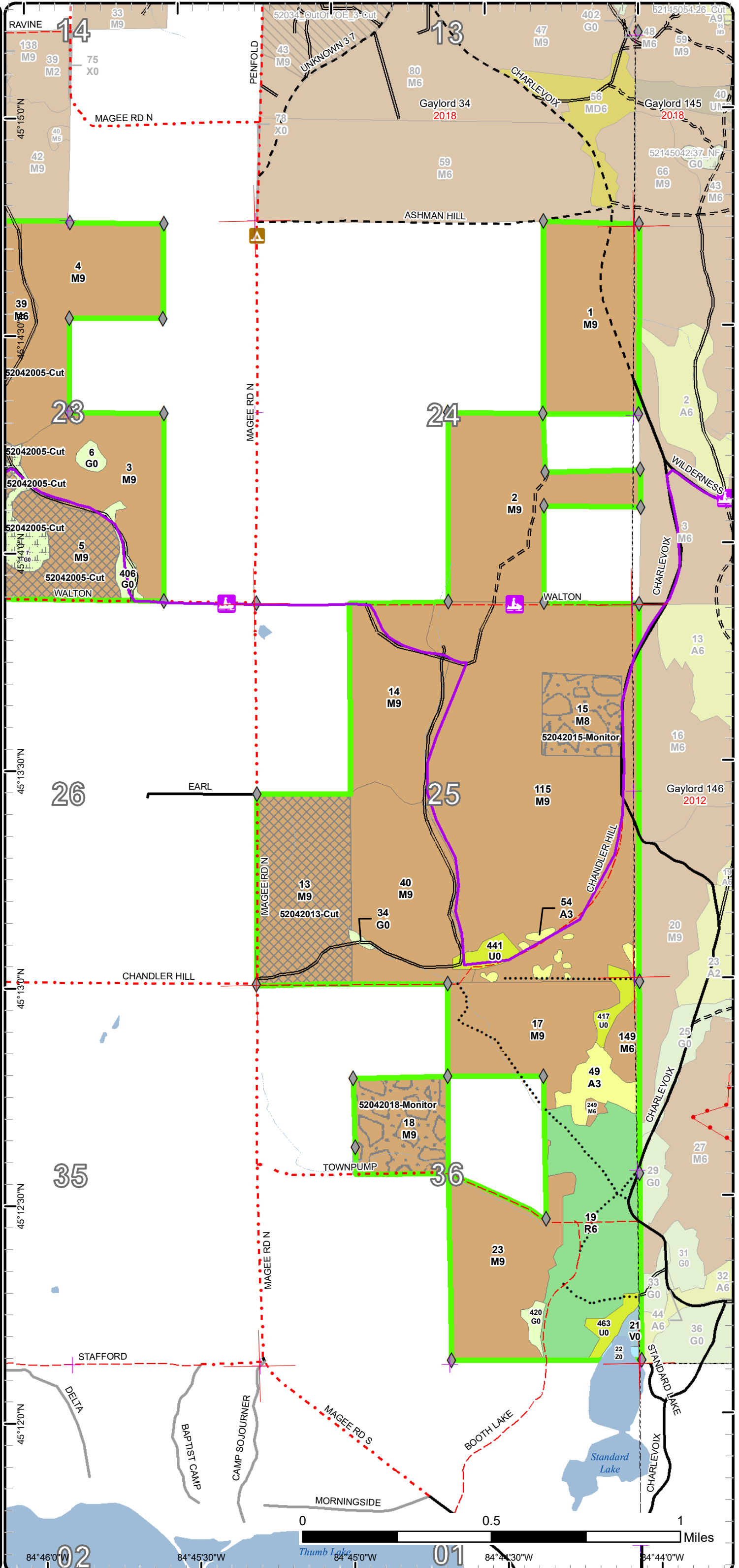


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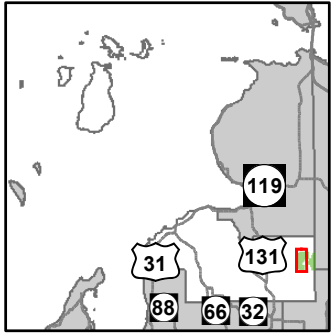


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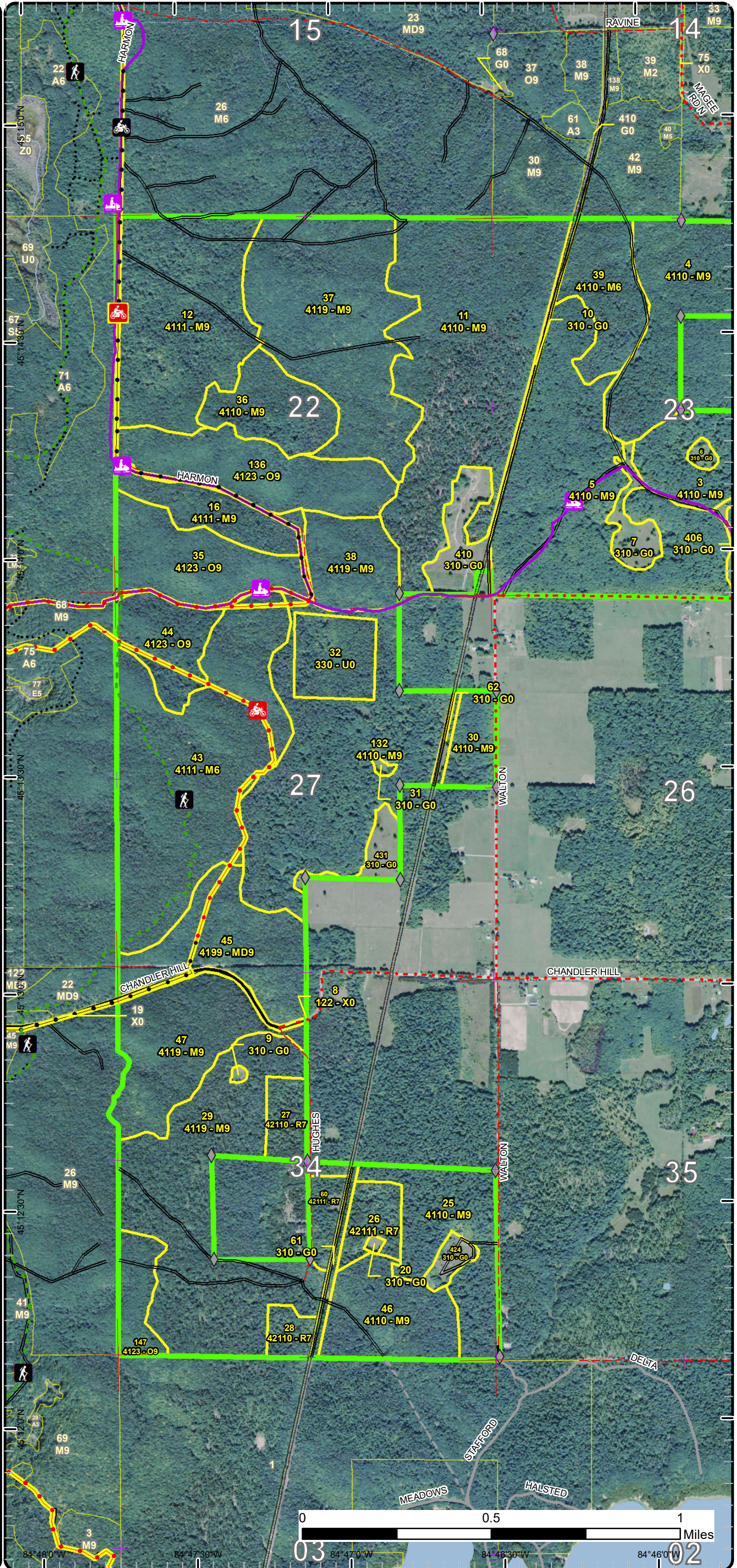


# Stand Boundary Map

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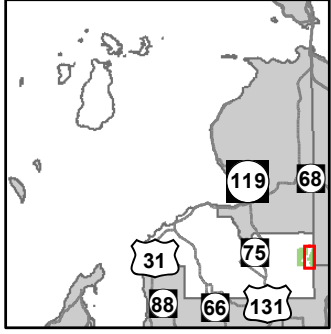
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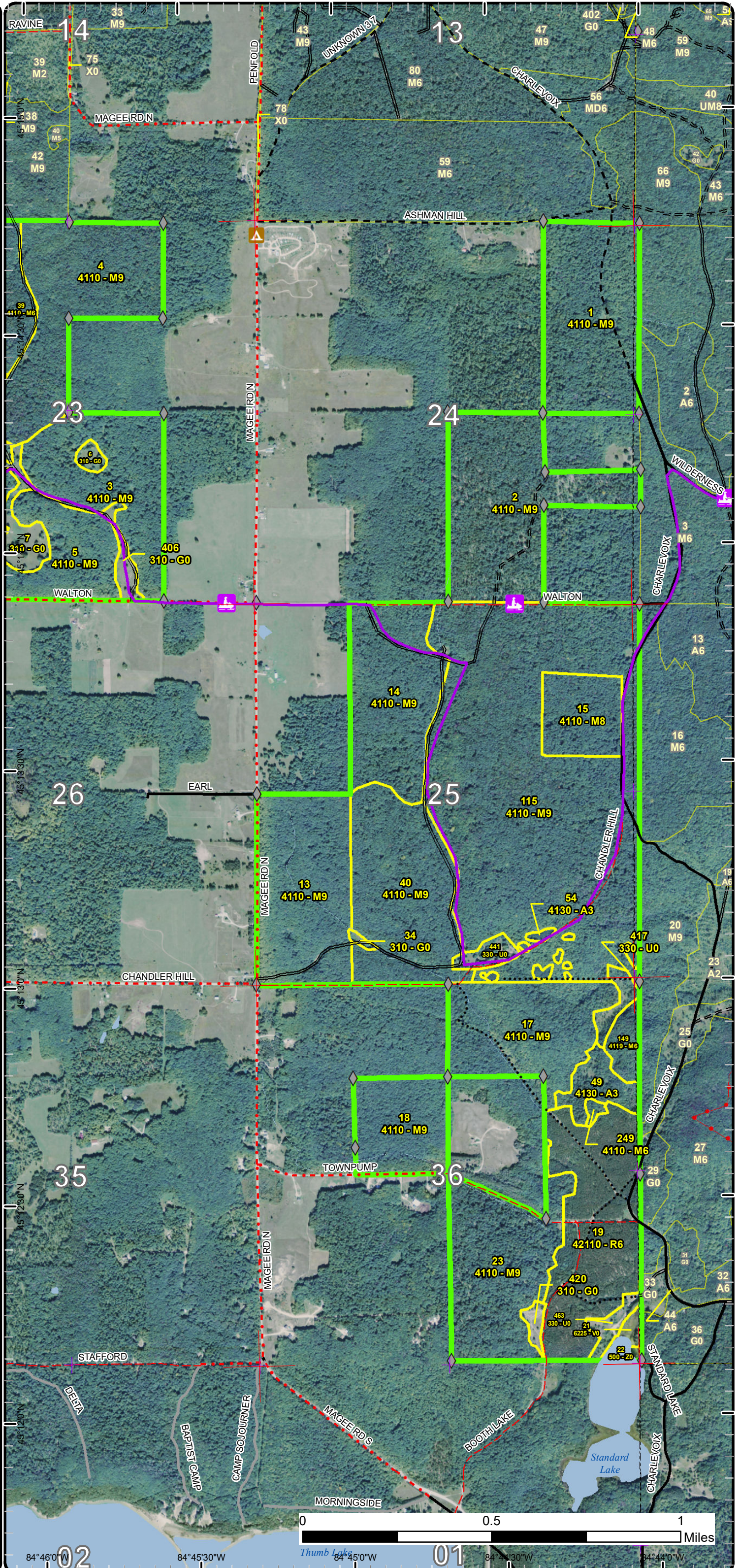


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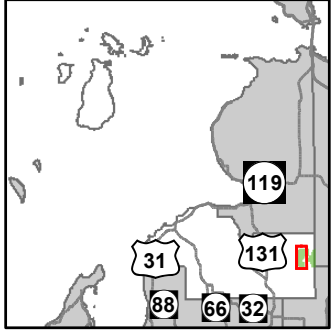
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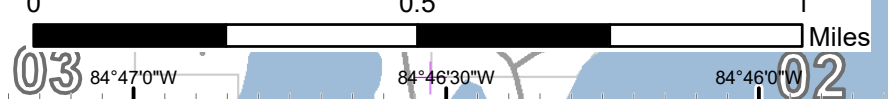
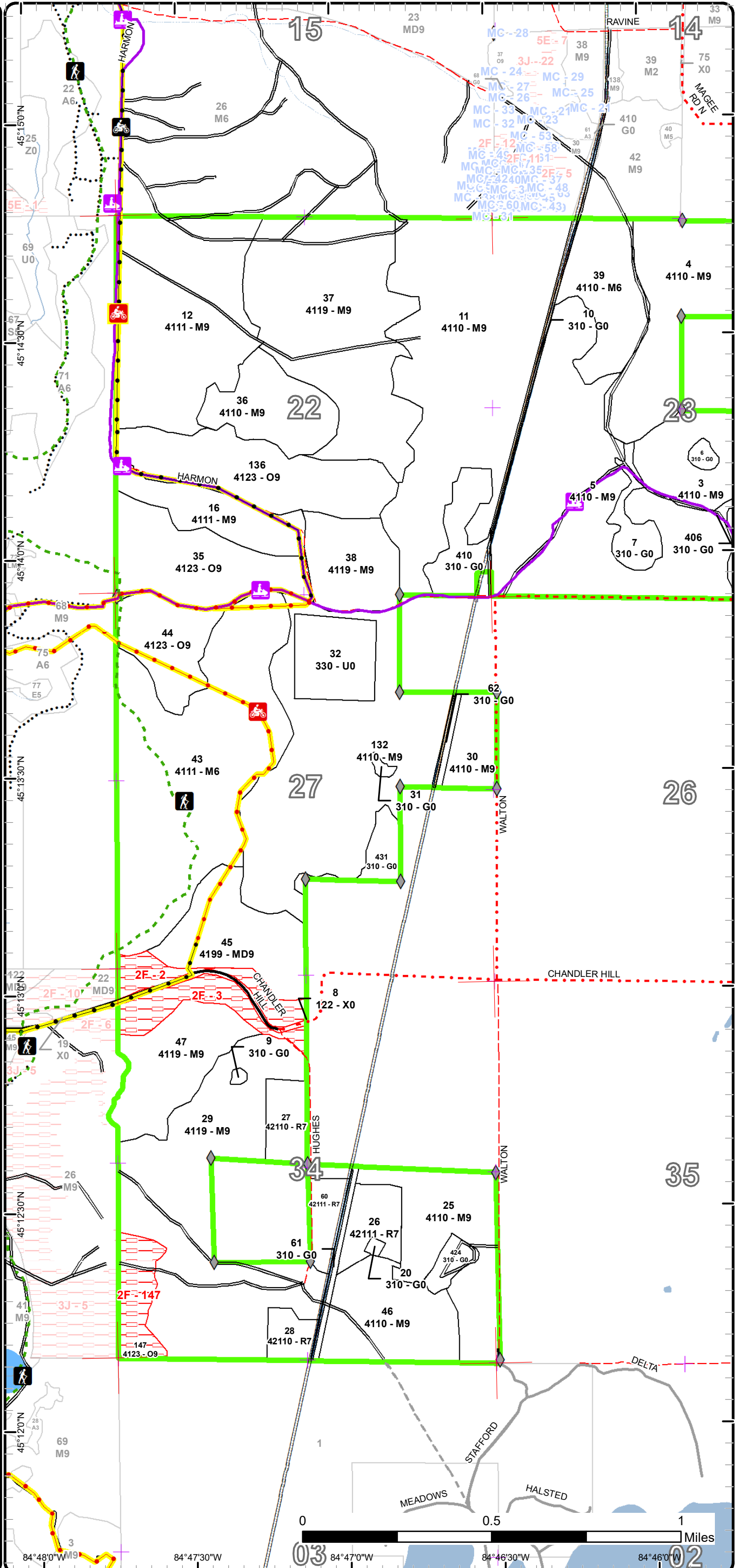


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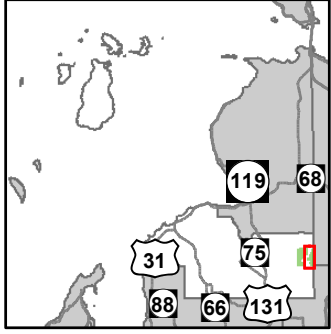
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- Pipeline
- Compartment Boundary
- Unavailable
- 2F: Too steep
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



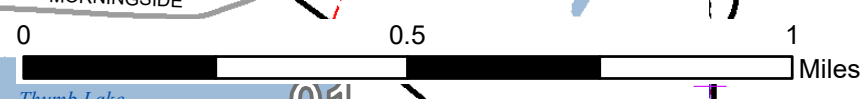
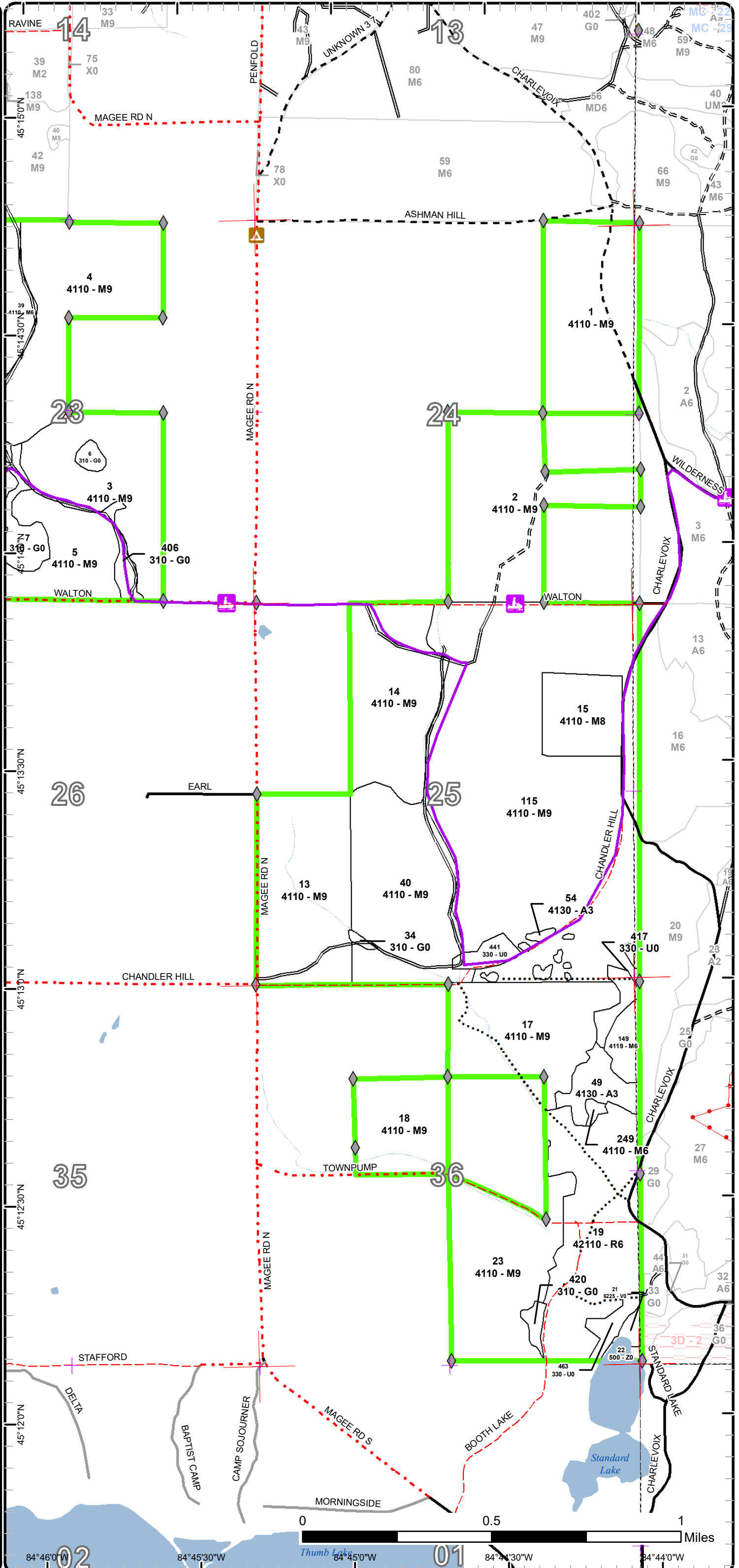


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- Cold Water Lakes



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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	15	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Herbaceous Openland	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87
Low-Density Trees	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	67	0	0	0	0	0	0	0	67
Northern Hardwood	0	0	0	0	0	0	0	0	54	1911	96	0	0	0	0	0	0	447	2508
Oak	0	0	0	0	0	0	0	0	0	89	94	0	0	0	0	0	0	0	183
Red Pine	0	0	0	0	0	0	86	0	0	55	0	0	0	0	0	0	0	0	141
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Water	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<b>Total</b>	<b>147</b>	<b>15</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>86</b>	<b>0</b>	<b>54</b>	<b>2055</b>	<b>257</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>447</b>	<b>3064</b>





## Report 2 – Treatment Summary

Gaylord Mgt. Unit

Year of Entry: 2020

Acres of Harvest

Compartment 42

Total Compartment Acres: 3,065

Commercial Harvest - 527  
 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
Mixed Upland Deciduous	49	0	0	0	0	0	0	0	0	49
Northern Hardwood	118	259	0	0	0	0	0	0	0	377
Oak	45	0	0	0	0	0	0	0	0	45
Red Pine	55	0	0	0	0	0	0	0	0	55
<b>Total</b>	<b>267</b>	<b>259</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>527</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	527	30	0	0	0	0	257	0	47	861
Next Step	0	55	45	30	0	30	527	0	0	686
<b>Total</b>	<b>527</b>	<b>85</b>	<b>45</b>	<b>30</b>	<b>0</b>	<b>30</b>	<b>784</b>	<b>0</b>	<b>47</b>	<b>1547</b>





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	Approval Status
5	52042005-Cut	159.4	4110 - Sugar Maple Association	Sawtimber Well	85	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Even-Aged	Draft Field Boundary

**Habitat Cut: No****Site Condition:**

Prescription Thin stand down to 80 BA, create regeneration gaps 100 feet in diameter. Create at least one regeneration gap per 5 acres. Add specs to protect snowmobile trail.

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

Acceptable Regen: Mix of northern hardwoods representative of the stand canopy that meets stocking requirements.

Other Comment: Any stumps within 2 feet of the edge of the trail must be cut flush to the ground or cut high and have the stump removed.

Proposed Start Date: 10/1 /2019

7	52042007-NF	13.3	310 - Herbaceous Openland	Nonstocked		Unspecified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Next Step  
Treatments:

Acceptable Regen:

Other Comment: Protect snowmobile trail which runs through stand.

Proposed Start Date: 10/1 /2019

11	52042011-Monitor	187.6	4110 - Sugar Maple Association	Sawtimber Well	85	51-80	Monitoring	Natural Regen (Intermediate)	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Check regeneration.

Next Step  
Treatments:

Acceptable Regen: A mix of northern hardwood species that resembles the canopy of the stand that meets minimum stocking requirements.

Other Comment: Percent to Treat = 100%

Proposed Start Date: 10/1 /2020

12	52042012-Cut	117.8	4111 - S.Maple, Hard Mast Association	Sawtimber Well	81	51-80	Harvest	Clearcut with Retention	4119 - Mixed Northern Hardwoods	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Final harvest stand, leave all white pine and hemlock. Leave retention in islands focusing retention around large, mast producing oak and pockets of hemlock. Add oak wilt restrictions and specs to protect the snowmobile and MCCCT trails.

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

Acceptable Regen: Mix of northern hardwood species with a component of oak and aspen.

Other Comment:

Proposed Start Date: 10/1 /2019





Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
13	52042013-Cut	80.6	4110 - Sugar Maple Association	Sawtimber Well	85	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Even-Aged	Draft Field Boundary

**Habitat Cut: No****Site Condition:**

Prescription Thin stand down to 80 BA, create regeneration gaps 100 feet in diameter. Create at least one regeneration gap per 5 acres.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Mix of northern hardwoods representative of the stand canopy that meets stocking requirements.

Regen:

Other North end will need surveyed.

Comment:

Proposed Start Date: 10/1 /2019

15	52042015-Monitor	28.8	4110 - Sugar Maple Association	Sawtimber Medium	81	81-110	Monitoring	Natural Regen (Intermediate)	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Natural regen survey per MWR project.

Specs:

Next Step

Treatments:

Acceptable A diverse mix of northern hardwood species.

Regen:

Other Percent to Treat = 100%

Comment:

Proposed Start Date: 6 /1 /2018

18	52042018-Monitor	40.7	4110 - Sugar Maple Association	Sawtimber Well	85	81-110	Monitoring	Natural Regen (Re-Inventory)	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Check regeneration.

Specs:

Next Step

Treatments:

Acceptable Any mix of deciduous species that resembles the parent stand.

Regen:

Other Percent to Treat = 100%

Comment:

Proposed Start Date: 10/1 /2019

26	52042026-Cut	17.5	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Poor	84	1-50	Harvest	Clearcut with Retention	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Final harvest 2" and up, leave minimum retention.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory); SitePrep, Roller Chopping

Treatments:

Acceptable Mix of northern hardwoods.

Regen:

Other Try to set back stand as much as possible, if needed roller chopping is a backup plan.

Comment:

Proposed Start Date: 10/1 /2019





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	Approval Status
27	52042027-Cut	15.1	42110 - Planted Red Pine	Sawtimber Poor	84	51-80	Harvest	Clearcut with Retention	411 - Northern Hardwood	Even-Aged	Draft Field Boundary

**Habitat Cut: No****Site Condition:**Prescription Final harvest 2" and up, leave minimum retention.Specs:Next Step Monitoring, Natural Regen (Re-Inventory); SitePrep, Roller ChoppingTreatments:Acceptable Mix of northern hardwoods.Regen:Other Try to set back stand as much as possible, if needed roller chopping is a backup plan.Comment:Proposed Start Date: 10/1 /2019

28	52042028-Cut	9.9	42110 - Planted Red Pine	Sawtimber Poor	84	51-80	Harvest	Clearcut	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**Prescription Final harvest 2" and up, leave no retention due to small stand size.Specs:Next Step Monitoring, Natural Regen (Re-Inventory); SitePrep, Roller ChoppingTreatments:Acceptable Mix of northern hardwoods.Regen:OtherComment:Proposed Start Date: 10/1 /2019

30	52042030-Cut	19.3	4110 - Sugar Maple Association	Sawtimber Well	85	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**Prescription Thin stand down to 80BA, create regeneration gaps 100 feet in diameter. Create at least one regeneration gap per 5 acres.Specs:Next Step Monitoring, Natural Regen (Re-Inventory)Treatments:Acceptable Mix of northern hardwood representative of the stand canopy and meets stocking requirements.Regen:OtherComment:Proposed Start Date: 10/1 /2019

32	52042032-Prep	29.8	330 - Low-Density Trees	Nonstocked	0	Unspecified	SitePrep	Scarification	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**Prescription Follow directions outlined in Mike Walters Research Documentation that includes scarification, seeding, and use of herbicides.Specs:Next Step Pesticide, Skidder/Mechanical; ; Seeding, Hand SeedTreatments:Acceptable A diverse mix of northern hardwood species.Regen:Other Percent to Treat = 100%Comment:Proposed Start Date: 10/1 /2018





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	Approval Status
45	52042045-Cut	49.4	4199 - Other Mixed Upland Deciduous	Sawtimber Well	91	81-110	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	Draft Field Boundary

**Habitat Cut: No****Site Condition:**

Prescription Final harvest 2" and up, leave retention in islands. Focus retention around healthy, large mast producing oak and any pockets of hemlock. Add  
Specs: specs to protect steep slopes and ORV trail. Add oak wilt restrictions.

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

Acceptable Any mix of deciduous northern hardwood species that results in a moderate stocked stand with an oak component.  
Regen:

Other ORV trail is in a valley where a road will need to be built for sale access, work with the trail specialist on this issue. Steep slopes in this stand  
Comment: leading down to Chandler Hill road and the adjacent power line were estimated and excluded from the treatment boundary. Significant reduction in acres could occur while setting up sale due to topography.

Proposed Start Date: 10/1 /2019

60	52042060-Cut	12.4	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Poor	81	1-50	Harvest	Clearcut with Retention	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Final harvest 2" and up, leave minimum retention.  
Specs:

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

Acceptable Mix of northern hardwoods  
Regen:

Other Try to set back stand as much as possible, if needed roller chopping is a backup plan.  
Comment:

Proposed Start Date: 10/1 /2019

136	52042136-Cut	45.2	4123 - Red Oak	Sawtimber Well	87	111-140	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Final harvest approximately 2/3 of the treatment area, 2" and up leaving all hemlock. Leave approximately 1/3 of the stand for mast production in  
Specs: islands or strips around hemlock and/or large crowned, healthy mast producing oak. Designate a portion of the 1/3 being left as long term retention for the stand. Add specs to protect steep slopes, snowmobile and MCCCT trails, and oak wilt restrictions.

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

Acceptable Oak associated with other mixed hardwoods such as sugar maple, basswood, red maple, white ash, and beech. Stand should not be acceptable  
Regen: if it is dominated by beech and ironwood.

Other Monitor and follow up with planting oak in the harvested areas.  
Comment: Treatment applies to the whole stand, it was spatially edited to properly reflect the 2/3 of the stand acreage being harvest for POW purposes. The locations of the 1/3 of the stand being left will be determined by the Forester on the ground during sale prep.

Proposed Start Date: 10/1 /2019

410	52042410-NF	22.5	310 - Herbaceous Openland	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.  
Specs:

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date: 10/1 /2019





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	Approval Status
431	52042431-NF	11.6	310 - Herbaceous Openland	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

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**Total Treatment  
Acreage Proposed: 860.9**



## Report 4 – Site Conditions

Gaylord Mgt. Unit

Compartment: 42

Matthew Foster : Examiner

Year of Entry: 2020

### Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	2F	3D
		With Condition	Not Available			
19	19	0	0	Aspen		
3	0	0	3	Bog		3
87	87	0	0	Herbaceous Openland		
48	48	0	0	Low-Density Trees		
67	49	0	17	Mixed Upland Deciduous	17	
2509	2488	0	21	Northern Hardwood	21	
183	163	0	20	Oak	20	
141	141	0	0	Red Pine		
5	5	0	0	Urban		
3	0	0	3	Water		3
3,065	3,000		65	Total Forested Acres	59	6
	98%		2%	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
2	Unavailable	2F: Too steep	17	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
3	Unavailable	2F: Too steep	21	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
147	Unavailable	2F: Too steep	21	3D: Recreational / Scenic values	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments





**Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS**

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

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

Conservation Area	Type	Description
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4110 - Sugar Maple Association	Sawtimber Well	82.1	85	81-110	Thinned in 2004, average stand BA is 100 from 10 plots. Ironwood and beech dominated understory with a few basswood and sugar maple stump sprouts.
2	4110 - Sugar Maple Association	Sawtimber Well	96.4	90	81-110	Stand thinned in summer/fall 2013, average BA is 85. BA is higher further north you go in the stand, a lot of berry brush coming up in the understory.
3	4110 - Sugar Maple Association	Sawtimber Well	65.9	81	81-110	Thinned in 1990, again in 2004. Average BA of 106 from 11 plots. Still room in the canopy to grow.
4	4110 - Sugar Maple Association	Sawtimber Well	89.4	81	51-80	Thinned in 2004, nicer hardwood on top of the hill. Good amount of ash dead and falling over. Looks like they couldn't harvest on some of the hills, more pole sized in these areas.
5	4110 - Sugar Maple Association	Sawtimber Well	159.4	85	111-140	Thinned and completed in 2003, average BA of 111 from 17 plots. Nice stand good quality, found a couple gaps from previous harvest with elderberry and raspberry. Understory is variable but mostly thick with ash and beech, east end is more open. Could go either way with stand as far as treating now or next entry.
11	4110 - Sugar Maple Association	Sawtimber Well	186.7	85	51-80	Select harvest finished 2016, average BA is 75. A few areas especially at the north end that are more open due to salvaging the ash during the harvest. West half is hilly, understory is mostly dominated by berry brush.
12	4111 - S.Maple, Hard Mast Association	Sawtimber Well	117.8	81	51-80	Stand harvested in 2004. Not the best quality, ash is dead and falling over. Understory mostly dominated by beech and ironwood. Average BA is 76 from 10 plots. I think it would be best to restart this stand.
13	4110 - Sugar Maple Association	Sawtimber Well	80.6	85	111-140	Almost a pure sugar maple stand, was thinned in 1991. Average BA is 118, understory is variable with areas of nothing and areas with pockets of beech, ironwood, and a few with sugar maple.
14	4110 - Sugar Maple Association	Sawtimber Well	70.3	81	81-110	Selection harvested in 2005 with adjacent stands 115 and 40. Stand still has canopy gaps to fill in, especially at the south end. Average BA is 100 from 17 plots.
15	4110 - Sugar Maple Association	Sawtimber Medium	29.0	81	81-110	This stand is part of the MWR research project and will be updated when sale is complete. Harvested December 2017. 30 percent of canopy removed in gaps.  Stand 15, 40, and 14 selection harvested in 2004/05. OPIC - FMD: POOR TO FAIR QUALITY HARDWOOD. Section 25.
16	4111 - S.Maple, Hard Mast Association	Sawtimber Well	32.8	85	81-110	BA averages to 85, variable due to dead ash. Ash is past salvaging, steep north facing slopes.
17	4110 - Sugar Maple Association	Sawtimber Well	66.4	81	81-110	Thinned in 2015, average BA is 87 from 12 plots. Most of the stand is a borderline pole/log, west of the pipeline has a little higher average diameter. East of the pipeline is a steep hill, looks like most of it was excluded from the thinning, understory is variable throughout the stand.





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4110 - Sugar Maple Association	Sawtimber Well	40.2	85	81-110	Thinned in 1992, single tree selection in 2015. Average BA 81 from 9 plots. Understory is mostly ironwood with gaps filled with blackberry/raspberry. Did find a couple pockets of ash regeneration throughout the stand. BA was left a little higher closer to Townpump Road. Southeast corner of the stand has a small pond/wet area.
19	42110 - Planted Red Pine	Poletimber Well	85.7	55	141-170	Third row thinned in 2002, marked thinning in 2012. Average BA of 141 from 13 plots. Still some room to grow, understory has dense hardwood regeneration in most spots. Stand has some hills, looks like they have had to cut across rows in past thinning treatments.
23	4110 - Sugar Maple Association	Sawtimber Well	75.3	81	51-80	Thinned in 1992, selection harvest in 2013. Average BA is 80 from 9 plots. Understory is dominated by ironwood and beech, stand has steep hills and valleys. Looks like some of the steeper hills were left during the harvest, a few large diameter red oak in the stand.
25	4110 - Sugar Maple Association	Sawtimber Well	63.9	83	81-110	Harvested in 2014, BA is now 90. Understory is mostly ironwood and beech with pockets of ash regeneration. Good quality sugar maple, some 18-20" DBH.
26	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Poor	17.5	84	1-50	Harvested in 1983, 1993, and 2003. Past management has left multiple ages and size classes. Look to remove red pine and complete stand conversion to hardwoods.
27	42110 - Planted Red Pine	Sawtimber Poor	15.1	84	51-80	Harvested in 1983 and 2003, past management has left multiple ages and size classes. Groups of red pine left were for visual management. Good amount of sugar maple in the understory. Should look to remove red pine and complete conversion to hardwoods.
28	42110 - Planted Red Pine	Sawtimber Poor	9.9	84	51-80	Past management has left multiple ages and size classes, last cut was in 2003. They left groups of red pine for visual management, look to remove red pine and complete conversion to hardwoods.
29	4119 - Mixed Northern Hardwoods	Sawtimber Well	150.8	81	51-80	Harvested and closed 11/16/2009, ash dead and falling over. BA is low (average 70) and a lot of room in the canopy for trees to grow. A lot of rubus in the understory, good amount of oak in the overstory.
30	4110 - Sugar Maple Association	Sawtimber Well	19.3	85	111-140	Thinned in 1999, average BA of 115 from 4 plots.
35	4123 - Red Oak	Sawtimber Well	59.0	95	111-140	Steep slopes, good quality oak. Lower quality and smaller diameter at the top of the ridge. Not much in the understory, a couple areas where oak are starting to dye out from competition, look to do some management. Average BA of 117 from 13 plots.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	4110 - Sugar Maple Association	Sawtimber Well	39.4	85	81-110	This was the portion of the sale that was salvaged. Steep hills, a couple areas they couldn't get to. Mostly elderberry and beech coming back so far. Nice component of hemlock. Old comment: Unit 1A only unit salvaged out of original treatment area in north part of stand 36. (consult map in TCR). Salvage completed June 2016. Unit 1B walked away from due to quality of timber. Damages paid by Manthei for failure to complete contract.
37	4119 - Mixed Northern Hardwoods	Sawtimber Well	134.1	87	81-110	Ash is dying and falling out of the stand, average BA of 102 from 16 plots. Pockets of hemlock being used by deer for cover, understory is mostly open but a few pockets of ironwood and beech. North half of stand has steep hills and valleys.
38	4119 - Mixed Northern Hardwoods	Sawtimber Well	36.5	85	81-110	This stand is log sized oak and mostly pole sized hardwoods. Oak composition increases as you walk north.
39	4110 - Sugar Maple Association	Poletimber Well	42.9	75	81-110	A good amount of dead ash, I would estimate around 20-30% of the canopy. Ash is past salvaging and falling over, stand is basically thinning itself naturally. Hilly terrain, south end has been managed with stand 5 but kept with this stand due to amount of dead ash. Average BA is 85.
40	4110 - Sugar Maple Association	Sawtimber Well	84.5	81	81-110	Selection harvested in 2005 with adjacent stands 14 and 115, rolling hills. Understory is dominated by beech and ironwood. Average BA of 104 from 17 plots.
43	4111 - S.Maple, Hard Mast Association	Poletimber Well	173.1	80	81-110	Ash dead and falling over throughout the stand, steep hills especially the north half. A couple of the ridges at the north end are oak dominated. Stand is basically thinning itself out.
44	4123 - Red Oak	Sawtimber Well	34.9	95	81-110	Stand harvested in 2004, mostly oak with some maple and basswood in the overstory. Decent sugar maple regeneration in the understory, heavy deer browse. Average BA of 85 from 6 plots. There is some dead ash falling over, especially in the valleys.
45	4199 - Other Mixed Upland Deciduous	Sawtimber Well	66.8	91	81-110	Steep slopes, some dead ash falling over, oak is dying out in the valley along the MCCCT Trail. Not much in the understory.
46	4110 - Sugar Maple Association	Sawtimber Well	50.6	83	81-110	Harvested in 2002, ash is dead and falling out of the stand. Understory in southwest portion is fairly open, but most of the stand is full of beech and ironwood. Not worth entering this stand right now.
47	4119 - Mixed Northern Hardwoods	Sawtimber Well	69.5	85	81-110	North half of stand is steep hills that lead down to Chandler Hill Road, rest of stand also is steep with oak ridges and mixed hardwood valleys. Ash is dead and falling over.
49	4130 - Aspen	Sapling Well	14.5	3	Immature	Final harvested in 2015, good aspen regeneration coming back mixed with some hardwoods.
54	4130 - Aspen	Sapling Well	4.9	13	Immature	New stand added, small aspen clumps harvested in 2005. Good aspen regeneration coming back with some hardwoods mixed in.





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
<b>60</b>	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Poor	12.4	81	1-50	Harvested in 1983, 1993, and 2003, left groups of red pine for visual management. past management has left multiple ages and size classes. Good amount of sugar maple in the understory, look to remove red pine and complete conversion to hardwood stand.
<b>115</b>	4110 - Sugar Maple Association	Sawtimber Well	294.4	81	81-110	Selection harvested in 2005 with adjacent stands 40 and 14. This stand has areas with ash that are dead and falling over. Average BA of 101 from 37 plots. South half has a slightly smaller average diameter than the north half. Southeast corner has steep slopes that lead down into stand 417.
<b>132</b>	4110 - Sugar Maple Association	Sawtimber Well	146.4	85	81-110	Selection harvested in 2004, average BA of 96 from 15 plots. Still room for tree canopies to grow, ash is dead and blowing over making BA lower.
<b>136</b>	4123 - Red Oak	Sawtimber Well	68.8	87	111-140	Mostly oak, hardwoods mixed in. Smaller oak diameter and lower quality on top of the ridge. Average BA of 128 from 15 plots. Steep hills, mostly south facing slopes.
<b>147</b>	4123 - Red Oak	Sawtimber Well	20.5	85	111-140	Steep slopes, oak dominated ridges, a few ash that are dead and falling over. Not much in the understory.
<b>149</b>	4119 - Mixed Northern Hardwoods	Poletimber Well	9.6	73	81-110	Thinned in 2015, some of north portion of stand was excluded due to steep slopes. A lot of orange marked trees left due to topography, not the best quality, a lot of multi stemmed trees. Average BA is 100 from 3 plots, a few aspen mixed in.
<b>249</b>	4110 - Sugar Maple Association	Poletimber Well	1.6	73	111-140	This stand is a hill overlooking stand 49, it was marked but they could only get to a small area due to topography so most of stand was not cut. Average BA is 130 from 2 plots, decent sugar maple regeneration in the understory.



Stand	Cover Type	Acres	Managed Site	General Comments:
6	310 - Herbaceous Openland	2.9	No	Opening with a few scattered sugar maple.
7	310 - Herbaceous Openland	13.3	No	Opening with a few scattered open grown sugar maple.
8	122 - Road/Parking Lot	4.9	No	Chandler Hill Rd.
9	310 - Herbaceous Openland	1.0	No	Old landing, filled with rubus.
10	310 - Herbaceous Openland	5.5	No	TransCanada high pressure natural gas pipeline.
20	310 - Herbaceous Openland	1.1	No	Small opening with rubus.
21	6225 - Bog	3.3	No	Lowland area leading to Standard Lake.
22	500 - Water	2.6	No	North end of Standard Lake.
31	310 - Herbaceous Openland	1.4	No	Small opening with some rubus.
32	330 - Low-Density Trees	29.9		This is part of the MWR project, harvested in 2017. Single trees left throughout the sale, mostly sugar maple and red oak. A couple hills at the north end they could not harvest.
34	310 - Herbaceous Openland	1.0	No	Opening full of rubus.
61	310 - Herbaceous Openland	6.5	No	TransCanada high pressure natural gas pipeline.
62	310 - Herbaceous Openland	3.9	No	TransCanada high pressure natural gas pipeline.
406	310 - Herbaceous Openland	5.9	No	Opening with scattered hardwood.
410	310 - Herbaceous Openland	22.5	No	Shrubs planted in south end of field in failed oak planting area. Seeding in with hardwood saplings around the edges.
417	330 - Low-Density Trees	6.1	No	Large valley with scattered pole sized cherry and sapling sized aspen pockets, also hawthorn.
420	310 - Herbaceous Openland	3.1	No	Grassy opening, filling in with some hardwood and red pine from adjacent stands.





Stand	Cover Type	Acres	Managed Site	General Comments:
424	310 - Herbaceous Openland	7.1	No	Opening with some scattered hardwood trees.
431	310 - Herbaceous Openland	11.6	No	Grassy opening with a few scattered open grown basswood and pine.
441	330 - Low-Density Trees	6.2	No	Scattered open grown pole and log sized maple with cherry pockets and rubus.
463	330 - Low-Density Trees	6.3	No	Open area with scattered aspen, maple, cherry, and hawthorn. Standard Lake erosion control project completed in 1992, popular camping area.