



Compartment Review Presentation

Gladwin Forest Management Unit

Compartment 73008

Entry Year 2019

Acreage: 2,471

County Clare

Management Area: Upper Muskegon

Revision Date: 2017-06-08

Stand Examiner: Chris Wasserman

Legal Description:

T 20N – R6W Sections 1,2,3,10,11,12,13,14,22,25,26,27,28,34 and T20N-R5W Section 7

Identified Planning Goals:

Continue to manage aspen and jack pine stands to maintain a variety of age classes to enhance deer and grouse habitat. The compartment also has a moderate acreage of mature oak and red pine stands most of these stands have had partial harvests in the past 10 to 20 years.

The state land in this compartment is spread out over 15 sections. The state and private lands are intermixed resulting in miles of private property lines. Overall the compartment is on average ground with site indices between 55 and 70. There are numerous old railroad grades criss-crossing the area, remnants from the logging era.

Soil and topography:

The area varies from well drained sands in the outwash plains to poorly drained mucky soil as you enter the Clam River flood plain. The terrain is mostly flat with a few rolling hills as you move out of the flat plains. The Clam River (a designated trout stream) bisects the compartment; in many locations the river is in a small valley and there are areas of steep banks leading down into the river valley. The major soil types are Menominee – Iosco – Kawkawlin associations adjacent to the Clam and Muskegon River floodplains and Lupton-Markey associations within the floodplain areas.

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

Private holdings are mostly comprised of large forested single holdings with absentee landowners. Many new hunting cabins have been built within the last 10 years and some of the larger blocks of private are now being broken into smaller parcels. Some areas of state owned land within the compartment have limited access due to both ownership patterns and topography. There are several private landowners who access their land via state two track roads none of which have easements.

Unique Natural Features:

This area has a variety of rare species that could be or are present including; Wood Turtle, Blanding's Turtle, Slippershell Mussel, Elktoe Mussel, Eagle, Kirtland Warbler, Secretive locust and Red legged Spittle Bug. Also potential for Round Pigtoe and Migrant Loggerhead Shrike.

Archeological, Historical, and Cultural Features:

One archaeological site is located within this compartment, 20CE47. This site is a scatter of Native American artifacts found in an area that covers portions of stands 168, 73, 75, and 76. As no treatments are proposed in these areas, we have no concerns.

Special Management Designations or Considerations:

None known

Watershed and Fisheries Considerations:

The Clam River and the West Branch of the Clam River flow through Compartment 73008. The Clam River is a Designated Trout Stream with a self-sustaining brook trout population, and is stocked with brown trout. The Clam River is in a shallow valley and has a natural buffer of lowland brush, lowland timber types and marsh directly adjacent to its banks. The Muskegon River, a warm water fishery and a major Michigan watershed has a natural corridor (floodplain) of lowland swamp hardwood along most of the water course and should be considered a sensitive area for timber harvest purposes. Upland/High bank areas along the river should also be considered sensitive.

Wildlife Habitat Considerations:

Wildlife Habitat Considerations: Compartment #8. Upland systems are dominant in this compartment, making it suitable for a number of early forest successional wildlife species. The majority of stands are aspen with lowland cover types present. Species such as Ruffed grouse, white-tailed deer and American woodcock are quite common. Cranberry Lake is

in this compartment. Furbearers including beaver, mink, muskrat, black bear, bobcat, and coyote use the area around the lake as a travel corridor as well as year-round habitat. Other game species likely to be present in this compartment include raccoon, wild turkey and snowshoe hare. Many bird species stand to benefit from the juxtaposition of lowland and upland habitats present in the compartment. These include pileated woodpecker, wood duck, American bittern, mallard, and red-headed woodpecker. The compartment is easily accessible to hunters via Hemlock Ave.

Mineral Resource and Development Concerns and/or Restrictions

There is no known metallic mineral potential in this part of the state. An active sand/gravel pit is located in Section 33. There appears to be mostly sand potential within the compartment and relatively little gravel. Portions of the compartment lie within the Cranberry Lake and Winterfield underground gas storage fields. There is also active production of oil and gas, primarily from Devonian formations. Much of the state land within the compartment is currently under lease for oil and gas development or gas storage or both. The production and storage fields are mature, and the compartment is unlikely to see many new wells drilled. Some of the fields are currently undergoing secondary recovery operations.

Vehicle Access:

Access to most of the compartment is good via the county road system and state two tracks that are in place. There are access limitations in Sections 3 and 22.

Survey Needs:

Stand 53 that is prescribed needs surveyed.

Recreational Facilities and Opportunities:

No designated recreation facilities or trails exist within the compartment. However dispersed recreation is present within the compartment for hunting, fishing, camping, etc. and user created game trails.

Fire Protection:

Development of the private property will increase the wild land /urban interface problem.

Additional Compartment Information:

The following reports from the Inventory are attached:

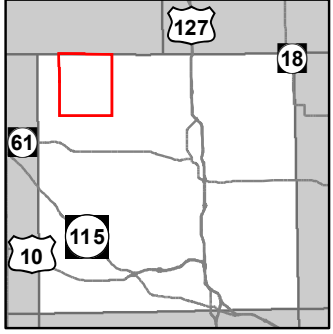
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

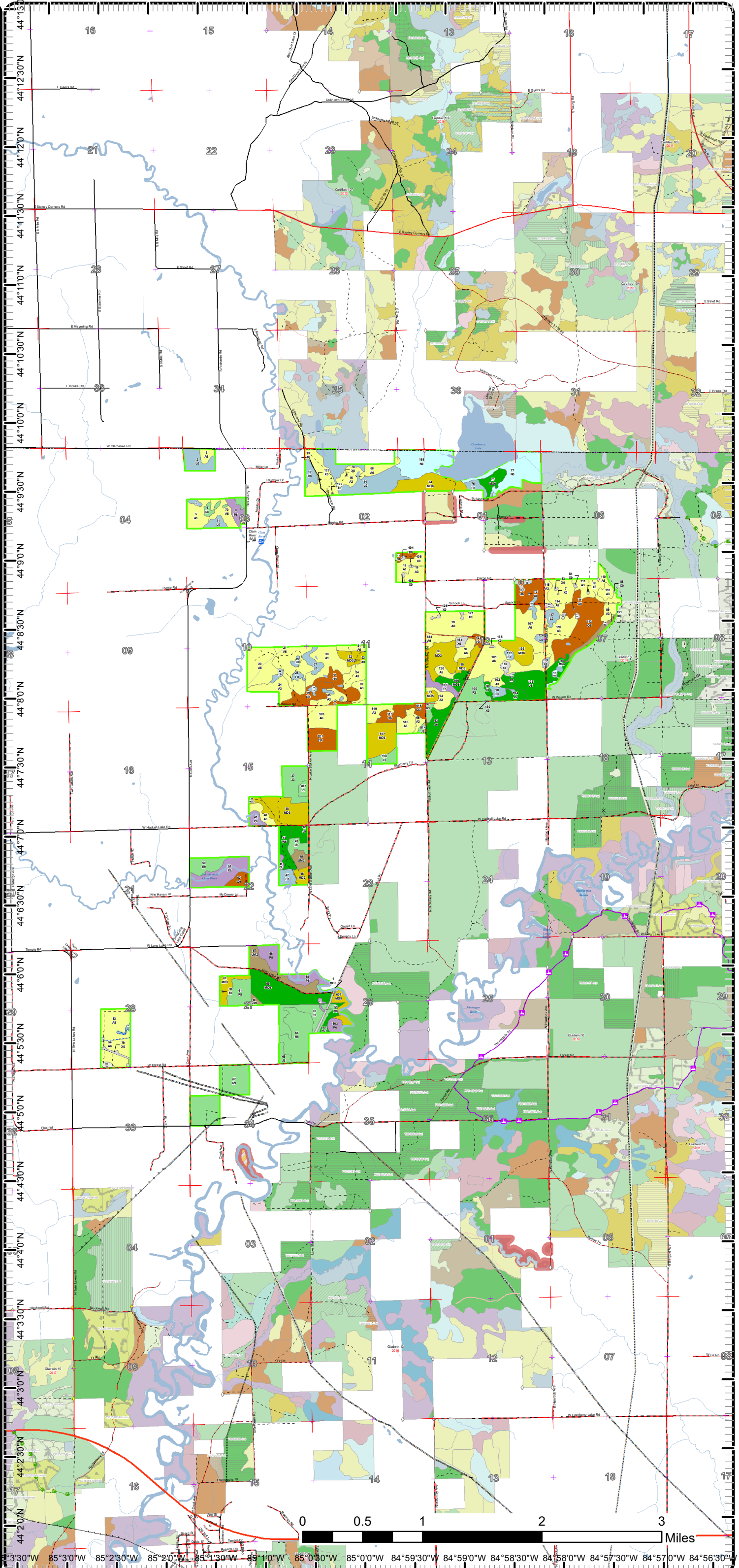
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 8
 T20N-06W Sec. 1-3,10-14,22
 County: Clare
 Unit: Gladwin
 Mgmt Area: Upper Muskegon
 YOE: 2019
 Acres: 2470.8 GIS Calculated
 Examiner: Chris Wasserman
 Map Revised: 7/31/2017
 Map Phase: Post-Review



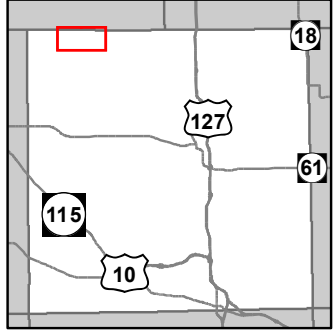
- Miris Corners
- + Remonumented Section Corners
- ◇ Field Grade GPS Corners
- ▭ Counties
- × Gate
- Boating Access Site
- Snowmobile Trails
- Designated Snowmobile Trails
- Paved Roads
- County Gravel Roads
- Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Pipeline
- Compartment Boundary
- Treatments with Site Conditions
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 110 - Low Intensity Urban
- 122 - Roads/Parking Lot
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 790 - Other Bare/Sparsely Vegetated
- Lakes



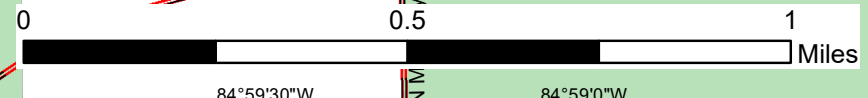
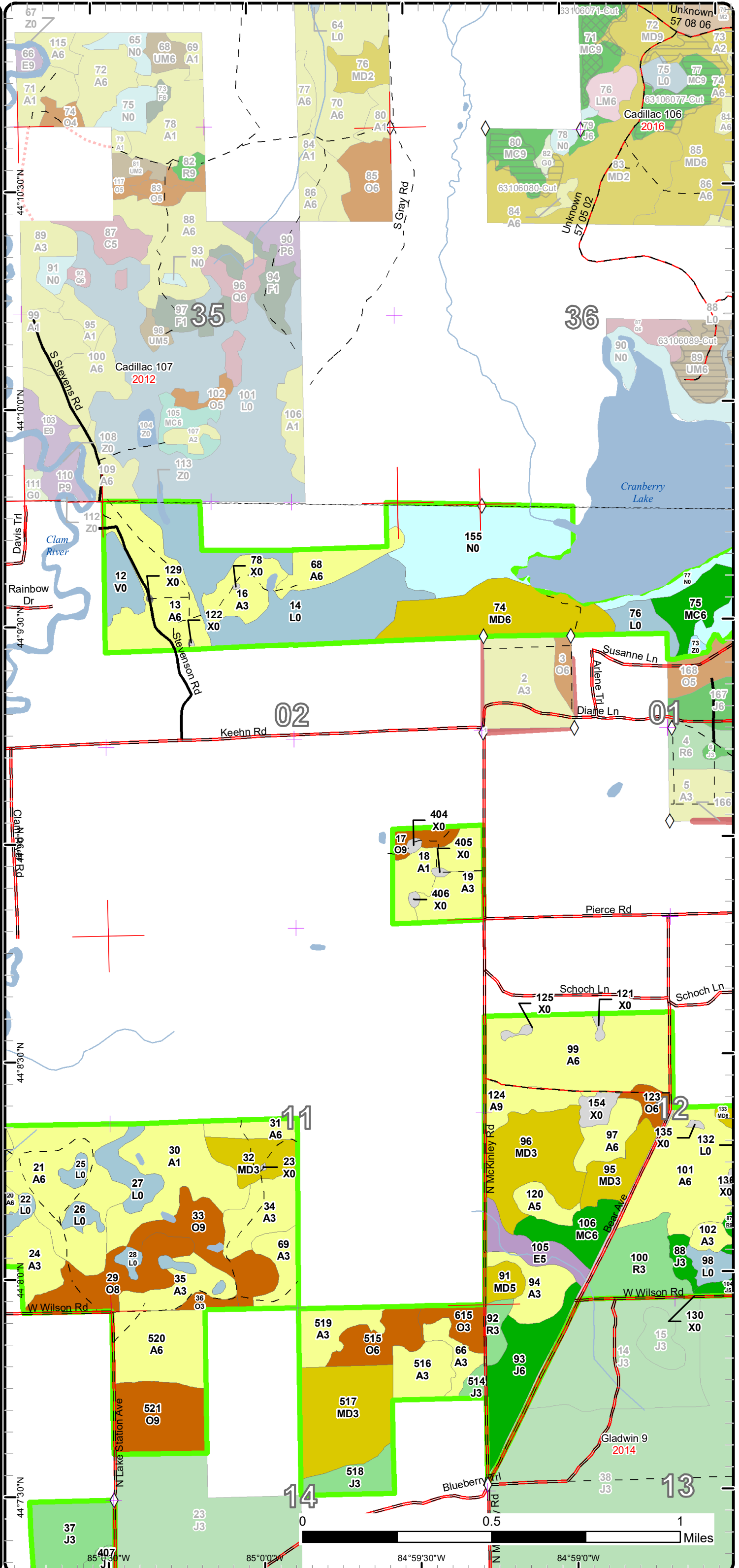
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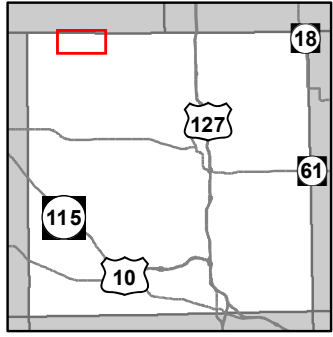
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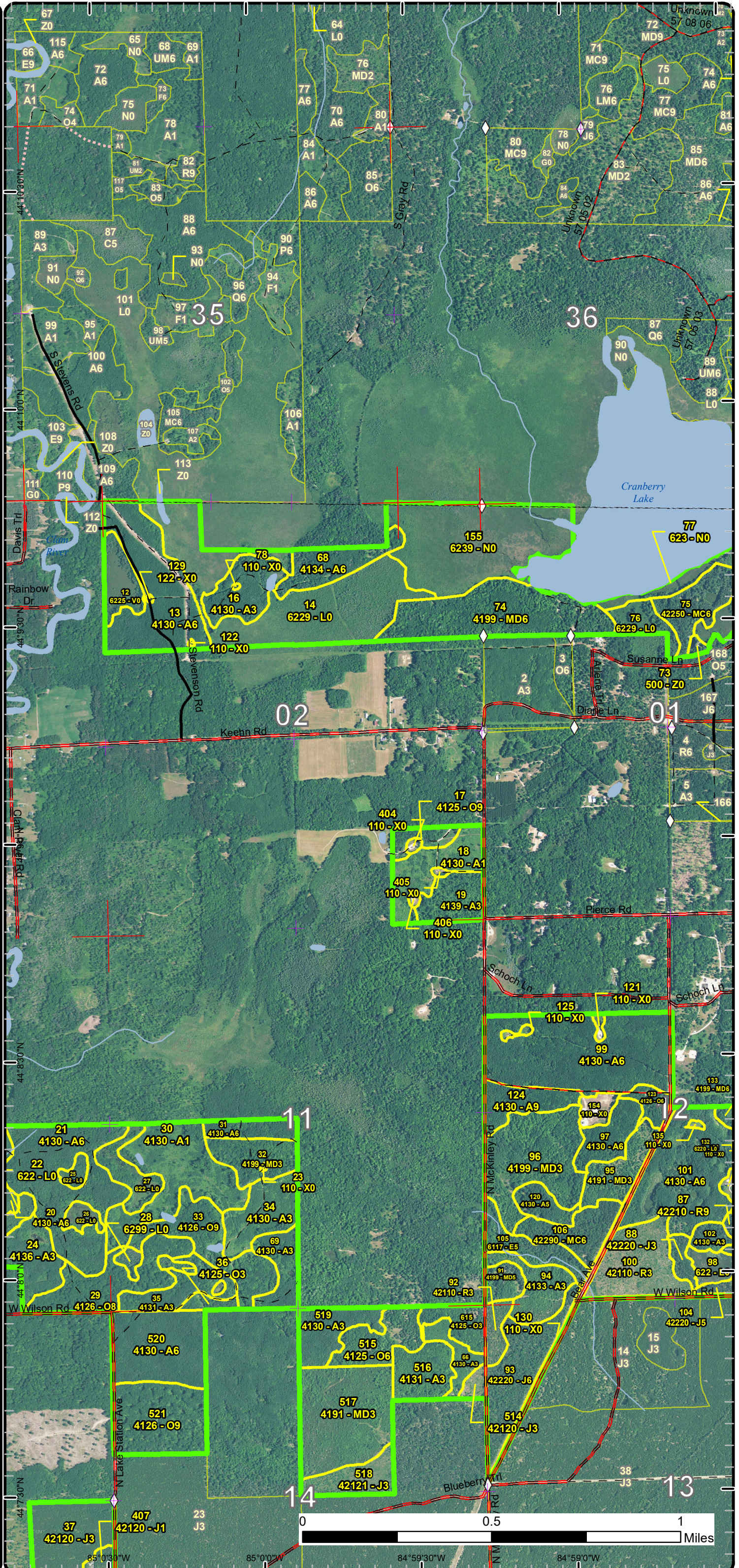
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Stand Boundary Map

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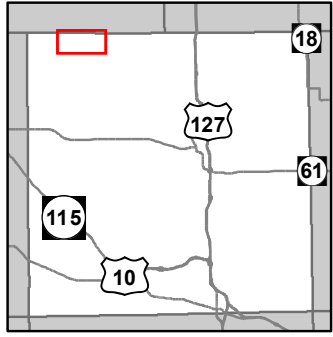


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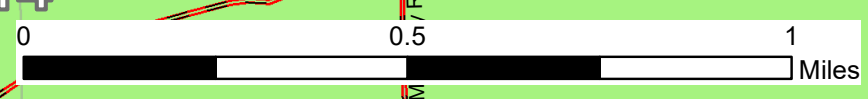
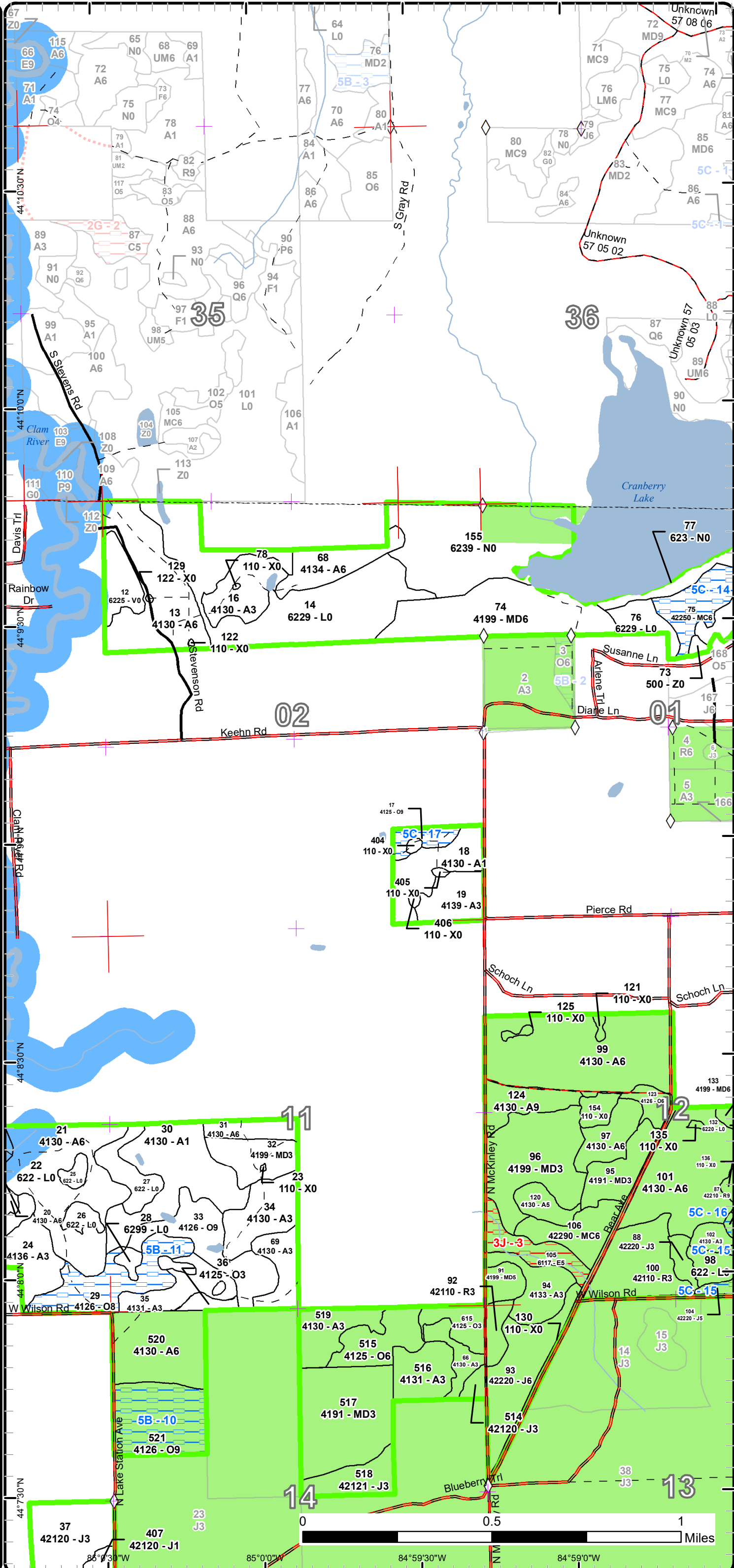


Special Conservation Areas & Site Conditions Map

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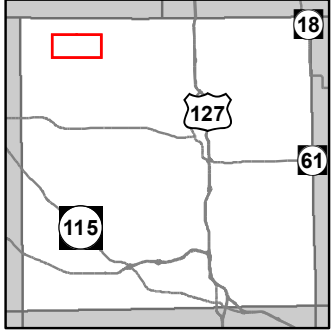
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- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- Stand Boundaries
- Kirtland Warbler Habitat
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



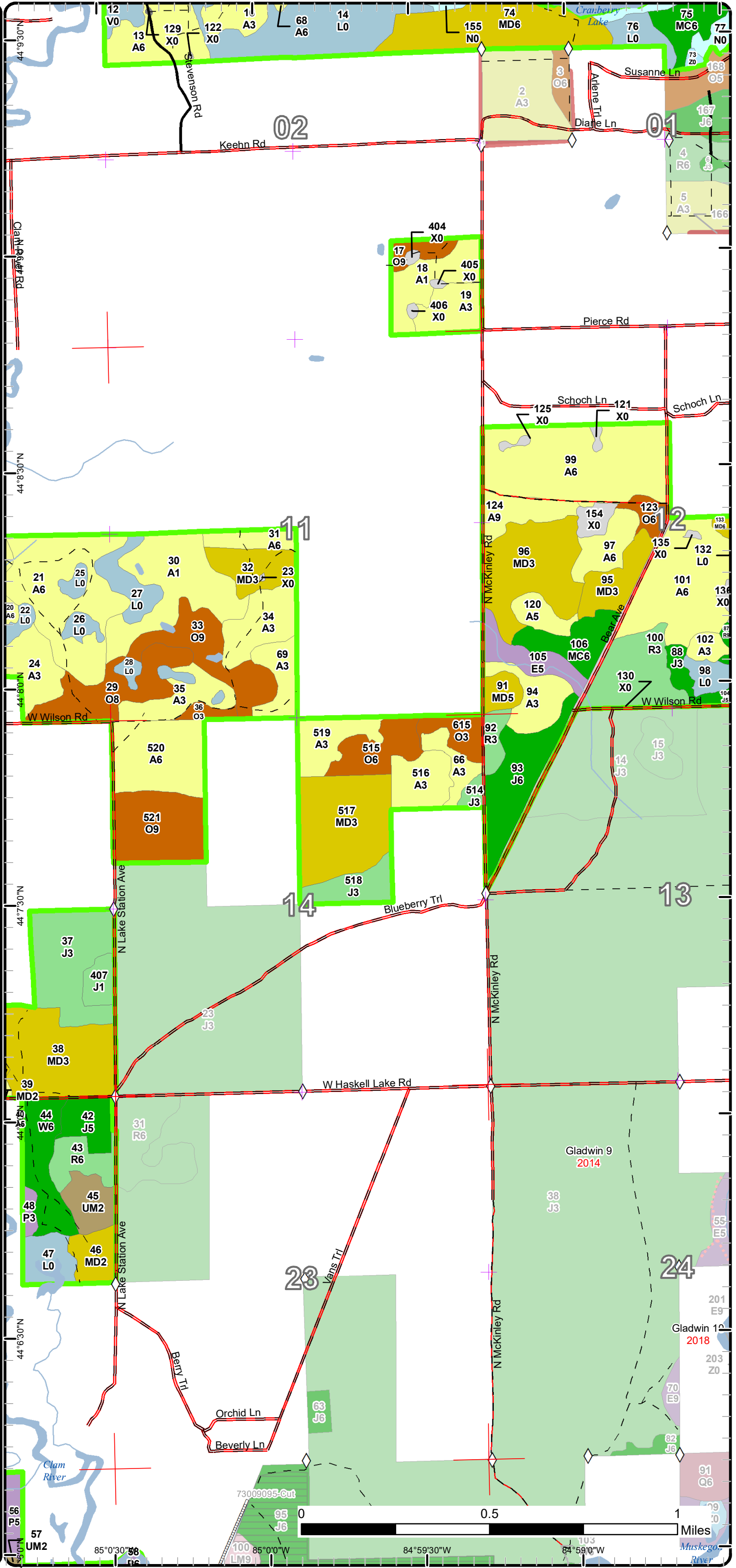
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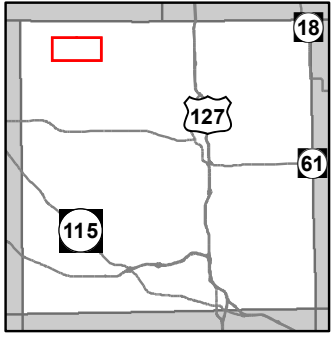
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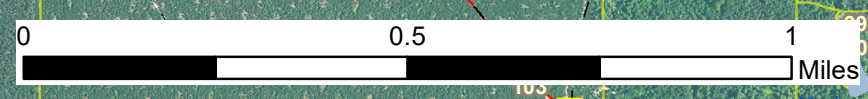
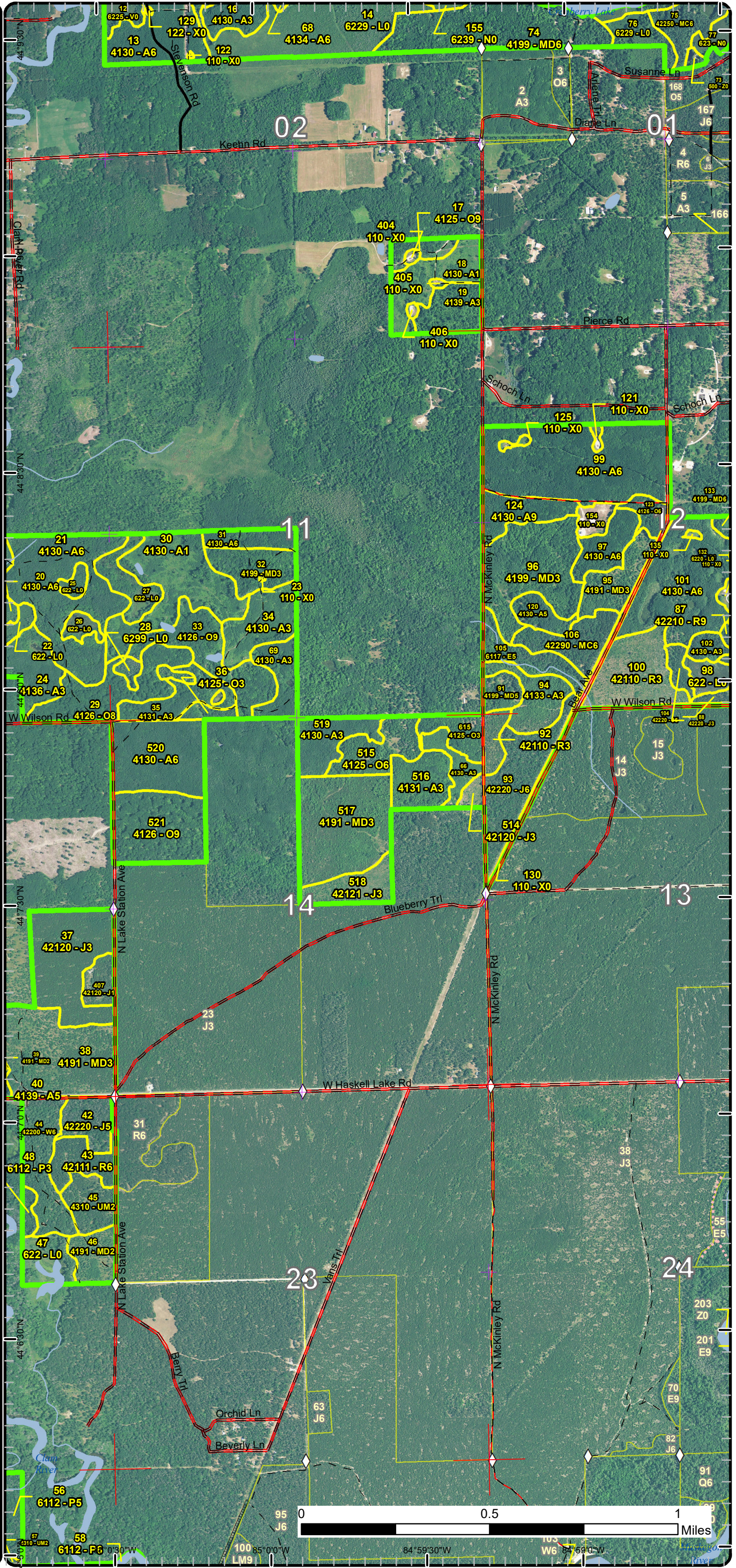
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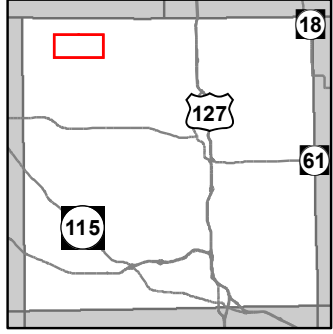
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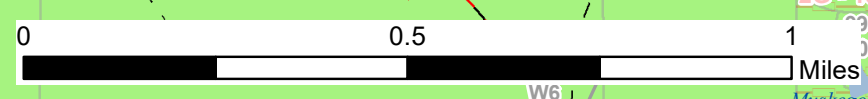
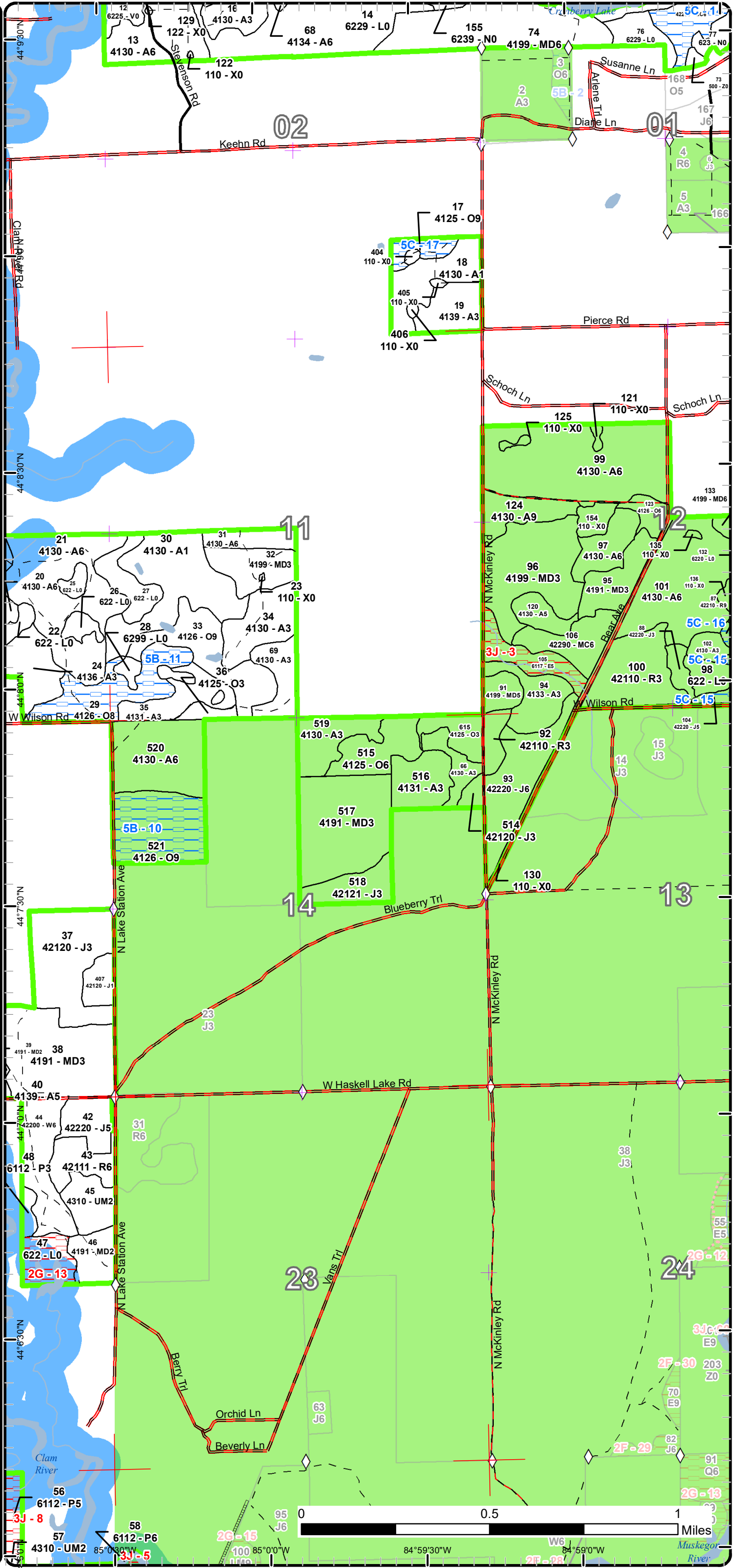
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Special Conservation Areas & Site Conditions Map

Compartment: 8
 T20N-06W Sec. 1-3,10-14,22
 County: Clare
 Unit: Gladwin
 Mgmt Area: Upper Muskegon
 YOE: 2019
 Acres: 2470.8 GIS Calculated
 Examiner: Chris Wasserman
 Map Revised: 7/31/2017
 Map Phase: Post-Review



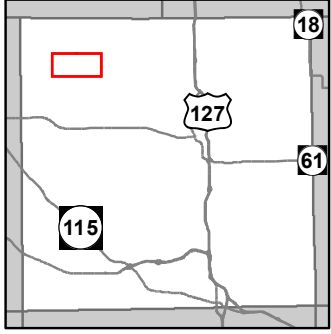
- Miris Corners
- + Remonumented Section Corners
- ◇ Field Grade GPS Corners
- Counties
- Paved Roads
- County Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 3J: Water quality / BMPs (stream, river, or lake)
- Stand Boundaries
- Kirtland Warbler Habitat
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



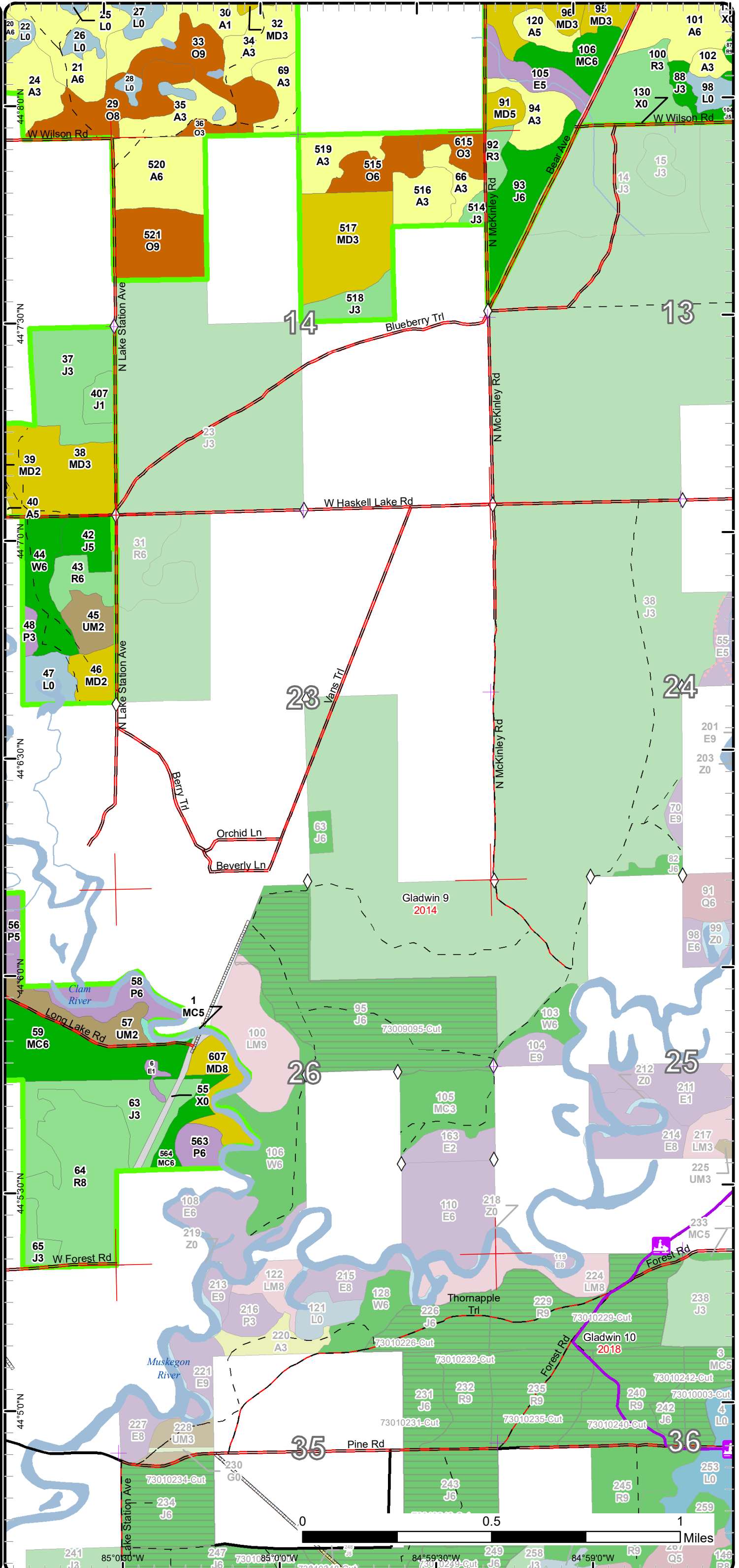
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Cover Type & Treatments Map

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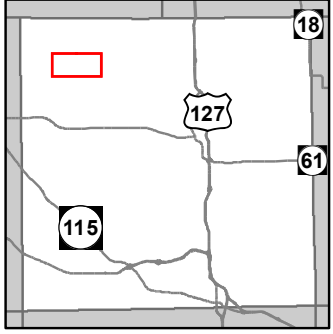


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- Pipeline
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- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 110 - Low Intensity Urban
- 622 - Lowland Shrub
- Lakes

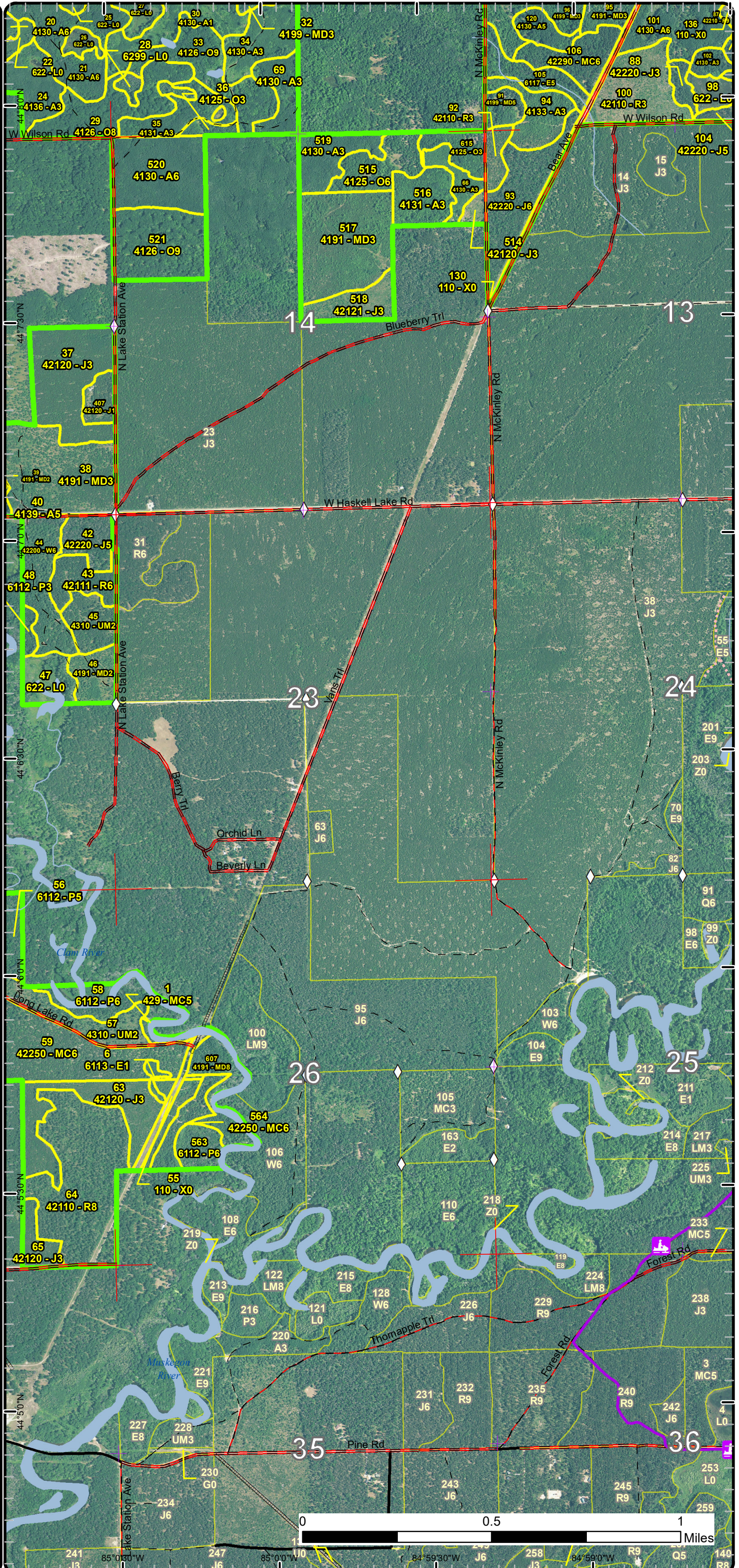


Stand Boundary Map

Compartment: 8
 T20N-06W Sec. 1-3,10-14,22
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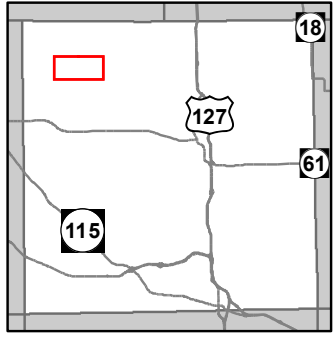


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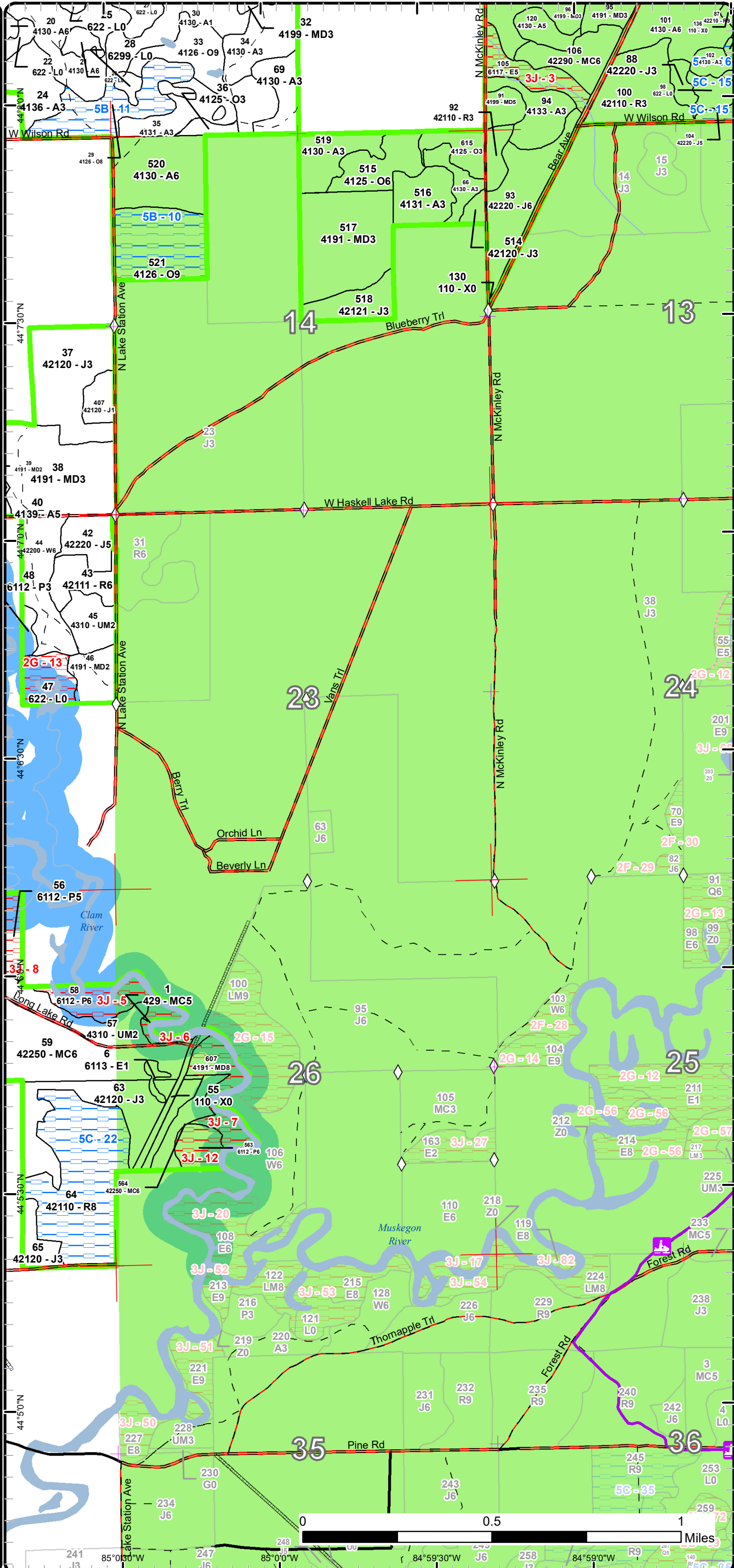


Special Conservation Areas & Site Conditions Map

Compartment: 8
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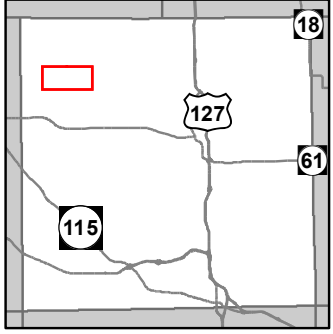
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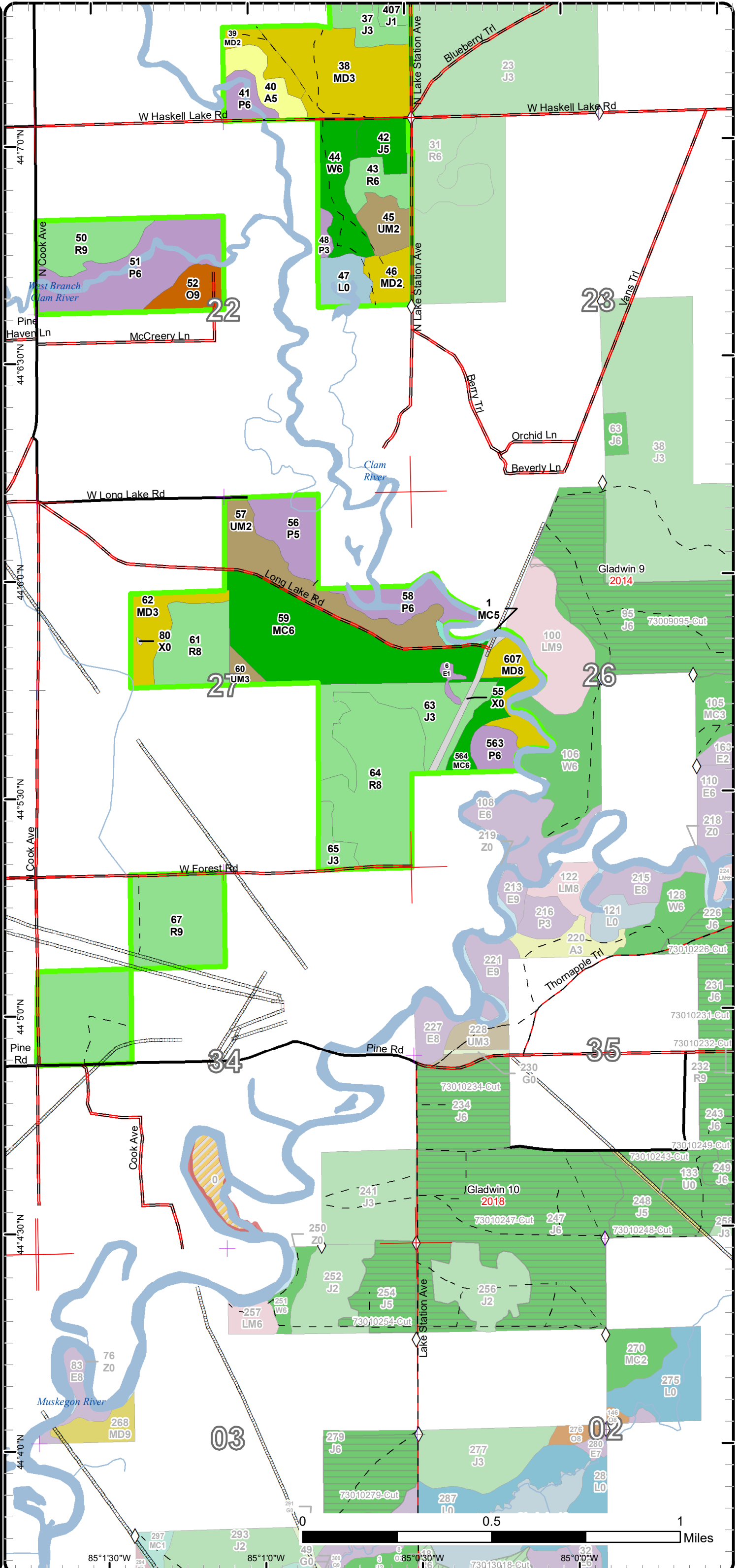
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Cover Type & Treatments Map

Compartment: 8
 T20N-06W Sec. 1-3,10-14,22
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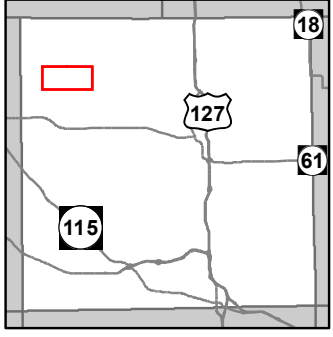
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- 622 - Lowland Shrub
- 790 - Other Bare/Sparsely Vegetated
- Lakes



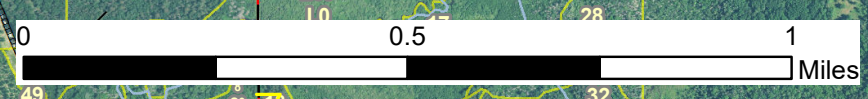
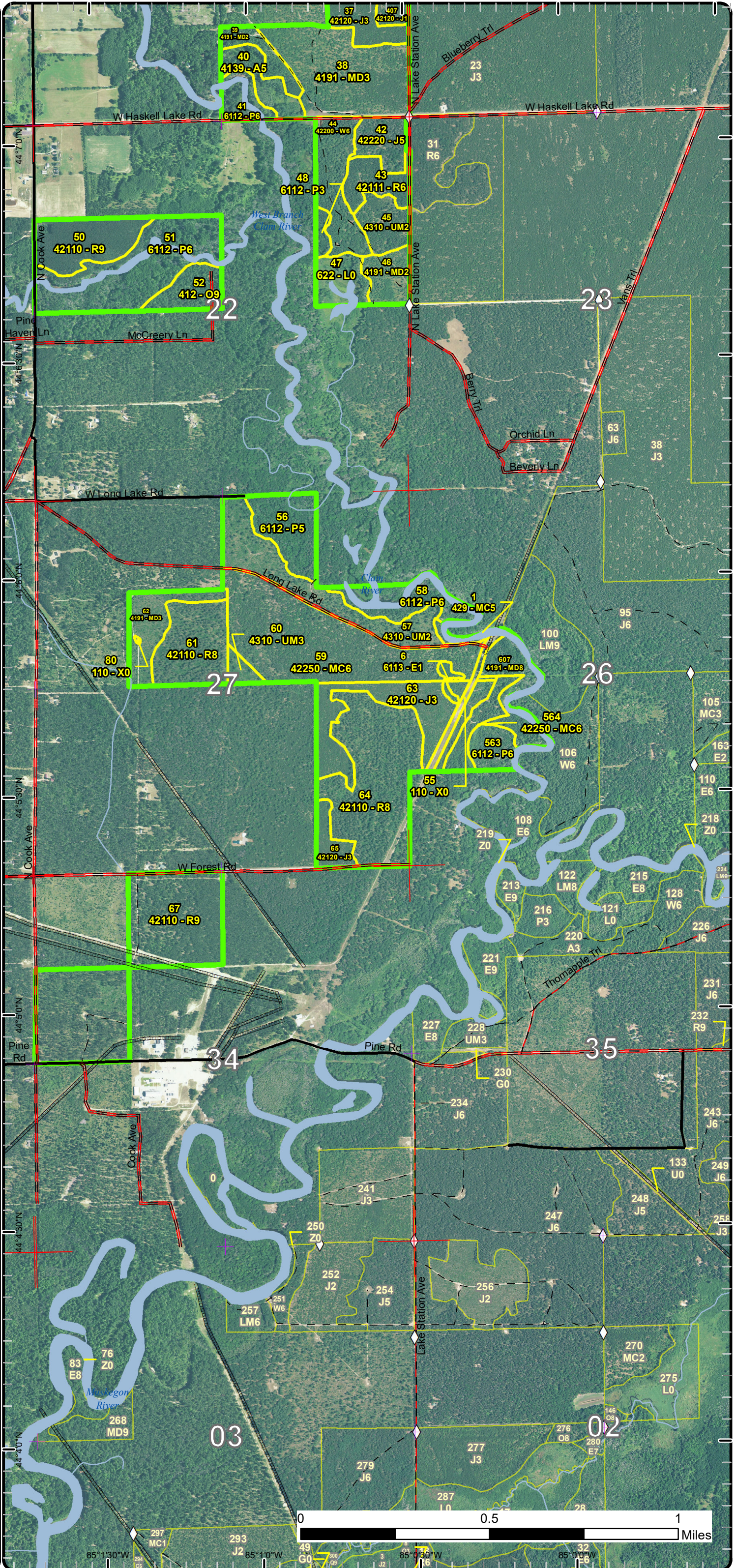
85°1'30"W 85°1'0"W 85°0'30"W 85°0'0"W

Stand Boundary Map

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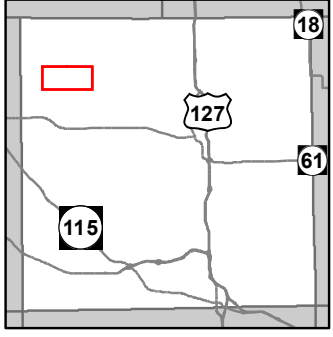
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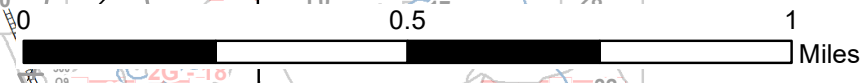
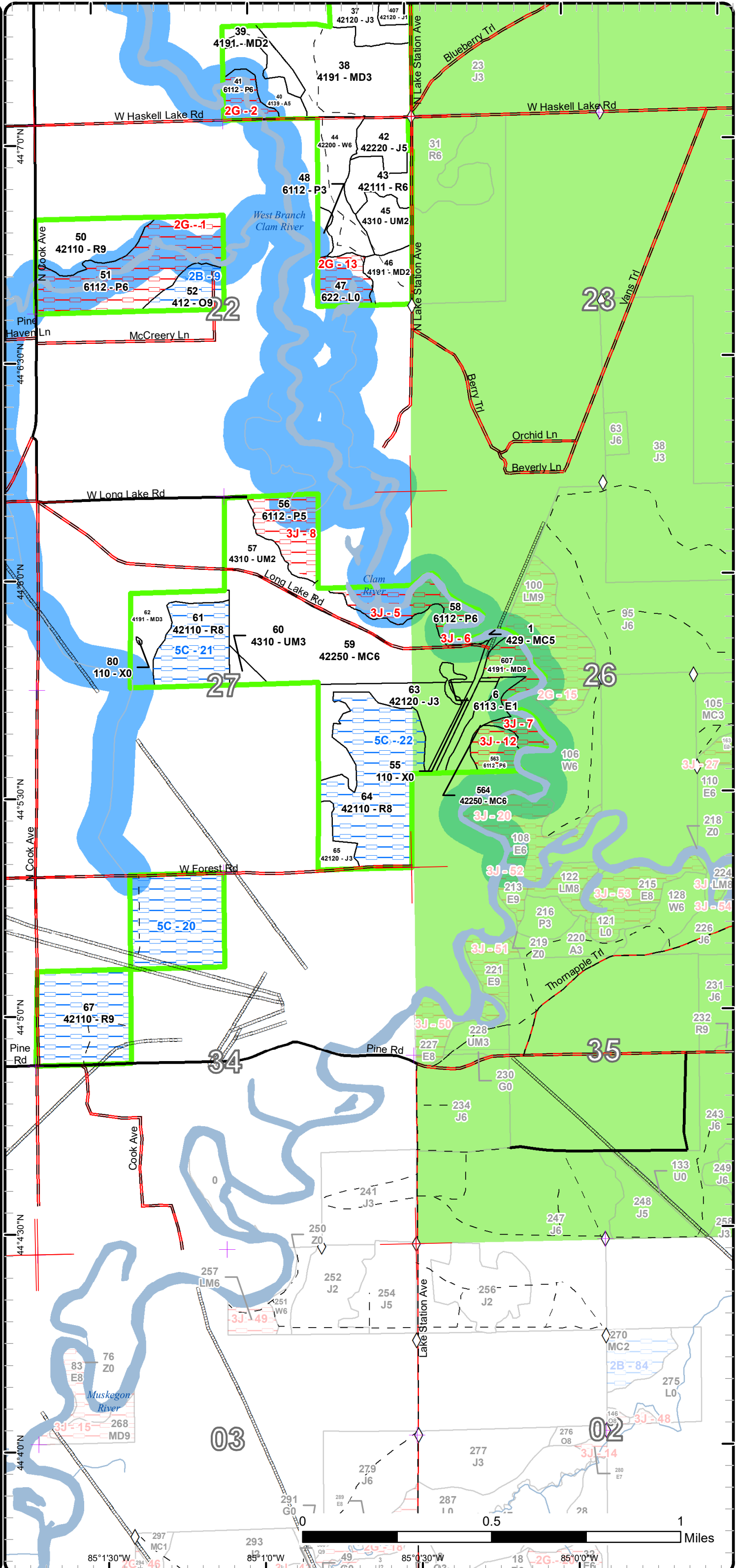
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85°1'30"W 85°10'W 85°0'30"W 85°0'0"W
 44°4'0"N 44°4'30"N 44°5'0"N 44°5'30"N 44°6'0"N 44°6'30"N 44°7'0"N

Report 1 – Total Acres by Cover Type and Age Class

Gladwin Mgt. Unit

Compartment 8

Year of Entry 2019

Chris Wasserman : Examiner



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	103	75	175	255	146	80	0	0	0	0	0	0	0	0	0	0	0	833
Bare/Sparsely Vegetated	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Bog	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Jack Pine	0	15	81	0	39	11	14	26	0	0	0	0	0	0	0	0	0	0	185
Lowland Aspen/Balsam Poplar	0	0	0	3	9	0	0	45	58	0	0	0	0	0	0	0	0	0	115
Lowland Deciduous	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	12
Lowland Shrub	179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	179
Marsh	128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	127
Mixed Upland Deciduous	0	26	14	146	68	0	0	6	0	0	16	0	0	0	0	0	0	0	276
Natural Mixed Pines	0	0	0	76	0	0	28	0	0	16	0	0	0	0	0	0	0	0	120
Oak	0	0	3	0	33	30	0	0	12	29	56	0	76	0	0	0	0	0	239
Red Pine	0	25	6	0	0	0	32	11	162	5	0	0	0	0	0	0	0	0	240
Upland Conifers	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Upland Mixed Forest	0	37	11	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
Urban	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White Pine	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	21
Total	365	206	190	412	404	222	154	88	232	50	72	0	76	0	0	0	0	0	2467



Report 2 – Treatment Summary

Gladwin Mgt. Unit

Year of Entry: 2019

Acres of Harvest

Compartment 8

Total Compartment Acres: 2,471

Commercial Harvest - 159
 Harvests with Site Condition - 38
 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	99	0	0	0	0	0	0	0	0	99
Jack Pine	26	0	0	0	0	0	0	0	0	26
Natural Mixed Pines	15	0	0	0	0	0	0	0	0	15
Oak	24	0	0	0	0	0	0	0	0	24
Red Pine	0	0	0	0	0	33	0	0	0	33
Total	164	0	0	0	0	33	0	0	0	197

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	197	0	0	0	0	0	0	0	0	197
Next Step	0	82	41	0	0	26	205	0	0	354
Total	197	82	41	0	0	26	205	0	0	551

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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
33 73008033-Cut	24.1	4126 - White, Black, N. Pin Oak	Sawtimber Well	92	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription 2" spec clear cut leaving the large Red and White Oak to meet retention guidelines. Also leave large White pines.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventry)

Treatments:

Acceptable Mix of Oak, Aspen and Maple and White Pine.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

43 73008043-Cut	11.2	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	62	201+	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Thin Red Pine to 120 BA using a combination of row thing and marking trees outside rows to facilitate harvest.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

50 73008050-Cut	22.0	42110 - Planted Red Pine	Sawtimber Well	58	201+	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Rows are narrow. Cut every 4th row and then mark single trees in the double rows that are left to reach desired BA of 120. Stand must be

Specs: shortwooded. Due to narrow rows it must be cut with a processor of some type, no buncher.

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

53 73008053-Cut	37.9	4130 - Aspen	Sawtimber Well	53	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition: Survey Needed**

Prescription 2" spec. clearcut. Leave conifers and some large oaks. There are some wet areas that will need to be painted out. Include Grouse Habitat spec.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventry)

Treatments:

Acceptable Mix of Aspen, maple, oak and pine.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018



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
93	73008093-Cut	26.3	42220 - Natural Jack Pine	Poletimber Well	63	111- 140	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription 2" clear cut leaving some big Oaks for retention. Chip harvest required. Trench and plant Red Pine following harvest.

Specs:

Next Step Pesticide, Skidder/Mechanical; SitePrep, Roller Chopping; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr);

Treatments: Monitoring, Artificial Regen(3yr)

Acceptable Mix of Red Pine, Jack Pine and Oak.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

97	73008097-Cut	11.6	4130 - Aspen	Poletimber Well	52	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription 2" clear cut. Leave scattered Oak and islands for retention. Include Grouse Habitat Spec.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Mix of Aspen, Maple and Oak.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

106	73008106-Cut	14.6	42290 - Natural Mixed Pine	Poletimber Well	52	81-110	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription 2" spec clear cut. Leave retention on the south side along wet area. Trench and plant Red Pine.

Specs:

Next Step SitePrep, Roller Chopping; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable Mix of Red Pine, Jack Pine and Oak.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

114	73008114-Cut	30.2	4139 - Aspen, Mixed Deciduous	Sawtimber Well	54	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription 2" spec clearcut. Retention should be some of the higher quality White Oak marked throughout the Stand and islands. Will need to be froze or dry.

Specs: Some areas may need painted out that are too wet. Include grouse habitat spec.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Mix of oak, maple and Aspen.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018



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
120	73008120-Cut	7.1	4130 - Aspen	Poletimber Medium	49	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

Habitat Cut: No **Site Condition:**

Prescription 2' Spec clearcut leaving some large oaks as retention.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventry)

Treatments:

Acceptable Mix of Aspen, Maple and Oak.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

124	73008124-Cut	12.2	4130 - Aspen	Sawtimber Well	49	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition:**

Prescription 2" spec Clear Cut. Mark scattered Oak and islands as Retention. Include Grouse Habitat Spec.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventry)

Treatments:

Acceptable Mix of Aspen, Oak and Maple.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

**Total Treatment
Acreage Proposed: 197.2**

Report 4 – Site Conditions

Gladwin Mgt. Unit

Compartment: 8

Chris Wasserman : Examiner

Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available	Dominant Site Conditions						
		With Condition			2B	2I	5B	5C	2G	3J	
833	777	56	0	Aspen		38		19			
3	3	0	0	Bare/Sparsely Vegetated							
11	11	0	0	Bog							
186	172	14	0	Jack Pine				14			
114	3	0	111	Lowland Aspen/Balsam Poplar					67	45	
14	2	0	12	Lowland Deciduous						12	
179	168	0	11	Lowland Shrub					11		
127	127	0	0	Marsh							
277	261	0	16	Mixed Upland Deciduous						16	
120	104	16	0	Natural Mixed Pines				16			
238	90	148	0	Oak	12		130	6			
240	74	167	0	Red Pine				167			
2	0	0	2	Upland Conifers						2	
60	60	0	0	Upland Mixed Forest							
44	44	0	0	Urban							
1	1	0	0	Water							
21	21	0	0	White Pine							
2,471	1,918	400	153	Total Forested Acres	12	38	130	220	78	75	
	78%	16%	6%	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	2G: Too wet (sensitive soils, does not include access issues)	45	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gladwin Mgt. Unit

Compartment: 8

Chris Wasserman : Examiner

Year of Entry: 2019

2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Available	5B: Maintain for regeneration purposes	75	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gladwin Mgt. Unit

Chris Wasserman : Examiner

Compartment: 8

Year of Entry: 2019

8	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	18	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
9	Available	2B: Unknown if access through adjacent landowner(s) is possible	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Available	5B: Maintain for regeneration purposes	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Available	5B: Maintain for regeneration purposes	26	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	9	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gladwin Mgt. Unit

Compartment: 8

Chris Wasserman : Examiner

Year of Entry: 2019

14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
15	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified
Comments:							
18	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gladwin Mgt. Unit
Chris Wasserman : Examiner

Compartment: 8
Year of Entry: 2019

19	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	19	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
20	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	79	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
21	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	25	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	57	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
23	Available	2I: Survey needed	38	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	429 - Mixed Upland Conifers	Poletimber Medium	2.3	41	51-80	Mix stand above Clam River and then drops off Steeply to river. Leave as buffer.
3	4130 - Aspen	Poletimber Well	7.6	28	51-80	OPIC - FMD: Clear cut 1989. Areas of tag alder. Nice pole size Aspen. Some wet pockets
5	4136 - Aspen, Mixed Conifer	Sapling Poor	22.5	7	Immature	Excellent aspen, scattered hemlock, sugar maple, white pine, looks like northern hardwood site growing super aspen. Selective clear cut in 1971. Scattered vernal ponds and non stocked low areas. Hold ten years. At Wildlife Divisions request will final harvest now and manage for a mix of natural regeneration of aspen, maple and oak. Paint out all vernal ponds and non stocked wet areas. Leave all cedar, hemlock and scattered large wolf trees. Access is a issue here. Private lines are also a concern here as only one survey corner was located while doing inventory. Clear-cut 2010, North comp 8, 73-010-08-01. Aspen has not regenerated well.
6	6113 - Lowland Maple	Sapling Poor	1.9	27	Immature	Mostly Tag Alder wet area.
8	6112 - Lowland Aspen	Poletimber Well	12.7	78	51-80	Major drainage runs north / south through entire stand.
9	42110 - Planted Red Pine	Poletimber Well	10.3	59	141-170	Nice red pine, every third row cut in 2000. Reduce 1/3 of BA by marking. Access is a issue here. Adjacent land owner has allowed access to harvest timber in the past. Thinned 2010, North Comp 8, 73-010-08-01.
10	4130 - Aspen	Sapling Well	1.6	28	Immature	Final harvest 1989. Wet stand.
13	4130 - Aspen	Poletimber Well	40.1	28	Immature	Very nice Aspen.
16	4130 - Aspen	Sapling Well	16.1	28	Immature	Final harvest 1989. Much wetter than stand 13 and slower growth.
17	4125 - Black, N. Pin Oak	Sawtimber Well	5.7	91	81-110	Small oak stand of not very good quality. Leave for age distribution.
18	4130 - Aspen	Sapling Poor	18.0	7	Immature	Clear-cut 2010, North Comp 8, 73-010-08-01. Aspen regeneration is decent. Scattered large White Pines.
19	4139 - Aspen, Mixed Deciduous	Sapling Well	12.8	18	Immature	Clearcut in 1999 oak seed trees left for mast. Mix of natural regeneration red maple, aspen and oak.
20	4130 - Aspen	Poletimber Well	44.7	28	Immature	Final harvest in 1989. Nice Aspen stand.
21	4130 - Aspen	Poletimber Well	47.2	42	111-140	OPIC - FMD: Excellent aspen, scattered low areas and drains. Two aged stand, selective clear cut in 1975. Scattered vernal ponds and non stocked low areas. Heavy beaver activity.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4136 - Aspen, Mixed Conifer	Sapling Well	23.3	18	Immature	Final harvest 1999. Good aspen regen. Pockets of Cedar and Balsam to the west.
29	4126 - White, Black, N. Pin Oak	Sawtimber Medium	25.6	92	1-50	Thinned 1999. Oak that was left is high quality. Mostly Red Maple regeneration.
30	4130 - Aspen	Sapling Poor	37.2	7	Immature	Clear-cut 2010, North Comp 8, 73-010-08-01. Some areas have a very nice mix of Oak, Maple and Aspen regeneration. Some areas more open with Pin Chery.
31	4130 - Aspen	Poletimber Well	7.9	28	Immature	Final harvest 1989. Nice Aspen stand.
32	4199 - Other Mixed Upland Deciduous	Sapling Well	14.2	17	Immature	Some scattered large trees.
33	4126 - White, Black, N. Pin Oak	Sawtimber Well	24.1	92	81-110	Nice mixed stand. Clear cut with retention.
34	4130 - Aspen	Sapling Well	17.5	7	Immature	Clear-cut 2010, North Comp 8, 73-010-08-01. Very nice Aspen regeneration.
35	4131 - Aspen, Oak	Sapling Well	13.5	18	Immature	Final harvest 1999. Good aspen regen.
36	4125 - Black, N. Pin Oak	Sapling Well	3.3	18	Immature	Final harvest 1999. Decent regen.
37	42120 - Planted Jack Pine	Sapling Well	34.5	19	Immature	Final harvest 1997 replanted to jack pine. Scattered oak regen as well.
38	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	45.2	20	Immature	Final harvest 1997. Never got replanted, wildlife did not want stand planted. Mix of pin cherry, oak and jack pine. Stand is sparce in some spots. SE corner has denser Jack Pine.
39	4191 - Mixed Upland Deciduous with Conifer	Sapling Medium	8.0	21	Immature	Final harvest 1996. Mix of oak, aspen, maple, jack pine and pin cherry.
40	4139 - Aspen, Mixed Deciduous	Poletimber Medium	11.2	29	Immature	In the Clam River flood plain. Includes steep banks leading down to the river. Many scattered low areas. Habitat cut 1998.
41	6112 - Lowland Aspen	Poletimber Well	8.6	64	51-80	In the Clam River floodplain. Very wet.
42	42220 - Natural Jack Pine	Poletimber Medium	10.8	44	81-110	Decent Jack Pine. Hold 10 years.
43	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	11.3	62	201+	Interplanted Red Pine appears to have never been thinned. Rows are tight and very hard to follow. Thin now to 140 BA in a combination of row thinning and marking.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	42200 - Natural White Pine	Poletimber Well	21.3	44	111-140	All but white and red pine harvested in 1998. White Pine varies in size and density. Nice mixed stand.
45	4310 - Pine, Oak Mix	Sapling Medium	11.2	19	Immature	Final harvest in 1998. Mixed stand. Openings scattered
46	4191 - Mixed Upland Deciduous with Conifer	Sapling Medium	10.2	7	Immature	Clear Cut 05/2010. Nice mix of regeneration.
48	6112 - Lowland Aspen	Sapling Well	2.8	28	Immature	Habitat cut 1989. Down over the bank. Steep bank. Good wildlife habitat.
50	42110 - Planted Red Pine	Sawtimber Well	22.0	58	201+	Very nice Red Pine. Rows are too narrow to crown thin alone. Will have to row thin and then single tree mark to reach desired BA.
51	6112 - Lowland Aspen	Poletimber Well	45.3	73	51-80	Down over the bank in the West Branch Clam River flood plain. Lots of diversity here bayous, oxbows, springs and scattered high ground. No harvest very wet ground.
52	412 - Oak Types	Sawtimber Well	11.5	76	81-110	Did not visit stand. Access is an issue here.
53	4130 - Aspen	Sawtimber Well	37.9	53	81-110	This is a nice mixed Aspen stand. Aspen is on the decline. 2" spec clear out leaving conifers and some big oak trees. Some wet areas will need to be painted out.
54	4130 - Aspen	Poletimber Well	30.7	33	Immature	Nice Aspen stand. Mature Oak on West side of stand.
56	6112 - Lowland Aspen	Poletimber Medium	18.7	68	51-80	Down over the bank in the Clam River flood plain. Lots of diversity here bayous, oxbows, springs and scattered high ground. No harvest very wet ground.
57	4310 - Pine, Oak Mix	Sapling Medium	32.6	7	Immature	The stand is fully stocked with some open areas in the stand. The planted jack pine has ~ 50% mortality in areas of thick oak regeneration. In the open area the survival is much better. However, even if there is a loss of 50% of the oak seedling the stand will still be medium to fully stocked. There is heavy deer browse on both the oak and jack pine. At the current time the stand will be considered fully stocked and meet cover type objective. Clear cut 05/2010. stand planted to jack pine FTP C73-857 in 2012. Jack Pine seedlings are mostly 3 feet tall. Oak regen is spotty and 6-10 feet tall.
58	6112 - Lowland Aspen	Poletimber Well	17.3	68	51-80	Down over the bank in the Clam River flood plain. Lots of diversity here bayous, oxbows, springs and scattered high ground. No harvest very wet ground.
59	42250 - Pine, Oak	Poletimber Well	67.5	27	Immature	No records of harvest stand is part of a recent land acquisition from Consumers Energy. Nice natural mix pine and oak stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
60	4310 - Pine, Oak Mix	Sapling Well	3.5	7	Immature	The stand is fully stocked with some open areas in the stand. The planted jack pine has ~ 50% mortality in areas of thick oak regeneration. In the open area the survival is much better. Clear cut 05/2010. Clear cut 05/2010. stand planted to jack pine FTP C73-857 in 2012. Jack Pine is 5-10 feet tall. Oak is 6-12 feet tall.
61	42110 - Planted Red Pine	Sawtimber Medium	25.2	78	81-110	Pine was interplanted in 1939. Harvest will stimulate and release oak regeneration that is in place. Selection harvest 05/2010. High quality Red Pine stand. Oak seedlings are 3-10 feet tall. Hold 10 more years and then remove pine overstory and manage for oak.
62	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	16.2	7	Immature	The planted jack pine has ~ 20% mortality in areas of thick oak regeneration. There is heavy deer browse on both the oak and jack pine. Clear cut 05/2010 Clear cut 05/2010. stand planted to jack pine FTP C73-857 in 2012. Jack Pine is 4-6 feet tall. Oak is 10-15 feet tall.
63	42120 - Planted Jack Pine	Sapling Well	32.4	16	Immature	Final harvest 2000. Trenched and planted to jack pine. Fully stocked.
64	42110 - Planted Red Pine	Sawtimber Medium	57.4	78	51-80	OPIC - FMD: All but red pine harvested in 2000. Not a plantation density of red pine varies. Decent oak regeneration has resulted from the harvest it appears that the overstory red pine is nursing the oak regen. Red pine was interplanted in 1939. Red Pine over story has been suppressed. It is not the highest quality. Oak sub canopy is very thick and of good quality. Red Pine should be removed and manage for Oak in 10 years.
65	42120 - Planted Jack Pine	Sapling Well	7.3	16	Immature	OPIC - FMD: Final harvest 2000. Trenched and planted to jack pine. Fully stocked.
66	4130 - Aspen	Sapling Well	7.4	9	Immature	Stand is a nice aspen stand on a ridge. Final harvest 11/2008.
67	42110 - Planted Red Pine	Sawtimber Well	79.4	78	81-110	Thinned 05/2010. Very good oak regeneration. Hold Ten years then remove Red pine over story and manage for Oak. There is a couple acre Clearcut area in the NE. Excellent oak Regeneration in that area.
68	4134 - Aspen, Spruce/Fir	Poletimber Well	14.8	28		Nice Aspen. 2 acre area of much older Aspen. Wet stand.
69	4130 - Aspen	Sapling Well	11.5	18	Immature	Final harvest 1999. Excellent regeneration.
70	4139 - Aspen, Mixed Deciduous	Poletimber Well	18.5	46	111-140	Selective clear cut in 1971. Scattered vernal ponds and non stocked low areas. Hold ten years.
74	4199 - Other Mixed Upland Deciduous	Poletimber Well	43.0	35	81-110	Mixed Stand. Some large overstory trees left.
75	42250 - Pine, Oak	Poletimber Well	15.8	80	81-110	Nice mixed stand. Red Pine is decent quality. Treat next inventory cycle. Jack and Red Pine are q few years younger then oak. Access through wetland is narrow. 3 old buildings on site.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
87	42210 - Natural Red Pine	Sawtimber Well	4.5	81	81-110	Small stand, leave for big tree management and diversity in an area dominated by large jack pine clearcuts. Commercial harvest would be difficult.
88	42220 - Natural Jack Pine	Sapling Well	4.2	38	81-110	Cut in 1979 some residual jack pine is present. Small stand but nice Jack Pine.
89	4139 - Aspen, Mixed Deciduous	Sapling Well	9.2	20	Immature	Final harvest in 1997. Good mix of regeneration.
90	4310 - Pine, Oak Mix	Sapling Medium	12.3	22	Immature	Final harvest in 1995. Four inch spec. Regen is decent.
91	4199 - Other Mixed Upland Deciduous	Poletimber Medium	6.2	63	1-50	Very open. Mix of large Oaks and some aspen and pine.
92	42110 - Planted Red Pine	Sapling Well	5.7	13	Immature	Final harvest 1995 poor regeneration. Rx burn to controll pin cherry, trench and hand plant red pine. Site index is from adjacent stand. FTP # C73-752 - Herbicide application 9/22/04 - planted to red pine 5/2005. Replanted 2009. Red Pine is doing well.
93	42220 - Natural Jack Pine	Poletimber Well	26.4	63	111-140	OPIC - FMD: OI Stand Year Origin was 1954. Jack Pine is ready to be cut. Trench and plant following harvest. Appox 130 basal area.
94	4133 - Aspen, Mixed Pine	Sapling Well	13.9	13	Immature	Final harvest in 1997 poor regeneration very dense pin cherry. Prescription was to remove aspen and dead oak and the stand was clearcut. Rx burn to controll pin cherry trench and hand plant red pine. 1995 comments: REMOVE ASPEN & DEAD OAK. LOW PRIORITY. FTP # C73-752 - Herbicide application 9/22/04 - planted to red pine 5/2005. Replanted 2009. Aspen regeneration is very good in most of the stand. Some areas the Aspen didn't come back and in those areas Red Pine is doing well. Over all a nice Mixed stand.
95	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	13.7	20	Immature	Final harvest in 1997 poor regeneration very dense pin cherry. Prescription was to remove a few live oak and dead oak and the stand was clearcut. Rx burn to controll pin cherry trench and hand plant red pine. 1995 comments: REMOVE DEAD OAK. LOW PRIORITY. FTP # C73-752 - Herbicide application 9/22/04 - planted to red pine 5/2006. Replanted 2009. Red Pine is doing well. It is currently the understory to Oak stump sprouts an cherry.
96	4199 - Other Mixed Upland Deciduous	Sapling Well	37.5	20	Immature	Final harvest in 1997 poor regeneration very dense pin cherry. Prescription was to remove a few live oak and dead oak and the stand was clearcut. Rx burn to controll pin cherry trench and hand plant red pine. 1995 comments: REMOVE DEAD OAK. LOW PRIORITY. FTP # C73-752 - dropped from FTP by district TMS. Over all stand is regenerating well at this point.
97	4130 - Aspen	Poletimber Well	11.6	52	81-110	Nice Aspen Stand.
99	4130 - Aspen	Poletimber Well	61.5	41	81-110	Very nice Aspen.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
100	42110 - Planted Red Pine	Sapling Well	24.7	6	Immature	Clearcut in 2007. FTP # W73-810. Planted 2011. Red Pine is fully Stocked and four feet tall making it a forested stand.
101	4130 - Aspen	Poletimber Well	62.2	30	Immature	Final harvest 1987. 4" spec. Nice Aspen Stand. Some decent Oak regen in areas. Many wet pockets.
102	4130 - Aspen	Sapling Well	4.4	39	51-80	Wet site. Scattered residual red pine.
103	42220 - Natural Jack Pine	Poletimber Well	35.0	38	Unspecified	Cut in 1979 natural regeneration. 1995 comments: POTENTIAL HABITAT FOR KIRTLAND WARBLER Nice Jack Pine Stand.
104	42220 - Natural Jack Pine	Poletimber Medium	13.6	58	1-50	Stand varies greatly. High water table.
105	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	12.2	42	51-80	Buffer along drainage. Intermittent stream. Leave as buffer most of stand is to wet to harvest.
106	42290 - Natural Mixed Pine	Poletimber Well	14.6	52	81-110	Nice mixed pine. NE corner is planted Red Pine.
107	4130 - Aspen	Poletimber Well	41.3	39		Very nice Aspen Stand. Has some very wet areas.
108	4125 - Black, N. Pin Oak	Poletimber Well	31.7	39	111-140	Northern pin oak cut in 1978. Very good Oak regeneration from harvest. Scattered large White Pine. White Pine Saplings in the understory.
110	4131 - Aspen, Oak	Poletimber Well	17.5	37	81-110	Mixed stand of decent quality.
111	4130 - Aspen	Sapling Well	13.8	20	Immature	Final harvest in 1997 1995 comments: STAND ACREAGE/LINES NOT DEFINITE. CUT IN POORER OAK/ASPEN AREAS. Excellent Aspen regeneration.
112	4130 - Aspen	Sapling Well	8.3	20	Immature	Final harvest 1997 - Excellent regeneration. .
113	4125 - Black, N. Pin Oak	Sawtimber Well	75.5	111	1-50	Stand was thinned to 40 BA. It was submitted to burn but never was. Aspen and Maple regen is extremely thick to the east.
114	4139 - Aspen, Mixed Deciduous	Sawtimber Well	30.2	54	81-110	Aspen is fair quality but starting to fall out of stand. Harvest now.
115	4131 - Aspen, Oak	Sapling Well	5.9	31	Immature	Decent mixed stand.
116	4130 - Aspen	Sapling Well	33.6	30	Immature	Stand Year Origin was 1987. Excellent Aspen Stand
118	42250 - Pine, Oak	Poletimber Well	13.6	51	81-110	Nice mixed stand. Hold ten years.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
120	4130 - Aspen	Poletimber Medium	7.1	49	81-110	Decent Aspen.
123	4126 - White, Black, N. Pin Oak	Poletimber Well	5.2	44	51-80	Pole sized oak.
124	4130 - Aspen	Sawtimber Well	12.2	49	81-110	Excellent aspen.
133	4199 - Other Mixed Upland Deciduous	Poletimber Well	25.4	30	Immature	Final harvest 1987. 4" spec. Stump sprout oak regeneration.
158	4125 - Black, N. Pin Oak	Poletimber Well	1.2	39	111-140	Northern pin oak cut in 1978. Very good Oak regeneration from harvest. Scattered large White Pine. White Pine Saplings in the understory.
407	42120 - Planted Jack Pine	Sapling Poor	6.5	19	Immature	Old twp dump. Part of it was planted with adjacent stand. Still lots of garbage scattered throughout.
514	42120 - Planted Jack Pine	Sapling Well	2.9	7	Immature	Final harvest 11/2008 Planted to jack pine 5/2010.
515	4125 - Black, N. Pin Oak	Poletimber Well	15.5	41	51-80	Mixed pine, oak stand. Low quality oak.
516	4131 - Aspen, Oak	Sapling Well	14.2	31	Immature	Stand is a mix of oak, maple and aspen, it is coming back quite well.
517	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	41.2	21	Immature	This stand was harvested in 1996. Planted Jack Pine is doing well but Still the understory. Next cycle this should be a Jack Pine Stand.
518	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	12.2	7	Immature	Planted to jack pine 5/2010, FTP C73-768. Jack Pine is doing well.
519	4130 - Aspen	Sapling Well	14.3	31	Immature	This stand is thick and is doing well.
520	4130 - Aspen	Poletimber Well	30.4	31	Immature	Excellent Aspen stand.
521	4126 - White, Black, N. Pin Oak	Sawtimber Well	29.3	89	81-110	Group Selection harvest completed 11/2008 - 60 foot crown openings were created - 2 openings/ac. Mainly Red Maple and some Oak coming back in the openings. Thin in 10 years. Heavy Deer Browse.
563	6112 - Lowland Aspen	Poletimber Well	8.6	30	Immature	Stand is a trembling aspen stand. Very Wet.
564	42250 - Pine, Oak	Poletimber Well	8.6	23	Immature	Stand was harvested in 1994 primarily as salvage cut. Fish Camp along river.

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Gladwin Mgt. Unit

Report 7 – Forested Stands

Compartment: 8
Year of Entry: 2019



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
607	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Medium	16.1	98	51-80	Retain as buffer along the Clam river. There are two drainages running through this stand that flow into the clam river.
615	4125 - Black, N. Pin Oak	Sapling Well	8.9	41	1-50	Cut in 1976. Stump sprout Oak.



Stand	Cover Type	Acres	Managed Site	General Comments:
2	622 - Lowland Shrub	23.6	No	OPIC - FMD: E4/L very wet site, part of a larger "L" type on pvt land. Tag alder throughout entire stand. Scattered mature aspen mainly in northern part of stand. North West part of stand is pole sized aspen. Commerical harvest not practical.
4	622 - Lowland Shrub	2.8	No	Alder
7	110 - Low Intensity Urban	0.1	No	Michigan Gas Storage Company facilities. Injection sites, valves and other related openings.
11	622 - Lowland Shrub	8.5	No	
12	6225 - Bog	10.8	No	blueberry leather leaf bog
14	6229 - Mixed lowland shrub	68.3	No	Cattails and lowland Brush.
15	110 - Low Intensity Urban	1.0	No	Old well site.
22	622 - Lowland Shrub	3.4	No	Alder and other shrubs.
23	110 - Low Intensity Urban	0.2	No	Consumers Energy gas well.
25	622 - Lowland Shrub	2.8	No	Lowland shrubs.
26	622 - Lowland Shrub	3.6	No	Beaver flooding, very active beaver.
27	622 - Lowland Shrub	10.6	No	Beaver flooding.
28	6299 - Lowland Shrub (OI)	4.5	No	Filling in with spruce and shrubs
47	622 - Lowland Shrub	11.3	No	Beaver flooding, very active beaver. Some Aspen and dead Ash.
55	110 - Low Intensity Urban	4.7	No	Pipeline
71	110 - Low Intensity Urban	0.1	No	Michigan Gas Storage Company facilities. Injection sites, valves and other related openings.
72	110 - Low Intensity Urban	0.2	No	Michigan Gas Storage Company facilities. Injection sites, valves and other related openings.



Stand	Cover Type	Acres	Managed Site	General Comments:
73	500 - Water	1.3	No	Old sand Pit. Signs of illegal ATV use.
76	6229 - Mixed lowland shrub	8.2	No	Alder stand.
77	623 - Emergent Wetland	63.4	No	Wetland around Cranberry Lake.
78	110 - Low Intensity Urban	0.2	No	Consumers Energy gas well.
79	110 - Low Intensity Urban	4.4	No	Stand is a maintained ROW
80	110 - Low Intensity Urban	0.1	No	Consumers Energy gas well.
81	6229 - Mixed lowland shrub	2.1	No	area of low wet ground that showed some water in 1998 imagery.
82	790 - Other Bare/Sparsely Vegetate	3.1	No	Old Pit. Heavy ATV use.
83	110 - Low Intensity Urban	0.6	No	Gas opening. Fragmites on site.
84	110 - Low Intensity Urban	0.6	No	Old well site.
85	110 - Low Intensity Urban	0.5	No	Michigan Gas Storage Company facilities. Injection sites, valves and other related openings.
86	110 - Low Intensity Urban	0.4	No	Michigan Gas Storage Company facilities. Injection sites, valves and other related openings.
98	622 - Lowland Shrub	7.0	No	Scattered jack pine.
109	110 - Low Intensity Urban	1.7	No	Old well site.
117	622 - Lowland Shrub	8.1	No	Standing dead timber and cattails.
119	622 - Lowland Shrub	2.8	No	Willow and Alder.
121	110 - Low Intensity Urban	1.1	No	Old well site.
122	110 - Low Intensity Urban	0.1	No	Consumers Energy gas well.



Stand	Cover Type	Acres	Managed Site	General Comments:
125	110 - Low Intensity Urban	0.9	No	Old well site.
126	622 - Lowland Shrub	3.9	No	Willow and tag alder.
127	622 - Lowland Shrub	4.7	No	Cattails, grass and Tag Alder.
128	6239 - Mixed Emergent Wetland	4.5	No	2 small ponds.
129	122 - Road/Parking Lot	0.2	No	Consumers Energy gas well.
130	110 - Low Intensity Urban	10.2	No	pipelines.
131	110 - Low Intensity Urban	0.2	No	: Michigan Gas Storage Company facilities. Injection sites, valves and other related openings.
132	6220 - Alder/willow	3.2	No	Alder swamp
135	110 - Low Intensity Urban	0.5	No	Old well site.
136	110 - Low Intensity Urban	4.7	No	
139	110 - Low Intensity Urban	3.3	No	Oil well site.
143	110 - Low Intensity Urban	1.0	No	Old well site.
154	110 - Low Intensity Urban	4.7	No	Consumers well.
155	6239 - Mixed Emergent Wetland	59.2	No	
404	110 - Low Intensity Urban	0.8	No	Consumers Energy gas well.
405	110 - Low Intensity Urban	0.5	No	Consumers Energy gas well.
406	110 - Low Intensity Urban	0.6	No	Consumers Energy gas well.