



Compartment Review Presentation

Shingleton Forest Management Unit

Compartment 41178

Entry Year 2020

Acreage: 2,029

County Alger

Management Area: Cusino Complex

Revision Date: 2018-08-01

Stand Examiner: Steve Touvila

Legal Description:

T47N R17W Sections 20, 21 and 28 - 33

Identified Planning Goals:

To manage the compartment in accordance with the principles of sustainable forest eco-system management, with emphasis on timber production, maintaining & enhancing wildlife habitat, and protection of riparian areas.

Soil and topography:

The topography varies from rolling upland terrain to flooded bottomlands.

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

Five separate parcels of private land are included within the compartment boundary, and the south half of section 32 (adjacent to the state lands) is also privately owned. Most of the private land is owned by the Heartwood Forestland Fund IV group and enrolled in CFR, but there are also several year-round homes in section 32 and a camp in the SESE of section 29. The southeast boundary of this compartment follows county highway H-58.

Unique Natural Features:

None.

Archeological, Historical, and Cultural Features:

None.

Special Management Designations or Considerations:

Stands 1,2,3, and 4 may require surveys for T&E plant species prior to any treatments.

Watershed and Fisheries Considerations:

The northwestern region of this compartment contains Noble Lake. 100' plus 5' per 1% increase in slope; buffers are recommended to protect shoreland areas adjacent to Noble Lake in accordance with Best Management Practices. The northeast region of this compartment borders Star Creek. Star Creek is a designated Type 1 trout stream less than 50' width. A 300' buffer is recommended for Star Creek in riparian areas susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration, 100' plus 5' per 1% increase in slope; buffers are recommended to protect these areas in accordance with Best Management Practices (specifically stands 15 and 18). The southwest region of this compartment contains Stony Creek. Stony Creek is a designated Type 1 trout stream less than 50' width. A 300' buffer is recommended for Stony Creek in riparian areas susceptible to Aspen regeneration (specifically stand 402). For areas not susceptible to Aspen regeneration, 100' plus 5' per 1% increase in slope; buffers are recommended to protect these areas in accordance with Best Management Practices.

Wildlife Habitat Considerations:

None.

Mineral Resource and Development Concerns and/or Restrictions

Active sand/gravel pits are located one to two miles to the northeast, one of which is a state-owned pit (Melstrand/Adams Trail) currently leased to the local county road commission. There may be additional sand and gravel potential within the compartment. There is no known metallic mineral potential in this area, and there is no history of mineral leasing or exploration. There is no commercial oil and gas production in the UP.

Vehicle Access:

The Noble Lake Road and associated woods roads provide reasonably good access to most of the uplands in this compartment. The bottomlands are generally impassable to vehicle traffic.

Survey Needs:

None.

Recreational Facilities and Opportunities:

There are no developed recreational facilities in this compartment at this time. The area is locally popular for hunting, trout fishing and mushroom picking.

Fire Protection:

Most of this compartment consists of relatively low-risk fuel types (hardwoods and aspen) with reasonably good access. The bottomland fuels types (cedar and seasonally flooded marshland) where vehicle travel is difficult or impossible would be more challenging. Water sources such as Star Creek are readily accessible in the vicinity.

Additional Compartment Information:

The following reports from the Inventory are attached:

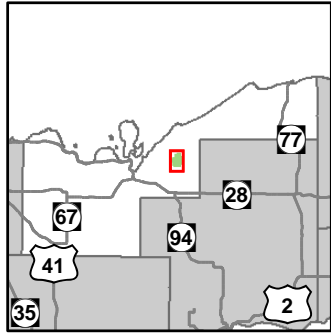
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

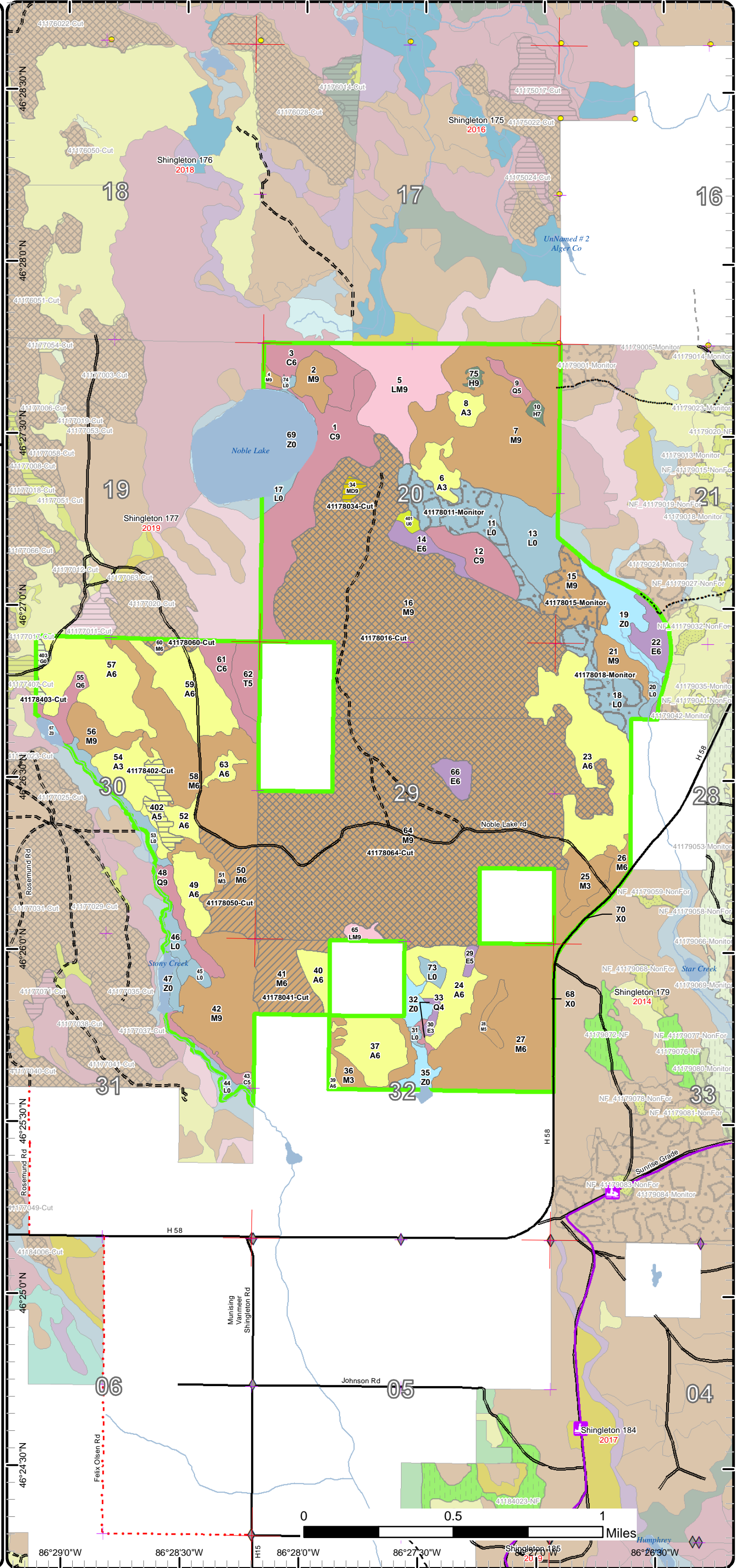
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 178
 T47N,R17W, Sec: 20, 21, 28-30,
 31, 32
 County: Alger
 Unit: Shingleton
 Mgmt Area: Cusino Complex
 YOE: 2020
 Acres: 2,029 GIS Calculated
 Examiner: Steve Touvila
 Map Revised: 12/17/2018
 Map Phase: Post Review

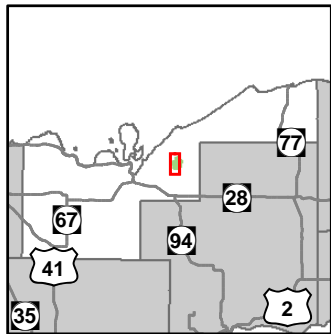


- Miris Corners
- Remonumented Section Corners
- Survey Grade Corners
- Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- Private - Dirt / Gravel Road
- Snowmobile Trails
- Designated Snowmobile Trails
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Regeneration Survey
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- Lakes

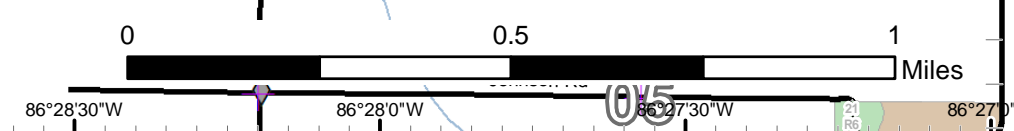
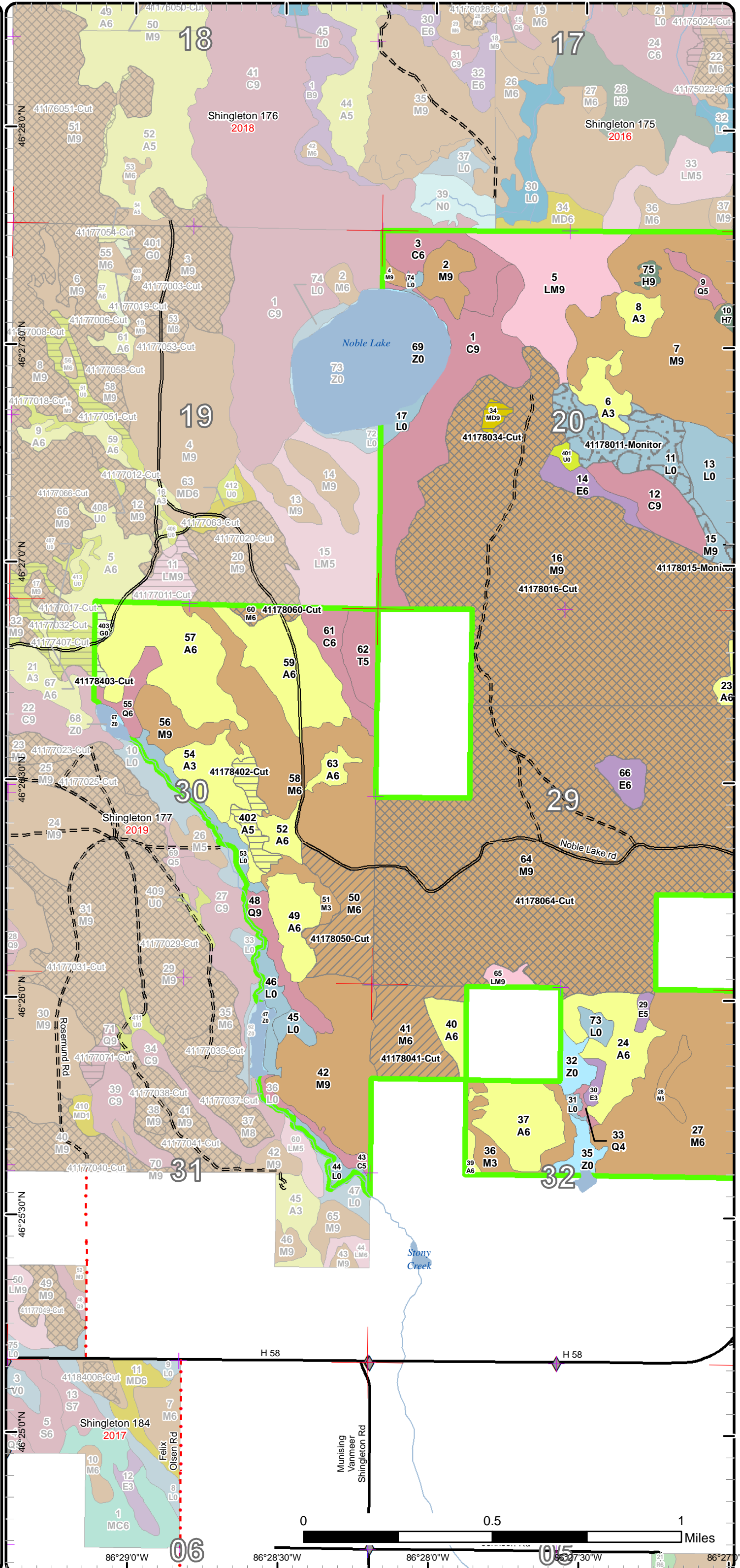


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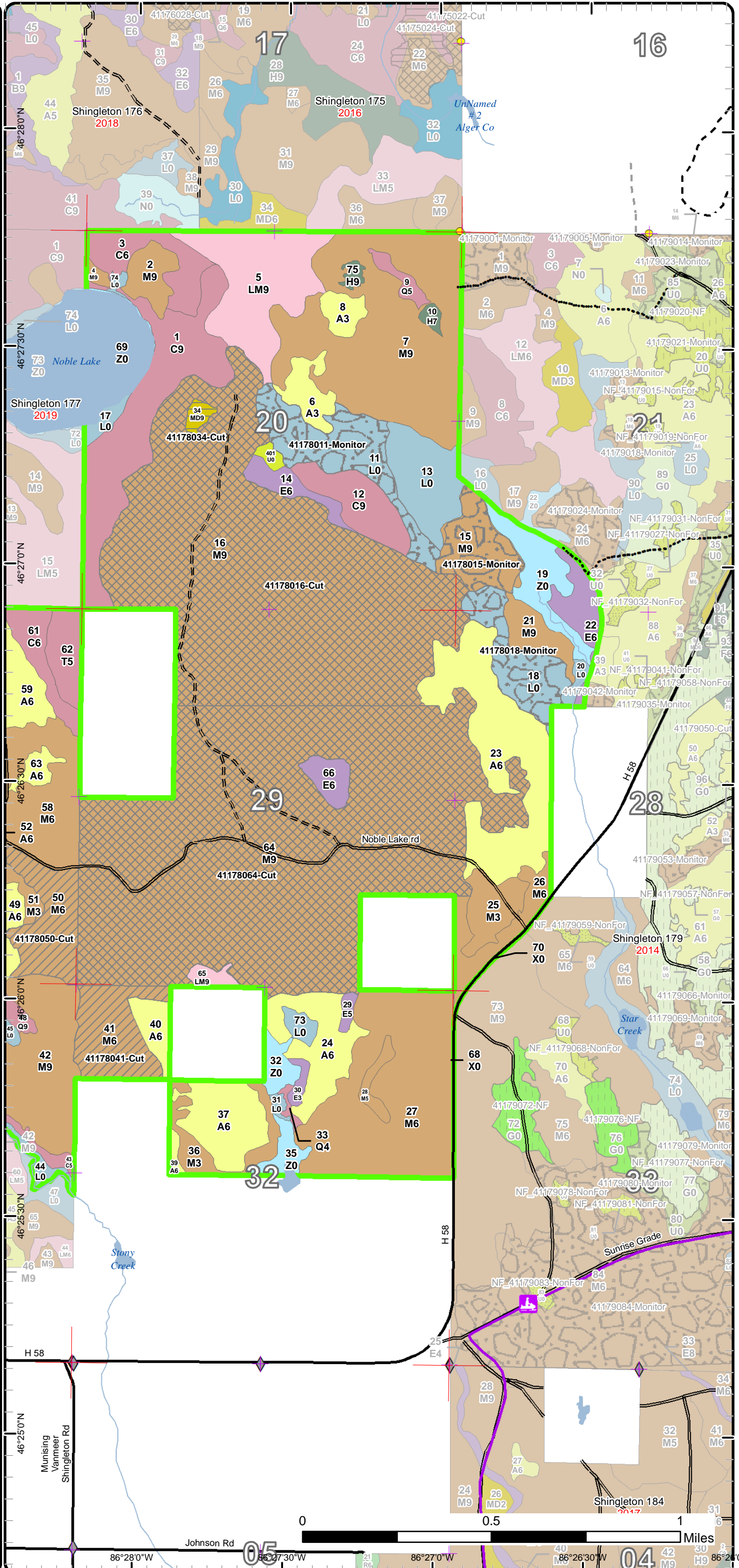
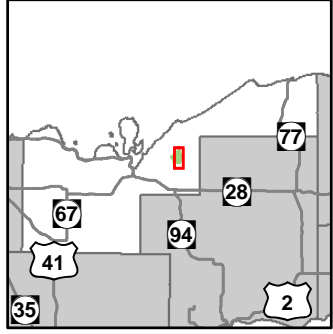


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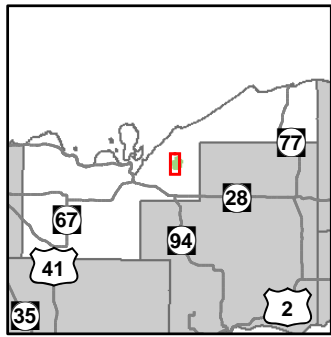


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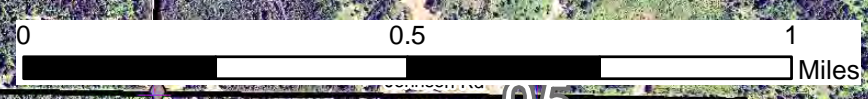
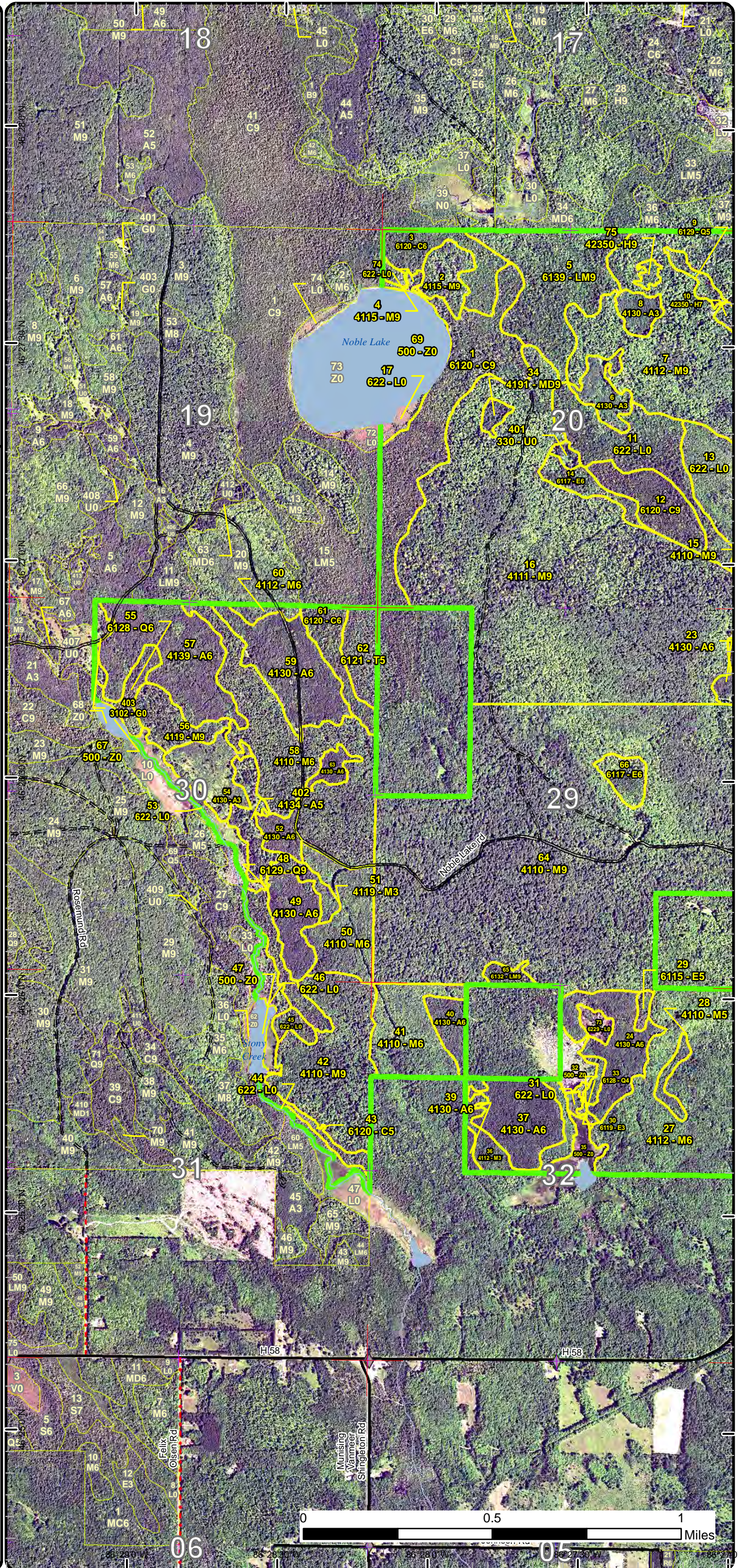


Stand Boundary Map

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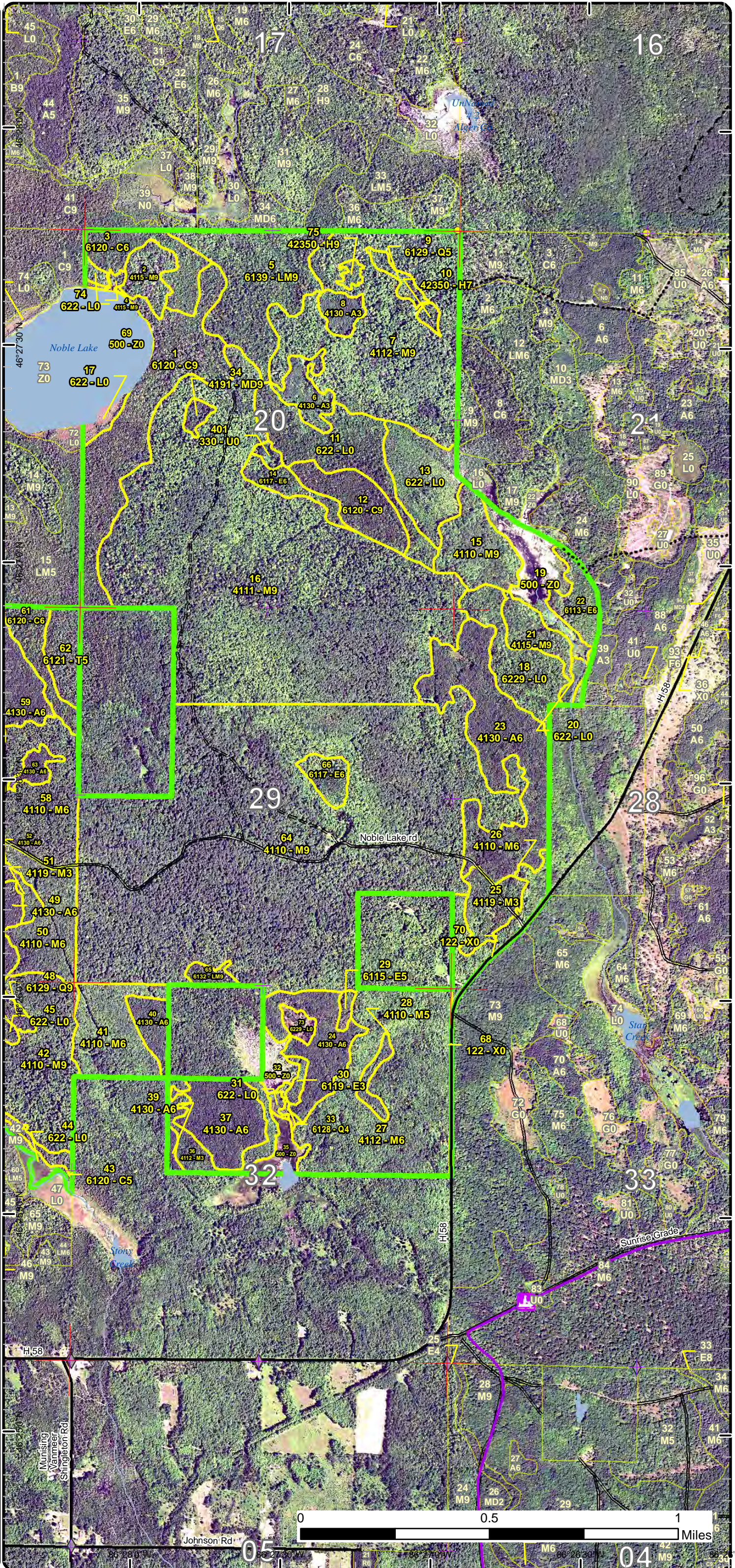
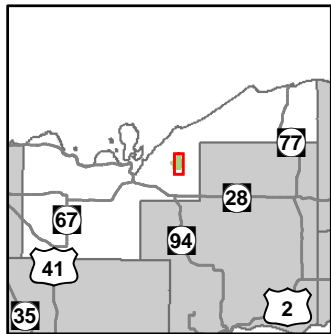


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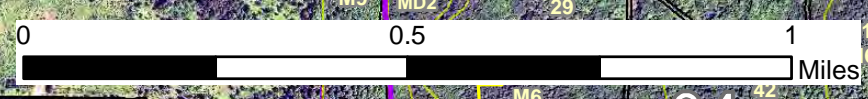


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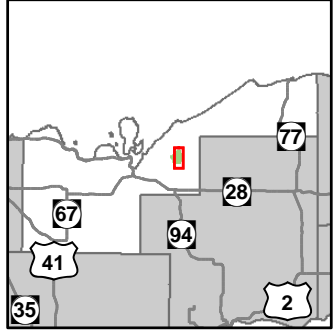
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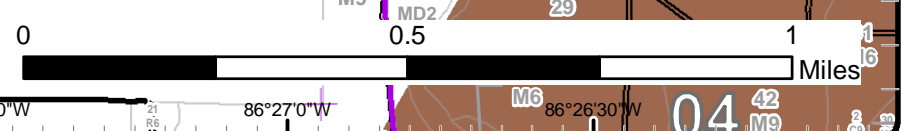
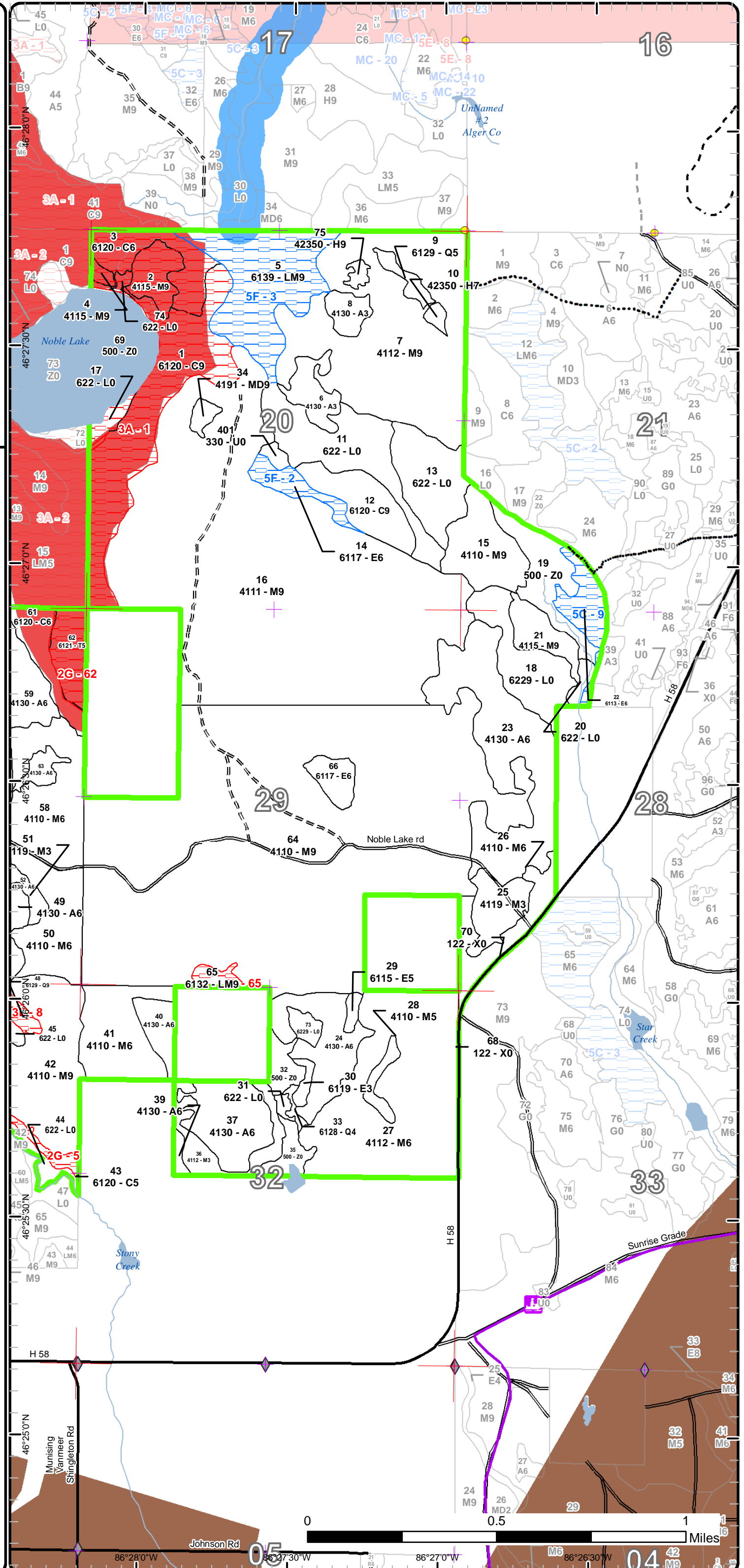
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Special Conservation Areas & Site Conditions Map

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- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Conservation Values incompatible with harvest at this time
- 3L: Other wildlife concerns
- Stand Boundaries
- Ecological Reference Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Deer Winter Range
- Contiguous Resource Area



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	18	18	151	97	0	13	0	0	0	0	0	0	0	0	0	0	0	295
Cedar	0	0	0	0	0	0	0	0	0	0	13	92	21	0	0	0	0	0	126
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
Herbaceous Openland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Low-Density Trees	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Conifers	0	0	0	0	0	0	0	8	0	12	1	0	0	0	0	0	0	4	25
Lowland Deciduous	0	0	0	3	0	0	10	0	23	0	0	0	0	0	0	0	0	0	35
Lowland Mixed Forest	0	0	0	0	0	0	0	0	52	4	0	0	0	0	0	0	0	0	56
Lowland Shrub	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
Northern Hardwood	0	0	0	6	29	0	0	0	216	156	0	0	0	0	0	0	0	853	1259
Tamarack	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	13
Urban	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Water	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69
Total	210	18	18	160	126	0	13	18	0	294	172	27	92	21	0	0	2	859	2026



Report 2 – Treatment Summary

Shingleton Mgt. Unit

Year of Entry: 2020

Acres of Harvest

Compartment 178

Total Compartment Acres: 2,029

Commercial Harvest - 807
 Harvests with Site Condition - 0
 Next Step Harvest - 0
 Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	10	0	0	0	0	0	0	0	0	10
Herbaceous Openland	4	0	0	0	0	0	0	0	0	4
Mixed Upland Deciduous	3	0	0	0	0	0	0	0	0	3
Northern Hardwood	0	731	0	0	0	59	0	0	0	790
Total	17	731	0	0	0	59	0	0	0	807

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	807	0	0	0	0	0	87	0	0	894
Next Step	0	0	0	0	0	0	748	0	0	748
Total	807	0	0	0	0	0	835	0	0	1642



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
11	41178011-Monitor	38.3	622 - Lowland Shrub	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Intermediate)	613 - Lowland Mixed Forest	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Natural regeneration survey per work instructions.

Specs:

Next Step

Treatments:

Acceptable mix of lowland hardwoods and conifers

Regen:

Other Percent to Treat = 100%

Comment:

Proposed Start Date: 2 /20/2023

15	41178015-Monitor	23.3	4110 - Sugar Maple Association	Sawtimber Well	93	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 regeneration survey per work instructions.

Specs:

Next Step

Treatments:

Acceptable Maple, cherry, birch, white spruce, balsam fir, white pine, hemlock.

Regen:

Other Percent to Treat = 100%

Comment:

Proposed Start Date: 10/1 /2023

16	41178016-Cut	315.4	4111 - S.Maple, Hard Mast Association	Sawtimber Well	92	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Thin to 80 basal area following The Complete Marker. If possible try to create canopy openings around the birch and black cherry to encourage regeneration of those species. Leave some of the healthier beech or large wildlife beech. About 6 acres near the center of the stand just off the main north/south road contains up to 50-70% beech. Mark most of these beech while leaving around 2-3 beech per acre.

Specs:

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Sugar maple, red maple, paper birch, yellow birch, beech, basswood, balsam fir, white spruce, white pine, black cherry.

Regen:

Other 1 acre was excluded on the north end, this area looks like it was clear cut in last sale with 15' tall aspen growing there.

Comment:

Proposed Start Date: 10/1 /2019

18	41178018-Monitor	25.8	6229 - Mixed lowland shrub	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Intermediate)	6117 - Lowland Deciduous, Mixed Coniferous	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Cut in winter of 2016.

Specs:

Next Step

Treatments:

Acceptable mix of conifers and lowland hardwoods

Regen:

Other

Comment:

Proposed Start Date: 1 /1 /2021



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
34	41178034-Cut	3.0	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	88	81-110	Harvest	Clearcut with Retention	4191 - Mixed Upland Deciduous with Conifer	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Clear cut leaving black cherry as reserve. Cut all deciduous to 2" dbh and all conifer to 4" dbh. Try to mark a few of the mature aspen as leave trees
Specs: either as part of the sale line or a few marked with green paint.

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Paper birch, aspen, balsam fir, white spruce, red maple, sugar maple, white pine, beech.

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

41	41178041-Cut	30.2	4110 - Sugar Maple Association	Poletimber Well	82	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Thin to 80 basal area following The Complete Marker. Leave a few smooth bark/or large wildlife beech. Try to increase regeneration of lesser occurring species such as cherry. Just south of the grassy opening in the sw corner is a pocket of 9" aspen that could be marked to create a small aspen regeneration area.

Next Step

Treatments:

Acceptable Maple, black cherry, paper birch, yellow birch, aspen, balsam fir, white spruce, hemlock, white pine.

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

50	41178050-Cut	28.6	4110 - Sugar Maple Association	Poletimber Well	83	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Thin to 80 basal area following The Complete Marker. Leave some beech with smooth bark/or wildlife trees. Try to increase regeneration of lesser occurring species such as cherry.

Next Step

Treatments:

Acceptable Maple, black cherry, basswood, beech, paper birch, yellow birch, aspen, balsam fir, white spruce, hemlock.

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

60	41178060-Cut	3.8	4112 - Maple, Beech, Cherry Association	Poletimber Well	81	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Thin stand to 70-90 BA following The Complete Marker. Leave a few smooth bark or wildlife beech. Provide regeneration gaps or enhance regen gaps for current advanced regeneration.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Sugar and red maple, beech, yellow and paper birch, hemlock, balsam fir, white spruce, white pine.

Regen:

Other

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
64	41178064-Cut	412.0	4110 - Sugar Maple Association	Sawtimber Well	92	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Mark stand to 80 BA following The Complete Marker. Retain some beech with the smooth bark and wildlife trees. Some larger canopy gaps may be desirable around the cherry and yellow birch if possible to regenerate those species and enhance any advanced regeneration that may be present.

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

Acceptable Maple, cherry, yellow and paper birch, balsam fir, white spruce, beech, aspen, basswood, hemlock, white pine.
Regen:

Other Keep logging operations out of the drainage ditch that is north of stand 65 Q6. It's a large ditch and visible with leaf off imagery. Looks like there's
Comment: some old roads on each side to avoid going through the ditch.

Proposed Start Date: 10/1 /2019

402	41178402-Cut	10.1	4134 - Aspen, Spruce/Fir	Poletimber Medium	51	51-80	Harvest	Clearcut	3303 - Mixed Low Density Trees		Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Cut all species to 2" DBH to re-establish the grassy opening. Leave a 300' buffer for Stoney Creek. No other retention needed.
Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable grass and mixed conifer and deciduous low density trees
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

403	41178403-Cut	3.6	3102 - Grass	Nonstocked		Unspec ified	Harvest	Clearcut	3102 - Grass		Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Cut stand for wildlife opening. Cut all trees except apple, juneberry, and elm. Do not cut any aspen in the south east corner near the Stoney creek
Specs: pond.

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

Acceptable none
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2020

**Total Treatment
Acreage Proposed: 894.1**

Report 4 – Site Conditions

Shingleton Mgt. Unit
Steve Touvila : Examiner

Compartment: 178
Year of Entry: 2020

Availability for Management

Total Acres	Acres Available	Acres Available With Condition	Acres Not Available
297	276	0	21

Dominant Site Conditions

	Total Acres	Acres Available	Acres Available With Condition	Acres Not Available	Dominant Site Conditions							
					5C	5F	2G	3A	3J	3L	5E	
297	276	0	21	Aspen					2			18
126	21	0	106	Cedar			17	86	2			
4	4	0	0	Hemlock								
4	4	0	0	Herbaceous Openland								
2	2	0	0	Low-Density Trees								
26	6	0	20	Lowland Conifers					8	12		
35	12	23	0	Lowland Deciduous	14	9						
56	0	52	4	Lowland Mixed Forest		52				4		
133	127	0	6	Lowland Shrub				6				
3	3	0	0	Mixed Upland Deciduous								
1259	1246	0	13	Northern Hardwood				13				
13	0	0	13	Tamarack			13					
2	2	0	0	Urban								
68	68	0	0	Water								
2,028	1,772	74	182	Total Forested Acres	14	61	31	105	12	16	18	
	87%	4%	9%	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	3A: Conservation Values incompatible with harvest at this time	105	Unspecified	Unspecified	Unspecified	Unspecified
Comments: ERA							
2	Available	5F: Evaluated for Forest Health Considerations	9	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified
Comments:							

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3	Available	5F: Evaluated for Forest Health Considerations	52	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stony Creek and Stony Creek tributary.							
8	Unavailable	3L: Other wildlife concerns	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Left this the same from last inventory.							

Report 4 – Site Conditions

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9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
62	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
65	Unavailable	3L: Other wildlife concerns	4	5F: Evaluated for Forest Health Considerations	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				
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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	Type 1 and Type 2 Old Growth	Old-Growth forest (also termed primary forest, ancient forest, virgin forest, or primeval forest) is an area of forest that has few or no signs of human disturbance and that exhibits unique ecological features related to age, composition and associated structure. Old growth forests are of natural origin. They may be dominated by late successional forest species (i.e. sugar maple and American beech), or may be a very old example of a stand dominated by long-lived early- or mid-seral species (i.e. oak, or red pine).
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.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6120 - Lowland Cedar	Sawtimber Well	65.5	110	141-170	Part of ERA. Some large cedar in this stand.
2	4115 - Y.Birch, Hemlock NH	Sawtimber Well	11.4	92	111-140	Large trees with the hemlock grouped mostly on north and south ends. Some pockets of low ground with black ash growing there. The largest of the beech has now died off.
3	6120 - Lowland Cedar	Poletimber Well	20.7	110	81-110	Part of ERA. Wetter ground than the adjacent cedar stand to the south. A lot of black ash that is just under pole sized.
4	4115 - Y.Birch, Hemlock NH	Sawtimber Well	1.8	92	81-110	Ridge of hardwoods overlooking Noble Lake and surrounded by cedar. Some large yellow birch. Part of larger ERA.
5	6139 - Mixed Lowland Forest	Sawtimber Well	51.7	84	81-110	Lowland are with mature trees. Healthy stand. Vary narrow upland ridge in north central part of stand.
6	4130 - Aspen	Sapling Well	11.2	14	Immature	Cut in 04 under Rainbow Hardwoods # 410140201. Regeneration looks good.
7	4112 - Maple, Beech, Cherry Association	Sawtimber Well	117.8	92	81-110	Selection cut in 2004 as part of Rainbow Hardwood #410140201. Full stocking of maple and to a lesser extent beech regeneration.
8	4130 - Aspen	Sapling Well	6.9	14	Immature	Cut in 04 as part of Rainbow Hardwoods #410140201. Regeneration looks good.
9	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	4.4	105	51-80	Lowland MC stand that gets wetter and more sparse in the south half of the stand. There's a good amount of variable size mixed regeneration including hemlock.
10	42350 - Upland Hemlock	Sawtimber Poor	2.0	155	1-50	Cut in 04 as part of Rainbow Hardwoods #410140201, leaving the hemlock and a few red maple. Regeneration coming in thick and looks good.
12	6120 - Lowland Cedar	Sawtimber Well	20.9	121	201+	Very dense cedar stand. Nice straight and tall cedar.
14	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	9.1	82	81-110	Hardwood/conifer mix on terrain that is lower & wetter than the adjacent hardwoods. Stand looks healthy. Some younger 7" yellow birch doing good.
15	4110 - Sugar Maple Association	Sawtimber Well	24.5	93	81-110	Stand was harvested in February of 2018 as part of 178 Mix #410251001.
16	4111 - S.Maple, Hard Mast Association	Sawtimber Well	315.4	92	111-140	Last thinned in 2004-2005. Mature beech makes up approximately 10% of the stand and it now has beech bark disease.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4115 - Y.Birch, Hemlock NH	Sawtimber Well	11.7	92	81-110	Southern leg is mostly black cherry logs. Hemlock is scattered throughout the stand.
22	6113 - Lowland Maple	Poletimber Well	13.6	82	81-110	Red maple is the dominant canopy. There's hemlock regeneration evenly distributed throughout the entire stand, as well as a thick balsam fir sub-canopy.
23	4130 - Aspen	Poletimber Well	68.9	31	51-80	Aspen regeneration is growing quick.
24	4130 - Aspen	Poletimber Well	27.3	26	51-80	Regeneration looks good. Some lower ground in northern part of the stand.
25	4119 - Mixed Northern Hardwoods	Sapling Well	14.7	31	Immature	Regeneration looking good with some grassy openings on west side of road. Some pockets of aspen.
26	4110 - Sugar Maple Association	Poletimber Well	17.7	86	81-110	Good diameter distribution within the saplings to the logs.
27	4112 - Maple, Beech, Cherry Association	Poletimber Well	96.6	82	81-110	Mixed hardwood stand of varied quality. Some larger blocks of black cherry in the south-central part of stand, a lot of black knot in those trees. Most of the aspen is in the southeastern part of the stand. Best quality hardwoods is on a higher ridge west of stand 28.
28	4110 - Sugar Maple Association	Poletimber Medium	4.6	82	1-50	Stand was cut leaving maple and basswood; with aspen, cherry, and maple regenerating.
29	6115 - Lowland Ash	Poletimber Medium	2.1	68	51-80	Lowland stand, had more yellow birch component but most of that has died off. A lot of sub canopy 3-4" black ash is now recruiting towards the canopy.
30	6119 - Mixed Lowland Deciduous Forest	Sapling Well	2.5	26	Immature	Lowland hardwoods stand with good thick regeneration.
33	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Poor	1.4	103	1-50	
34	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	3.0	88	81-110	Pocket of mature conifer and aspen. Some of the aspen is xlog size.
36	4112 - Maple, Beech, Cherry Association	Sapling Well	14.4	32	Immature	Young hardwoods with a few residuals mixed in.
37	4130 - Aspen	Poletimber Well	26.3	32	51-80	Stand doing very good. Some residual hardwoods left from previous harvest.
39	4130 - Aspen	Poletimber Well	2.2	32	51-80	Stand looking good. Some residual hardwoods left from previous sale.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
40	4130 - Aspen	Poletimber Well	9.0	26	51-80	Stand regeneration looks good. Still plenty of saplings.
41	4110 - Sugar Maple Association	Poletimber Well	30.2	82	111-140	Basal area averages 122, some spots up to 160.
42	4110 - Sugar Maple Association	Sawtimber Well	55.9	85	81-110	Overall basal area of 92. The south edge has a few hemlock. And the south and west edges contains some balsam fir and red maple.
43	6120 - Lowland Cedar	Poletimber Medium	6.1	111	1-50	Southern part of stand is too wet to operate in and the larger cedar has died off, it may have been flooded at some point. The north end of the stand is a dense cedar stand for good wildlife cover.
48	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	11.9	92	111-140	The stand is healthy but a few large balsam fir have snapped in half. The south end of the stand is about 1.7 acres of black spruce with a few other species. From there north to the top end of the stand is moderately dense to dense stand of large cedar with BA's from 120-190; with a couple lighter gaps in places.
49	4130 - Aspen	Poletimber Well	17.3	29	51-80	Good thick regeneration.
50	4110 - Sugar Maple Association	Poletimber Well	28.6	83	111-140	Sub-canopy has recruited into pole size with a very tight canopy. A few paper birch on north end. Some widely scattered very large aspen throughout the stand. Basal area averages 125.
51	4119 - Mixed Northern Hardwoods	Sapling Well	6.3	29	Immature	Good regeneration coming back.
52	4130 - Aspen	Poletimber Well	7.0	29	51-80	Regeneration looks good.
54	4130 - Aspen	Sapling Well	18.3	4	Immature	Cut as part of 178 Mix sale #410251001 in 2014. Elm was left as reserve. Regeneration coming in thick, looks good.
55	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	8.2	67	81-110	Retain as buffer for Stony Creek on south end. A flowing Stony Creek tributary runs down the middle off the rest of the stand. The north end of the stand is very wet with a pocket of smaller black as were the tributary comes together and flows south.
56	4119 - Mixed Northern Hardwoods	Sawtimber Well	13.9	82	51-80	Stand was select cut in 2014 as part of 178 Mix #410251001. Regeneration looks good with a mix of species including aspen regenerating throughout the stand.
57	4139 - Aspen, Mixed Deciduous	Poletimber Well	48.9	28	51-80	Thick regeneration has reached pole size. Small area of lower ground north of stand 55 Q6. Some maples were left as reserve from the last harvest.
58	4110 - Sugar Maple Association	Poletimber Well	77.8	82	81-110	Stand was cut in 2013 as part of 178 Mix #410251001. BA is 85.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
59	4130 - Aspen	Poletimber Well	36.3	29	1-50	Regeneration looking good, just entered pole size trees.
60	4112 - Maple, Beech, Cherry Association	Poletimber Well	3.8	81	81-110	Stand has a lot of advanced regeneration in it.
61	6120 - Lowland Cedar	Poletimber Well	13.3	104	111-140	More of the log sized cedar is on the north end of the stand.
62	6121 - Tamarack	Poletimber Medium	13.2	102	1-50	Tamarack is healthy.
63	4130 - Aspen	Poletimber Well	4.7	29	51-80	Stand doing very well, has entered pole sized.
64	4110 - Sugar Maple Association	Sawtimber Well	412.0	92	111-140	Good quality stand was last thinned in 1998. Just a few large beech widely scattered throughout the stand, also with a pocket of beech concentrated near the northeast side of stand 66. The beech canopy's have no dieback yet but the bark is showing beech bark disease now.
65	6132 - Mixed Lowland Forest with Cedar	Sawtimber Well	3.9	98	111-140	Retain for diversity/wildlife habitat.
66	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	7.8	67	81-110	Low quality maples, about 30% of the maples have significant top dieback. The balsam fir looks healthy so far.
75	42350 - Upland Hemlock	Sawtimber Well	2.1	155	201+	Nice dense hemlock stand within the M9 stand.
402	4134 - Aspen, Spruce/Fir	Poletimber Medium	12.5	51	51-80	Grassy opening that has filled in over the years. Can reset this as an opening again.



Stand	Cover Type	Acres	Managed Site	General Comments:
11	622 - Lowland Shrub	38.3		
13	622 - Lowland Shrub	27.2	No	Beaver flooding has killed the timber in this area, but pockets of regen and lowland brush have become re-established on some of the higher spots.
17	622 - Lowland Shrub	4.4	No	
18	6229 - Mixed lowland shrub	25.8		<p>OPIC - FMD: Soils - Munising calcareous substratum - Ensley complex, 0-6% slope Habitat - AVO/ATD on the dryer ground, with FI on the swales. Mixed lowland hardwood/conifer stand on a gently rolling upland/swale complex. Mixed hardwood logs include sugar maple, yellow birch, beech, black cherry & black ash. Mixed hardwood pulp includes cherry, ash & beech. A few white pine are also present. Cut now reserving the hemlock & yellow birch. Acceptable regeneration will include all commercial species present. Protect vernal ponds.</p> <p>7/13/11 BB Sale is now on proposal 25-10, 178 Mix, Unit 5, actual acres = 14, Residual BA = Hemlock 32.3 sq ft, yellow birch 19.2 sq ft, cherry 3.8, white pine .8 The acreage was reduced drastically to protect vernal ponds and wet ground. Stand was coded as shelterwood prep but actually should be considered shelterwood with reserves since the reserves will not be removed. Make certain the regen in this stand is tracked once the sale is complete. 12/3/12 RFT Stand is now under contract 41-025-10-01 178 Mix. 10/27/16 Stand was cut in the winter of 2016/2017</p>
19	500 - Water	21.2	No	OPIC - FMD: Soils - Histosols and aquents, pondedHabitat - unclassifiedPond/flooded lowland area - headwaters of Star Creek. Water level varies seasonally.
20	622 - Lowland Shrub	2.8	No	
31	622 - Lowland Shrub	1.4	No	Seasonally flooded lowland brush/marsh grass.
32	500 - Water	6.8	No	Beaver pond - flooded dead timber
35	500 - Water	7.0	No	
44	622 - Lowland Shrub	5.1	No	
45	622 - Lowland Shrub	4.1	No	
46	622 - Lowland Shrub	8.8	No	
47	500 - Water	3.0	No	



Stand	Cover Type	Acres	Managed Site	General Comments:
53	622 - Lowland Shrub	10.0	No	
67	500 - Water	2.0	No	Pond - headwaters of Stoney Creek
68	122 - Road/Parking Lot	1.2	No	
69	500 - Water	29.1	No	Noble Lake
70	122 - Road/Parking Lot	0.5	No	
73	6229 - Mixed lowland shrub	3.7	No	
74	622 - Lowland Shrub	1.3	No	Lowland adjacent to Noble Lake. Part of ERA area.
401	330 - Low-Density Trees	2.2	No	Small grassy opening that is slowly filling in.
403	3102 - Grass	3.6	Yes	Stand is under prescription to maintain the grassy opening.