



Compartment Review Presentation

Atlanta Forest Management Unit

Compartment 54089

Entry Year 2019

Acreage: 1,555

County Alpena

Management Area: Alpena Lake Plain

Revision Date: 2017-05-24

Stand Examiner: Dale Parris

Legal Description:

T30N R08E Section 5 N2SW, N2SE; Section 8; Section 17; Section 9 SWNW, SW4; Section 16 N2NW, SWNW, SWSW; Section 10 NENW; Section 11 SW4, W2SE

Identified Planning Goals:

All harvests have been prescribed following the direction indicated in the Alpena Lake Plains Management Area (ALPMA) Plan and Timber Analysis. In all cases the unique characteristics of the individual stand was taken into consideration when writing the prescription. The timber analysis completed on the ALPMA indicated that the lowland aspen, aspen, tamarack, lowland spruce-fir, and lowland conifer covertypes be of focus for harvest for the purpose of balancing the age classes of these covertypes across the Management Area (MA). Wildlife, recreation, aesthetics, adjacent stands, and the larger landscape were considered in all management decisions.

Soil and topography:

Approximately 90 percent of the land within Compartment 89 west and north of Devils Lake is the very poorly drained Lupton and Tawas mucks. The ponded areas within the compartment often have Histosol and Aquent soils. The lesser higher ground areas, west and north of Devils Lake, are comprised of Rousseau fine sand (well drained), Proper-Deford-Rousseau complex (mostly rapidly drained), and the Crowell-Proper fine sands (somewhat excessively drained to rapidly drained) soils.

To the east of Devils Lake from west to east running parallel with the lake the soils are Deford muck (very poorly drained; along the lake shore), Au Gres sand (somewhat poorly drained; narrow strip), Grayling sand (excessively drained, wide strip), and Tawas-Au Gres complex (somewhat to very poorly drained; wide strip).

The 64 acres at the end of Partridge Point on the Lake Huron shore has a matrix of soils consisting of ponded Histosols and Aquents, Allendale-Dorval-Blue Lake complex (well drained to very poorly drained), Potogannissing silt loam (somewhat poorly drained), and Namur channery silt loam (well drained) soils.

The 160 acres to the north has soils comprised of the very poorly drained Lupton and Tawas mucks in the lowland areas. The higher ground is the Proper-Deford-Rousseau complex (mostly rapidly drained) soils.

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

The western and southern edges of Compartment 89 are adjacent to more state land. The northern and eastern portions of the compartment is adjacent to both residential and recreational properties.

Unique Natural Features:

The eastern edge of the main body of Compartment 89 is part of the Squaw Bay Wooded Dune and Swale complex. This complex consists of narrow, alternating, high and low ground parallel ridges that resulted from the receding Lake Huron shoreline. Devils Lake within the compartment, a shallow lake running parallel to the Lake Huron shoreline, also resulted as the Lake Huron shoreline receded through the decades.

Archeological, Historical, and Cultural Features:

The State Historic Preservation Office (SHPO) did have hits within Compartment 89. For further information, contact the SHPO.

Special Management Designations or Considerations:

Compartment 89 has the Squaw Bay Wooded Dune and Swale (SBWDS) complex Ecological Reference Area (ERA) along its eastern edge. All forest management in and around this ERA should reference the SBWDS ERA plan.

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations:

This compartment is an excellent opportunity to manage for wildlife. It is part of a multiple compartment, large scale block of public land providing contiguous wildlife pathways that are necessary for many of our large game animals such as black bear. There is also a large lake edge which is an excellent non-developed area for wildlife species. Habitat components of cedar and wetland complexes as well as small pockets of aspen provide food and cover for multiple species at a variety of age classes. We are working to maintain winter cover areas as well as keep a good age rotation of aspen in this compartment with consideration of adjacent compartments. Species which benefit from our management include white-tailed deer, black bear, ruffed grouse, woodcock, and many other game and non-game species.

Mineral Resource and Development Concerns and/or Restrictions

Sections 5, 8-9, & 16-17, T30N R8E, Alpena County

There is no metallic mineral potential in this part of the state. Active sand/gravel pits are not located in the area and, due to extensive wetlands and other factors, potential appears to be limited. This area has not had development for the Antrim Shale because the Antrim is thin or absent in this area and production is unlikely. There is no known potential for other oil and gas reservoirs in this area, and there are currently no active leases in the area.

Vehicle Access:

In the northern 160 acres of Compartment 89, at the south end of Lay Road, trails are present that access both the eastern and western portions of this state land. These trails are not accessible to the conventional vehicle due to being overgrown and having overall poor road conditions.

The portion of Compartment 89 to the west and north of Devils Lake is moderately accessibly via Devils Lake Trail. Due to most of this area being lowlands, only a few scattered foot trails exist for reaching areas off of the Devils Lake Trails.

The area of Compartment 89 east of Devils Lake and west of Piper Road is accessible via one access point off of Piper Road running west over the railroad tracks towards Devils Lake. A system of ORV trails offers good accessibility to conventional vehicles and ORVs alike once west of the railroad tracks.

West of Piper Road, Compartment 89 has limited accessibility. This limited accessibility provides protection to the Squaw Bay Wooded Dune and Swale ERA. Only one east-west running forest road provides access to this ERA off of Piper Road.

Survey Needs:

Surveys will likely be needed, prior to timber sale prep, along the northern and southern borders of the 160 acres at the south end of Lay Road.

Surveys will possibly be needed in the southwest corner of Section 16 in T30N R08E to facilitate timber sale prep.

Recreational Facilities and Opportunities:

Opportunities for hunting rabbit, grouse, whitetail deer, ducks, geese, squirrels, and bear are present in Compartment 89. All regulations set forth by the Michigan Department of Natural Resources are to be adhered to by hunters.

On the west side of Devils Lake, snowmobiling opportunities exist on the Devils Lake Trail which is part of a greater trail system. On the east side of Devils Lake, a small isolated ORV trail system is present.

Fire Protection:

Fire response to Compartment 89 will be covered by the Alpena DNR office as well as the Alpena Fire Department.

Additional Compartment Information:

A majority of the land in Compartment 89 west and north of Devils Lake is lowland conifer, most of which is cedar dominated. Approximately 40 years ago a number of strip cuts were completed in lowland cedar stands. These strip cuts have regenerated well, mostly to lowland conifer with some deciduous. Cedar makes up 40 percent or more of the regeneration in all of these strip cuts.

In the northern 160 acres of Compartment 89, south of Lay Road, unique natural pine stands exist at both the west and east ends.

Trash and yard waste dumping has been an on going issue in the Piper Road area of this compartment. Any dumping should be reported to the Michigan DNR Law Enforcement Division.

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:

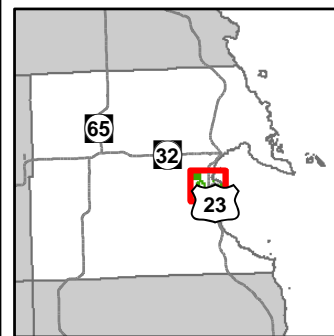
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

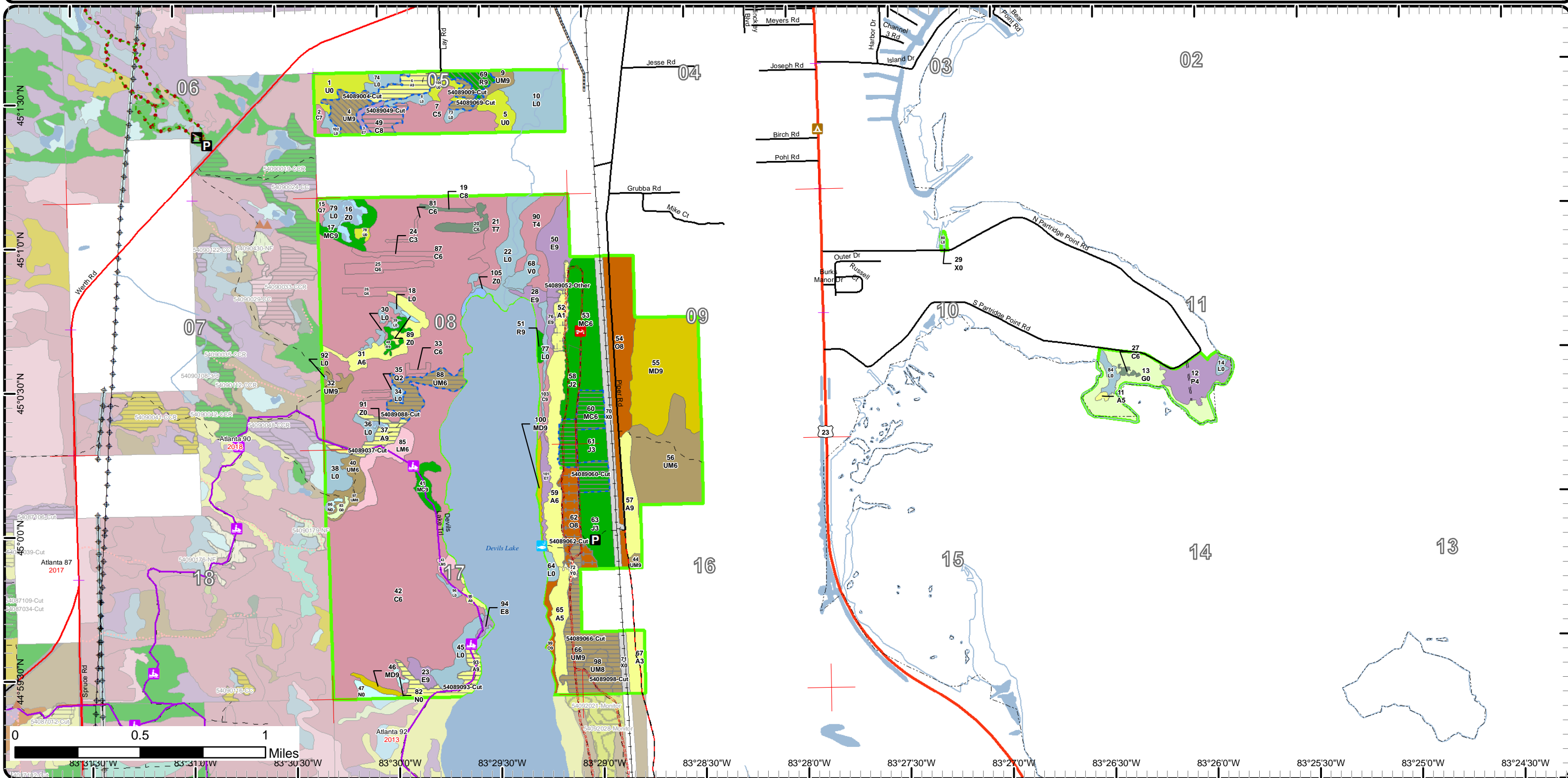
Compartment: 89
T30N, R08E, Sec: 5, 8, 9, 11, 16, 17

County: Alpena
Unit: Atlanta
Mgmt Area: Alpena Lake Plain

YOE: 2019
Acres: 1554.9 GIS Calculated
Examiner: Dale Parris
Map Revised: 10/3/2017
Map Phase: Post-Review

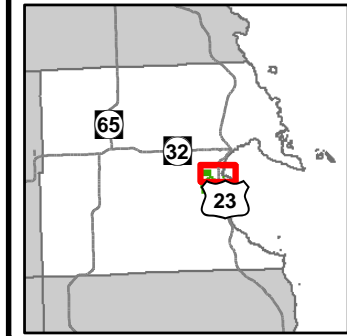


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|--------------------------------|-----------------------------------|-----------------------------------|--------------------------|
| — Miris Corners | — Gravel Roads | ■ 412 - Oak Types | ■ 622 - Lowland Shrub |
| ⊕ Remonumented Section Corners | — County Poor Dirt Roads | ■ 413 - Aspen | ■ 623 - Emergent Wetland |
| — Counties | — Poor Dirt Roads | ■ 419 - Mixed Upland Deciduous | ■ 710 - Sand/Soil |
| ▲ Campground | ⋯ Closed | ■ 422 - Natural Pines | ■ Lakes |
| 🏞 Fishing Access Site | — Active Railroads | ■ 423 - Other Upland Conifers | |
| P Parking Lot | — Streams | ■ 430 - Upland Mixed Forest | |
| 🚙 ORV Routes | — Lakes and Rivers All | ■ 611 - Lowland Deciduous Forest | |
| 🏂 Snowmobile Trails | — Pipeline | ■ 612 - Lowland Coniferous Forest | |
| — Designated ORV Route | — State Boundary | ■ 613 - Lowland Mixed Forest | |
| — Designated Snowmobile Trails | — Compartment Boundary | ■ 110 - Low Intensity Urban | |
| — Highway | — Treatments with Site Conditions | ■ 122 - Roads/Parking Lot | |
| — County Paved Roads | — Other Harvest - See Comments | ■ 310 - Herbaceous Openland | |
| — Paved Roads | — Other Treatment - See Comments | ■ 330 - Low Density Trees | |
| | — Harvest, Overstory Removal | ■ 500 - Water | |
| | | ■ 621 - Floating Aquatic | |

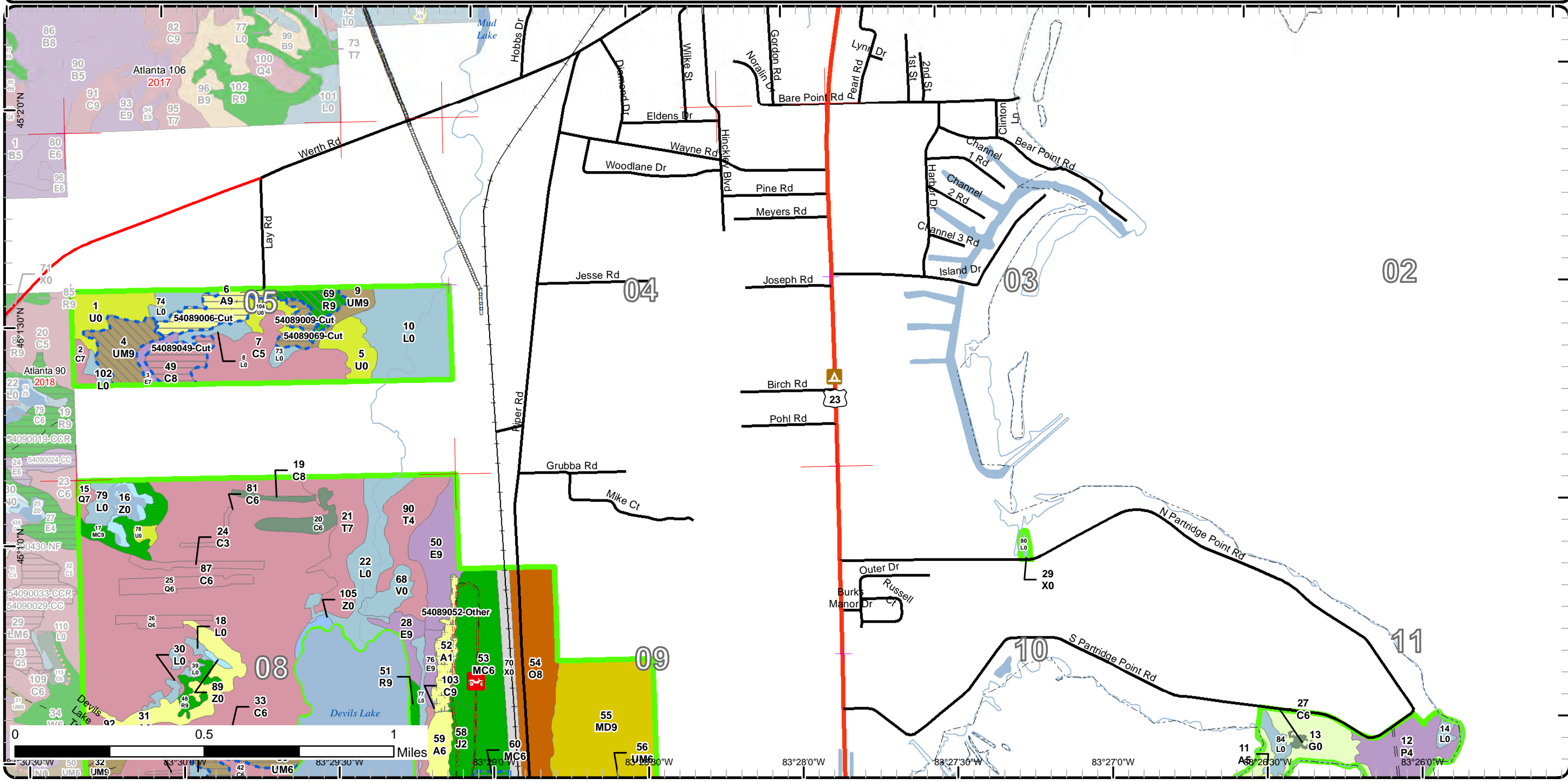


Cover Type & Treatments Map

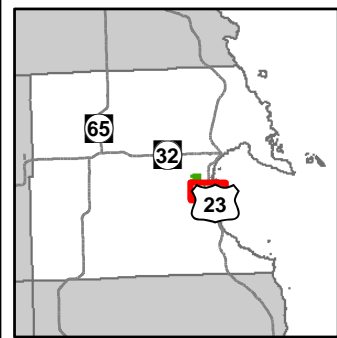
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| — Miris Corners | — Lakes and Rivers All | — 612 - Lowland Coniferous Forest |
| + Remonumented Section Corners | — Pipeline | — 110 - Low Intensity Urban |
| — Counties | — State Boundary | — 122 - Roads/Parking Lot |
| ▲ Campground | — Compartment Boundary | — 310 - Herbaceous Openland |
| — ORV Routes | — Treatments with Site Conditions | — 330 - Low Density Trees |
| — Designated ORV Route | — Other Harvest - See Comments | — 500 - Water |
| — Highway | — Other Treatment - See Comments | — 621 - Floating Aquatic |
| — County Paved Roads | — Clearcut (w/Reserves) | — 622 - Lowland Shrub |
| — Paved Roads | — 412 - Oak Types | — Lakes |
| — Gravel Roads | — 413 - Aspen | |
| — Poor Dirt Roads | — 419 - Mixed Upland Deciduous | |
| — Closed | — 422 - Natural Pines | |
| — Active Railroads | — 423 - Other Upland Conifers | |
| — Streams | — 430 - Upland Mixed Forest | |
| | — 611 - Lowland Deciduous Forest | |

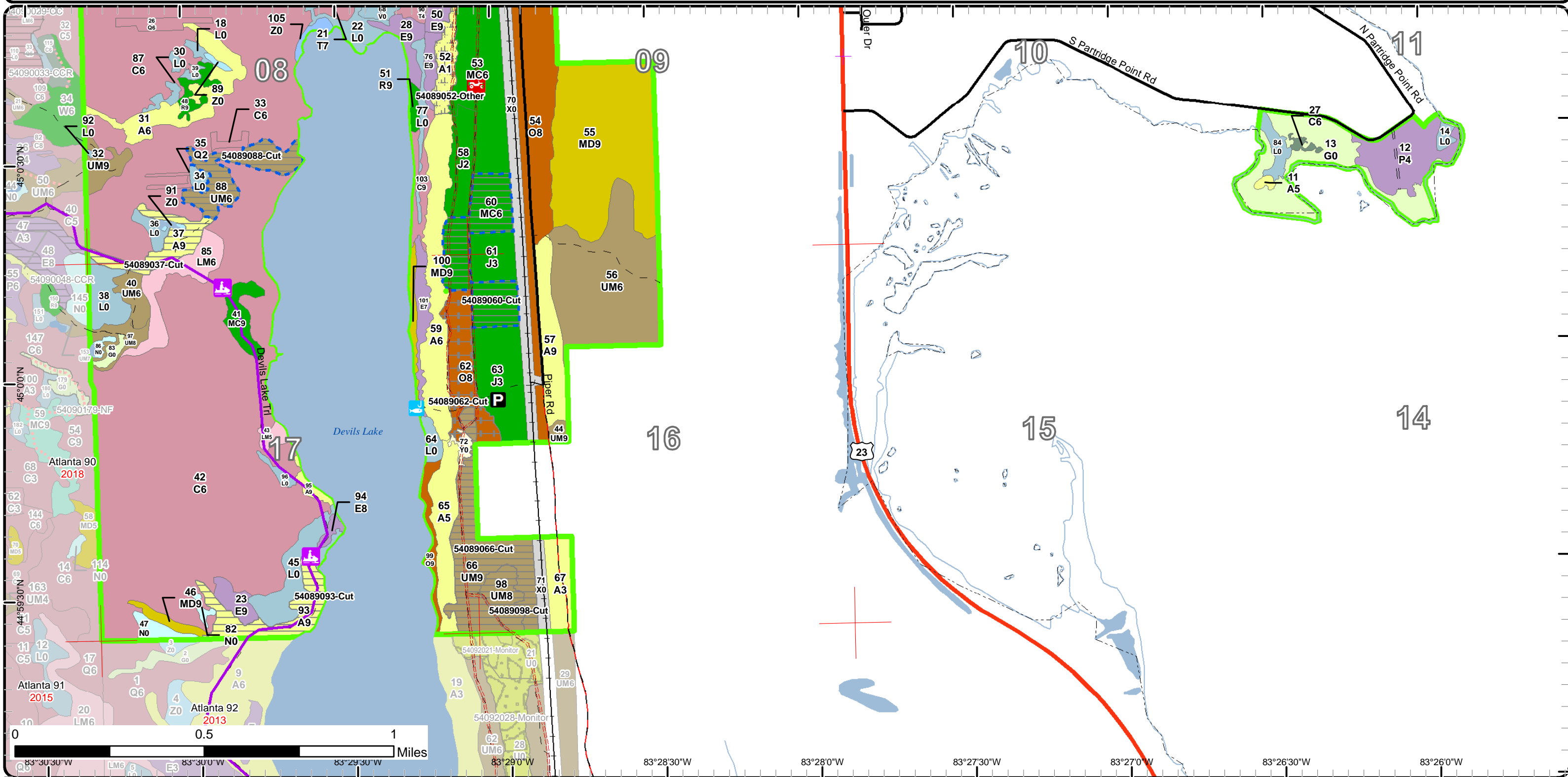


Cover Type & Treatments Map



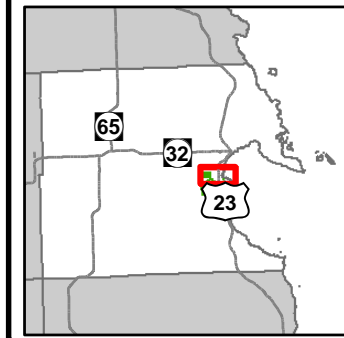
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|--|---|---|
| <ul style="list-style-type: none"> — Miris Corners — Remonumented Section Corners — Counties — Fishing Access Site — Parking Lot — ORV Routes — Snowmobile Trails — Designated ORV Route — Designated Snowmobile Trails — Highway — Paved Roads — Gravel Roads — County Poor Dirt Roads | <ul style="list-style-type: none"> — Poor Dirt Roads — Closed — Active Railroads — Streams — Lakes and Rivers All — State Boundary — Compartment Boundary — Treatments with Site Conditions — Other Treatment - See Comments — Clearcut (w/Reserves) — Harvest, Overstory Removal — 412 - Oak Types — 413 - Aspen — 419 - Mixed Upland Deciduous — 422 - Natural Pines | <ul style="list-style-type: none"> 423 - Other Upland Conifers 430 - Upland Mixed Forest 611 - Lowland Deciduous Forest 612 - Lowland Coniferous Forest 613 - Lowland Mixed Forest 110 - Low Intensity Urban 310 - Herbaceous Openland 500 - Water 621 - Floating Aquatic 622 - Lowland Shrub 623 - Emergent Wetland 710 - Sand/Soil Lakes |
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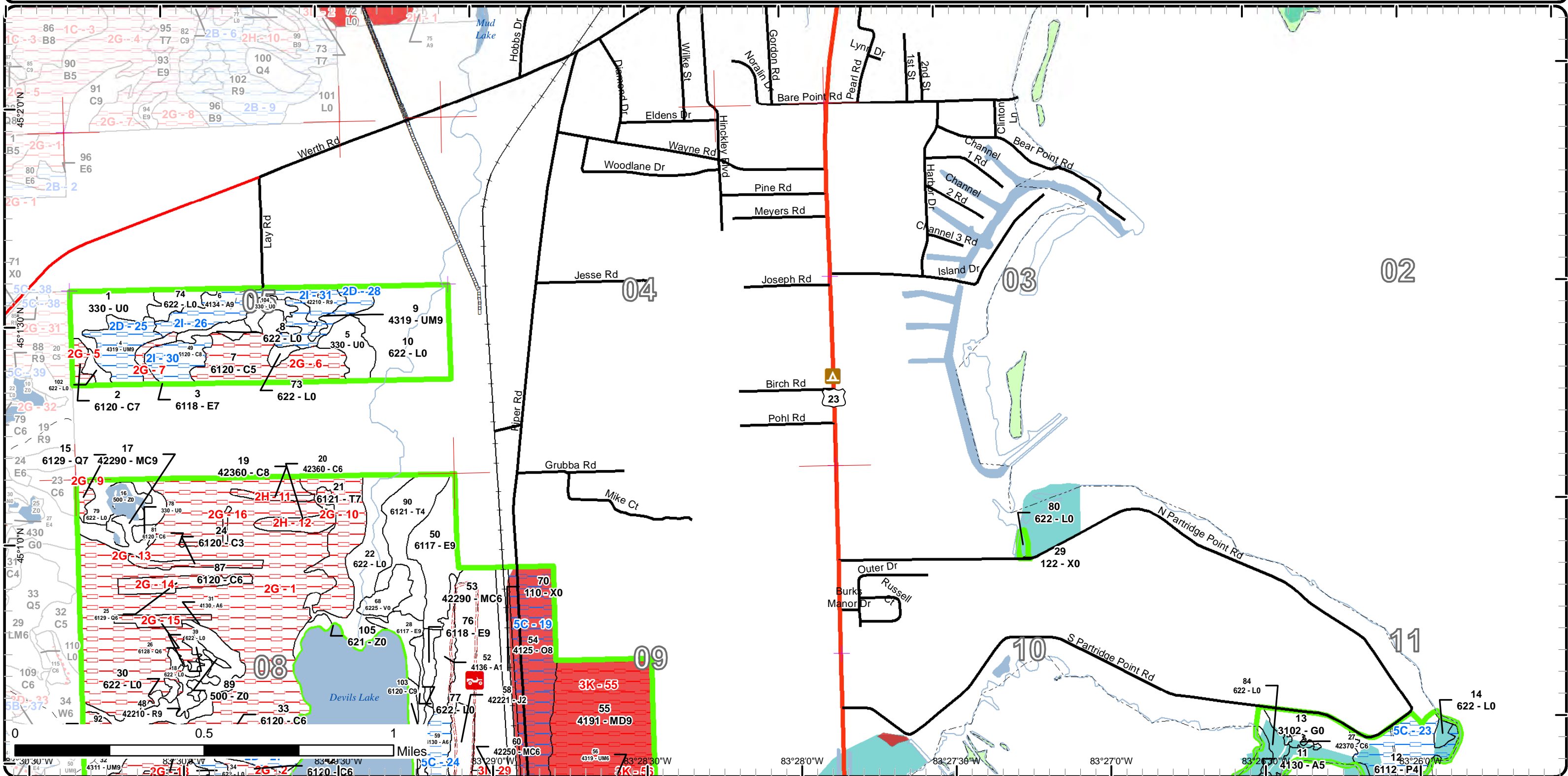


Special Conservation Areas & Site Conditions Map

Compartment: 89
 T30N, R08E, Sec: 5, 8, 9, 11, 16, 17
 County: Alpena
 Unit: Atlanta
 Mgmt Area: Alpena Lake Plain
 YOE: 2019
 Acres: 1554.9 GIS Calculated
 Examiner: Dale Parris
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- Miris Corners
- + Remonumented Section Corners
- Counties
- Campground
- ORV Routes
- Designated ORV Route
- Highway
- County Paved Roads
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Closed
- Active Railroads
- Streams
- Lakes and Rivers All
- Pipeline
- State Boundary
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 2D: Portable Bridge Needed (Dept. bridge will be adequate)
- 2I: Survey needed
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3K: Rare or unique landforms
- Stand Boundaries
- Ecological Reference Areas
- Coastal Environmental Areas
- Great Lakes Islands



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	20	0	0	19	0	63	12	19	0	0	11	0	0	0	0	0	0	144
Bog	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Cedar	0	0	0	0	6	3	0	0	0	271	238	2	44	3	0	0	0	0	566
Herbaceous Openland	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Jack Pine	0	0	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
Low-Density Trees	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	21
Lowland Conifers	0	0	0	0	10	4	0	0	0	2	0	0	0	0	0	0	0	0	16
Lowland Deciduous	0	0	0	0	0	0	0	20	7	2	5	3	4	0	0	0	0	6	47
Lowland Mixed Forest	0	0	0	0	0	0	14	0	0	3	0	0	0	0	0	0	0	0	17
Lowland Shrub	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	125
Marsh	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	3	73	0	5	0	0	0	0	0	0	81
Natural Mixed Pines	0	0	0	0	0	38	0	0	0	39	0	0	7	0	0	0	0	0	84
Oak	0	0	0	0	0	0	0	0	0	50	18	0	7	0	0	0	0	0	74
Red Pine	0	0	0	0	0	0	0	4	0	7	0	0	2	0	0	0	0	0	13
Sand, Soil	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Tamarack	0	0	0	0	0	20	0	0	0	0	0	21	0	0	0	0	0	0	41
Upland Mixed Forest	0	0	0	0	6	0	6	16	0	118	9	2	5	0	0	0	0	0	162
Urban	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Water	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Total	248	20	0	44	41	65	104	52	29	565	270	44	69	3	0	0	0	6	1556



Report 2 – Treatment Summary

Atlanta Mgt. Unit

Year of Entry: 2019

Acres of Harvest

Compartment 89

Total Compartment Acres: 1,555

Commercial Harvest - 90
 Harvests with Site Condition - 92
 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	39	0	0	0	0	0	0	0	0	39
Cedar	10	0	0	0	0	0	0	0	0	10
Natural Mixed Pines	29	0	0	0	0	0	0	0	0	29
Oak	0	0	0	0	0	18	0	0	0	18
Red Pine	0	0	0	0	0	0	0	7	0	7
Upland Mixed Forest	65	0	0	0	0	0	0	14	0	79
Total	143	0	0	0	0	18	0	21	0	182

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	182	0	0	0	0	0	9	0	0	190
Next Step	0	103	51	0	0	51	242	0	0	447
Total	182	103	51	0	0	51	242	9	0	637



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
4	54089004-Cut	13.5	4319 - Mixed Upland Forest	Sawtimber Well	83	81-110	Harvest	Other - Specify	413 - Aspen	Two-Aged	Draft Field Boundary

Habitat Cut: No **Site Condition:** Portable Bridge Needed

Prescription Clear-cut with retention / Mark to thin the red and white pine.

Specs:

Do not harvest any oak.

Protect the pine and oak regen to maintain future stand diversity.

Require a shortwood operation to protect slopes and prevent erosion.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Regen: Acceptable regeneration is a medium to well stocked mix of aspen, red maple, paper birch, balsam fir, pine, and oak.

Other Comment:

Steep slopes with remnant pine and stand representative species are good options for long term retention placement.

Access to this stand has its difficulties, due to the narrow hilly forest road and a run-off impeding access centrally located in Stand 6. Topography will place some limitations on where wood can be forwarded out of the stand.

To forward wood over the run-off, place large rock in the run-off where the forwarder will cross. Place crane mats lengthwise over the large rock for the forwarder to ride over. The large rock will permit proper drainage. The large rock is to be moved to the drainage banks post harvest to prevent erosion. Future vehicle/ORV traffic will not be permitted past this drainage.

Proposed Start Date: 10/01/2018

6	54089006-Cut	11.7	4134 - Aspen, Spruce/Fir	Sawtimber Well	67	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
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Habitat Cut: No **Site Condition:** Survey Needed

Prescription Clear-cut with retention.

Specs:

Mark to retain remnant pine. Residual basal area is not to exceed 10 BA.

Do not harvest any oak.

Mark out lowland pockets. The treatment will reduce in acres accordingly.

Protect the pine and oak regen to maintain future stand diversity.

Require a shortwood operation to protect slopes and prevent erosion.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Regen: Acceptable regeneration is a medium to well stocked mix of aspen, red maple, paper birch, balsam fir, pine, and oak.

Other Comment:

Edges of the lowland pockets and the slope along the southern edge of the stand can be used as retention if deemed stand representative.

Access to this stand has its difficulties, due to the narrow hilly forest road and a run-off impeding access centrally located in Stand 6. Topography will place some limitations on where wood can be forwarded out of the stand.

To forward wood over the run-off, place large rock in the run-off where the forwarder will cross. Place crane mats lengthwise over the large rock for the forwarder to ride over. The large rock will permit proper drainage. The large rock is to be moved to the drainage banks post harvest to prevent erosion. Future vehicle/ORV traffic will not be permitted past this drainage.

Proposed Start Date: 10/01/2018



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
9	54089009-Cut	4.8	4319 - Mixed Upland Forest	Sawtimber Well	85	81-110	Harvest	Clearcut	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary

Habitat Cut: No **Site Condition: Portable Bridge Needed**

Prescription Clear-cut. No retention is necessary due to the small size of stand.

Specs:

Keep any oak along the western edge of the stand out of the harvest.

Protect legacy white pine and remnant red pine.

Do not harvest the trace oak.

Protect the trace oak and pine regen to promote future stand diversity.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Regen: Acceptable regeneration is a medium to well stocked mix of red maple, balsam fir, spruce, pine, paper birch, and oak.

Other

A drainage needs to be Crossed to harvest the southwestern portion of this stand.

Comment:

Access to this stand has its difficulties, due to the narrow forest access road and a run-off impeding access centrally located in this treatment.

To forward wood over the run-off, place large rock in the run-off where the forwarder will cross. Place crane mats lengthwise over the large rock for the forwarder to ride over. The large rock will permit proper drainage. The large rock is to be moved to the drainage banks post harvest to prevent erosion.

A lowland area could be crossed to harvest the east and southeastern portion of this stand, but much of the timber in this portion is not desirable for harvest (young white pine, remnant oak, young oak, legacy white pine).

Most of the oak present is at the east end of the stand.

Proposed Start Date: 10/01/2018

37	54089037-Cut	11.2	4136 - Aspen, Mixed Conifer	Sawtimber Well	102	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition:**

Prescription Clear-cut with retention. Retain 3-10% of the stand in pockets and single trees.

Specs:

To promote future stand diversity and for aesthetic purposes along the snowmobile trail, do not cut any pine, cedar, or oak. Protect oak and pine regen.

Require a shortwood operation to protect the sensitive sandy soils and the snow mobile trail.

Include specs for protecting the snowmobile trail and recreationists.

Include specs for protecting culverts on forest roads.

Include the spec that requires grouse logs and brush piles for hare.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Regen: Acceptable regeneration is a medium to well stocked mix of aspen, red maple, balsam fir, paper birch, pine, and oak.

Other

Comment:

Proposed Start Date: 10/01/2018



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
49	54089049-Cut	9.7	6120 - Lowland Cedar	Sawtimber Medium	117	171-200	Harvest	Clearcut with Retention	613 - Lowland Mixed Forest	Even-Aged	Draft Field Boundary

Habitat Cut: No Site Condition: Survey Needed

Prescription Clear-cut. Retention is not necessary if harvest stays under 10 acres per the retention guidelines. Require a shortwood operation to protect slopes and prevent erosion. Include the spec to require bush piles for hare along the outside edges of the harvest.

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

Acceptable Regen: Acceptable regeneration is a low to medium stocked mix of cedar, red maple, aspen, paper birch, and spruce.

Other Comment: Access to the stand will be hindered by the wet E7 stand to the north and west. Crane mats will likely be needed. Access will also be hindered by the slope along the west and northern edge of the E7 stand. This stand has much windthrow that will need to be moved in order to harvest the stand. A decision will need to be made as to whether leaning and down trees are part of the timber sale volume. The cedar that was aged showed minimal sign of rot. The cruiser will need to be cautious with log calls.

Access to this stand has its difficulties, due to the narrow hilly forest road and a run-off impeding access centrally located in Stand 6. Topography will place some limitations on where wood can be forwarded out of the stand.

To forward wood over the run-off, place large rock in the run-off where the forwarder will cross. Place crane mats lengthwise over the large rock for the forwarder to ride over. The large rock will permit proper drainage. The large rock is to be moved to the drainage banks post harvest to prevent erosion. Future vehicle/ORV traffic will not be permitted past this drainage.

Crane mats will be needed to cross the narrow lowland strip to the north. The staging of wood/landing will have to be placed in Stand 6 east of the drainage.

Proposed Start Date: 10/01/2018

52	54089052-Other	8.6	4136 - Aspen, Mixed Conifer	Sapling Poor	5	Immature	Other	Other	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No Site Condition:

Prescription This is a low stocking that does not meet the acceptable medium to well stocked stand agreed upon at Compartment Review. At the 2019 YOE
Specs: Compartment Review we need to decide if the regeneration is acceptable. We agreed to accept the current regeneration. After compartment review this treatment can be closed out.

Next Step
Treatments:

Acceptable Regen: medium to well stocked mix of aspen, red maple, pine.

Other Comment: The openness of this stand will benefit the eagles nesting to the west.

Proposed Start Date: 03/15/2017

60	54089060-Cut	28.7	42250 - Pine, Oak	Poletimber Well	84	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary
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Habitat Cut: No Site Condition: Historical/Archaeological

Prescription Clear-cut with retention.
Specs:
 Retain 3-10% of the stand in one or more pockets focused around large crowned healthy oak.
 Require snow-off full tree skidding to promote jack pine regeneration.
 Included trail specs to protect the ORV trail and its users.

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

Acceptable Regen: Acceptable regeneration is a medium to well stocked mix of pine, aspen, and oak.

Other Comment: Place retention pocket(s) around areas of historical significance. This treatment will need to be surveyed to ensure archeological areas of historical significance are not disturbed. The circumstances of the regeneration of Stands 58, 61, and 63 could not be determined due to the absence of records in our files. Otherwise, we would have tried to mimic the processes for regeneration of jack pine in this stand. Note that Parks is planning on decommissioning this ORV trail.

Proposed Start Date: 10/01/2018

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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
62 54089062-Cut	18.3	4125 - Black, N. Pin Oak	Sawtimber Medium	97	1-50	Harvest	Overstory Removal	42260 - Natural Pine, Mixed Deciduous	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**Prescription Clear-cut with retention.Specs:

Protect all pine and oak regeneration less than 4.5 inches in DBH.

Require a shortwood operation to protect the regenerating pine and oak.

Included trail specs to protect the ORV trail and its users.

Next Step Monitoring, Natural Regen (Re-Inventory)Treatments:Acceptable Regen: Acceptable regeneration is a low to medium stocked mix of pine, oak, aspen, and red maple.Other Comment:

Basically we are taking the top off a shelterwood with this prescription. Note that Parks is planning on decommissioning this ORV trail.

Proposed Start Date: 10/01/2018

66 54089066-Cut	35.3	4310 - Pine, Oak Mix	Sawtimber Well	86	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**Prescription Clear-cut with retention.Specs:

Place retention around pocket(s) of advanced white pine regeneration.

Require a winter harvest to promote oak stump sprouts.

Plan A: Natural regeneration of the stand;

Plan B: Plant Red Pine.

Included trail specs to protect the ORV trail and its users.

Next Step SitePrep, Roller Chopping; Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Natural RegenTreatments: (Intermediate); Monitoring, Artificial Regen(3yr)Acceptable Regen: Acceptable regeneration is medium to well stocked stand of red pine with lesser amounts of white pine, oak, jack pine, and aspen.Other Comment:

Do a natural regeneration check within 2 years of harvest. Note that Parks is planning on decommissioning this ORV trail.

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
69	54089069-Cut	7.3	42210 - Natural Red Pine	Sawtimber Well	84	141- 170	Harvest	Other - Specify	4211 - Planted Red Pine	Even-Aged	Approved Proposal

Habitat Cut: No **Site Condition: Survey Needed**

Prescription Crown Thinning:

Specs:

Thin red pine to 120 BA.

Remove all other species except retain all oak and legacy pine.

Retention of removal species is not necessary due to the small size of the stand per the retention guidelines.

Mark to thin the red pine to 120 BA.

Require a shortwood operation to protect residual red pine and slopes.

Next Step SitePrep, Roller Chopping; Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr);
Treatments: Monitoring, Artificial Regen(3yr)

Acceptable Regen: Acceptable regeneration is a well stocked stand of red pine with low amounts of other species.

Other Comment: The southern most 0.4 acre of this stand is not included in the harvest due to a drainage ditch blocking its access.

Access to this stand has its difficulties, due to the narrow forest road.

Proposed Start Date: 10/01/2018

88	54089088-Cut	16.3	4319 - Mixed Upland Forest	Poetimber Well	61	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition: Portable Bridge Needed**

Prescription Clear-cut with retention. Do not cut any cedar, oak, relic white pine, and relic red pine.

Specs:

Include trail specs to protect the snowmobile trail and its users.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Regen: Acceptable regeneration is a medium to well stocked mix of red maple, paper birch, aspen, balsam fir, and pine.

Other Comment: There is a low narrow run-off at the south end of the treatment. A temporary bridge (or crane mats placed lengthwise) will be needed at the south end of the treatment to gain access to the stand. Include specs to protect culverts on forest roads. A shortwood operation will be needed if it is determined that wood will need to be forwarded across the portable bridge at the southern most end to the stand to get the wood to the landing.

Proposed Start Date: 10/01/2018

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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
93 54089093-Cut	16.3	4139 - Aspen, Mixed Deciduous	Sawtimber Well	70	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Clear-cut with retention. Retain 3-10% of the stand in pockets and single trees.

Specs:

To promote future stand diversity and for aesthetic purposes along the snowmobile trail, do not cut any pine, cedar, or oak. Protect oak and pine regen.

Focus pocket retention around wet areas, white pine saplings, and Devils Lake.

Require a shortwood operation to protect the sensitive sandy soils around Devils Lake and to protect the snowmobile trail.

Include specs to protect the snowmobile trail and its users.

Include specs for protecting culverts on forest roads.

Include the spec that requires grouse logs and brush piles for hare.

Next Step Monitoring, Artificial Regen(1yr)

Treatments:

Acceptable Regen: Acceptable regeneration is a medium to well stocked mix of aspen, paper birch, red maple, pine, balsam fir, and oak.

Other Comment:

Consult with archeology and the fisheries division. Take into consideration the slopes down to Devils Lake when putting in harvest boundaries.

Proposed Start Date: 10/01/2018

98 54089098-Cut	8.7	4310 - Pine, Oak Mix	Sawtimber Medium	97	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clear-cut with retention.

Specs:

Place retention around pocket(s) of advanced white pine regeneration.

Require a winter harvest to promote oak stump sprouts.

Plan A: Natural regeneration of the stand;

Plan B: Plant Red Pine.

Included trail specs to protect the ORV trail and its users.

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

Treatments: Monitoring, Artificial Regen(3yr); Monitoring, Natural Regen (Intermediate)

Acceptable Regen: Acceptable regeneration is medium to well stocked stand of red pine with lesser amounts of white pine, oak, jack pine, and aspen.

Other Comment:

Note that Parks is planning on decommissioning this ORV trail. Complete a natural regeneration check within 2 years post harvest.

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
9	54092009-Cut	27.1	4137 - Aspen, Birch	Poletimber Well	48	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal - Approval Pending Edits

Habitat Cut: No**Site Condition:**

Prescription Clear-cut with retention. Retain 3-10% of the stand in pockets and single trees.

Specs:

To promote future stand diversity and for aesthetic purposes along the snowmobile trail, do not cut any pine, cedar, or oak. Protect oak and pine regen.

Place retention around the stream that is already marked out of the center of the stand.

Require a shortwood operation to protect the sensitive sandy soils around Devils Lake and to protect the snowmobile trail.

Include specs to protect the snowmobile trail and its users.

Include specs for protecting culverts on forest roads.

Include the spec that requires grouse logs and brush piles for hare.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Acceptable regeneration is a medium to well stocked mix of aspen, paper birch, red maple, pine, balsam fir, and oak.

Regen:

Other Consult with archeology and the fisheries division. Take into considerate the slopes down to Devils Lake when putting in harvest boundaries.

Comment:

This treatment was approved out of YOE with Compartment 89.

Proposed Start Date: 10/01/2012

**Total Treatment
Acreage Proposed: 217.5**

Report 4 – Site Conditions

Atlanta Mgt. Unit
Dale Parris : Examiner

Compartment: 89
Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions							
		With Condition	Not Available		2D	2I	5C	2G	2H	3I	3K	
143	68	75	0	Aspen		12	63					
6	6	0	0	Bog								
566	11	10	546	Cedar		10		537	9			
37	37	0	0	Herbaceous Openland								
44	44	0	0	Jack Pine								
29	29	0	0	Low-Density Trees								
21	0	21	0	Lowland Aspen/Balsam Poplar			21					
16	0	0	16	Lowland Conifers				16				
46	39	0	8	Lowland Deciduous				8				
17	3	0	14	Lowland Mixed Forest				14				
125	125	0	0	Lowland Shrub								
6	6	0	0	Marsh								
81	8	0	73	Mixed Upland Deciduous								73
83	47	7	29	Natural Mixed Pines			7				29	
75	18	57	0	Oak			57					
14	7	7	0	Red Pine		7						
2	2	0	0	Sand, Soil								
40	19	0	21	Tamarack				21				
162	63	40	59	Upland Mixed Forest	40							59
30	30	0	0	Urban								
10	10	0	0	Water								
1,555	574	217	764	Total Forested Acres	40	29	149	595	9	29	131	
	37%	14%	49%	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)	231	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Atlanta Mgt. Unit
Dale Parris : Examiner

Compartment: 89
Year of Entry: 2019

2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	270	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	24	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Atlanta Mgt. Unit
Dale Parris : Examiner

Compartment: 89
Year of Entry: 2019

7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	21	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Atlanta Mgt. Unit
Dale Parris : Examiner

Compartment: 89
Year of Entry: 2019

12	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments: A stream runs along and through the north edge of this stand.							
14	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Atlanta Mgt. Unit
Dale Parris : Examiner

Compartment: 89
Year of Entry: 2019

17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: A stream meanders through portions of this stand.							
18	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	50	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
20	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
21	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Atlanta Mgt. Unit
Dale Parris : Examiner

Compartment: 89
Year of Entry: 2019

22	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
23	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	21	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
24	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	30	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
25	Available	2D: Portable Bridge Needed (Dept. bridge will be adequate)	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
26	Available	2I: Survey needed	12	2D: Portable Bridge Needed (Dept. bridge will be adequate)	Unspecified	Unspecified	Unspecified
Comments: A property line survey will likely be needed.							

Report 4 – Site Conditions

Atlanta Mgt. Unit
Dale Parris : Examiner

Compartment: 89
Year of Entry: 2019

27	Available	2D: Portable Bridge Needed (Dept. bridge will be adequate)	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments: A portable bridge will be needed to forward timber at the southern most portion of the stand.							
28	Available	2D: Portable Bridge Needed (Dept. bridge will be adequate)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
29	Unavailable	3I: Historical / archeological (add locked comments)	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments: A survey needs to be completed in this stand before any harvesting can occur to ensure that any areas of historical or archeological significance that might be present are protected.							
30	Available	2I: Survey needed	10	2D: Portable Bridge Needed (Dept. bridge will be adequate)	Unspecified	Unspecified	Unspecified
Comments: A property line survey will probably be needed.							
31	Available	2I: Survey needed	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: A property line survey will probably be needed.							
55	Unavailable	3K: Rare or unique landforms	73	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Atlanta Mgt. Unit
Dale Parris : Examiner

Compartment: 89
Year of Entry: 2019

56	Unavailable	3K: Rare or unique landforms	59	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				



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	Great Lakes Islands	Great Lakes Islands provide significant habitat for numerous species, including many rare plants and animals, several of which are endemic or largely restricted to the Great Lakes region. Due to their isolation, islands provide good examples of many Great Lakes-associated natural communities and ecosystems, and thus have potential to provide insights for understanding the consequences of human disturbance on the increasingly fragmented ecosystems of the mainland.
HCVA	Coastal Environmental Areas	The public designation process is defined by Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the Michigan Department of Environmental Quality (DEQ). This is an inactive program with no new areas currently under consideration by the DEQ.
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:
2	6120 - Lowland Cedar	Sawtimber Poor	3.2	121	1-50	There is lots of blowdown in this stand; mostly cedar. There is an ORV width trail cut from the northeast at Stand 4 out the south end of the stand that may or may not lead to the private land.
3	6118 - Lowland Deciduous with Cedar	Sawtimber Poor	2.9	108	1-50	The upland stand to the west drops off into this maple flat like transition area.
4	4319 - Mixed Upland Forest	Sawtimber Well	13.5	83	81-110	Much of the red pine and white pine is 19 inches plus in DBH. Based on ages taken on similar pine taken in nearby stands, these pine are somewhere around 120 years old. Walking trails have been cut throughout the stand.
6	4134 - Aspen, Spruce/Fir	Sawtimber Well	11.7	67	81-110	(OPIC - FMD: Poor access into stand, road into stand needs new culvert, and runs down property line adjacent to house.) This stand is approximately 30% lowland that is covered by dense shrub.
7	6120 - Lowland Cedar	Poletimber Medium	26.8	117	111-140	The percent canopy cover varies throughout the stand from a low of around 35 percent to a high of around 80 percent. This stand is thick with tag alder in the under story with scattered cedar windthrow. After coring three trees with a rotten center the age from the previous inventory was used.
9	4319 - Mixed Upland Forest	Sawtimber Well	10.0	85	81-110	Scattered 26+ inch DBH white pine are present throughout the stand. The occasional relic red pine is present. A drainage runs west-east through the center of the stand. Most of the oak present is at the east end of the stand.
11	4130 - Aspen	Poletimber Medium	0.9	37	1-50	The understory is fully covered with various shrub species. Log to pole sized aspen are present and the aspen gets smaller towards the edge of the stand.
12	6112 - Lowland Aspen	Poletimber Poor	21.1	50	1-50	(OPIC - FMD: HCVA: Coastal Environmental Area) The understory is fully covered by various types of 5 - 10 ft. shrubs. The cedar is mostly found around the outside edges of the stand. The aspen gets smaller in size toward the edges of the stand.
15	6129 - Mixed Coniferous Lowland Forest	Sawtimber Poor	2.2	87	1-50	Cedar and tamarack alternate in dominance throughout the stand.
17	42290 - Natural Mixed Pine	Sawtimber Well	9.9	87	81-110	The white pine is present throughout. The red pine is most in the northern 2/3 of the stand. Trace amounts of cedar, hemlock, and white spruce are present.
19	42360 - Upland Cedar	Sawtimber Medium	2.1	101	111-140	One legacy white pine is located along the northern edge of the stand.
20	42360 - Upland Cedar	Poletimber Well	6.2	97	81-110	One legacy white pine is present at the west end of the ridge. Oak and white spruce is focused at the east end of the main ridge. The cedar are rotten in the center so the age from the previous inventory was relied upon.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	6121 - Tamarack	Sawtimber Poor	20.9	109	1-50	The understory is fully covered with various types of lowland shrub.
23	6118 - Lowland Deciduous with Cedar	Sawtimber Well	4.9	92	81-110	Depending on where you are at in the stand, aspen, red maple, or cedar dominate the canopy.
24	6120 - Lowland Cedar	Sapling Well	4.4	35	1-50	A stream runs along and through the north edge of this stand. A second age class of cedar is growing at 2-3 feet tall in this stand where enough sunlight is reaching the forest floor. Timber Sale Contract 04-81A verifies that this stand was harvested in 1982.
25	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	7.7	37	1-50	The tamarack is most dense along the northern edge of the stand, especially to the northwest. Timber Sale Contract 04-81A verifies that the eastern 2.5 acres of this stand was harvested in 1982. Timber Sale Contract 15-80A verifies that the western 3 acres of this stand was harvested in 1980.
26	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	4.1	40	1-50	This stand resulted from a strip cut harvest.
27	42370 - Upland Cedar, Aspen	Poletimber Well	1.2	37	1-50	(OPIC - FMD: scattered cedar. HCVA: Coastal Environmental Area)
28	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	6.4	118	81-110	This stand has almost equal amounts of lowland and upland. The upland is along the Devils Lake shoreline. The lowland is the northern half of the stand.
31	4130 - Aspen	Poletimber Well	17.7	35	1-50	At the south end of the stand there is a weak bridge over a drainage between cedar patches. Timber Sale Contract 93-79A verifies that the all aspen, paper birch, red maple, ash, cedar, and spruce with a merchantable stick was harvested in this stand in 1982. The red pine/white pine that are now in the adjacent stand was marked to cut.
32	4311 - Pine, Aspen Mix	Sawtimber Well	6.4	55	81-110	This stand has a high level of species diversity in the canopy.
33	6120 - Lowland Cedar	Poletimber Well	1.7	43	1-50	(OPIC - FMD: old cedar cuts.) There is a 3 - 4 foot wide stream that runs through the stand at various points. This stand was approx. 50% flooded and iced over in the winter when visited.
35	6128 - Lowland Coniferous, Mixed Deciduous	Sapling Medium	1.5	37	1-50	(OPIC - FMD: old cedar cuts. Some cedar mixed in.) A 4 inch DBH paper birch aged at 36 + 1 = 37.
37	4136 - Aspen, Mixed Conifer	Sawtimber Well	11.2	102	81-110	This stand is dominated by old over mature aspen that need to be harvested before they fall to the ground. The portion of the snowmobile trail dubbed the Devils Lake Loop runs through the center of this stand. Scattered red and white pine of all sizes are present in the stand. There are a couple large oak present in the stand. A pocket of jack pine is present at east end of the stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
40	4311 - Pine, Aspen Mix	Poletimber Well	5.5	35	51-80	This stand is representative of what stand 37, to the north, will eventually look like after harvest. The pine, oak, and red maple were retained at the last harvest. A 13 inch DBH red pine aged at 63 + 6 = 69.
41	42290 - Natural Mixed Pine	Sawtimber Well	7.3	119	111-140	(OPIC - FMD: scattered cedar. Stand is ridge in middle of large cedar stand. Snowmobile trail runs through middle of stand.)
42	6120 - Lowland Cedar	Poletimber Well	270.9	85	171-200	(OPIC - FMD: There are several small L-types mixed in. Also several small streams draining from this stand into Devils Lake.) MiFI 2017 Basal Area Measurements: (190, 170, 170)
43	6139 - Mixed Lowland Forest	Poletimber Medium	2.8	82	51-80	(OPIC - FMD: scattered pine, nice ridge along lake edge.)
44	4310 - Pine, Oak Mix	Sawtimber Well	1.8	109	171-200	BA Measurements (230, 200, 180). This stand is likely what the stand to the north would have looked like had it not been harvested.
46	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	3.1	77	81-110	Very old and large red pine are scattered throughout the stand.
48	42210 - Natural Red Pine	Sawtimber Well	4.1	65	111-140	The white pine and red pine were thinned in this stand in 1982 when the surrounding aspen stand was clear-cut.
49	6120 - Lowland Cedar	Sawtimber Medium	9.7	117	171-200	(OPIC - FMD: OI Stand Year Origin was 1900) Aging (coring) confirm the OI year of origin. About 20% of the stand has been windthrown. It here there is not windthrow the BA is 200+.
50	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	20.2	67	81-110	This stand has a line of lowland shrub running N-S along the eastern edge. The stand tends to have a lower amount of upland as you go farther north. Cedar increases in density as you move north in the stand. Due to disturbance over time there are areas in the stand that are higher to log sized trees and areas that are higher to pole sized trees. A 10 inch DBH red maple aged at 67 years. This age was taken on an average sized red maple. The red maple in the stand likely range from 30 to 100+ years.
51	42210 - Natural Red Pine	Sawtimber Well	2.4	115	141-170	This is a remnant natural red pine stand. It is small but worth mapping due to its unique nature.
52	4136 - Aspen, Mixed Conifer	Sapling Poor	8.6	5	Immature	(2009 YOE Treatment Prescription: Clear-cut with reserves. Leave all cedar and oak, and 2-3 white & red pin per acre. Winter cut to protect soils and lower conflict with ORV trail. Acceptable Regen is any mix of aspen, red maple, pine. SEE LOCKED COMMENTS FOR ADDITIONAL SALE REQUIREMENTS.) Stand cut in 2012; Sale Number: 54-037-09-01; Sale Name: Devils Lake Mix. The aspen is mainly along the eastern edge of the stand. The red maple is evenly spaced throughout. Where the aspen is present, the canopy is full.
53	42290 - Natural Mixed Pine	Poletimber Well	37.5	45	51-80	OPIC - FMD: OI Stand Year Origin was 1969



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
54	4125 - Black, N. Pin Oak	Sawtimber Medium	50.4	84	1-50	(OPIC - FMD: Stand was species thinned in 2004. Left scattered oak, white & red Pine. SCA: ERA: Wooded dune & swale complex. Glossy Buckthorn & ORV's are potential threats to ERA.) In 2004 Timber Sale Name: Poibaireachd; Sale No.: 54-024-00-01; all aspen and jack pine were removed.
55	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	72.7	85	81-110	(OPIC - FMD: Old Beach ridges with Mixed HDWD on ridges and Cedar/Low in swales. SCA: ERA: Wooded dune & swale complex. Glossy Buckthorn & ORV's are potential threats to ERA.) Alternating strips of high and low ground parallel to the Lake Huron shoreline are present. The low ground holds water depending on the time of year and rainfall. The lowland areas, which make-up about 30% of the stand, have a full stocking of various shrubs.
56	4319 - Mixed Upland Forest	Poletimber Well	58.8	87	141-170	(OPIC - FMD: Old Beach ridges with Mixed HDWD on ridges and Cedar/Low in swales. SCA: ERA: Wooded dune & swale complex. Glossy Buckthorn & ORV's are potential threats to ERA.) Alternating strips of high and low ground parallel to the Lake Huron shoreline are present. The low ground holds water depending on the time of year and rainfall. The lowland areas make-up about 30% of the stand.
57	4133 - Aspen, Mixed Pine	Sawtimber Well	17.2	52	51-80	(OPIC - FMD: scattered oak and pine SCA: ERA: Wooded dune & swale complex. Glossy Buckthorn & ORV's are potential threats to ERA.) The aspen are highly variable in diameter. The oak, white pine, and red pine are evenly spaced in the stand.
58	42221 - Natural Jack Pine, Mixed Deciduous	Sapling Medium	11.5	26	Immature	The northern half of the stand is not as densely regenerated.
59	4130 - Aspen	Poletimber Well	29.9	54	51-80	
60	42250 - Pine, Oak	Poletimber Well	28.7	84	81-110	Red oak is more dominate in the central region of this stand and jack pine are more dominate in the north and south regions of this stand.
61	42220 - Natural Jack Pine	Sapling Well	9.8	25	Immature	OPIC - FMD: Scattered Oak & Aspen
62	4125 - Black, N. Pin Oak	Sawtimber Medium	18.3	97	1-50	(OPIC - FMD: Stand was species thinned in 2004. Oak overstory with scattered red pine.) There is a mix of white pine, red pine, jack pine, and oak in the understory. A medium amount of aspen is present in the understory at the north end of the stand where the canopy is more open. In 2004 Timber Sale Name: Poibaireachd; Sale No.: 54-024-00-01; all aspen and jack pine were removed.
63	42220 - Natural Jack Pine	Sapling Well	22.4	25	Immature	OPIC - FMD: Scattered Oak & Aspen
65	4131 - Aspen, Oak	Poletimber Medium	16.3	52	111-140	Depending on where you are at in the stand residual oak and pine, retained during the last harvest, make up about 30-40% of the canopy. There tends to be more and larger aspen in the northern half of the stand where it was opened up more during the last harvest.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
66	4310 - Pine, Oak Mix	Sawtimber Well	35.3	86	51-80	(2009 YOE Prescription: Good white pine understory already established, shortwood to protect regen. Summer cut to help scarify soil. Thin overstory to 40-60 BA, some areas may not need any treatment if adequate room for regen to grow into overstory. Acceptable mix of regen is white pine, red pine, oak & jack pine.) Stand cut in 2012; Sale Number: 54-037-09-01; Sale Name: Devils Lake Mix. The residual BA post harvest was 56 per the cruise. A red pine cored in 2017, 5 years post harvest, showed that the red pine put on about 1/2 inch in DBH since harvest. At this rate the red pine would be only 1 inch in DBH larger on average, 13 inches DBH, by the 2029 YOE inventory. There is not any noticeable oak regen in the understory.
67	4130 - Aspen	Sapling Well	10.8	5	Immature	(2009 YOE Treatment Prescription: Clear cut with reserves, leave some oak & pine. No other retention needed due to small area. Acceptable regen mix is aspen, oak, red maple and pine. Piper Road runs through stand so acres will probably be decreased.) Stand cut in 2012; Sale Number: 54-037-09-01; Sale Name: Devils Lake Mix. Scattered log sized white pine, oak, and red pine are present that were retained during the last harvest. Most oak regeneration appears to be a result of stump sprouts.
69	42210 - Natural Red Pine	Sawtimber Well	7.3	84	141-170	(OPIC - FMD: Poor access into stand, would need to widen/build new road and start of road is very close to private. Pockets of low mixed in. South tip of stand is not accessible with equipment, old drainage ditch runs E to W across stand.) 26+ inch DBH white pine are scattered throughout. Some relic red pine are present but sparse. A 15 inch DBH red pine put on 1.5 inches in diameter over the last 10 years. BA Measurements: (130, 160, 140, 180, 90)
76	6118 - Lowland Deciduous with Cedar	Sawtimber Well	3.7	118	111-140	A 12 inch DBH red maple aged at 118 years. This tree only put on about 3 inches in diameter in the last 40 years.
81	6120 - Lowland Cedar	Poletimber Well	1.6	41	1-50	This is between a pole and sapling stand and varies by location. A second age class of cedar is growing at 2-3 feet tall in this stand where enough sunlight is reaching the forest floor. The balsam poplar are already falling out of the canopy. This fall out is likely due to the high level of moisture in the soil.
85	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	13.8	55	51-80	This stand is too wet to harvest.
87	6120 - Lowland Cedar	Poletimber Well	231.4	95	81-110	(OPIC - FMD: There are several small L-types mixed in. Also several small streams draining from this stand into Devils Lake.) BA Measurements (130, 140, 240, 260). A 7 inch DBH cedar aged at 86 + 15 = 101. 15 was added due to the medium growth rate early on. This stand is too wet to harvest. An 8 inch DBH cedar aged at 78 + 10 = 88.
88	4319 - Mixed Upland Forest	Poletimber Well	16.3	61	81-110	BA Measurements (50, 50, 80, 130). An 8 inch DBH paper birch aged at 86 + 2 = 88. A 7 inch DBH balsam fir cored at 51 + 10 = 61. The paper birch has only put on about 2 inches in diameter over the last 40 years.
90	6121 - Tamarack	Poletimber Poor	19.5	48	1-50	This stand is thick with shrubs and grass throughout. A 6 inch DBH tamarack aged at 38 + 10 = 48.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
93	4139 - Aspen, Mixed Deciduous	Sawtimber Well	16.3	70	81-110	This is a nice ridge along Devils Lake. Over mature aspen throughout are in need of harvesting.
94	6118 - Lowland Deciduous with Cedar	Sawtimber Medium	1.8	81	51-80	There is a fully stocked layer of misc. shrubs in the understory. An 8.5 inch DBH paper birch aged at $79 + 2 = 81$ years.
95	4139 - Aspen, Mixed Deciduous	Sawtimber Well	2.7	70	81-110	This is a sister stand to stand 94 to the south.
97	4319 - Mixed Upland Forest	Sawtimber Medium	5.3	119	81-110	A 15 inch DBH red pine aged at $113 + 6 = 119$. The cedar in the stand borders the adjacent lowland areas.
98	4310 - Pine, Oak Mix	Sawtimber Medium	8.7	97	51-80	This stand was part of a larger harvest cut in 2012. Sale Number: 54-037-09-01; Sale Name: Devils Lake Mix. The residual BA post harvest was 56 per the cruise. The Southern most 1/4 of this stand experienced a ground fire in the summer of 2016. A 4 inch DBH jack pine aged at $32 + 6 = 38$. A 6 inch DBH bigtooth aspen aged at 46. There has definitely been a number of disturbances to this stand that added a second age class. The 42 year second age is somewhat of an average of the ages that resulted from these disturbances.
99	4123 - Red Oak	Sawtimber Well	6.5	116	141-170	This is an area that was not harvested with the adjacent stand to the east. There are a few cedar along the Devils Lake shoreline.
100	4190 - Mixed Upland Deciduous with Cedar	Sawtimber Well	4.9	104	111-140	The oak lessons in dominance and the red maple increases in dominance as you travel north in the stand. This is a wave of lake bank higher ground between Devils Lake and a narrow maple flat to the east.
101	6113 - Lowland Maple	Sawtimber Poor	6.7	73	1-50	This is basically a lowland maple flat. The understory is fully covered by lowland shrub. The basal area varies highly within the stand; from as low as 20 to upwards around 110. There are obviously red maple above and below 73 years of age due to disturbance in the forest canopy of this low ground soil. 73 years is an estimate of the stand age from an 11.5 inch DBH red maple with relatively vigorous bark, indicating vigorous growth which the grow the rings confirm.
103	6120 - Lowland Cedar	Sawtimber Well	7.1	118	141-170	The west ridge is upland and the east ridge is lowland with upland.



Stand	Cover Type	Acres	Managed Site	General Comments:
1	330 - Low-Density Trees	13.6	No	A low density of scattered and pocketed balsam fir, paper birch, red maple, cedar, balsam poplar, etc. are present throughout. Most trees are pole to sapling size with some log sized cedar occurring sparingly. There is an illegal trail cut through this stand from the private property to the north to stand 4 to the south.
5	330 - Low-Density Trees	9.2	No	A low density of scattered and pocketed balsam fir, paper birch, red maple, cedar, balsam poplar, etc. are present throughout.
8	622 - Lowland Shrub	3.5	No	Within the lowland shrub there are scattered trees and pockets of trees consisting of spruce, balsam fir, aspen, cedar, paper birch, etc.
10	622 - Lowland Shrub	34.1	No	This lowland shrub stand has pockets of marsh present.
13	3102 - Grass	35.6	No	(OPIC - FMD: cobble stone beaches, some scattered aspen. HCVA: Coastal Environmental Area) Scattered trees and pockets of trees consisting of aspen, cedar, white pine, and scotch pine are present.
14	622 - Lowland Shrub	1.7	No	The southwest half is dense shrub. The northeast half is scattered short shrub (< 5 ft.), cedar seedlings, and grass.
16	500 - Water	6.4	No	(OPIC - FMD: marsh/water)
18	622 - Lowland Shrub	1.2	No	
22	622 - Lowland Shrub	23.2	No	This is lowland shrub with Devils Creek running through the center.
29	122 - Road/Parking Lot	0.1	No	Partridge Point Road
30	622 - Lowland Shrub	1.9	No	
34	622 - Lowland Shrub	1.8	No	
36	622 - Lowland Shrub	2.9	No	
38	622 - Lowland Shrub	9.3	No	A portion of this stand along the eastern edge is bog.
39	622 - Lowland Shrub	1.8	No	
45	622 - Lowland Shrub	15.0	No	(OPIC - FMD: Low, thick tagalder. Several streams cross stand draining into Devils Lake) Pockets of deciduous and coniferous trees are present throughout.



Stand	Cover Type	Acres	Managed Site	General Comments:
47	623 - Emergent Wetland	3.9	No	This is marsh with shrub along the edges. This marsh can be completely flooded with water depending on the weather and time of year. This stand has about a 20% coverage of reeds.
64	622 - Lowland Shrub	3.1	No	This is a lowland shrub stand with varying densities of pine, oak, aspen, red maple, paper birch, etc. forming a sparse overstory.
68	6225 - Bog	6.4	No	
70	110 - Low Intensity Urban	25.1	No	OPIC - FMD: Rail Road Grade and Power line. Small Utype in between. Most of the area is bare sand from ORV traffic.
71	110 - Low Intensity Urban	5.0	No	OPIC - FMD: Rail Road Grade and Power line. Small Utype in between. Most of the area is bare sand from ORV traffic.
72	710 - Sand, Soil	1.8	No	ORVs have this area tore up. Most of this area would likely be covered by grass if not for the illegal ORV use. Sand is deep and loose throughout.
73	622 - Lowland Shrub	1.7	No	Within the lowland shrub there are scattered trees and pockets of trees consisting of spruce, balsam fir, aspen, cedar, paper birch, etc.
74	622 - Lowland Shrub	5.6	No	Within the lowland shrub there are scattered trees and pockets of trees consisting of spruce, balsam fir, aspen, white pine, cedar, paper birch, red maple, etc.
77	622 - Lowland Shrub	4.1	No	OPIC - FMD: Low in most areas, scattered trees where ground is higher.
78	330 - Low-Density Trees	1.6	No	
79	622 - Lowland Shrub	4.6	No	OPIC - FMD: OI Stand Year Origin was
80	622 - Lowland Shrub	1.0	No	(OPIC - FMD: Scattered Black Ash and Tamarack. Thick tag alder. HCVA: Coastal Environmental Area) The northern most portion of this stand is less dense tag alder with dense grass. There is a thin line of cedar and tamarack running E - W through the northern half of the stand. Various sized tamarack are scattered throughout. Dense tall shrub dominates the southern 2/3 of this stand.
82	623 - Emergent Wetland	1.3	No	This stand has full coverage of reeds.
83	3102 - Grass	1.8	No	Due to the slope that this opening sits on and the soil erosion that is already taking place, this area should be closed off to all motor vehicle traffic.



Stand	Cover Type	Acres	Managed Site	General Comments:
84	622 - Lowland Shrub	4.3	No	This would have been low intensity trees, but the dominate black ash in the canopy is dead. All trees that are present are short and stunted. Scattered cedar from 5-10 feet tall are present at the south end. Some scattered aspen are present. Where the 2014 CIR imagery changes to the south the shrub becomes more dense and taller.
86	6233 - Wet Meadow	1.2	No	This is a wet meadow/emergent wetland type area with common lake reeds in the middle and shrubs along the edge.
89	500 - Water	0.7	No	Lowland shrub fills in the edges of this stand with water filling out the center.
91	500 - Water	0.7	No	This stand may or may not be holding water all year round. Lowland shrub lines the edges of this water pocket.
92	622 - Lowland Shrub	0.2	No	
96	622 - Lowland Shrub	1.7	No	Per Contract 60-79A it appears that all red maple, white birch, and aspen with a merchantable stick was harvested with no oak being cut.
102	622 - Lowland Shrub	2.1	No	Within the lowland shrub there are scattered trees and pockets of trees consisting of spruce, balsam fir, aspen, cedar, paper birch, red maple, etc.
104	330 - Low-Density Trees	4.9	No	A low density of scattered and pocketed balsam fir, paper birch, red maple, cedar, balsam poplar, etc. are present throughout.
105	621 - Floating Aquatic	2.5	No	