



Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61018

Entry Year: 2017

Acreage: 3,634

County: Benzie

Management Area: Manistee Plains

Revision Date: 2015-05-12

Stand Examiner: Craig Allen

Legal Description:

T26N- R13W; Sections 22, 24-27, 34-36 of Benzie County.

Identified Planning Goals:

This compartment is a part of the Manistee Plains Management Area (MA). Vegetation management in this MA will provide forest products; maintain or enhance wildlife habitat; protect areas of unique character including the Betsie River (a designated natural river), and the Grass Lake Flooding; threatened, endangered and special concern species; and provide for forest-based recreational uses. The primary attributes and associated uses that influence and drive management in the Manistee Plains management area are wood fiber production, wildlife habitat for existing species along with various recreational uses. Management activities will emphasize the age, size and species distribution within cover types. Expected trends within this 10-year planning period are increased recreation pressure and continued management to balance cover type age-class distributions for timber and wildlife habitat. This age-class management effort is easily seen in this compartment by the current prescriptions for aspen regeneration harvests.

Soil and topography:

The topography is mostly level. Approximately half of the compartment is lowlands. The upland areas consist of the well drained Kalkaska- Rubicon soil association. Lowland areas of wet and semi- wet flats are made up of permeable Roscommon- Augres- Crosswell soils.

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

The north half of this compartment is comprised of a mixture of ownerships with a higher percentage of private than State lands. The south half is mostly State land and the compartment is bordered by other State lands on the west and south sides. The private lands in the area have many residential homes and continue to experience much land fragmentation. There are vacation and retirement homes in the area. Duck and Green lakes are close by to the east of the compartment.

Unique Natural Features:

In and around this compartment Grass, Green and Duck Lakes form the headwaters for the Betsie River. The Betsie is a designated Michigan Natural River system.

Archeological, Historical, and Cultural Features:

There are a few old homestead sites within the compartment. Early Native Americans would commonly establish settlements along the Betsie River. There are old railroad grades within the compartment that were used during the original logging operations in this area around the turn of the century. There is also a more modern railroad grade that is now in State ownership in sections 26, 27, and 36.

Special Management Designations or Considerations:

Many wildlife projects occur in this area due to the large wetland complex around the Betsie River and Grass Lake.

Watershed and Fisheries Considerations:

The Betsie River flows through Compartment 18, although much of it is impounded by the Grass Lake Wildlife Flooding. The Betsie River is a State-designated Natural River, and is a Designated Trout Stream. Any timber treatments should be kept at least 100' back from the river per MDNR BMPs. (Mark Tonello, Fisheries Division, Cadillac)

Wildlife Habitat Considerations:

The north and west portions of this compartment consist of an outwash plain (LTA 5111). The topography is generally flat and the soils are well drained. Within this compartment, maple and aspen stands dominate. There is also an oak stand, red pine, and grassy openings. The majority of the compartment consists of a broad, flat outwash plain (LTA 5149). Soils here are poorly drained peat or muck. Within this compartment, there are large blocks of mixed swamp conifers and swamp hardwoods. There are also DNR rye fields and a limited amount of maple and aspen. Small portions of the compartment consist of a pitted outwash plain (LTA 5211). Several aspen stands are located here, along with a red pine stand.

Wildlife considerations for northern hardwood stands involve maintaining tree species diversity, the protection of den/nesting trees & snags, coarse woody debris (cwd), and maintaining a scattering of mast-producing trees/shrubs. This will insure use by many species of wildlife. Examples of species found include downy woodpecker, porcupine, sharp-shinned hawk, spotted salamander, wild turkey, and white-tailed deer. Ruffed grouse use different aged aspen throughout their life cycle. Younger stands provide cover while older stands provide catkins (food source) for the winter months. Within each compartment, clearcutting helps facilitate different sized aspen trees by mimicking the necessary disturbance vital for regeneration. The inclusion of cwd trees for drumming logs and maintaining berry-producing shrubs is also desirable. Woodcock prefer areas that are similar to grouse, but with a higher water table. The moist soils allow woodcock to forage. This compartment contains poorly drained soils and would be an ideal area for woodcock hunting. Openings are evaluated for wildlife value and may require hand-felling to maintain this habitat type. Many wildlife species rely on small forest openings. These openings provide grassy nest sites, plentiful seeds and insects, and cover. Examples of species include northern flicker, cottontail rabbit, and garter snake. The rye fields provide an important food source for white-tailed deer in early spring as they emerge from winter yards in nearby conifer swamps. Other species of wildlife found here include snowshoe hare, evening grosbeak, and black bear. Grass Lake is an important waterfowl area, along with providing opportunities for furbearers. Wildlife species that you may see here include bald eagle, osprey, red-winged blackbird, northern water snake, beaver, otter, and mink. (Wildlife Div., Traverse City F.O.).

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 1,000 feet. Beneath the glacial drift is the Devonian Ellsworth Shale. The Ellsworth is used for cement products. A gravel pit is located 1.5 miles to the east and there may be some potential. This area is located in an area of recent Antrim Shale leasing and development. The Compartment is nearly completely leased for oil and gas development and part of two Antrim Shale Unit Areas are in the Compartment. (Tom Hoane, DNR Geologist)

Vehicle Access:

There are many paved and seasonal county roads throughout the compartment within this area offering good and easy access to State lands. There are also many forest "2-track" roads in various areas of the compartment that are in good condition and are used for public and DNR land management accessibility.

Survey Needs:

There are no known survey needs in this compartment at this time.

Recreational Facilities and Opportunities:

Snowmobile Trail #39 (Platte River Snowmobile Trail) runs East/West thru the southern third of this compartment along Lamb, Turtle Lake, and Reynolds road--all seasonal county roads. There is potential to move the snowmobile trail onto abandoned rail road corridor in the area. If the existing snowmobile trail will be impacted by timber treatments (harvests or hauling route) then appropriate measures identified in the DNR Policy and Procedures "32.22XX Best Management Practices for Forest and Wildlife Management Adjacent to Recreational Trails" should be taken into consideration. Hunting, Fishing and camping are common recreational activities within this compartment. The Grass Lake State Forest Campground is located just south of the compartment boundary. (T.M.N. 12/9/14)

Fire Protection:

This area has wildfire protection by Almira Township Fire Dept., and the DNR Platte River Field Office. Access is acceptable in this compartment, and there is only a minor history of wildfire. The majority of this compartment is a hardwood type, so the possibility for a large wildfire event is minimal.

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:

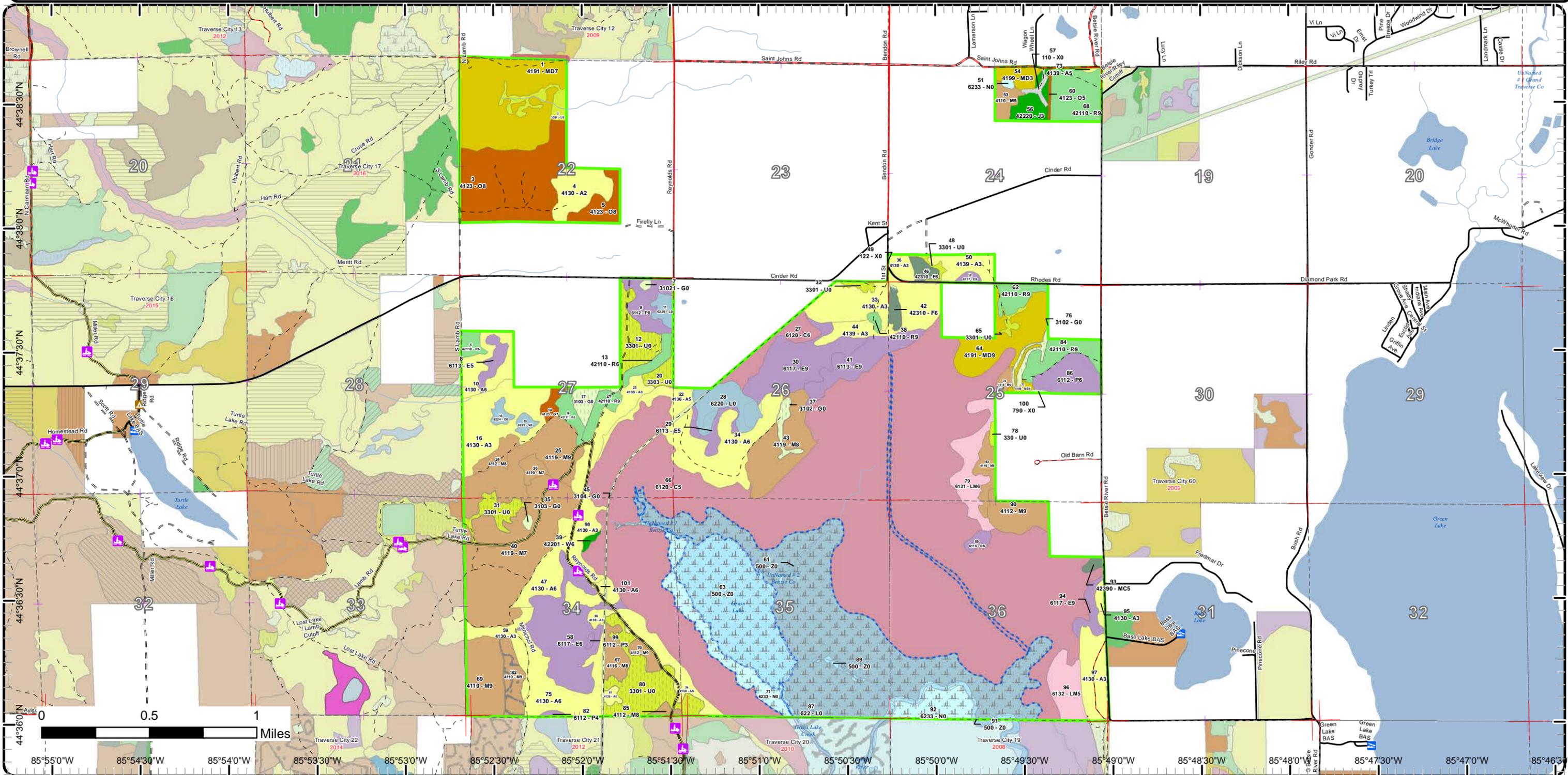
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Overview Map

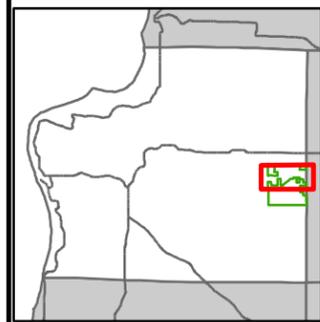
Compartment: 18
 T26N R13W 22,24-27,34-36
 Benzie
 Unit: Traverse City
 Mgmt Area: Manistee Plains
 YOE: 2017
 Acres: 3634 GIS Calculated
 Examiner: Craig Allen
 Map Revised: 6/26/2015
 Map Phase: Pre-Review



- Miris Corners
 - County Paved Roads
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 - County Gravel Roads
 - Gravel Roads
 - Poor Dirt Roads
 - County Poor Dirt Roads
 - Culverts
 - Boating Access Site
 - Campground
 - Snowmobile Trails
 - Rivers
 - Lakes
 - Treatments with Site Conditions
- Treatments**
- Other Treatment - See Comments
 - Opening Maintenance
 - Regeneration Survey
- Forest Covertypes**
- 411 - Northern Hardwood
 - 412 - Oak Types
 - 413 - Aspen
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
- Non-Forest Covertypes**
- 613 - Lowland Mixed Forest
 - 110 - Low Intensity Urban
 - 122 - Roads/Parking Lot
 - 310 - Herbaceous Openland
 - 330 - Low Density Trees
 - 500 - Water
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland
 - 790 - Other Bare/Sparsely Vegetated



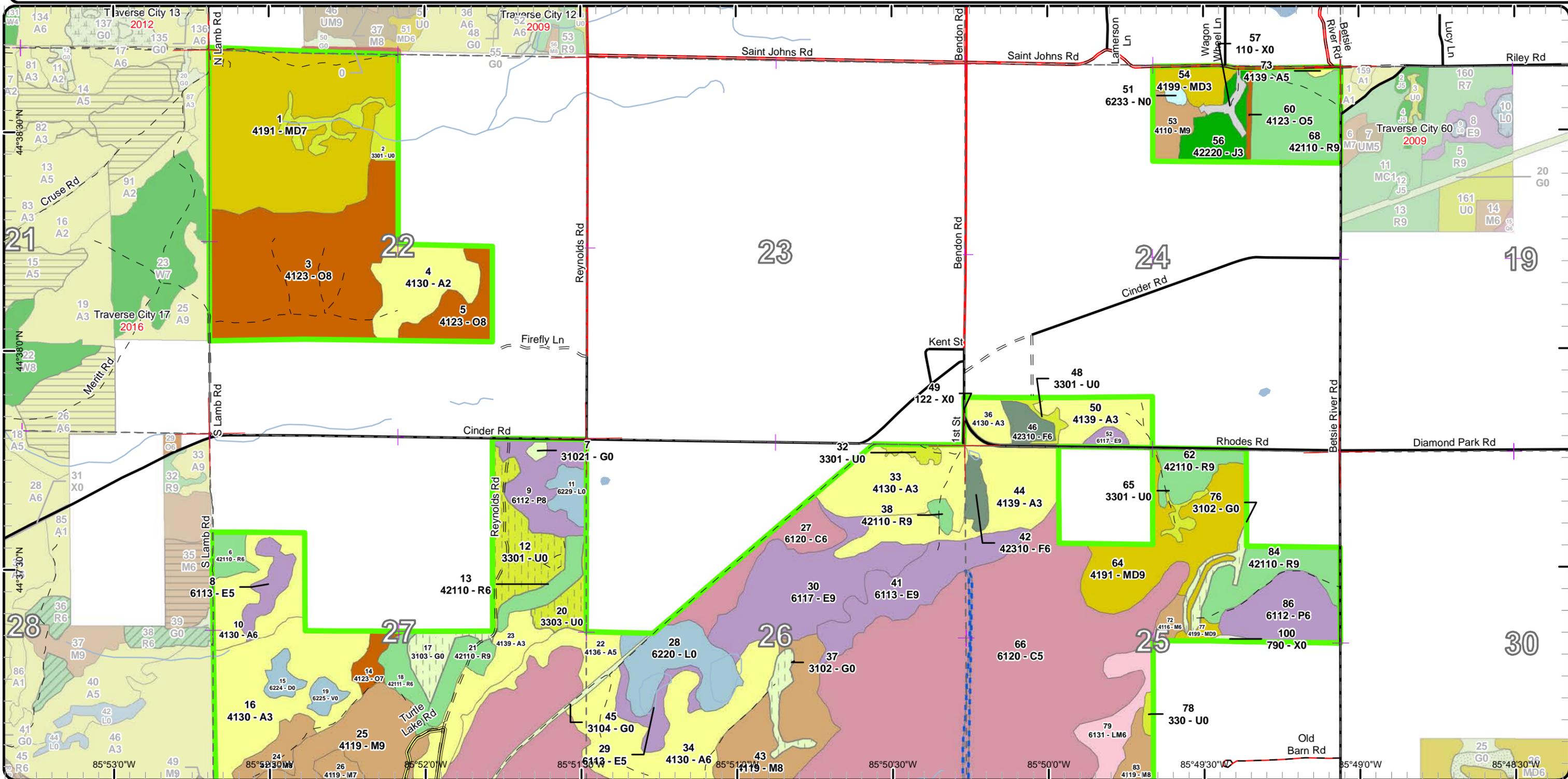
Cover Type & Treatments



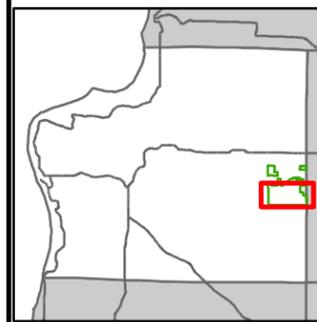
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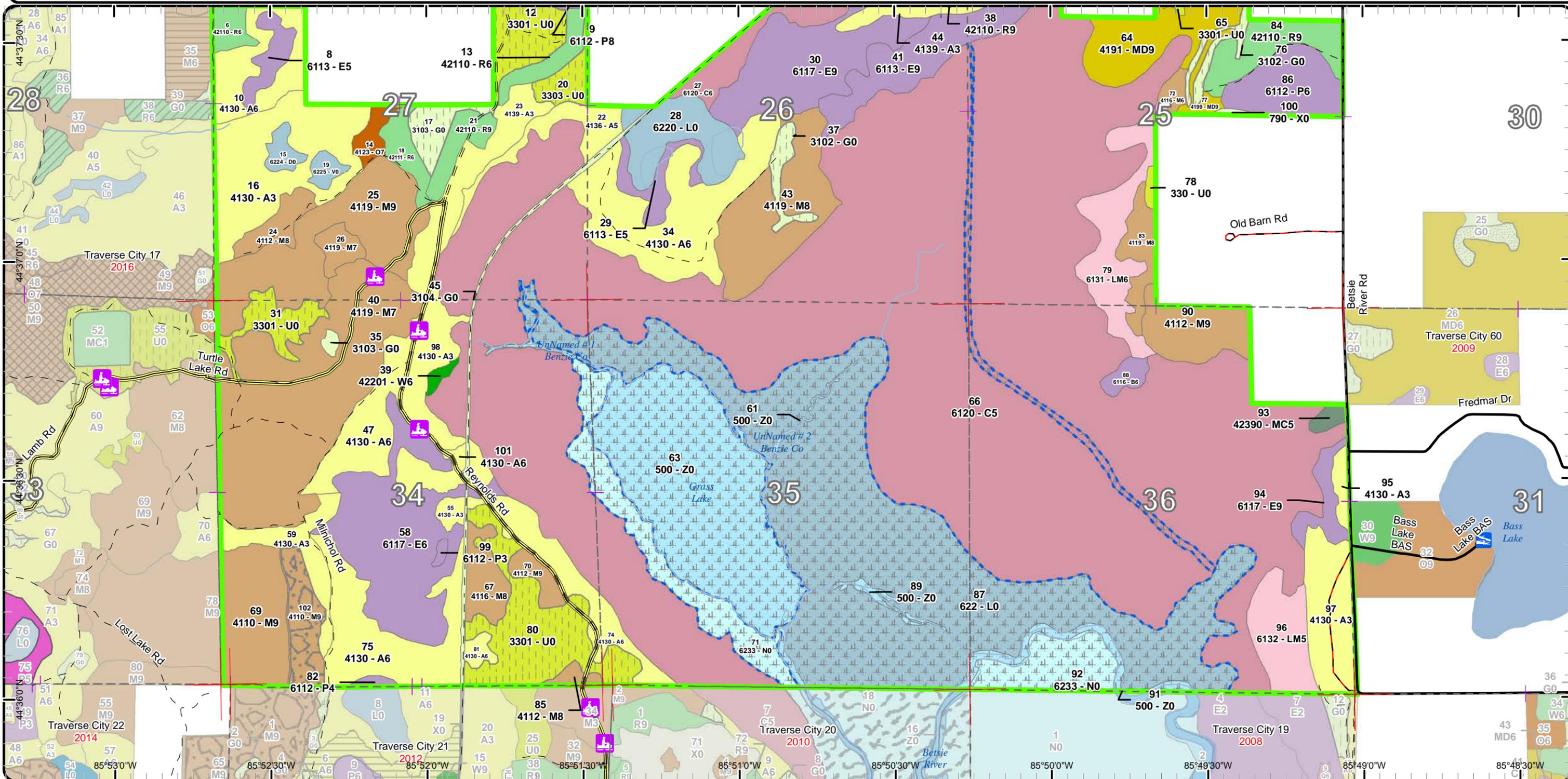


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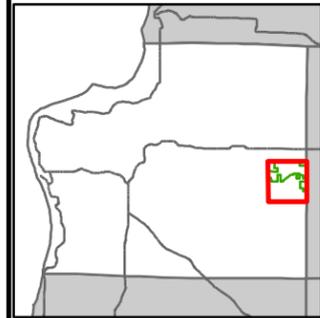


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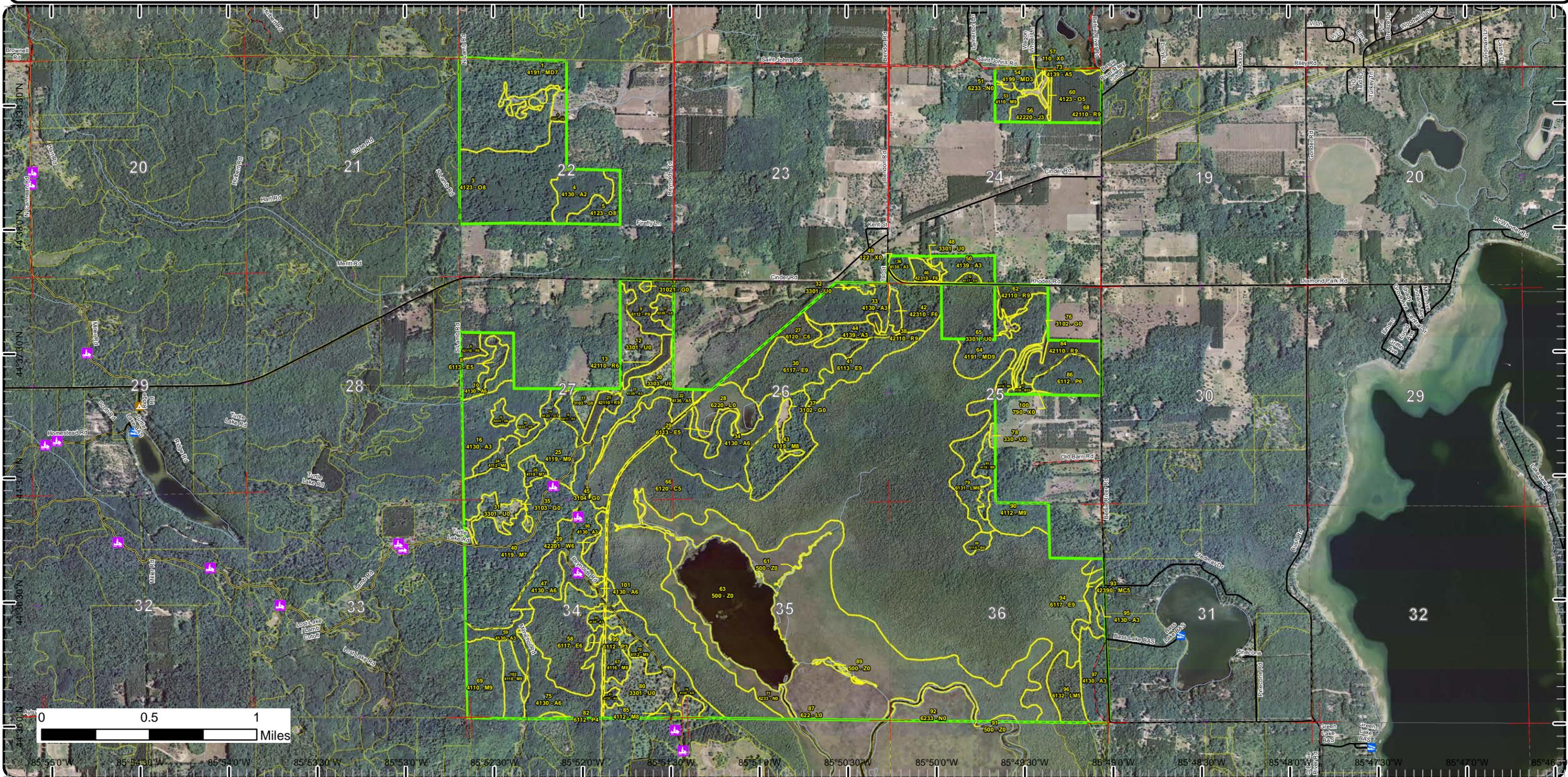
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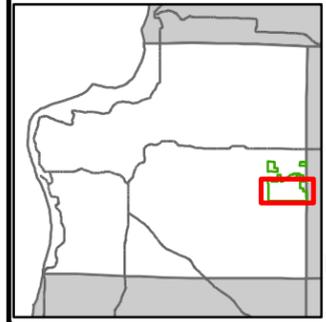
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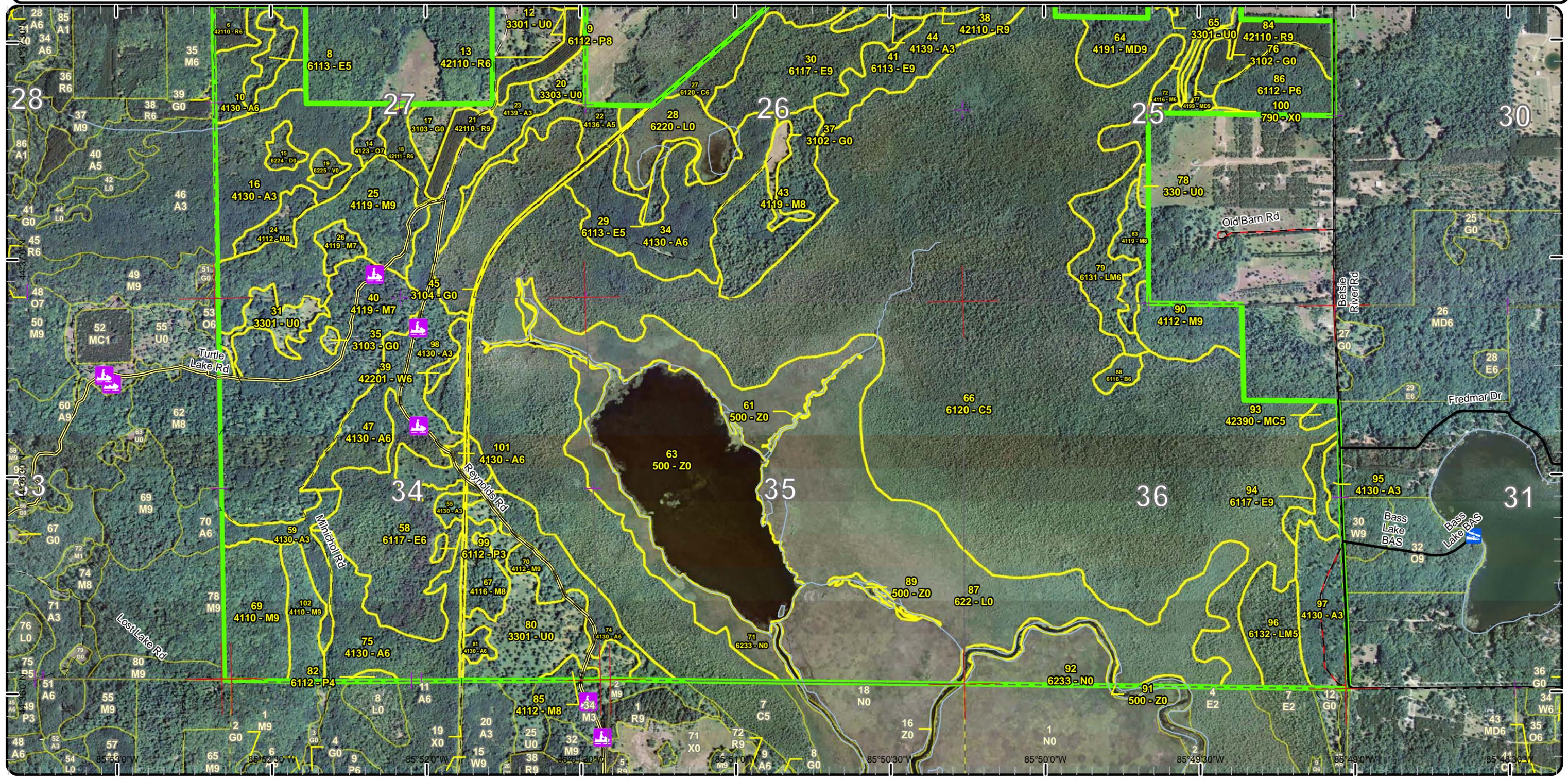
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Stand Boundary Map



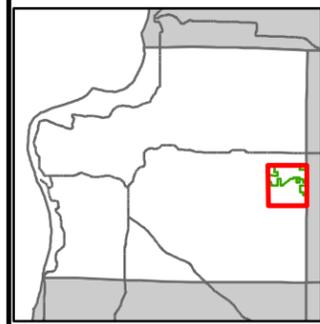
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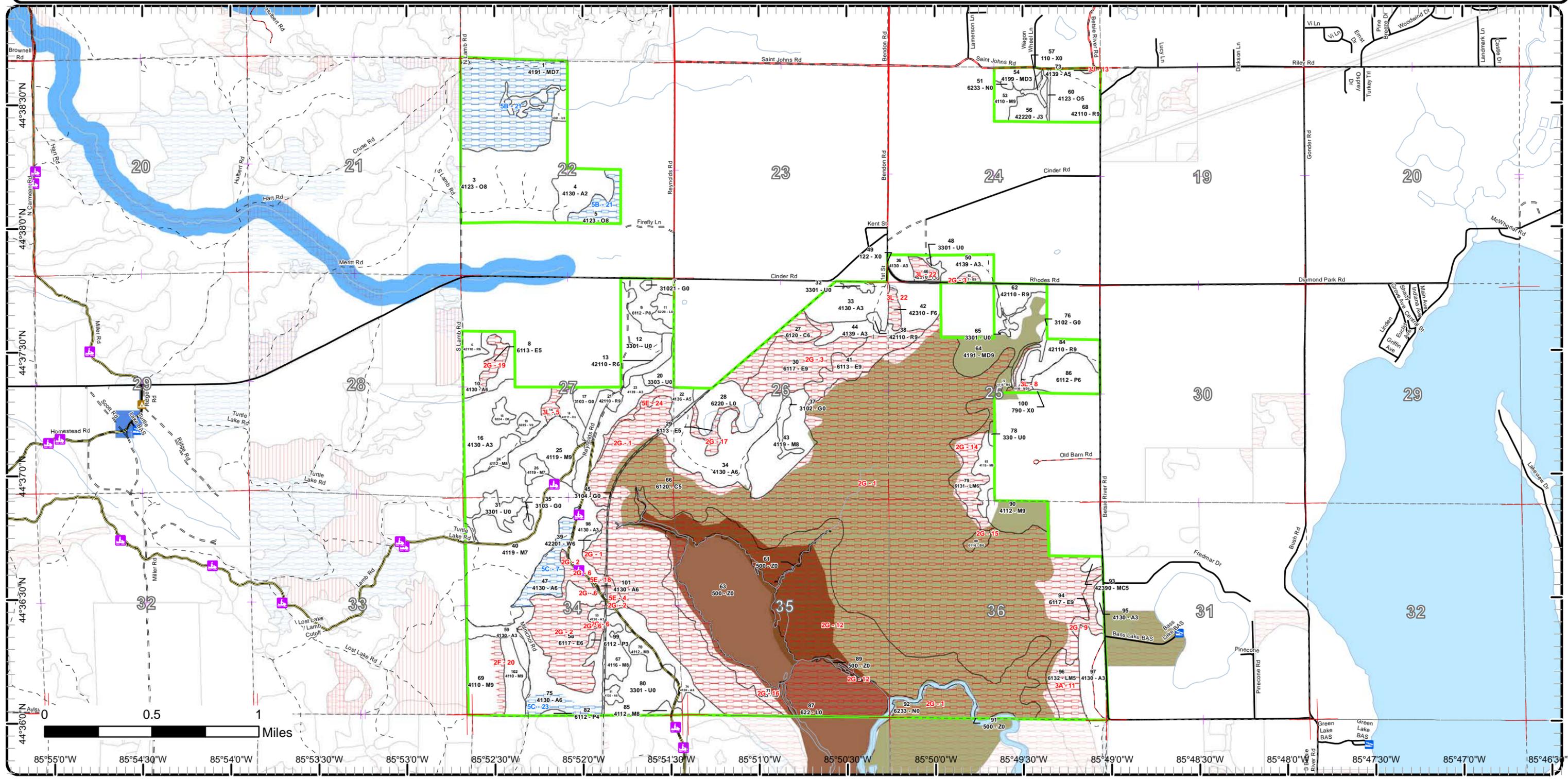


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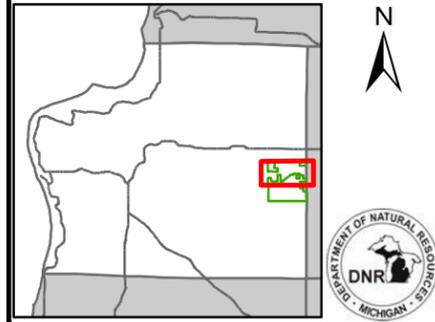


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|---|---|---|
| <ul style="list-style-type: none"> — Miris Corners — County Paved Roads — Paved Roads — County Gravel Roads — Gravel Roads — Poor Dirt Roads — County Poor Dirt Roads Culverts Boating Access Site Campground Snowmobile Trails — Rivers Stand Boundaries | <ul style="list-style-type: none"> — Available w/ Constraints — Unavailable <p>Available Factors W/ Constraints</p> <ul style="list-style-type: none"> 5B: Maintain for regeneration purposes 5C: Delay treatment for age/size class diversity or exceptional site quality <p>Unavailable Factors</p> <ul style="list-style-type: none"> 2F: Too steep 2G: Too wet (sensitive soils, does not include access issues) 3A: Potential old growth / biodiversity 3J: Water quality / BMPs (stream, river, or lake) | <ul style="list-style-type: none"> 3L: Other wildlife concerns 5E: Long-Term Retention Special Conservation Areas — Cold Water Streams — Cold Water Lakes — High Priority Trout Stream Buffer — Wildlife Management Areas — Boat Access Site — Potential Old Growth |
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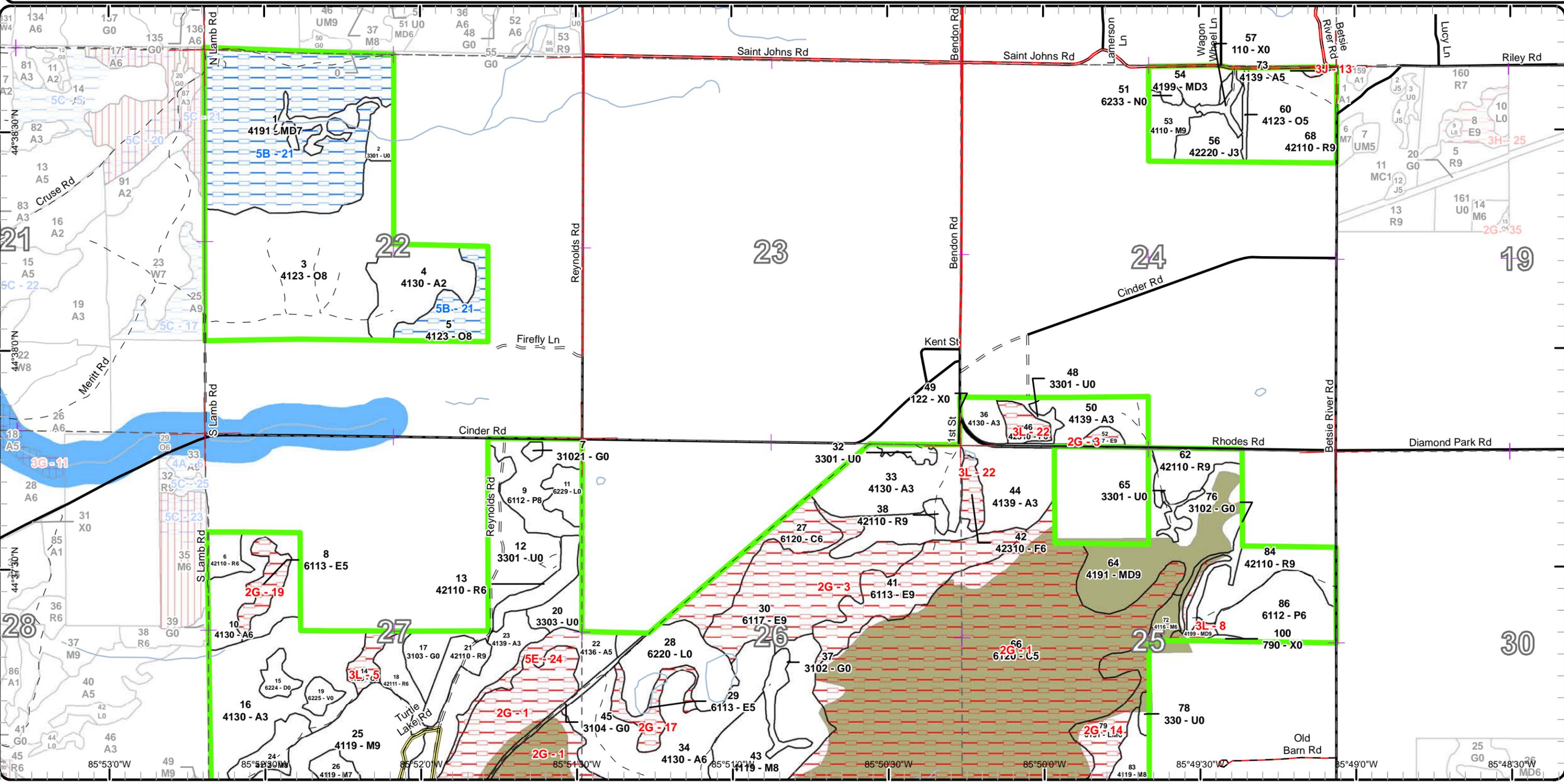


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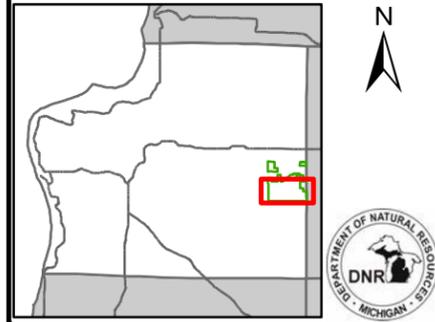


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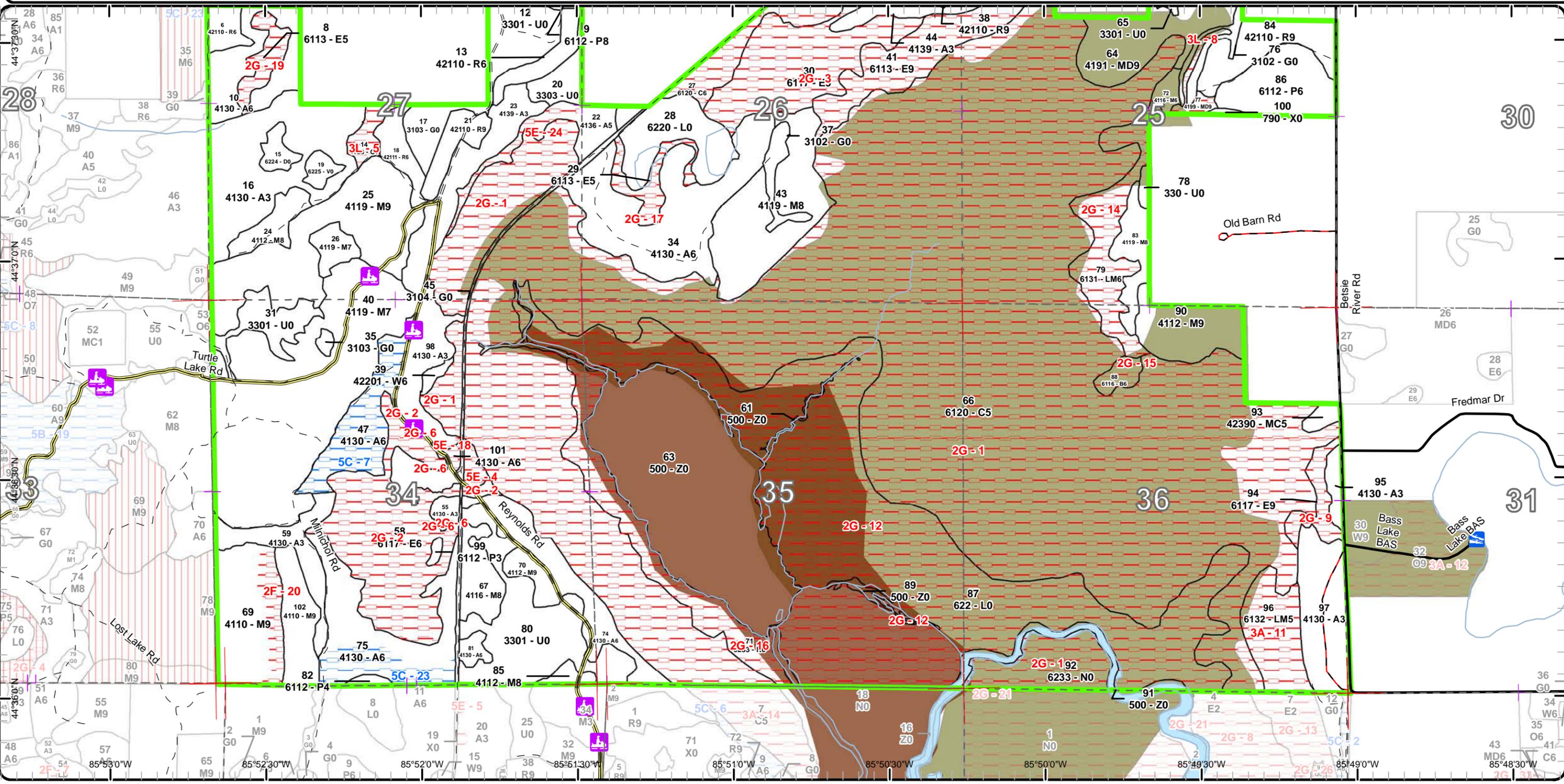


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Report 1 – Total Acres by Cover Type and Age Class



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	75	112	125	0	66	137	0	16	0	0	0	0	0	0	0	0	0	531
Bare/Sparsely Vegetated	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Bog	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Cedar	0	0	0	0	0	0	0	0	0	0	0	1152	0	0	0	0	0	0	1152
Herbaceous Openland	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
Jack Pine	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Low-Density Trees	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129
Lowland Aspen/Balsam Poplar	0	1	0	0	28	0	24	0	0	0	0	0	0	0	0	0	0	0	53
Lowland Deciduous	0	0	0	0	0	0	0	10	78	14	92	10	0	0	0	0	0	0	204
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	35	61
Lowland Shrub	367	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	367
Marsh	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
Mixed Upland Deciduous	0	0	11	0	0	0	0	0	49	114	5	0	0	0	0	0	0	0	179
Northern Hardwood	0	0	0	0	0	4	0	25	0	92	121	25	0	0	0	0	0	128	395
Oak	0	0	0	0	0	2	0	0	0	131	0	0	0	0	0	0	0	0	133
Paper Birch	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Red Pine	0	0	0	10	0	10	57	37	0	0	0	0	0	0	0	0	0	0	114
Treed Bog	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
Upland Spruce/Fir	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	13
Urban	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Water	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155
White Pine	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
Total	774	76	138	135	28	87	231	72	145	351	218	1216	0	0	0	0	0	163	3634



Report 2 – Treatment Summary

Traverse City Mgt. Unit
Year of Entry: 2017

Acres of Harvest

Compartment 18
Total Compartment Acres: 3,634

Commercial Harvest - 0
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 713

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	94	0	0	0	0	0	0	0	0	94
Lowland Aspen/Balsam Poplar	22	0	0	0	0	0	0	0	0	22
Mixed Upland Deciduous	7	0	0	0	0	0	0	0	0	7
Northern Hardwood	41	25	0	0	0	0	0	0	0	66
Oak	107	0	0	0	0	0	0	0	0	107
Red Pine	0	0	0	0	0	74	0	0	0	74
Total	271	25	0	0	0	74	0	0	0	370

Proposed and Next Step Treatments by Harvest Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	370	0	0	0	0	18	568	128	0	1083
Next Step	0	0	0	0	0	296	0	0	0	296
Total	370	0	0	0	0	314	568	128	0	1379



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
3	61018003-Cut	106.7	4123 - Red Oak	Sawtimber Medium	80	81-110	Harvest	Clearcut with Retention	4123 - Red Oak	Even-Aged	Draft Proposal

Habitat Cut: No **Site Condition:**

Prescription Regeneration harvest of all red oak. Leave many small retention islands evenly scattered throughout the stand. Try to do as least amount of damage to existing advanced sapling understory (especially sugar maple) as possible. Although, this will be challenging due to large oak trees with large crowns. Hope for lots of stump sprouting of the oak. Leave all pine.

Next Step
Treatments:

Acceptable Oak, maple, aspen, cherry, white pine.
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

9	61018009-Cut	22.3	6112 - Lowland Aspen	Sawtimber Medium	55	Unspecified	Harvest	Clearcut with Retention	6112 - Lowland Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Harvest portions of the stand that are accessible and not too wet, to regenerate/expand aspen component. Cut all aspen, red maple, cherry and elm within these areas and leave any pine or other species that may be present. Low/wet area of the stand can be used as retention areas. Create some CWD during harvest operations and leave any standing dead and den trees that may exist.

Next Step
Treatments:

Acceptable aspen, red maple, cherry
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

10	61018010-Cut	25.6	4130 - Aspen	Poletimber Well	57	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Craig Allen: Harvest all aspen, red maple, ironwood, beech to help regenerate and expand aspen component. Leave all oak and majority of pine. Could leave retention component along the edges of the adjacent lowland stand (#8) that this aspen stand surrounds. Create some CWD during harvest operations and leave any standing dead and den trees that may exist.

Next Step
Treatments:

Acceptable aspen, red maple
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

12	61018012-NF	27.5	3301 - Low Density Deciduous Trees	Nonstocked		Unspecified	NonForestMgt	Herbaceous/Crop/ Grass Planting	310 - Herbaceous Openland		Proposal
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Habitat Cut: Yes **Site Condition:**

Prescription This opening is dominated by bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate perennial pasture mix (i.e. clover/alfalfa) or native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016



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
17	61018017-NF	10.5	3103 - Rubus-Fern	Nonstocked		Unspec ified	NonForestMgt	Herbaceous/Crop/ Grass Planting	310 - Herbaceous Openland		Proposal

Habitat Cut: Yes

Site Condition:

Prescription This opening is dominated by bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate perennial pasture mix (i.e. clover/alfalfa) or native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

20	61018020-NF	8.9	3303 - Mixed Low Density Trees	Nonstocked		Unspec ified	NonForestMgt	Herbaceous/Crop/ Grass Planting	310 - Herbaceous Openland		Proposal
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Habitat Cut: Yes

Site Condition:

Prescription This opening is dominated by bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate perennial pasture mix (i.e. clover/alfalfa) or native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

22	61018022-Cut	7.5	4136 - Aspen, Mixed Conifer	Poletimber Medium	70	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Harvest all aspen, red maple and fir to open-up the stand for aspen regeneration purposes. Leave all cedar, white pine, and oak. The "NW tail" part of the stand can remain uncut and out of the sale area as long term retention. Create some CWD during harvest operations and leave any standing dead and den trees that may exist.

Next Step
Treatments:

Acceptable aspen, red maple
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

25	61018025-Cut	27.7	4119 - Mixed Northern Hardwoods	Sawtimber Well	83	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Cut all aspen, maple and cherry to regenerate all species and hopefully expand aspen type. Leave retention islands and/or possibly individual retention trees. Leave all oak or pine that may be in the stand. Leave any standing dead and wildlife den trees that may exist.

Next Step
Treatments:

Acceptable aspen, maple, cherry
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016



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
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31	61018031-NF	14.7	3301 - Low Density Deciduous Trees	Nonstocked		Unspecified	NonForestMgt	Brush Cutting	320 - Upland Shrub		Proposal
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Habitat Cut: Yes

Site Condition:

Prescription Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover.
Specs: Fertilize plantings and protect with wire cages or tubex.

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

37	61018037-NF	6.7	3102 - Grass	Nonstocked		Unspecified	NonForestMgt	Herbaceous/Crop/ Grass Planting	31021 - Cool Season Grass		Proposal
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Habitat Cut: Yes

Site Condition:

Prescription This opening is a traditional wildlife planting. Plant to annual rye for several years and then convert to a pasture mix (i.e. clover/alfalfa) if soil will support it. Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

62	61018062-Cut	14.1	42110 - Planted Red Pine	Sawtimber Well	59	141-170	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Thin stand by removal of 1/3 volume. Will require individual select marking of trees.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

63	61018063-Other	138.2	500 - Water	Nonstocked		Unspecified	Other	Other	510- Water (OI)		Proposal
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Habitat Cut: Yes

Site Condition:

Prescription Water level and vegetation will be managed via the Grass Lake Wildlife Management Area plan, upon the plan's completion and approval.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016



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	61018064-Cut	7.0	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	77	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal

Habitat Cut: No Site Condition:

Prescription Cut all aspen, maple, cherry, beech, and ironwood to regenerate and expand aspen type (preferably). Leave small retention island and/or individual retention trees. Do not cut any cedar or oak (if present). Leave some white pine especially any super canopy pines. Leave all standing dead and any den trees that may exist.

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

Acceptable aspen, maple, cherry, birch
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

66	61018066-24- New	13.4	6120 - Lowland Cedar	Poletimber Medium	106	51-80	Other	Other	61203 - Cedar (OI)	Uneven-Aged	Proposal
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Habitat Cut: Yes Site Condition: Too Wet

Prescription Investigate possibility of revitalizing old hunter walking trail from Rhodes Road to Carpenter Road.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Trail would be for foot traffic only. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

67	61018067-Cut	13.7	4116 - Mixed N. Hardwood - Aspen	Sawtimber Medium	60	51-80	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Draft Proposal
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Habitat Cut: No Site Condition:

Prescription Cut all aspen and red maple to regenerate these species. Mark some retention islands and/or scattered retention trees, especially of the large maples that are on the hills. Leave all pine and fir. Leave any standing dead and den trees that may exist.

Next Step
Treatments:

Acceptable aspen, maple, cherry
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

68	61018068-Cut	36.6	42110 - Planted Red Pine	Sawtimber Well	65	171-200	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	Draft Proposal
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Habitat Cut: No Site Condition:

Prescription Thin stand by removal of 1/3 volume by individual tree marking.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016



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	61018069-Monitor	17.8	4110 - Sugar Maple Association	Sawtimber Well	97	51-80	Monitoring	Natural Regen (Re-Inventory)	4110 - Sugar Maple Association	Uneven-Aged	Draft Field Boundary

Habitat Cut: Yes **Site Condition:**

Prescription monitor for regen
Specs:

Next Step
Treatments:

Acceptable maple, beech, ash, basswood, aspen
Regen:

Other Percent to Treat = 100% Old next step comments:
Comment:

Proposed Start Date: 1 /1 /2015

71	61018071-Other	41.7	6233 - Wet Meadow Nonstocked	Unspecified			Other	Other	623 - Emergent Wetland		Proposal
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Habitat Cut: Yes **Site Condition: Too Wet**

Prescription Treat for invasive phragmites and any other invasive species. It is very likely that glossy buckthorn is present as well.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Water level and vegetation will be managed via the Grass Lake Wildlife Management Area plan, upon the plan's completion and approval. Old
Comment: next step comments:

Proposed Start Date: 10/1 /2016

74	61018074-Cut	27.0	4130 - Aspen	Poletimber Well	55	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Clear cut red maple, aspen, cherry to help regenerate all species and expand aspen component. Mark leave areas for retention or possibly
Specs: design cut boundaries to exclude retention pockets especially around lowland spots or steep slopes that are scattered in the stand. Leave all oak and leave most pine and fir. Can mark some individual retention trees too. Leave any standing dead and den trees that may exist.

Next Step
Treatments:

Acceptable aspen, red maple, cherry
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

75	61018075-Cut	30.2	4130 - Aspen	Poletimber Well	55	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Cut aspen and red maple to regenerate. Mark some leave retention islands and scattered individual trees. Leave any pine, fir, cedar or oak.
Specs: Leave any standing dead or den trees that may exist in the stand.

Next Step
Treatments:

Acceptable aspen, red maple, cherry
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016



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
76	61018076-NF	6.5	3102 - Grass	Nonstocked		Unspec ified	NonForestMgt	Herbaceous/Crop/ Grass Planting	31021 - Cool Season Grass		Proposal

Habitat Cut: Yes

Site Condition:

Prescription This opening is a traditional wildlife planting. Plant to annual rye for several years and then convert to a pasture mix (i.e. clover/alfalfa) if soil will support it. Specs: Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.

Next Step
Treatments:

Acceptable
Regen:

Other Keep wildlife planting away from edge of private property. Comment: Old next step comments:

Proposed Start Date: 10/1 /2016

80	61018080-NF	52.8	3301 - Low Density Deciduous Trees	Nonstocked		Unspec ified	NonForestMgt	Herbaceous/Crop/ Grass Planting	310 - Herbaceous Openland		Proposal
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Habitat Cut: Yes

Site Condition:

Prescription This opening is dominated by bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate perennial pasture mix (i.e. clover/alfalfa) or native mix if soils will allow. Specs: Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments: Comment:

Proposed Start Date: 10/1 /2016

81	61018081-Cut	3.5	4130 - Aspen	Poletimber Well	57	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Cut all aspen and red maple to regenerate. Mark some of the large diameter maple to keep for retention. Also, try to leave some of the pockets of advanced maple retention along south edge. Specs: Leave any pine or fir. May be less than 3% retention due to very small size of the stand.

Next Step
Treatments:

Acceptable aspen, red maple, cherry Regen:

Other Old next step comments: Comment:

Proposed Start Date: 10/1 /2016

84	61018084-Cut	23.0	42110 - Planted Red Pine	Sawtimber Well	59	171- 200	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Thin stand by removal of 1/3 volume. Will require individual select marking of trees. Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments: Comment:

Proposed Start Date: 10/1 /2016



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
87	61018087-Other	374.5	622 - Lowland Shrub	Nonstocked		Unspecified	Other	Other	629 - Mixed non-forested wetland		Proposal

Habitat Cut: Yes **Site Condition: Too Wet**

Prescription Water level and vegetation will be managed via the Grass Lake Wildlife Management Area plan, upon the plan's completion and approval.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

90	61018090-Cut	24.9	4112 - Maple, Beech, Cherry Association	Sawtimber Well	106	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Thin stand by select marking leaving approximately 80-90 SF residual BA. Follow complete marker guidelines.
Specs:

Next Step
Treatments:

Acceptable sugar maple, red maple, beech, cherry, basswood, birch,
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

Total Treatment Acreage Proposed: 1083.2



Dominant Site Conditions

	2G	3A	3J	3L	5B	5C	5E
Aspen			1			45	13
Bare/Sparsely Vegetated							
Bog							
Cedar	1,152						
Herbaceous Openland							
Jack Pine							
Low-Density Trees							
Lowland Aspen/Balsam Poplar							
Lowland Deciduous	203						
Lowland Mixed Forest	35	26					
Lowland Shrub	330						
Marsh	69						
Mixed Upland Deciduous				5	114		
Northern Hardwood							
Oak				6	19		
Paper Birch	5						
Red Pine							
Treed Bog							
Upland Conifers							
Upland Spruce/Fir				13			
Urban							
Water							
White Pine							
Total Forested Acres	1,795	26	1	24	132	45	13
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	Dominant Site 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)	1,157	Unspecified	Unspecified	Unspecified	Unspecified
Comments:								

Report 5 – Site Conditions

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2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	77	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	118	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Keep this small portion of the stand as long term retention...it is well defined by various edges and works scenically as mature timber due to its location at the intersection of two roads.							
5	Unavailable	3L: Other wildlife concerns	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Leave stand as is...for oak mast production for wildlife							
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	28	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Delay aspen harvest to help stagger age classes in the area. Delay 10 or 20 years.							

Report 5 – Site Conditions

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 Craig Allen : Examiner

Compartment: 18
 Year of Entry: 2017



8	Unavailable	3L: Other wildlife concerns	5	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments: Seasonal drainage near south private line. Majority of stand is "island" between the adjacent wildlife openings. Leave for wildlife mast and mature forest edge.</p>							
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments:</p>							
11	Unavailable	3A: Potential old growth / biodiversity	26	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<p>Comments:</p>							
12	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	330	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments:</p>							
13	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	1	5C: Delay treatment for age/size class diversity or exceptional site quality	5B: Maintain for regeneration purposes	2F: Too steep	Unspecified
<p>Comments: Small, hilly stand that has county road along edge and contains a small wetland. Inoperable for harvesting. Let aspen fall out of stand to Allow oak and maple saps and poles to grow up through understory.</p>							
14	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	35	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments:</p>							

Report 5 – Site Conditions

Traverse City Mgt. Unit
 Craig Allen : Examiner

Compartment: 18
 Year of Entry: 2017



15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	42	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
18	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
20	Unavailable	2F: Too steep	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

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 Craig Allen : Examiner

Compartment: 18
 Year of Entry: 2017



21	Available	5B: Maintain for regeneration purposes	132	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Timber sale was done in 2010-11 and all aspen maple and some oak were cut...all of which were cut for regeneration purposes.							
22	Unavailable	3L: Other wildlife concerns	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments: originally planted for wildlife cover purposes...keep for this reason. Concern for any type of thinning as heavy equipment will damage roots systems (that are very shallow.)							
23	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments: delay to help stagger age class of aspen. This will be cut with adjacent stand to the south in adjacent compartment 21 in 10 or 20 years.							
24	Unavailable	5E: Long-Term Retention	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Long term retention for stand 22							

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 6 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
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.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Poor	113.5	85	1-50	<p>Lots of variability in species mix, volume, and quality.</p> <p>seedlings=some oak 1'-2', others are S.maple, R.maple,cherry, ash, iron,beech,white pine.</p> <p>Quite a bit of oak sap-pole in some areas.</p> <p>Gentle rolling hills with a few deeper "vallys" that have mostly oak and white pine with aspen in them.</p> <p>maple leaf vibernum and a few other site indicator plants in stand, but variable in location/amounts.</p>
3	4123 - Red Oak	Sawtimber Medium	106.7	80	81-110	<p>All maple and aspen was cut in 1999.</p> <p>Seedlings species same as sub canopy species plus some ash.</p> <p>Lots of raspberries.</p> <p>Oak wilt treatment in stand</p>
4	4130 - Aspen	Sapling Medium	29.8	26	Unspecified	<p>Raspberries</p> <p>Various seedlings species present.</p>
5	4123 - Red Oak	Sawtimber Medium	18.6	85	1-50	<p>Stand was thinned in winter of 2010-2011. All aspen was cut and select marked maple and oak.</p> <p>A lot of multi-stem trees but some good maple and some nice large DBH red oak.</p> <p>Good species mix.</p>
6	42110 - Planted Red Pine	Poletimber Well	7.1	58	111-140	<p>Has already been 3rd row-thinned.</p> <p>Thinned feb of 2008=every third tree</p>
8	6113 - Lowland Maple	Poletimber Medium	9.7	60	81-110	<p>Standing water.</p>
9	6112 - Lowland Aspen	Sawtimber Medium	22.3	55	Unspecified	<p>A very diverse stand.</p> <p>Possible rows of oak planted along south end near pine plantation or oak volunteers started in furrows of pine plantation, unfortunately, oak wilt is within this area and many of these trees will have to be removed.</p> <p>Many low wet areas (with standing water) and drainages...fragile dark soils.</p> <p>Oak wilt was treated with vibratory plow in fall of 2014 and trees cut in winter of 2015</p>
10	4130 - Aspen	Poletimber Well	25.6	57	Unspecified	<p>Aspen still looking good.</p> <p>seedlings= cherry, red maple, white pine.</p>
13	42110 - Planted Red Pine	Poletimber Well	9.9	46	111-140	<p>Seedlings = red maple.</p> <p>Thinned feb.of 2008 = every 3rd row.</p>
14	4123 - Red Oak	Sawtimber Poor	6.3	85	1-50	<p>Leave stand as is... for oak mast production</p>



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	4130 - Aspen	Sapling Well	59.1	26	Unspecified	Many scattered wetland areas mixed with upland ridges. Also, has a few scattered red oak sawlog trees that were left as residual mast producers. seedlings = red maple & cherry.
18	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	9.8	28	141-170	Has large inclusions of red oak (saw & pole) towards north end of stand.
21	42110 - Planted Red Pine	Sawtimber Well	10.7	58	141-170	Has already been row- thinned and selective thinned. seedlings = red maple, beech, sugar maple and oak.
22	4136 - Aspen, Mixed Conifer	Poletimber Medium	15.6	70	Unspecified	Has a few nice northern red oak trees. Has some nice aspen
23	4139 - Aspen, Mixed Deciduous	Sapling Well	28.8	15	Unspecified	Low shrub = raspberries. Contains some residual pole and log sized red oak that was not cut in 2000.
24	4112 - Maple, Beech, Cherry Association	Sawtimber Medium	10.4	80	51-80	Lots of variability in size class & species mix. Lots of multi- stem trees. Natural openings.
25	4119 - Mixed Northern Hardwoods	Sawtimber Well	65.2	83	51-80	Mostly med. to low quality maple. Lots of multi-stems Dry upland conditions...no indicator plants here.
26	4119 - Mixed Northern Hardwoods	Sawtimber Poor	7.0	80	1-50	Mixed with natural openings. mid to low quality timber. seedlings= lots of beech!
27	6120 - Lowland Cedar	Poletimber Well	23.4	108	Unspecified	Standing water in majority of stand
29	6113 - Lowland Maple	Poletimber Medium	10.5	80	Unspecified	Some standing water, seasonably flooded.
30	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	56.8	90	Unspecified	Some good areas of hemlock regen. (3 to 5' tall).
33	4130 - Aspen	Sapling Well	36.3	26	Unspecified	Some scattered pole size white pine, red pine and oak.
34	4130 - Aspen	Poletimber Well	66.3	42	Unspecified	
36	4130 - Aspen	Sapling Well	7.5	17	Unspecified	Good diversity.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	42110 - Planted Red Pine	Sawtimber Well	2.5	59	141-170	Red maple will take over stand eventually.
39	42201 - Natural White Pine, Mixed Deciduous	Poletimber Well	2.1	71	51-80	
40	4119 - Mixed Northern Hardwoods	Sawtimber Poor	128.2	85	51-80	Timber sale in march/April of 2011 treated 96 acres of this stand. Cut all aspen and select marked maple, beech and oak. Left all conifers. Some very large DBH red oak. A lot of sapling oak 20 to 40' tall in understory. In 2011 I cut down two and found the ages to be 33 and 38 years...but very suppressed growth ring development (only 1.5" and 3" DBH). On site = star flower, pink lady slipper, serviceberry,
41	6113 - Lowland Maple	Sawtimber Well	35.5	90	81-110	Lots of wet holes throughout. fragile soils with high root systems. Would be difficult to log without rut problems and damage to residual roots. Very "humicky" ground. Majority of red maple is of good quality. Stick nest in middle of stand approx. 2 to 3 chains off road.
42	42310 - Planted Spruce	Poletimber Well	6.1	52	51-80	Has some scattered log and pole size white pine and cherry. Providing good thermal cover and escape cover for wildlife. Don't want to thin because logging equipment would damage root systems of residual trees.
43	4119 - Mixed Northern Hardwoods	Sawtimber Medium	49.1	93	81-110	All aspen and fir was cut along with select mark of other species in 1999. Many scattered clear-cut patches that are good aspen regen are included in the stand. East side has some scattered large DBH N. Red oak. Has some other good gap hole openings Lots of raspberries--predominant ground cover. (Overall avg BA = approx. 90) Some good quality sawlogs.
44	4139 - Aspen, Mixed Deciduous	Sapling Well	40.8	4	Immature	Site is mostly dry...but just barely. Very humicky. Could manage for mix stand of aspen, maple, pine, oak and spruce. maple and aspen where harvested out of stand in 2011 Seedlings = white pine, fir, spruce, red maple. Pockets of planted spruce avg. 6-8" DBH. Lots of old burned pine stumps.
46	42310 - Planted Spruce	Poletimber Well	6.6	52	51-80	Providing good thermal cover and escape cover for wildlife. Don't want to thin because logging equipment would damage root systems of residual trees.
47	4130 - Aspen	Poletimber Well	28.1	56	Unspecified	Leave for 10 years to create more of a gap in age class diversity with adjacent stands that have been harvested recently. Aspen can hold another 10 years.
50	4139 - Aspen, Mixed Deciduous	Sapling Well	18.5	17	Unspecified	Good diversity in species and structure. Quite a bit of residual (mainly oak) was left.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
52	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	2.7	85	Unspecified	Really good hemlock understory.
53	4110 - Sugar Maple Association	Sawtimber Well	9.9	85	81-110	Seedlings = mix, mostly sugar maple, beech, red maple. Some good quality maple Was thinned in
54	4199 - Other Mixed Upland Deciduous	Sapling Well	10.7	16	1-50	Seedlings = mix, mostly sugar maple, beech, red maple.
55	4130 - Aspen	Sapling Well	3.4	6	Immature	Was harvested in 2009. All fir, oak and marked leave trees retained. Aspen regen cut.
56	42220 - Natural Jack Pine	Sapling Well	14.5	17	Unspecified	Natural Jack pine regeneration = dog hair thick!
58	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	77.9	79	Unspecified	Contains a few oak trees. Patchy areas of standing water. Very "humicky" ground. Could possibly log some portions. Fir taking over majority of stand. Hardwoods of low quality.
59	4130 - Aspen	Sapling Well	19.0	17	Unspecified	
60	4123 - Red Oak	Poletimber Medium	1.8	40	51-80	
62	42110 - Planted Red Pine	Sawtimber Well	14.1	59	141-170	Average BA is 170, and possibly higher (if more intensive plot sampling). Was row-thinned once in approx. 1995
64	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	49.4	77	81-110	Inclusion of spruce plantation along private line in Northwest part of stand. (7 to 9" DBH, avg. 90SF). A few sugar maple on north east end. Stand also contains some cedar and hemlock along south edges that border swamp.
66	6120 - Lowland Cedar	Poletimber Medium	1,128.8	106	51-80	Lots of water! Lots of blow-downs. Some cedar regen in spots where deer can't get to them (6" to 2' tall)...but mostly balsam regen.
67	4116 - Mixed N. Hardwood - Aspen	Sawtimber Medium	13.7	60	51-80	
68	42110 - Planted Red Pine	Sawtimber Well	36.6	65	171-200	Has already been thinned twice (row-thinned and every 3rd tree).



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
69	4110 - Sugar Maple Association	Sawtimber Well	39.7	97	51-80	Due to topography, this stand will be treated with adjacent stand to the west in comp 17 when the time comes to do thinning. Timber Quality and volume mid to low. Seedlings = sugar maple, ash, beech Not very many ground indicator plants. Large hill in center- east (runs north/south) portion of stand. This will limit harvesting operations due to steepness.
70	4112 - Maple, Beech, Cherry Association	Sawtimber Well	7.6	60	51-80	A lot of multi- stem, low quality maple.
72	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	3.8	45	81-110	
73	4139 - Aspen, Mixed Deciduous	Poletimber Medium	1.1	58	Unspecified	Small, hilly stand that has county road along edge and contains a small wetland. Inoperable for harvesting. Let aspen fall out of stand....Allowing oak and maple to grow up through understory.
74	4130 - Aspen	Poletimber Well	30.4	55	Unspecified	Occasional oak. fir invading on east side along wet edge. old fir plw line along east side.
75	4130 - Aspen	Poletimber Well	47.5	55	Unspecified	Seedlings = red maple, cherry. also, some raspberry. Aspen is in good condition (holding).
77	4199 - Other Mixed Upland Deciduous	Sawtimber Well	4.6	90	81-110	Seasonal drainage near south private line. Majority of stand is "island" between the adjacent wildlife openings. Leave these trees for wildlife mast and mature forest edge.
79	6131 - Hemlock, White Pine, Maple, Birch	Poletimber Well	34.9	80	81-110	Lots of old white pine stumps. Seasonably wet and year-round pockets of wet areas... very hummicky with fragile dark soils. Too wet for harvesting activities.
81	4130 - Aspen	Poletimber Well	3.5	57	Unspecified	Seedlings = red maple and cherry.
82	6112 - Lowland Aspen	Poletimber Poor	1.8	55	Unspecified	High water table --seasonally wet. Blueberry bog is shrub component in "ground cover". Most of this "stand" carries into the compartment to the south.
83	4119 - Mixed Northern Hardwoods	Sawtimber Medium	13.5	95	51-80	Open... park-like ATV trail --not used much going through stand then into bottom edge of stand 90.
84	42110 - Planted Red Pine	Sawtimber Well	23.0	59	171-200	Has been 3rd-row thinned and mark thinned in past.Red maple moving in heavy in some areasareas of raspberries too. (1-3' tall).
85	4112 - Maple, Beech, Cherry Association	Sawtimber Medium	3.5	60	51-80	Multi-stem maple of low quality.

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Traverse City Mgt. Unit

Report 8 – Forested Stands

Compartment: 18
Year of Entry: 2017

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
86	6112 - Lowland Aspen	Poletimber Well	28.0	39	Unspecified	Some sawlog oak on outside edges. Aspen and some white pine around outside edges where not wet. Mostly wet (about 1/2 the total area) in middle and dryer around the edges.
88	6116 - Lowland Birch	Poletimber Well	5.2	43	Unspecified	Pockets of small wet areas (3 to 10' diameter) throughout. Was burned after it was cut ? Evidence of burn marks on stumps from when cut 33 years ago.
90	4112 - Maple, Beech, Cherry Association	Sawtimber Well	24.9	106	111-140	Very nice maple & cherry. All trees quite nice and long bodied sawlogs. Flat, open and park-like. Seedlings = mostly cherry.
93	42390 - Mixed Non-Pine Upland Conifers	Poletimber Medium	3.3	100	51-80	Mostly dry. Good mix of species.
94	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	10.3	107	Unspecified	Park- like with little or no regen in dry areas -- balsam fir regen in the wet areas.
95	4130 - Aspen	Sapling Well	5.2	17	Unspecified	
96	6132 - Mixed Lowland Forest with Cedar	Poletimber Medium	26.2	105	Unspecified	Some hemlock regen trying to establish (6" to 3' heights). Well populated in some spots.
97	4130 - Aspen	Sapling Well	32.6	17	Unspecified	
98	4130 - Aspen	Sapling Well	31.0	6	Unspecified	Harvested in Summer of 2009. aspen and maple was cut. All oak,pine and marked leave trees were retained. Also some sap maple.
99	6112 - Lowland Aspen	Sapling Well	1.2	6	Unspecified	Harvested in 2009. to expand and regenerate aspen
101	4130 - Aspen	Poletimber Well	1.3	56	Unspecified	This stand is a retention area that was left from the adjacent stand that was cut in 2009.
102	4110 - Sugar Maple Association	Sawtimber Well	18.8	97	81-110	Thinned in fall of 2014 Seedlings = sugar maple, ash, beech Not very many ground indicator plants.



Stand	Cover Type	Acres	Managed Site	General Comments:
2	3301 - Low Density Deciduous Tree	13.8	No	Eat portion is a grassy opening that is partially private. West portion is low density trees. Open areas are composed of mixed grasses, with cherry and junberry present. Clumps of upland deciduous, similar to adjacent stand. Deer browsing within this opening. Notes and inventory by Bill Rollo in 2005.
7	31021 - Cool Season Grass	1.3	No	Spend 25 minutes and cut out jack pine encroachment. Center is cool summer grasses. Bracken fern around perimeter. Some goldenrod present. This stand was inventoried by Bill Rollo in 2005.
11	6229 - Mixed lowland shrub	7.8	No	Fruiting buckthorn and other shrubs. A field of bulrushes. Seen eastern gray treefrog. This stand was inventoried by Bill Rollo in 2005.
12	3301 - Low Density Deciduous Tree	27.5	Yes	Openings is comprised mainly of pole cherry, mixed grasses/spotted knapweed/poverty grass with patches of bracken fern. Big clumps of upland deciduous, mainly oak from what I saw. There is a camp and dumpsite here. Notes and inventory by Bill Rollo in 2005.
15	6224 - Treed Bog	5.0	No	Standing water as of 5/20/2005. Various shrubs, pine, and hardwood species. Nice snag, south end. Various shrubs and ferns. This was inventoried by Bill Rollo in 2005
17	3103 - Rubus-Fern	10.5	No	Old culvert and junk present. Groups of young cherries. May eventually become low-density trees, but I believe rubus/fern is the appropriate category at this time. Notes and inventory by Bill Rollo in 2005.
19	6225 - Bog	4.1	No	Standing water as of 5/20/2005. Shrubs not leafed out yet. Red-shouldered hawk nearby, soaring pretty high. This was inventoried by Bill Rollo in 2005.
20	3303 - Mixed Low Density Trees	8.9	Yes	Alongside hill. All bracken fern, but dry site. Some barren spots. Pole oak and pine. This stand was inventoried by Bill Rollo in 2005
28	6220 - Alder/willow	29.6	No	Clump of hardwoods northwest side. From railroad grade, dominated by sedges and willows. Wet. Could not see SE side.
31	3301 - Low Density Deciduous Tree	14.7	No	Various aged black cherry with clumps of maples. Mixed ground cover. Unlisted specie is hawkweed. This site was inventoried by Bill Rollo in 2005.
32	3301 - Low Density Deciduous Tree	3.3	No	
35	3103 - Rubus-Fern	1.5	No	Might want to spend 10 minutes and cut out encroachment with chainsaws (Rollo). This was inventoried by Bill Rollo in 2005 before harvest was done to surrounding stand. This opening may have more encroachment into the opening from the harvest.
37	3102 - Grass	6.7	Yes	DNR rye field. Great location. Rye grass growing well. Continue planting here. Stand inventory was from Bill Rollo in 2005
45	3104 - Degraded	9.6	No	Old railroad grade.



Stand	Cover Type	Acres	Managed Site	General Comments:
48	3301 - Low Density Deciduous Tree	2.8	No	Power line goes through it. Adjacent to spruce stand. All bracken fern. Inventory info is from 2005 site inspection by Bill Rollo.
49	122 - Road/Parking Lot	2.6	No	Rhodes road
51	6233 - Wet Meadow	1.5	No	Nice, wet meadow. Low evergreen shrubs around perimeter and center. Seasonally wet. Wet on 05/05/2005. Inventoried by Bill Rollo 2005.
57	110 - Low Intensity Urban	3.3	No	communications tower site.
61	500 - Water	1.6	No	
63	500 - Water	138.2	No	Grass Lake
65	3301 - Low Density Deciduous Tree	3.0	No	Open area may be a good site to plant white spruce. Spruce stand nearby is doing well. Opening is degraded with spotted knapweed. Inventory and notes from 2005 Bill Rollo.
71	6233 - Wet Meadow	41.7	Yes	Appears to have a little more shrubs (tag alder) in this stand compared to other stands that surrounds Grass Lake. Notes and Inventory by Bill Rollo in 2005.
76	3102 - Grass	6.5	No	old planted rye field...but site has not been planted for 10 years.
78	330 - Low-Density Trees	1.8	No	A small area that is "spilled over" from a very poor condition 35 year old scotch pine plantation on the adjacent private land. The plantation had a lot of weevil damage and over all very poor health and form with no product or value. The private landowner had all the scotch pine chipped (about 2007?) to remove it...including the portion on State land. This actually did the State a favor by removal of this non-native tree species.
80	3301 - Low Density Deciduous Tree	52.8	No	Large stand. Fair amount of hardwoods (black cherry and maple). Full abundance of bracken fern. Notes and inventory by Bill Rollo in 2005.
87	622 - Lowland Shrub	329.7	No	Remote call...not field inspected
89	500 - Water	3.2	No	
91	500 - Water	12.2	No	Betsie River
92	6233 - Wet Meadow	27.7	No	Rich Earle 2005 - composed mostly of sedges. Cattails along the bank. Some shrubs mixed in.



Stand	Cover Type	Acres	Managed Site	General Comments:
100	790 - Other Bare/Sparsely Vegetate	0.9	No	A small area that is "spilled over" from a very poor condition 35 year old scotch pine plantation on the adjacent private land. The plantation had a lot of weevil damage and over all very poor health and form with no product or value. The private landowner had all the scotch pine chipped (about 2007?) to remove it...including the portion on State land. This actually did the State a favor by removal of this non-native tree species.