



Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61038

Entry Year 2018

Acreage: 3,579

County Manistee

Management Area: Manistee Plains

Revision Date: 2016-06-03

Stand Examiner: Patrick Cotant

Legal Description:

T24N, R14W, Sections 25, 26, 27, 34, 35, 36

Identified Planning Goals:

Vegetation management in the Manistee Plains management area (MA) (Figure 4.22.1) will provide forest products; maintain or enhance wildlife habitat; protect areas of unique character including the Betsie River (a designated natural river), Bear Creek and the Grass Lake Flooding State Wildlife Management Area; 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 and 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.

Soil and topography:

Approximately two thirds of the compartment falls into Land Type Association (LTA) 6149: Flat lake plain; very poorly drained muck. Topography is nearly level. Dominant soils of this LTA are mucks. However, about 30% of the LTA is underlain by Suagatuck loamy sands. Loamy sands exist as small, intricately mixed inclusions, too small to map separately. The remaining third of the compartment falls into LTA 6111: Broad flat lake plain; excessively drained sand and loamy sand. The dominant soil type for this LTA is Rubicon loamy sand, which is characterized by excessive drainage that is nearly devoid of organic matter. Glacial and bedrock geology for both LTA's is associated with lacustrine sediments deposited beneath a glacial lake.

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

This compartment is a part of a large block of State ownership in north central Manistee County. The only private land within the compartment is located in the west half of section 27 and the southwest quarter of section 34. Surrounding land is mostly State ownership to the north and east with mixed State and private lands to the south and west. Private land use is mostly rural residential and seasonal recreational with little new development in the last ten years. There is a new subdivision development in the southwest corner of section 22 along Bear Creek that is adjacent to the very northwest corner of the compartment.

Unique Natural Features:

Third Creek flows through section 25. Healy Lake in section 34.

Archeological, Historical, and Cultural Features:

none known. Healy Lake was once called Crokey Lake, after one of the first homesteaders in the area. Part of the area around Healy Lake was once owned by the Groupee Orchard Company of California in the early 1900's. Some of their apple trees are still standing, but much of their former ownership is now in red pine.

Special Management Designations or Considerations:

Conservation Area Recommendation: an area of 10 chains in radius around Healy Lake Campground has been identified as a potential Special Conservation Area (SCA). In addition, approximately 1100 acres in the southeast corner of this compartment is proposed to be designated as a "road less" area for habitat management. MNFI occurrences show that Wood Turtle populations exist in the area surrounding this compartment. In addition, stand 115 has an element occurrence of a red shouldered hawk - next was not found during inventory process.

Watershed and Fisheries Considerations:

Place holder until Fisheries submits comments

Third Creek flows through Compartment 38. Third Creek is a Designated Trout Stream that has resident populations of brown and brook trout, along with migratory populations of steelhead, Chinook salmon, and possibly coho salmon. Third

Creek is relatively small, and is vulnerable to damming by beavers. Therefore, we ask that the proposed aspen clearcut for Stand 128 be modified slightly. In particular, we ask that the clearcut be restricted to the upland portions of Stand 128. There is a short bluff or rise that runs the length of the stand. If cutting were restricted to those portions of the stand landward (south or west) of the top of the bluff, that would accomplish the goal of regenerating aspen while also protecting Third Creek.

Wildlife Habitat Considerations:

Approximately one third of Compartment 38 rest on well drained lake plain soils (a loamy sand). Pine plantations cover a large percentage of the uplands. Where possible, hardwoods should be encouraged within these plantations for within stand diversity. Also when possible, a 2-5 acre island within a mature plantation could be left relatively un-thinned to provide winter roosting cover for turkeys. Aspen also has a strong presence here and is managed to provide a variety of age classes. Retention of mast/bud producing trees/shrubs, creation of downed logs during harvest operations, and leaving tops un-chipped are excellent ways to increase wildlife use of regenerating aspen. Several cuts are planned to regenerate aspen needed by many wildlife species, including snowshoe hare, ruffed grouse, deer, woodcock, chestnut-sided warblers, and tiger salamanders. Hardwood stands are scattered about this compartment and provide diversity amongst the pine plantations. Hardwood treatments are typically designed to incorporate the preservation of within-stand tree species diversity, the retention of mature mast producing trees, and the protection of den, cavity, and downed trees. Species benefiting from hardwood forests include northern goshawk, wild turkey, gray squirrels, and eastern box turtles.

Openings are scattered about this compartment and a variety of maintenance projects have been scheduled for this entry period, including, selective hand felling, planting of herbaceous ground cover, mowing and fertilizing of grassy openings, planting of fruiting shrubs, and some prescribed burning. Non-forested habitats provide essential life requirements for a variety of wildlife in the form of food (herbaceous forage, fruiting shrubs, insects, small mammals, etc.) and cover (clumps of shrubs, tall grasses and ferns, brushy edges, etc.). Turkey, deer, eastern bluebirds, meadow jumping mice, and smooth green snakes are just a sample of the many species that use these openings.

The poorly drained soils in this compartment support several lowland communities, mostly lowland deciduous forests. Lowland coniferous stands as well as several bogs and lowland brush communities are scattered throughout the deciduous forests. Great blue herons, wood ducks, red-shouldered hawks, black bear, and wood frogs are just several of the many species that use bottomland forests. Inclusions of drier soils can also be found here and several aspen cuts are planned to produce horizontal cover and browse from downed tops, as well as browse and cover from the flush of regenerating aspen stems. Coniferous components (spruce and fir) within these cuts will be retained for additional wildlife cover. When timber sales are adjacent to lowland appropriate lowland stands the new snowshoe hare habitat spec should be used to create horizontal cover.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine sand and gravel. The glacial drift thickness varies between 400 and 800 feet. Beneath the glacial drift is the Devonian Ellsworth Shale. The Ellsworth is used for cement products. The nearest gravel pit is located one mile to the northeast and there may be some potential. This area is located within the Niagaran reef trend and also has Antrim Shale gas production. Most of the State land is currently leased for oil and gas development.

Vehicle Access:

See road closure proposal for southeast portion of compartment.

Survey Needs:

Corners adjoining private land in sections 27 and 34.

Recreational Facilities and Opportunities:

The Betsie River Snowmobile Trail transects the compartment. Healy Lake Campground, a state forest campground operated under a use permit by Springdale Township since 1986. Appropriate trail and campground protection specifications should be considered if proposed treatments impact these amenities. (T.M.N. 1/26/16).

Fire Protection:

Place holder until Fire submits comments

Platte River Field Office and Copemish-Cleon Volunteer Fire Department. This area is located a distance from the Platte River Field Office, which could mean a delay in making initial attack on a fire. There are some small pine plantations in this compartment, and travel time can mean the potential for them to burn completely is possible.

Additional Compartment Information:

The following reports from the Inventory are attached:

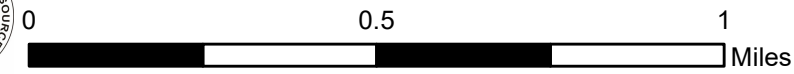
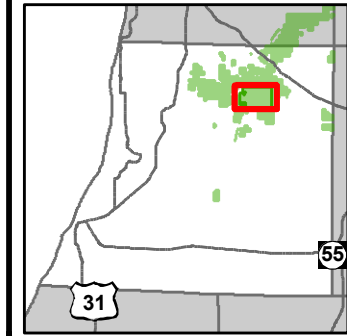
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

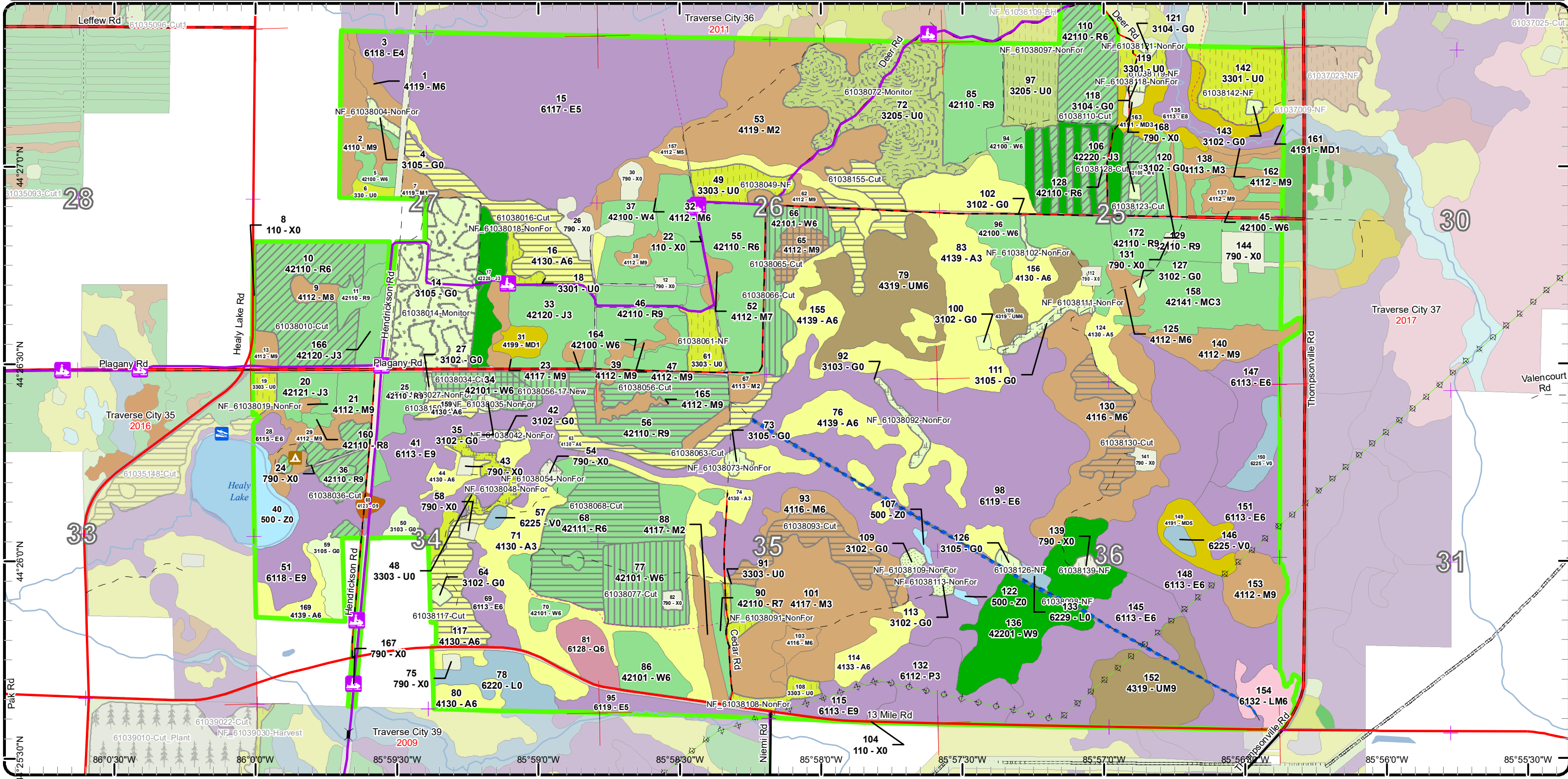
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 38
 T24N R14W 25-27, 34-36
 County: Manistee
 Unit: Traverse City
 Mgmt Area: Manistee Plains
 YOE: 2018
 Acres: 3579 GIS Calculated
 Examiner: Patrick Cotant
 Map Revised: 6/13/2016
 Map Phase: Web-Post

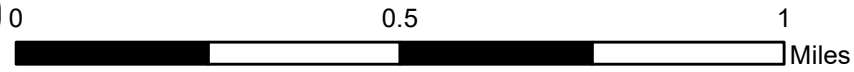
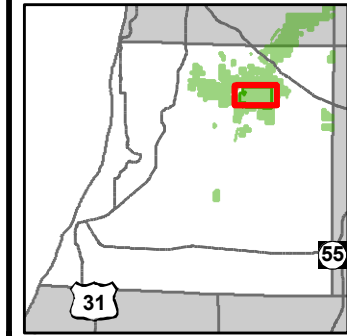


- Miris Corners
- + Remonumented Section Corners
- Bridges
- Boating Access Site
- Campground
- Snowmobile Trails
- Designated Snowmobile Trails
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Rivers
- Pipeline
- Powerline
- Compartment Boundary
- Treatments with Site Conditions
- Clearcut (w/Reserves)
- Other Treatment - See Comments
- Monitoring
- Opening Maintenance
- Regeneration Survey
- Mowing
- Thinning (Crown, Low, Systematic)
- Shelter Wood (w/Reserves)
- Seed Tree (w/Reserves)
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
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- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 790 - Other Bare/Sparsely Vegetated
- Lakes

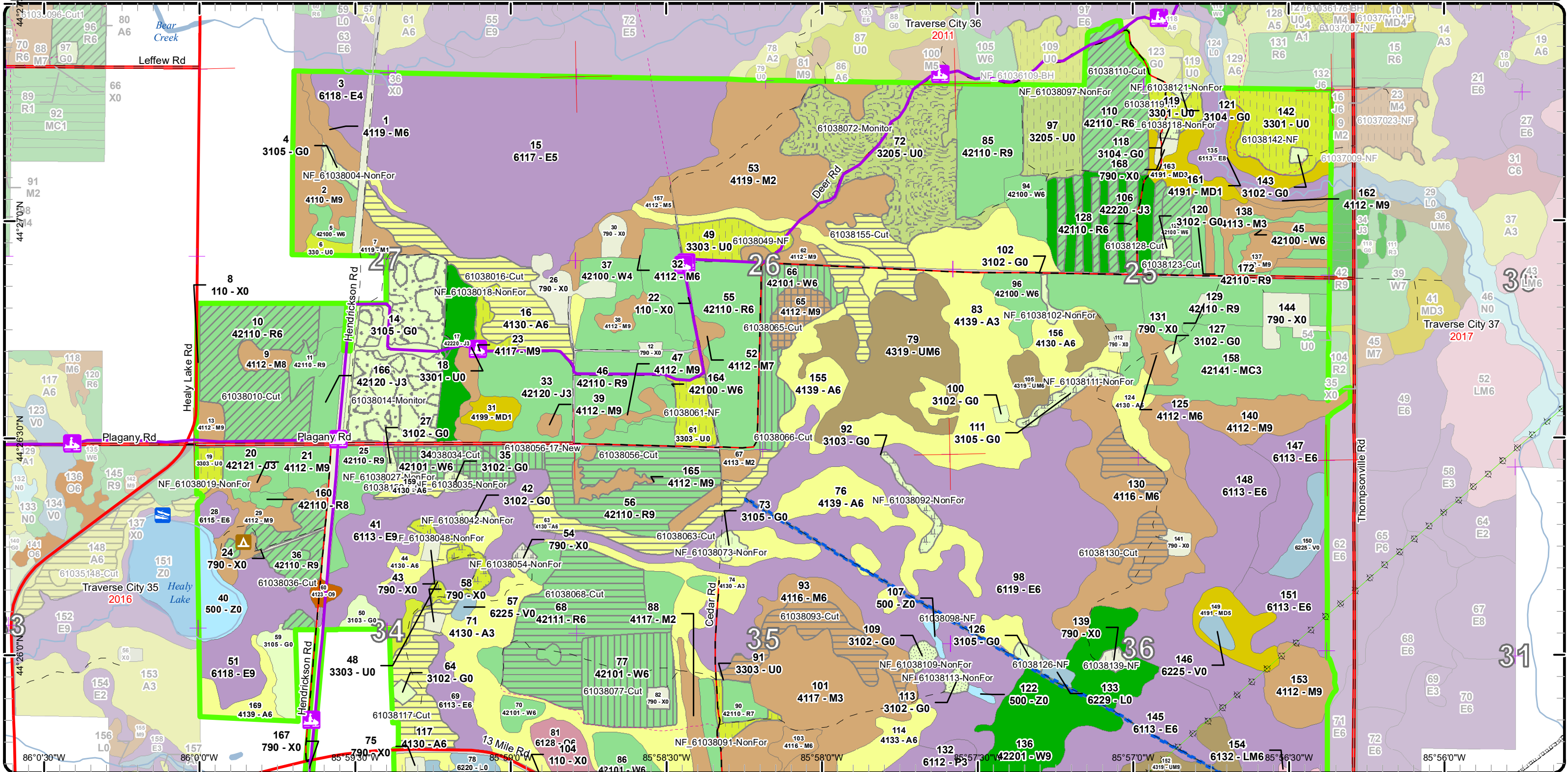


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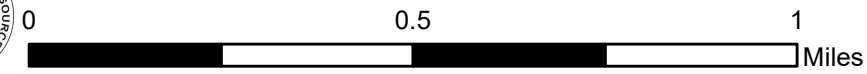
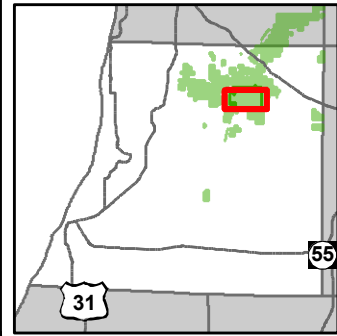


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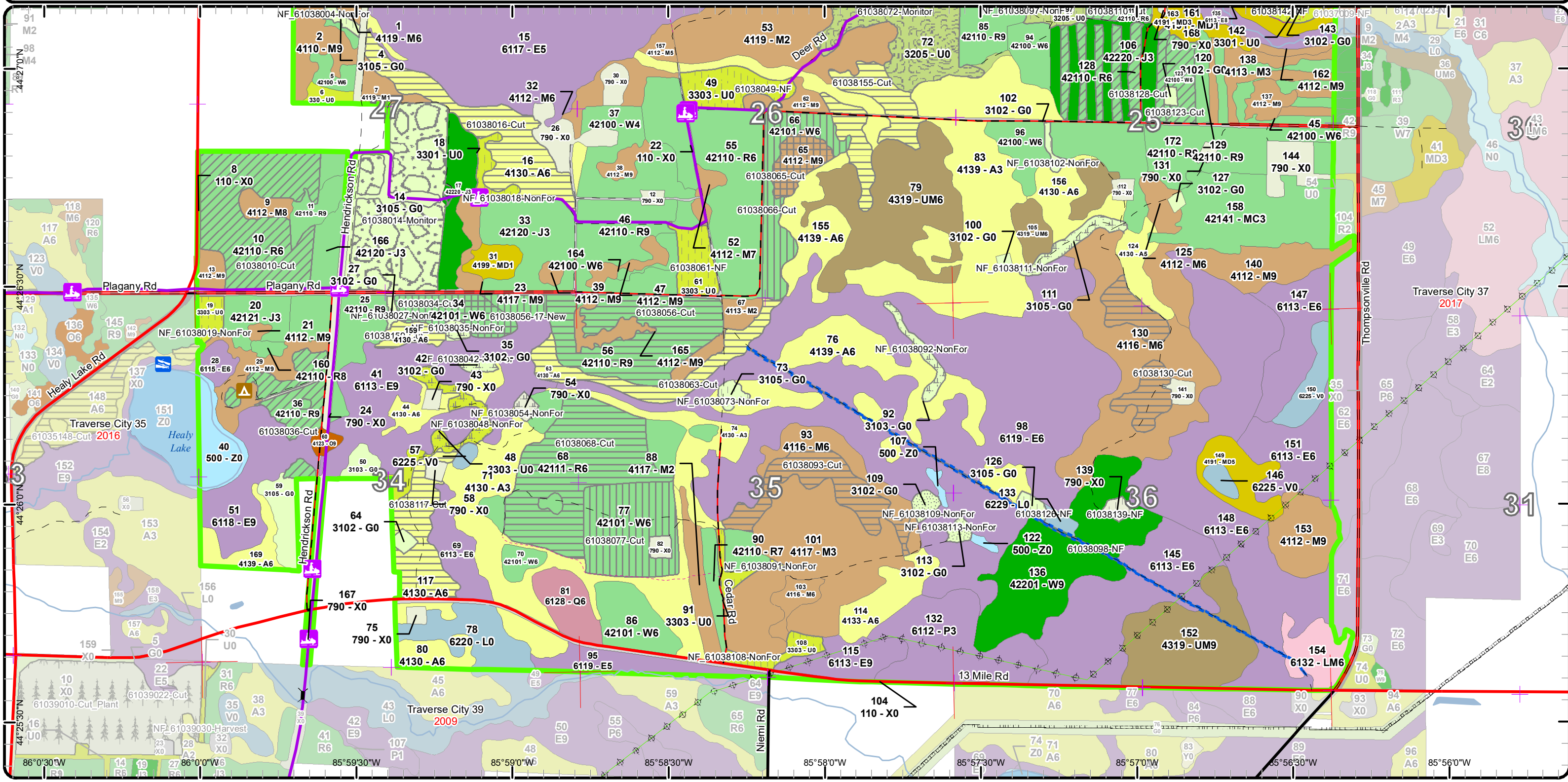


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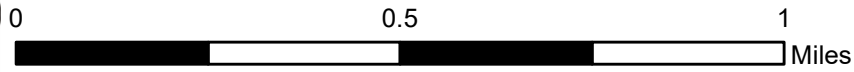
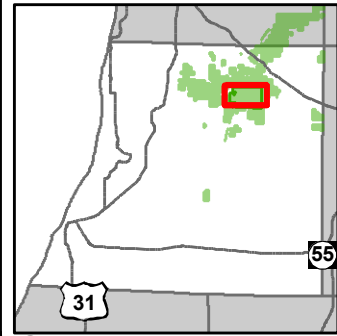


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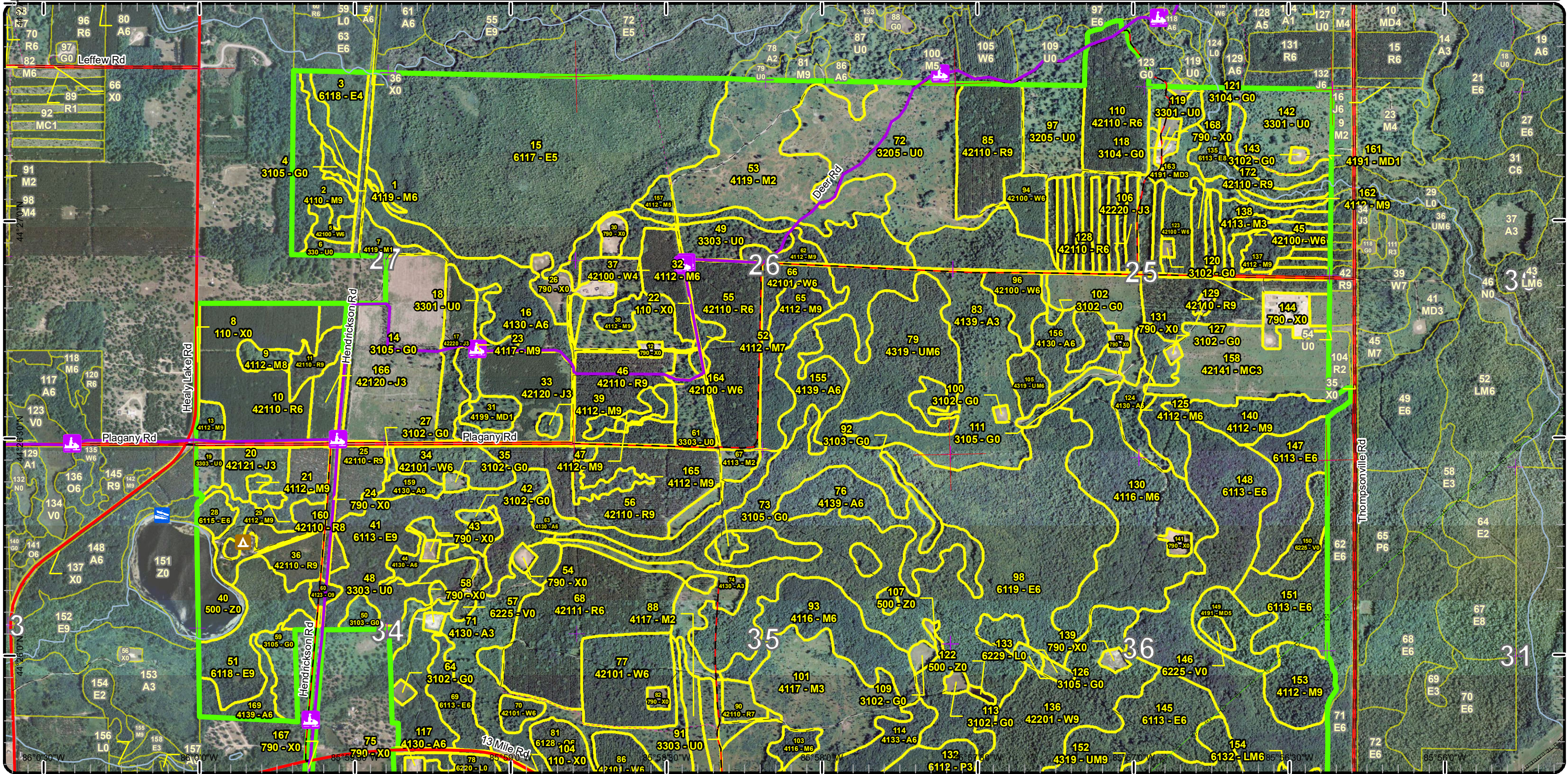


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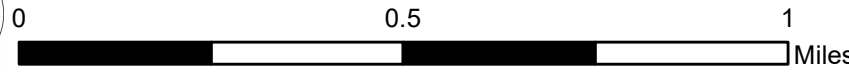
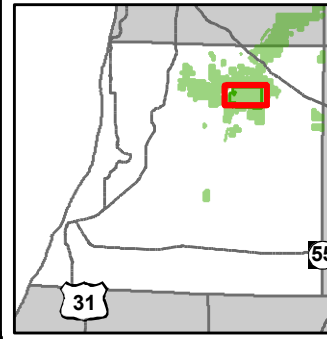


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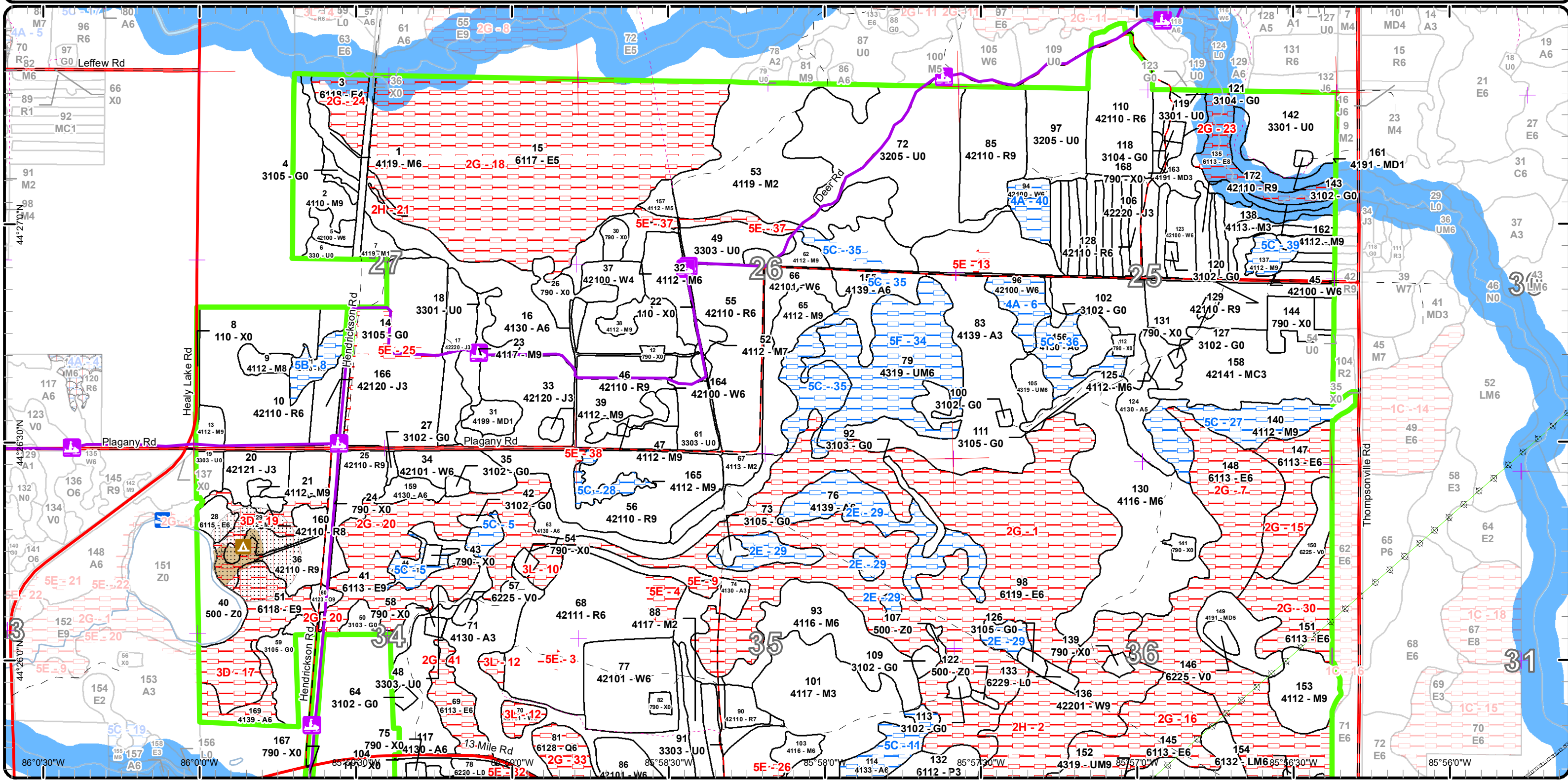


Special Conservation Areas & Site Conditions Map

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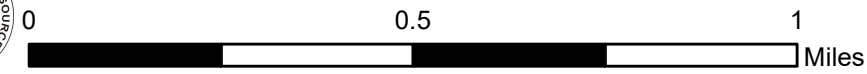
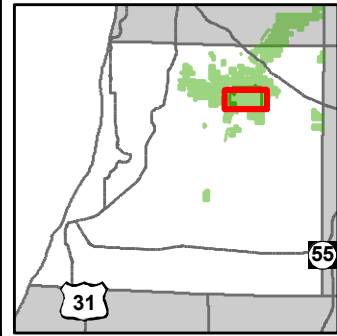


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- 2E: Road needed
- 4A: No Markets Available for these Forest Products
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3D: Recreational / Scenic values
- 3L: Other wildlife concerns
- 5E: Long-Term Retention
- Stand Boundaries
- Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- State Forest Campground
- Other SCA (No Category Assigned)

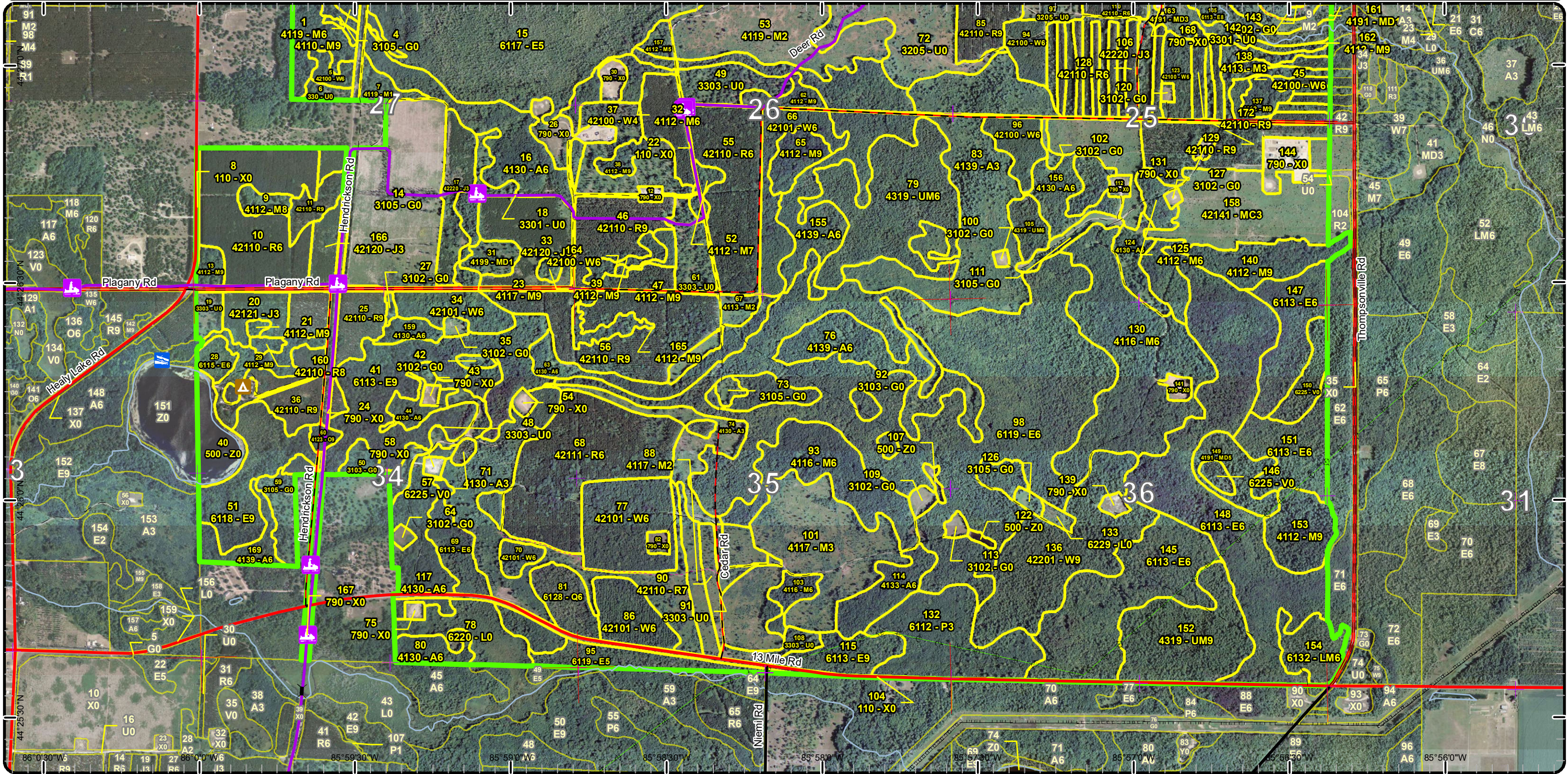


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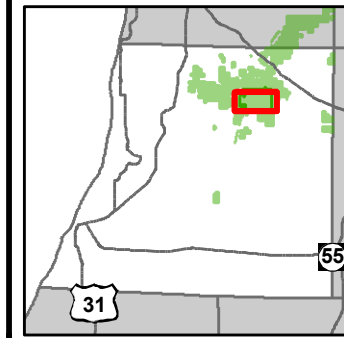


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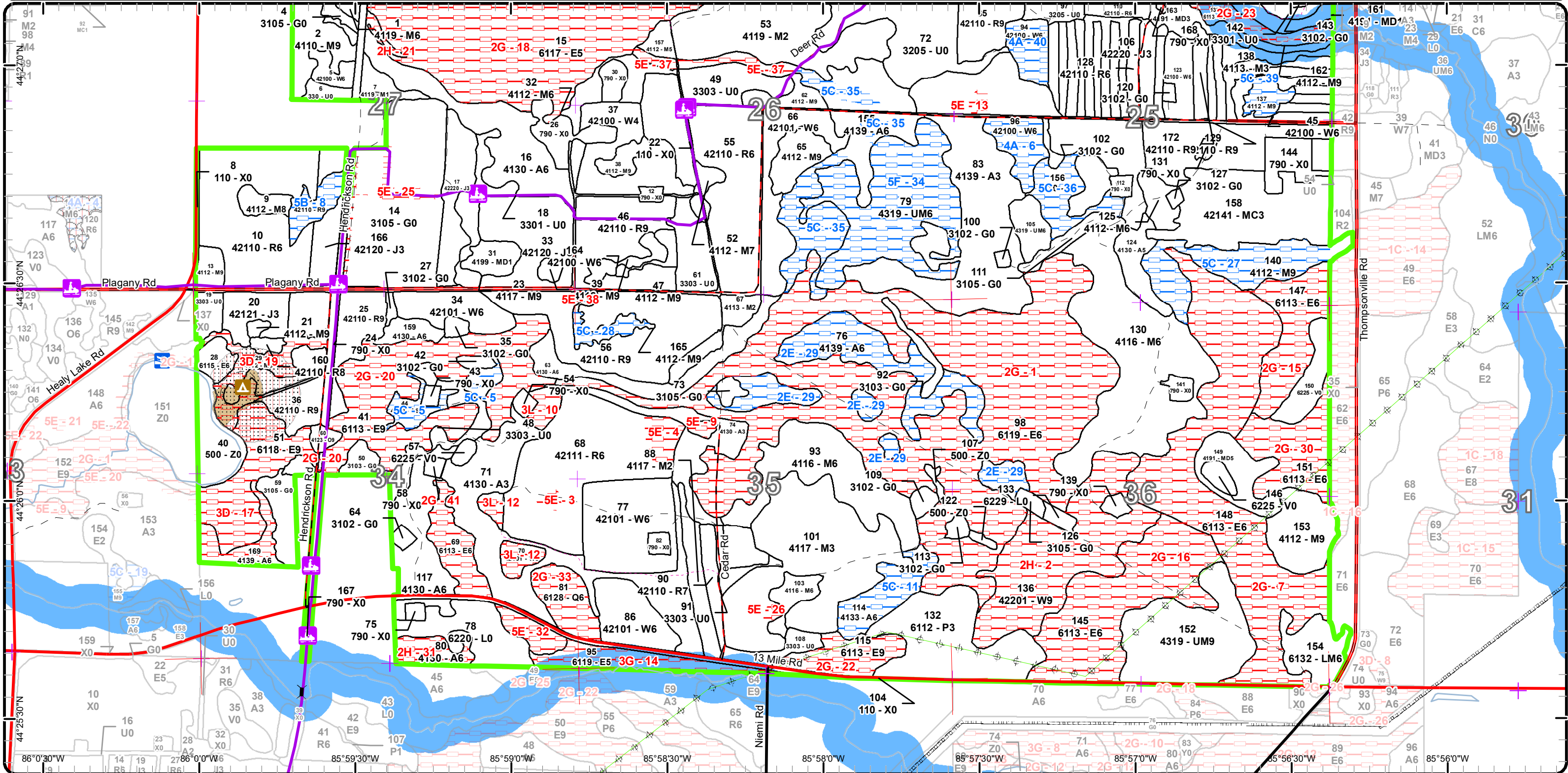


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Report 1 – Total Acres by Cover Type and Age Class



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	87	97	0	0	146	138	0	0	0	0	0	0	0	0	0	0	0	468
Bare/Sparsely Vegetated	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Bog	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Herbaceous Openland	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	124
Jack Pine	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Low-Density Trees	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103
Lowland Aspen/Balsam Poplar	0	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	15
Lowland Deciduous	0	0	0	0	0	13	20	520	28	19	285	50	0	0	0	0	0	0	935
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	16
Lowland Shrub	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Mixed Upland Deciduous	0	22	7	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	44
Northern Hardwood	0	180	24	0	0	7	66	92	15	61	64	5	0	0	0	0	0	8	522
Oak	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
Planted Mixed Pines	0	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
Red Pine	0	0	0	0	0	0	100	328	65	0	0	0	0	0	0	0	0	0	493
Upland Mixed Forest	0	0	0	0	0	16	65	0	0	48	0	0	0	0	0	0	0	0	129
Upland Shrub	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109
Urban	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
Water	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
White Pine	0	0	0	0	0	0	162	17	0	0	0	0	0	0	0	0	66	0	245
Total	497	362	273	0	0	182	551	972	111	144	349	70	0	0	0	0	0	74	3585



Report 2 – Treatment Summary

Traverse City Mgt. Unit
Year of Entry: 2018

Acres of Harvest

Compartment 38
Total Compartment Acres: 3,579

Commercial Harvest - 508
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	111	0	0	0	0	0	0	0	0	111
Northern Hardwood	45	0	0	11	0	0	0	0	0	56
Red Pine	112	0	0	0	5	140	0	0	0	257
White Pine	0	0	0	16	58	10	0	0	0	85
Total	267	0	0	27	64	150	0	0	0	508

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	508	0	0	0	0	0	143	0	161	812
Next Step	0	223	112	0	0	112	532	0	0	979
Total	508	223	112	0	0	112	675	0	161	1790



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
10	61038010-Cut	57.3	42110 - Planted Red Pine	Poletimber Well	57	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No

Site Condition:

Prescription Thin red pine by removing approximately 1/3 of the overall volume, focusing removal on defected, forked or otherwise poorly formed individuals. In places, higher quality individual trees will need to be removed for spacing purposes to get overall stand stocking to more appropriate levels following this treatment.

Next Step
Treatments:

Acceptable
Regen:

Other Consider this stand, or part of it as a candidate to restart next YOE - replanting entire area to red pine. Be mindful of the snowmobile trail during sale operations and include the snow trail protection spec for protection.

Proposed Start Date: 10/01/2017

17	61038014-Monitor	62.2	42220 - Natural Jack Pine	Sapling Well	16	Unspecified	Monitoring	Artificial Regen(1yr)	42110 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Monitor for success of planting done throughout stand.

Next Step ; Monitoring, Artificial Regen(3yr)
Treatments:

Acceptable Red pine at appropriate stocking throughout stand.
Regen:

Other Percent to Treat = 100%
Comment:

Proposed Start Date: 10/01/2016

16	61038016-Cut	36.9	4130 - Aspen	Poletimber Well	42	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Final harvest majority of stand, avoiding small area of western finger for green-up purposes if necessary. In addition, avoid excessively wet areas of stand. Scattered aspen are present along edge of stand 15 - if feasible, extend treatment into southern edge of this stand to regenerate some of this aspen and mixed deciduous component as well.

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

Acceptable aspen, red maple and scattered black cherry and white pine.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

34	61038034-Cut	16.0	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	56	171-200	Harvest	Seed Tree with Retention	42201 - Natural White Pine, Mixed Deciduous	Two-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Mark to leave scattered white pine - ~10-20 sq ft/ac as a seed source and to provide a shelterwood for regenerating deciduous species. In addition, leave most sugar maple throughout sale area and some scattered red maple as well. In areas where white pine plantation is uniform with less deciduous species present, delineate 1-2 small islands, less than 1 acre for retention and wildlife habitat purposes. Extend treatment off SE edge into adjacent stand 41 where possible.

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

Acceptable white pine, red maple, sugar maple, beech and black cherry with some small aspen pockets expected as well.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



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
36	61038036-Cut	20.5	42110 - Planted Red Pine	Sawtimber Well	68	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No

Site Condition:

Prescription Thin red pine, reducing basal area by approximately 1/3, except in narrow lobe of stand which extends into CG - BA should be reduced by 1/2 here to promote enhanced growth and an eventual long term retention area if remainder of stand is final harvested and replanted. Focus thinning/removal on defected trees and intermediate canopy trees where applicable. Some larger DBH, well formed trees should be removed in the upper diameter size classes for spacing as well.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

49	61038049-NF	15.2	3303 - Mixed Low Density Trees	Nonstocked			NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Proposal
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Habitat Cut: No

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. Could also work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

56	61038056-17-New	5.3	42110 - Planted Red Pine	Sawtimber Well	61	111-140	Harvest	Shelterwood with Retention	42110 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Shelterwood red pine leaving a residual BA in the 40-70 BA range - this will serve as a visual buffer between more intensive harvests w/in stand 34 and 56. From a silvicultural standpoint, this treatment will also allow red and white pine to naturally regenerate in conjunction with deciduous species throughout this portion of stand 56.

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

Acceptable Red pine, red maple, black cherry, aspen and white pine.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

56	61038056-Cut	49.2	42110 - Planted Red Pine	Sawtimber Well	61	111-140	Harvest	Clearcut with Retention	42110 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Final harvest red pine and deciduous species present and red plant to red pine at plantation spacing throughout entire sale area.
Specs:

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

Acceptable Red pine at plantation spacing.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



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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
61 61038061-NF	11.1	3303 - Mixed Low Density Trees	Nonstocked			NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Proposal

Habitat Cut: No

Site Condition:

Prescription Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or
Specs: conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Could also work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

63 61038063-Cut	20.5	4130 - Aspen	Poletimber Well	45	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Final harvest stand retaining scattered red maple and black cherry along with all conifers present. In addition, incorporate some area based retention
Specs: in eastern tip of stand - excluded with red line or a small island. Use hare spec in sale write up, specifying to fell red line marked trees into adjacent stand - specifically conifer species.

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

Acceptable aspen, red maple, black cherry and white pine are expected following harvest.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

65 61038065-Cut	10.9	4112 - Maple, Beech, Cherry Association	Sawtimber Well	55	111-140	Harvest	Seed Tree	4119 - Mixed Northern Hardwoods	Two-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Mark to leave approximately 20 sq ft/ac of basal area throughout stand, leaving a mix of well formed trees and large wolfy individuals. Species to
Specs: leave should include red maple, black cherry and sugar maple along with occasional white pine in central portion of stand. All beech should be removed. Use hare spec in sale write up, specifying to fell red line marked trees into adjacent stand - specifically conifer species.

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

Acceptable Red maple, black cherry, sugar maple and beech are expected to regenerate, along with white pine.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



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
66	61038066-Cut	22.6	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	55	171- 200	Harvest	Shelterwood	42201 - Natural White Pine, Mixed Deciduous	Two-Aged	Proposal

Habitat Cut: No

Site Condition:

Prescription Apply shelterwood treatment to stand, marking to leave white pine and deciduous species throughout stand, leaving a target residual of 20-40 sq ft/ac. Delineate 1-2 small islands along snowmobile trail to provide some aesthetic relief while also maintaining some more dense vertical structure within stand. Similar to other regen treatments on white pine stand within compartment, these islands should be located in areas of stand where white pine is more uniformly concentrated and less deciduous species are present.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable White pine, red maple, black cherry, sugar maple and beech are expected to regenerate throughout stand.

Regen:

Other Be mindful of the snowmobile trail during sale operations and include the snow trail protection spec for protection.

Comment:

Proposed Start Date: 10/01/2017

68	61038068-Cut	62.5	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	60	141- 170	Harvest	Clearcut	42110 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Final harvest majority of stand, then replant to red pine at plantation spacing. A small retention pocket will be placed near the central edge of stand to exclude a concentrated pocket of hardwoods. In addition, the eastern portion of the stand will be excluded in order to avoid pocket of stand that has advanced hardwood regen.

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

Treatments:

Acceptable Red pine at plantation spacing.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

72	61038072-Monitor	80.6	3205 - Mixed Upland Shrub	Nonstocked		Unspec ified	Monitoring	Other - Specify	3205 - Mixed Upland Shrub		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Monitor and determine success of RX burn based on objectives outlined in burn plan.

Specs:

The goal of prescribed burning is to restore and/or maintain a grassland/barrens ecosystem. The timing and frequency of the burns will be based on current needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Next Step

Treatments:

Acceptable hoping to setback regen and stimulate more grasses throughout stand.

Regen:

Other Percent to Treat = 100%

Comment:

Proposed Start Date: 10/01/2016



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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
77 61038077-Cut	35.9	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	55	141-170	Harvest	Shelterwood with Retention	42201 - Natural White Pine, Mixed Deciduous	Two-Aged	Proposal

Habitat Cut: No

Site Condition:

Prescription Mark to leave 20 sq ft/ac of white pine for shelterwood purposes. In addition mark to leave scattered red maple and black cherry and leave majority of scattered sugar maple that is present. Hardwood component is distributed throughout stand however a greater concentration of hardwood is localized in the NW portion of stand. Combination of species marked to leave should not be greater than 20-30 BA with the majority of retained trees being white pine. Also, delineate 2-3 islands of more uniform density white pine for increased vertical structure and wildlife habitat.

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

Acceptable Regen: White pine, red maple, black cherry, beech, aspen and associated mixed deciduous species are expected to regenerate.

Other Comment:

Proposed Start Date: 10/01/2017

93 61038093-Cut	24.9	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	51	51-80	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Final harvest portion of stand to regenerate aspen clones that are present and also attempt to regenerate some of the other deciduous species present. Mark scattered red maple and black cherry as individual tree retention throughout stand - ~10 BA or less. Overall, attempt to harvest 15-25 acres of stand, recognizing that portions of stand are wet and that treatment area/size will vary depending on on the ground determinations at time of timber sale set up.

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

Acceptable Regen: Expect aspen, red maple, black cherry and white pine to regenerate.

Other Comment:

Proposed Start Date: 10/01/2017

98 61038098-NF	3.7	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	61	Unspecified	NonForestMgt	Other - Specify	6119 - Mixed Lowland Deciduous Forest	Uneven-Aged	Proposal
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Habitat Cut: No

Site Condition: Too Wet

Prescription Maintain the old railroad grade as a hunter walking trail. Use quad and mower for grasses and seedlings. Fell just enough woody encroachment to maintain foot access for hunters. Maintain trail. Should add access gates on trail from stands 98 and 136.

Next Step
Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2017

110 61038110-Cut	39.5	42110 - Planted Red Pine	Poletimber Well	60	141-170	Harvest	Crown Thinning	42110 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Thin stand by removing approximately 1/3 of the overall volume aiming for a residual BA of 110 sq ft/ac - focus removal on defected and/or poorly formed individuals. BA is variable in places, mainly where large crowned deciduous species are present or were removed during the last treatment, so thinning will be light in spots.

Next Step
Treatments:

Acceptable Regen:

Other Comment: Be mindful of the snowmobile trail during sale operations and include the snow trail protection spec for protection.

Proposed Start Date: 10/01/2017



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
117	61038117-Cut	23.1	4130 - Aspen	Poletimber Well	47	81-110	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Proposal

Habitat Cut: No Site Condition:

Prescription Final harvest stand, leaving red oak and conifer species as retention within stand. Avoid excessively wet areas however majority of stand should be operable - the border with stand 69 is wet in places as is a small pocket south of stand 58. Portion of stand south of 13 Mile rd was excluded from sale area but could be added as a supplemental at time of harvest or could be set aside as area based retention.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Regen: Expect aspen, red maple, oak, white pine and black cherry along with scattered fir and spruce along eastern stand edge.

Other Comment: Include this spec -"To improve horizontal cover habitat for snowshoe hares, grouse, deer, and other species, the Purchaser is to push over(all, every 10th) (species) trees (marked with red boundary marks, marked with pink X's) along the (west, east etc) edge of the sale boundary (along the lowland type/swamp conifer type). (Black spruce and/or balsam fir should be targeted). These trees should be tipped over with the root ball still attached so the base of the tree is suspended off the ground. The crown of the fallen tree should be at or near ground level after it is pushed over. "

Proposed Start Date: 10/01/2017

119	61038119-NF	7.7	3301 - Low Density Deciduous Trees	Nonstocked		Unspec ified	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Proposal
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Habitat Cut: No 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. Could also work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Next Step
Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2017

123	61038123-Cut	10.1	42100 - Planted White Pine	Poletimber Well	64	141-170	Harvest	Systematic Thinning	42201 - Natural White Pine, Mixed Deciduous	Even-Aged	Proposal
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Habitat Cut: No Site Condition:

Prescription Row thin stand by removing two rows and leaving two rows. Deciduous species should be removed within rows designated for removal. All aspen should be removed if it is deemed feasible at time of sale set up to do so with two rows being removed and two being left.

Next Step
Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2017



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
126	61038126-NF	2.2	3105 - Mixed Upland Herbaceous	Nonstocked			NonForestMgt	Herbaceous/Crop/ Grass Planting	3105 - Mixed Upland Herbaceous		Proposal

Habitat Cut: No

Site Condition:

Prescription Remove exotics as needed by herbiciding, or other methods. Seed in forage crop appropriate for site location and seasonal (i.e. summer vs. winter forage) wildlife uses. May want/need to work around existing beneficial vegetation (i.e. blackberry). Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

128	61038128-Cut	22.6	42110 - Planted Red Pine	Poletimber Well	59	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Mark to cut red pine, remove approximately 1/3 of overall volume, reducing basal area to approximately 140 sq ft/ac.

Next Step
Treatments:

Acceptable
Regen:

Other Allow 1-2 more entry years then consider final harvesting this stand along with the alternating/adjacent J3 stand (106) and stand 172 to the east - replanting this entire area to red pine.

Proposed Start Date: 10/01/2017

130	61038130-Cut	20.0	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	61	81-110	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Final harvest portions of stand, specifically where aspen clones are located. Goal of treatment is to regenerate aspen and red maple in treatment areas. Leave some larger red maple and all conifer species w/in treatment areas to account for individual tree retention. Again, focus treatment areas where aspen is more consistently present. Try to originate treatment areas along or near trail that runs N/S through stand for access purposes. If wet or high water table areas are present w/in areas delineated to be treated then delineate islands to protect sensitive soils, etc. Dip into adjacent E6 stand to the west where possible. Attempt to treat approximately 20-30 acres of stand, treatment areas will most likely be slightly different that treatment geometry that was created.

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

Acceptable red maple, aspen, white pine and other mixed deciduous species.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

139	61038139-NF	2.2	790 - Other Bare/Sparsely Vegetated	Nonstocked			NonForestMgt	Herbaceous/Crop/ Grass Planting	3105 - Mixed Upland Herbaceous		Proposal
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Habitat Cut: No

Site Condition:

Prescription Degraded old well site. Treat site to remove exotics. Then reseed to site appropriate native grasses for wildlife food and cover. Consider also seeding in native forbs.

Next Step
Treatments:

Acceptable
Regen:

Other Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex.

Proposed Start Date: 10/01/2017



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
142	61038142-NF	31.8	3301 - Low Density Deciduous Trees	Nonstocked			NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Proposal

Habitat Cut: No **Site Condition:**

Prescription Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or
Specs: conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Could also work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Next Step
Treatments:

Acceptable
Regen:

Other This stand was treated via a timber sale during the last entry cycle, and has had shrubs planted by a local sportsman's club. This area is an ideal
Comment: area for wild turkey habitat projects.

Proposed Start Date: 10/01/2017

155	61038155-Cut	24.8	4139 - Aspen, Mixed Deciduous	Poletimber Well	50	Unspec ified	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription Final harvest portions of stand, retaining conifer component throughout treatment areas. Attempt to harvest 20-30 acres total. Focus treating
Specs: pockets of stand adjacent to Plagany rd and in southern part of stand adjacent to stand 66 if possible. Avoid wet areas of stand, there is significant high water table influence so treatment shapes will most likely be adjusted depending on on the ground determinations at time of timber sale set up.

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

Acceptable Aspen, red maple and white pine are expected to regenerate along with other deciduous species most likely in lower densities.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

159	61038159-Cut	5.5	4130 - Aspen	Poletimber Well	50	111- 140	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription Final harvest stand, leaving birch species along lowland area to the south. In addition, leave any larger white pine and attempt to protect some of the
Specs: small pockets of white pine regen for thermal cover as stand regenerates - also retain the few red oak within stand. Extend harvest into adjacent stand 41 where possible, this will likely be a small area as this area of stand 41 is very wet will water flow to the west.

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

Acceptable Aspen, red maple, white pine and associated mixed deciduous species.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

4	NF_61038004- NonFor	2.6	3105 - Mixed Upland Herbaceous	Nonstocked			NonForestMgt	Brush Cutting	3205 - Mixed Upland Shrub		Draft Field Boundary
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Habitat Cut: No **Site Condition:**

Prescription 1. Either hand fell or mechanically fell some woody encroachment to maintain opening in an upland brush community. Retain some mast producing
Specs: species.
2. Possibly plant some smooth sumac and/or other fruiting shrubs for wildlife food.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007



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
18	NF_61038018- NonFor	5.2	3301 - Low Density Deciduous Trees	Nonstocked			NonForestMgt	Brush Cutting	3205 - Mixed Upland Shrub		Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription 1. Hand fell some woody encroachment to maintain opening in an upland brush community. Retain some mast producing species.
Specs: 2. Plant some smooth sumac and/or other fruiting shrubs for wildlife food.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

19	NF_61038019- NonFor	5.1	3303 - Mixed Low Density Trees	Nonstocked			NonForestMgt	Brush Cutting	3205 - Mixed Upland Shrub		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Hand fell some woody encroachment. Retain some mast producing species for wildlife. This stand is bordered by both Plagany Rd and Healy Lake
Specs: Rd.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

27	NF_61038027- NonFor	1.2	3102 - Grass	Nonstocked			NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription This site may make a convenient timber landing if FMFM wants.

Specs: 1. Revegetate to native herbaceous cover after timber treatments.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

35	NF_61038035- NonFor	1.8	3102 - Grass	Nonstocked			NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription 1. Revegetate to native herbaceous cover after timber treatments as needed along with stand 27.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
42	NF_61038042-NonFor	1.9	3102 - Grass	Nonstocked			NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription 1. Replant to a grass/clover mix.

Specs:
2. Remove some woody encroachment to maintain opening. Avoid cutting mast bearing species.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

48	NF_61038048-NonFor	8.9	3303 - Mixed Low Density Trees	Nonstocked			NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription 1. Replant to a grass/clover mix.

Specs:
2. Remove some woody encroachment to maintain opening. Avoid cutting mast bearing species.
3. Start planting at approximately north of stand 58.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

54	NF_61038054-NonFor	2.0	790 - Other Bare/Sparsely Vegetated	Nonstocked			NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription This old well pad needs the soil reconditioned and planted to herbaceous cover. Avoid any existing shrubs or beneficial herbaceous cover.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007



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
73	NF_61038073-NonFor	2.6	3105 - Mixed Upland Herbaceous	Nonstocked			NonForestMgt	Brush Cutting	3105 - Mixed Upland Herbaceous		Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Hand fell some woody encroachment to maintain opening. Retain some mast producing species.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

91	NF_61038091-NonFor	4.2	3303 - Mixed Low Density Trees	Nonstocked			NonForestMgt	Brush Cutting	3205 - Mixed Upland Shrub		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription 1. Hand fell some woody encroachment to maintain opening in an upland brush community. Retain some mast producing species for wildlife.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

92	NF_61038092-NonFor	4.4	3103 - Rubus-Fern	Nonstocked		Unspecified	NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Need to improve access road from the NW and gate the road. This is an old Wildlife maintained opening.

Specs:

1. Reseed to grass/clover mix.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

97	NF_61038097-NonFor	24.6	3205 - Mixed Upland Shrub	Nonstocked			NonForestMgt	Brush Cutting	3205 - Mixed Upland Shrub		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Probably not enough fuel to burn. Would be low intensity if burnt.

Specs:

1. Possibly remove some woody encroachment to maintain upland shrub community and produce woody browse. Retain some mast bearing species if possible for wildlife.
2. Plant some smooth sumac and/or other fruiting shrubs for wildlife food.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007



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
102	NF_61038102-NonFor	1.7	3102 - Grass	Nonstocked			NonForestMgt	Brush Cutting	3105 - Mixed Upland Herbaceous		Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription 1. Hand fell encroaching woody vegetation. Avoid cutting mast bearing species.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

108	NF_61038108-NonFor	6.7	3303 - Mixed Low Density Trees	Nonstocked			NonForestMgt	Brush Cutting	3205 - Mixed Upland Shrub		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Hand fell some woody encroachment to maintain the stand in an upland brush community. Retain some mast producing species.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

109	NF_61038109-NonFor	2.7	3102 - Grass	Nonstocked			NonForestMgt	Mowing	3105 - Mixed Upland Herbaceous		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription 1. Mow and topdress grasses.
Specs: 2. Seed additional grasses, or clover, if needed.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

111	NF_61038111-NonFor	6.3	3105 - Mixed Upland Herbaceous	Nonstocked		Unspecified	NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription 1. Remove some woody encroachment.
Specs: 2. Plant remaining upland to grass/clover mix.
3. Several small wet spots within this stand. Access road to an oil well pad runs down the length of this stand.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007



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
113	NF_61038113-NonFor	2.1	3102 - Grass	Nonstocked			NonForestMgt	Mowing	3105 - Mixed Upland Herbaceous		Draft Field Boundary

Habitat Cut: No **Site Condition:**

Prescription 1. Mow and topdress grasses.
Specs: 2. Seed additional grasses, or clover, if needed.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

118	NF_61038118-NonFor	1.9	3104 - Degraded	Nonstocked			NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		Draft Field Boundary
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Habitat Cut: No **Site Condition:**

Prescription Reclaim to CSG. Soil will need considerable work.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

121	NF_61038121-NonFor	1.0	3104 - Degraded	Nonstocked			NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		Draft Field Boundary
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Habitat Cut: No **Site Condition:**

Prescription Reclaim this site.
Specs: 1. Rehab site. Soil will need a lot of work.
2. Plant to herbaceous cover.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2007

Total Treatment Acreage Proposed: 811.5

Report 4 – Site Conditions

Traverse City Mgt. Unit

Compartment: 38

Patrick Cotant : Examiner

Year of Entry: 2018

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions												
		With Condition	Not Available		2E	4A	5B	5C	5F	1C	2G	2H	3D	3G	3L	5E	
466	301	127	38	Aspen	55			72				11	11				16
67	67	0	0	Bare/Sparsely Vegetated													
17	17	0	0	Bog													
124	116	0	8	Herbaceous Openland								0					8
100	100	0	0	Jack Pine			0										
103	103	0	0	Low-Density Trees													
45	45	0	0	Lowland Aspen/Balsam Poplar													
15	0	0	15	Lowland Conifers							15						
935	6	0	930	Lowland Deciduous							880		33	17			
16	16	0	0	Lowland Mixed Forest													
24	24	0	0	Lowland Shrub													
44	44	0	0	Mixed Upland Deciduous													
521	459	43	17	Northern Hardwood				43		2			16				1
3	3	0	0	Oak									0				
73	73	0	0	Planted Mixed Pines													
493	474	8	10	Red Pine			8						0				10
129	63	65	0	Upland Mixed Forest					65								
108	108	0	0	Upland Shrub													
35	35	0	0	Urban													0
18	18	0	0	Water													
245	144	22	78	White Pine		22						66				12	
3,578	2,213	267	1,096	Total Forested Acres	55	22	8	115	65	2	894	77	60	17	12	36	
	62%	7%	31%	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)	275	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

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Patrick Cotant : Examiner

Compartment: 38

Year of Entry: 2018

2	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	66	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments: Potential access exists through stand 130, however access route is quite wet and would need significant improvement. Additionally, portions of stand 136 are quite wet and a significant area of stand would be excluded from harvesting if a treatment is able to be applied at some time in the future.							
3	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	5E: Long-Term Retention	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Delay treatment until next YOE for size class diversity.							
6	Available	4A: No Markets Available for these Forest Products	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Small DBH, tight spacing and low average BA.							
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	119	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

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Patrick Cotant : Examiner

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8	Available	5B: Maintain for regeneration purposes	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	3L: Other wildlife concerns	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: may want to factor limit and hold for WLD thermal cover							
11	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Delay for age/size class diversity							
12	Unavailable	3L: Other wildlife concerns	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments: may want to factor limit and hold for WLD thermal cover							
13	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
14	Unavailable	3G: Other Influence zones - See comments	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	28	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	66	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Unavailable	3D: Recreational / Scenic values	44	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
18	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	229	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Unavailable	3D: Recreational / Scenic values	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Healy Lake Campground and surrounding area.							
20	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	72	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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21	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
23	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	19	Unspecified	Unspecified	Unspecified	Unspecified
Comments: lowland e-type/riparian area with bear creek flowing through it.							
24	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
25	Unavailable	5E: Long-Term Retention	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Retention left along existing snowmobile trail and along corridor for potential snow trail reroute. Was not planted, does not have monitoring prescription placed on it.							
26	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Are representative of previous stocking and stand attributes for stand 101, prior to harvest last YOE.							

Report 4 – Site Conditions

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27	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	30	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
28	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: did not want to hard factor stand to preclude treatment but possibly consider leaving this stand for somewhat of a long term retention area if/when stand 56 is cut/replanted.							
29	Available	2E: Road needed	55	2D: Portable Bridge Needed (Dept. bridge will be adequate)	Unspecified	Unspecified	Unspecified
Comments: Treatment would require significant road work to reach portions of this multi-part stand. Aspen is in fairly good shape, should be able to hold at least until next YOE.							
30	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	28	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Wet throughout stand, significant standing water throughout the year.							
31	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Very wet surrounding area, and stand is quite wet in spots with some vernal areas of standing water.							

Report 4 – Site Conditions

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32	Unavailable	5E: Long-Term Retention	7	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments: Originally part of stand 71, north of 13 mile road and was left out of harvest area as long term retention. Small stand area, difficult to access because of deep ditch along county road, recommend maintaining retention site condition.</p>							
33	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	15	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments:</p>							
34	Available	5F: Evaluated for Forest Health Considerations	65	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments: Hold for wildlife cover.</p>							
35	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	29	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments:</p>							
36	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	15	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments:</p>							
37	Unavailable	5E: Long-Term Retention	8	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<p>Comments: Part of stand 155 but this portion constitutes a narrow draw with periodic flow in a northwesterly direction. Same species composition with an increase of lowland conifers at the very western tip of stand.</p>							

Report 4 – Site Conditions

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Compartment: 38
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38	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
39	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
40	Available	4A: No Markets Available for these Forest Products	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Small DBH, tight spacing and low average BA.							
41	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Wet with significant year-round flow in a southerly direction.							



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
	Concentrated Recreation Area	State Forest Campground	Proposed SCA	29
Comments Healy Lake SF campground managed by twp.				



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

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



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4119 - Mixed Northern Hardwoods	Poletimber Well	8.0	83	51-80	Upland/lowland stand with red maple dominant. Pole sized overall however there is some variability of sizes throughout with poles and saps present along with pockets of log sized trees. Typed stand upland w/ lowland, significant standing water in places along with pockets of muck/high water table. Cedar is present in pockets and along northern edge of stand adjacent to e-type. An upland ridge runs through stand from rr grade heading NW. trace elm present in understory, near wet pockets. (old comment) Red maple runs from 2-3" saps all the way through log size. Stand is succeeding to red maple and it is too late to manage for aspen
2	4110 - Sugar Maple Association	Sawtimber Well	22.0	85	81-110	Good quality sugar maple throughout with fair quality black cherry and red maple. Regen consists mainly of ironwood and beech with some black cherry present, seed source and stump sprout. Trace basswood and beech in canopy, large diameter individuals. (old comment) Traces of basswood, white ash, beech, and ironwood in the canopy.
3	6118 - Lowland Deciduous with Cedar	Poletimber Poor	13.1	46	Unspecified	lowland stand with pockets of deciduous cover type with cedar, hemlock and balsam fir present throughout. Some areas more dominated by red maple but overall aspen was the dominant species. Central northern portion of stand could possibly be mapped as lowland brush but left included in this stand as it contains significant sapling red maple as well as some pockets of aspen present on larger hummock areas. (old comment) standing water, tag alder, stand likely contains significant amounts of lowland brush types that may actually be non-forested, but are impossible to delineate with leaf off DOQ's.
5	42100 - Planted White Pine	Poletimber Well	6.3	56	111-140	White pine plantation, has not yet been treated. Larger sugar maple present throughout along with scattered low density deciduous regen. White pine is of mediocre quality
7	4119 - Mixed Northern Hardwoods	Sapling Poor	6.2	15	1-50	Was previously typed as a GO, however canopy coverage of stand is in the 50% range with overall succession occurring, trending towards sugar maple, ironwood and black cherry. Large sugar maple with trace hemlock and beech along rr grade, patches of deciduous regen dominated by sugar maple and ironwood throughout remainder of stand with grassy open areas interspersed.
9	4112 - Maple, Beech, Cherry Association	Sawtimber Medium	5.2	85	51-80	Small hardwood pocket that nicely breaks up larger red pine stand/area. Open grown hardwood species along with a small aspen clone. (old comment) Stand contains approximately 1/2 acre opening, bracken fern, poverty grass, scattered black cherry.
10	42110 - Planted Red Pine	Poletimber Well	57.3	57	171-200	Overall/average BA hovers right around 200 sq ft/ac with some spots slightly higher and others lower. Trace cherry and other hardwood species present throughout stand, however there really is very minimal diversity throughout stand.
11	42110 - Planted Red Pine	Sawtimber Well	8.3	75	141-170	older red pine, looks to be planted but has quite variable stocking/spacing/size. Some JP regen along edges along with some deciduous regen around perimeter of stand. consider maintaining integrity of this stand as is for visual when larger, adjacent red pine stand (stand 10) is final harvested/replanted.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
13	4112 - Maple, Beech, Cherry Association	Sawtimber Well	4.6	100	81-110	Sugar maple dominant with beech, red maple and oak also present. Beech is a significant component throughout, some very large individuals present. Trace red pine saps in understory <5'. 1 larger hemlock on western edge, trace hemlock seedlings in this vicinity.
15	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	228.7	66	Unspecified	Was able to access perimeter of stand and get into the interior a ways. There is a fair amount of lowland brush throughout along with small pockets of cattails. Decided to type stand as one contiguous area as management throughout is limited by the lowland nature of this area and it's proximity to Bear Creek. Aspen is concentrated along western edge, hummocky in this area with standing water in between. Pockets of aspen also persist along SE edge. Black ash in interior of stand is declining rapidly. Scattered large white pine present, balsam fir is evenly distributed throughout stand. (old comment) standing water, tag alder, stand likely contains significant amounts of lowland brush types that may actually be non-forested, but are impossible to delineate with leaf off DOQ's.
16	4130 - Aspen	Poletimber Well	40.5	42	51-80	Mixed, variable aspen stand. Western finger contains more mixed deciduous however the eastern lobe of the stand contains more concentrated aspen, of fair quality with more uniform stocking. Pockets of dense hardwood saplings present with trace sugar maple saplings. Witch hazel scattered throughout, some WP sap/pole/logs scattered along adjacent e-type. Pockets of standing water, typed stand as upland w/ lowland.
17	42220 - Natural Jack Pine	Sapling Well	18.2	16	Unspecified	Essentially a jack pine stand at this point, with little red pine relative to jack pine stem numbers. Black cherry and trace red maple/aspen also present throughout. Some open areas around edge of stand. (old comment) South part of stand was planted with red pine, north part was not. Red pine are small and overtopped by jack pine. Jack pine likely to out compete the red pine and since plantation covers only a portion of the stand I indicated plantation "no"
20	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	12.4	16	Unspecified	Dense stand, some mortality in JP saplings. Hardwood presence is concentrated with a great deal along edges however a fair amount also exists in the interior of stand. Overall, the deciduous component/clumps are concentrated in the eastern 2/3 of the stand.
21	4112 - Maple, Beech, Cherry Association	Sawtimber Well	1.3	75	81-110	Traces of yellow birch, black cherry, and sugar maple in the canopy.
23	4117 - Mixed N. Hardwood - Pine	Sawtimber Well	6.9	79	51-80	Higher density of white pine in north portion of stand, with mixture of conifer/deciduous species as you progress further to the south of the stand. Overall, this stand provides nice retention break between surrounding planted stands. (old comment) Small area of remnant pines approx. 70 years old, hardwood coming in underneath and in canopy gaps. Good snags and CWD from old aspen log trees.
25	42110 - Planted Red Pine	Sawtimber Well	22.6	70	111-140	Good quality stand, BA averages in the 120-140 sq ft/ac range with 11-13" DBH trees dominating the overall size class. Trace hardwood species in canopy. white pine regeneration scattered throughout along with some red pine regen and hardwood saplings, mainly beech.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
28	6115 - Lowland Ash	Poletimber Well	5.5	55	51-80	Mixed lowland stand with black ash and red maple dominant. Yellow birch and hemlock are also scattered throughout with the latter being concentrated moreso along the edges of the stand. White pine are also present along SE edge of stand, some larger individuals present. one very large yellow birch >30" DBH is present along northern edge of stand, quite an impressive tree. High water table, standing water in much of the stand at time of inventory.
29	4112 - Maple, Beech, Cherry Association	Sawtimber Well	15.8	92	81-110	Red maple and sugar maple are most dominant overall with the central portion of stand being more of a typical northern hardwood stand while the other pockets of stand have some high water table influence and some seasonally wet areas so red maple and aspen are more common. High beech presence in understory is concentrated in central portion of stand. Some spruce and white pine planted near campsites, did not record in canopy. (old comment) Sugar maple dominates west end of stand and red maple dominates east end. There are a few seasonally wet spots in the east end of the stand.
31	4199 - Other Mixed Upland Deciduous	Sapling Poor	7.1	11	1-50	Mixed deciduous stand with sugar maple and ironwood regen present as well. Beech regen is not as numerous which is somewhat of an anomaly. Stand results from a harvest conducted approximately 11 years ago. Could not find TCR for this stand and could not access treatment tab.
32	4112 - Maple, Beech, Cherry Association	Poletimber Well	10.1	57	81-110	Variable stand in terms of size classes present. Dominated by red maple with black cherry evenly distributed throughout. Mediocre quality aspen, mainly in the pole size class but small DBH and short in height, present in small clones and scattered. Low density mixed deciduous/hdwd regen present in understory. Conifer component in low density present, mainly along perimeter with adjacent e-type. (old comment) traces of white pine and balsam fir, red maple ages/sizes run from sap to small logs, but not "multi-storied" in the traditional sense.
33	42120 - Planted Jack Pine	Sapling Well	29.7	16	Unspecified	Planted red pine with natural jack pine volunteers that have taken over the entire stand and now make up majority of the canopy. Open areas scattered along edges are the result of jp mortality and deciduous competition. All RP (aside from RP along edges of stand that are free to grow) is extremely suppressed by JP and resulting in Small DBH. Natural jack pine regeneration, planted red pine, stand was seriously defoliated in areas by red-headed pine sawfly resulting in pockets of mortality. this was most severe in the southeast corner of the plantation, however the insects were active through out entire stand,
34	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	16.0	56	171-200	White pine plantation with high prevalence of deciduous species throughout, evenly distributed. Aspen is present along southern edge adjacent to stand 159.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	42110 - Planted Red Pine	Sawtimber Well	21.0	68	171-200	Nice Rp stand, still a fair amount of defect throughout. Stand is at the upper end of the entered BA range ~190, with some variability. Scattered blow down along with 1 large bark beetle pocket that was salvaged last entry. Understory species were entered as low density however some pockets are medium to high density, most notably in portions of stand w/in campground, and others portions of stand are relatively open with minimal regen present. Trace deciduous in overstory including oak, sugar maple, black cherry. WP present in overstory in low numbers as well. Some spruce have been planted within stand area adjacent to campground sites. Multipart stand, includes 2-3 acre pocket across e-type to the south.
37	42100 - Planted White Pine	Poletimber Poor	28.1	58	1-50	White pine stand that was seed treed last YOE. White pine overstory is transitioning to log sized on average - DBH 8-9"+. Understory is dense in places with other areas lighter stocking. Some pockets of heavy browse on red maple saps. (old comment) Generally poor quality white pine, planted on a hardwood site.
38	4112 - Maple, Beech, Cherry Association	Sawtimber Well	5.0	96	81-110	Fair quality stand with even distribution of different species. some thick pockets of sub canopy with other pockets less dense. (old comment) Some nice quality sugar maple, red maple, and black cherry logs.
39	4112 - Maple, Beech, Cherry Association	Sawtimber Well	2.1	88	81-110	Small hardwood stand, somewhat open grown, limby, not great quality. Most likely left as retention when surrounding stand 33 was harvested.
41	6113 - Lowland Maple	Sawtimber Well	71.8	90	81-110	Large lowland stand with occasional upland "islands" of small size, however even these are submerged. Upland species have become established in some of these locations only to succumb to mortality when water tables trend towards more average levels. Some of the red maple throughout stand are quite large with multiple stemmed individuals common. Upland species are present along perimeter of stand including aspen, black cherry, red oak and white pine. Some of the oak are quite large and have a significant amount of descent quality oak regeneration in the vicinity of these large mast producing individuals. standing water throughout most of the stand with a general westerly flow heading towards Healy lake and eventually forming what is known as Lemon creek flowing from the western edge of Healy Lake. For age, a red maple of average size was cored along edge of stand. (old comment) black cherry and aspen around edges, standing water, broad-wing hawk scolded me several times, possibly nesting in the area
44	4130 - Aspen	Poletimber Well	10.7	45	Unspecified	Small, isolated aspen stand surrounded by lowland types and a maintained opening. Trace oak present, concentrated along edges. Some pockets of stand are wet. Aspen is relatively small DBH.
45	42100 - Planted White Pine	Poletimber Well	3.1	64	141-170	Fully stocked white pine stand, has not been row thinned. Cherry present throughout along with some aspen along edges. white pine is of moderate quality, evidence of past weevil damage; multi-stemmed/forked tops, etc. Multi part stand, includes small WP pocket of same age that was originally lumped in with stand 137 which is an M9 stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
46	42110 - Planted Red Pine	Sawtimber Well	32.0	71	111-140	Older, good quality stand that surrounding plantations, growing well and responding well to recent treatment. Scattered hardwood throughout stand, more concentrated in southern 1/2 of stand. Beech regen is dense in places. BA averages on the upper end of the 111-140 range, some pockets slightly higher. Spacing/stocking has pushed this red pine to a more natural looking stand. This allows for nice aesthetics along snowmobile trail.
47	4112 - Maple, Beech, Cherry Association	Sawtimber Well	5.4	95	81-110	Mediocre quality hardwoods with somewhat dense understory of beech and other hardwood species along with pockets of brambles. trace red maple in understory as well.
51	6118 - Lowland Deciduous with Cedar	Sawtimber Well	33.3	101	Unspecified	Lowland deciduous stand with white pine present throughout. conifer component in the form of cedar, white pine, and hemlock with scattered balsam fir. Stand water throughout much of stand, pockets of V0/alder. (old comment) stand with Stand contains a pocket of tamarack just south of campground.
52	4112 - Maple, Beech, Cherry Association	Sawtimber Poor	4.2	99	1-50	Northern hardwood stand dominated by sugar maple, low stocking as a result of 2007-2008 shelterwood harvest. Sugar maple regen is promising in some portions of stand, beech typed as low but is heavy in pockets. BC regen present from seed and stump sprout origin, growing fairly well.
53	4119 - Mixed Northern Hardwoods	Sapling Medium	81.2	6	Immature	Mixed deciduous with white pine saplings and occasional small poles scattered throughout. Black cherry and red maple poles are scattered sparsely throughout stand, left as seed trees following last harvest. Black cherry that was retained during last harvest are declining with mortality common in that species. Portion of stand are M3 while many areas are on the upper end of the 50-75% range. Classified stand as 50-75% overall.
55	42110 - Planted Red Pine	Poletimber Well	62.2	60	141-170	Some variability in stand, especially size and understory stocking. beech regen seems significantly heavier to the east of the snowmobile trail while the portion of the stand to the west of the trail has a lower average DBH. Stand is descent quality, responding well to most recent treatment. Overall, average BA still hovering in the 140-150BA range.
56	42110 - Planted Red Pine	Sawtimber Well	54.9	61	111-140	Red pine stand with significant hardwood component throughout. Some dense pockets were remapped as separate hardwood stand. Beech regen is dense in pockets but overall low to medium density. Red pine varies between log and pole size, chose to define stand as Log size knowing that the classification could be pole for one more entry year. Density is also variable in places, could be classified in the next BA class but chose to classify it in the 111-140 range.
60	4123 - Red Oak	Sawtimber Well	2.8	78	111-140	Small upland stand that lies on both sides of rr grade. This stand consists of very good quality red oak along with white pine and red maple. The upland portion of stand forces adjacent e-type stands to narrow and form more of a stream forms with culverts in place to allow for flow. The water course flows right along the south edge of this stand. trace aspen and black cherry lying between road and rr grade. (old comment) black cherry and aspen around edges, standing water, broad-wing hawk scolded me several times, possibly nesting in the area



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
62	4112 - Maple, Beech, Cherry Association	Sawtimber Well	6.5	95	81-110	Small hardwood stand with red maple and BC evenly distributed. Stocking is variable in places with pockets of less BA and more dense red maple regen. White pine saps <5' present at edges of stand. Overall stand is low quality, provides good wildlife habitat and provides good diversity and a soft mast source - seems to be converting to more solid red maple and BC dies out. (old comment) older black cherry, sugar maple and some red maple, aspen is a minor component, stand appears to be succeeding to red maple.
63	4130 - Aspen	Poletimber Well	20.5	45	Unspecified	Narrow upland strip with variable size classes of aspen and some variability in quality as well. Western portion of stand has some more uniform, larger pole and small log sized aspen clones while the central and eastern portion of the stand are more evenly distributed between the three canopy species with aspen still being dominant. Moderate quality overall. Some conifers present - white pine, cedar - mainly along edges. Some pockets of higher water table, mainly along edges as well. (old comment) stand consists of a narrow upland strip adjacent to a lowland drainage.
65	4112 - Maple, Beech, Cherry Association	Sawtimber Well	10.9	55	111-140	Upland hardwood stand dominated by variable size red maple with BC and sugar maple evenly distributed throughout. not much in the understory of stand aside from some red maple and scattered beech regen. Remnant white pine from adjacent plantation throughout stand, concentrated in northern/eastern portion of stand. (old comment) stand is dominated by single stem pole size red maple, older log size black cherry and sugar maple,
66	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	22.6	55	171-200	Decent quality WP stand, growing fairly well however difficult to manage with intermediate treatment as rows are quite irregular and fairly tight. Considerable amount of hardwood evenly scattered throughout - BC and red maple with some beech and sugar maple present as well. Hardwood component concentrated adjacent to and south of stand 65 as the stand becomes narrower.
67	4113 - R.Maple, Conifer	Sapling Medium	8.9	3	Immature	Regenerating stand of mixed deciduous with red maple dominant. Northern lobe contains more conifer species, however narrow strip has conifer species present. Northern portion of stand also has trace larger deciduous species present, did not feature this size class in canopy.
68	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	72.5	60	141-170	Nice red pine stand with moderate stocking, in the lower end of the 140-170 range. Hardwood species scattered throughout with occasional concentrated pockets. These concentrated areas are where red maple regen is heaviest.
69	6113 - Lowland Maple	Poletimber Well	14.6	50	Unspecified	Lowland stand with red maple dominant. Wet in many places with some hummocky areas of higher ground. Not desirable for management however as this area overall is quite wet. Some larger DBH red maple scattered throughout but overall pole size is the average.
70	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	12.4	56	171-200	Multi part white pine stand, served as retention from surround cut in stand 71. Variable row alignment, most notably in northern piece. Aspen along with other deciduous species are relatively common throughout and evenly distributed. Maintain as retention, provides good diversity/cover along young aspen/WP edge.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
71	4130 - Aspen	Sapling Well	66.3	8	Immature	sapling aspen stand with white pine of all sizes scattered throughout. Stand is growing well, dense stocking for the most part, with the exception of a few areas. There are pockets of heavy browse, mainly on the red maple sprouts. Some wet pockets throughout stand, mainly along edges. Balsa fir is concentrated in these locations along with trace spruce and occasional tamarack. Oak is very scattered.
74	4130 - Aspen	Sapling Well	20.4	3	Immature	Regen doing well throughout this stand with aspen and red maple dominant. Cherry present in overstory along with scattered pockets of cherry regen throughout stand area. Trace cedar present, pole sized. Pockets of high water table, mostly in eastern lobe of stand. (old comment) Narrow stand along transition between upland and lowland. Stand origin is a result of multiple aspen cuts in late 1960's through early 1970's.
76	4139 - Aspen, Mixed Deciduous	Poletimber Well	55.3	50	Unspecified	This multi part stand is growing decent aspen however the road work required to access stand would be excessive, considering the aspen should hold at least until next YOE. Merged A6 stands within this lowland complex together as they are very similar in terms of species composition and all have the same age aside from small inclusions of red maple regen resulting from pockets of blow down - this is minimal.
77	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	35.9	55	141-170	White pine plantation, row thinned. Hdwd pockets throughout along with scattered hardwood within stand. Trace aspen and yellow birch. White pine regen is dense in rows that were removed. Consider shelterwood or seed tree treatment to promote regen recruitment.
79	4319 - Mixed Upland Forest	Poletimber Well	65.2	50	81-110	Planted white spruce throughout with scattered white pine around perimeter and aspen and red maple evenly distributed throughout. Hummocky, high water table in much of stand, specifically in south central portion. Lots of wildlife throughout stand, numerous areas of concentrated deer bedding. (old comment) uneven ground, perhaps seasonally wet, fresh bear tracks crossing Plagany Rd. just north of stand
80	4130 - Aspen	Poletimber Well	9.3	48	Unspecified	Inaccessible stand, surrounded by very wet areas along with PVT to the west. Interior of stand has some vernal pond areas where standing water is present.
81	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	14.6	101	Unspecified	Lowland stand dominated by cedar and tamarack with aspen and red maple evenly distributed throughout. Standing water in places, very wet in spots. Some areas have mossy understory. On the lower end of the 75-100% stocking range but fits best into this category.
83	4139 - Aspen, Mixed Deciduous	Sapling Well	96.7	11	1-50	Aspen/Wp stand with red maple saps throughout. Black cherry present as well along with scattered pockets of balsam fir along edges where water table is a bit higher. Pocket of long term retention on north side of plagany rd. Aspen and WP are advancing well, stand developing into nice mixture with larger WP present throughout adding structural diversity. Occasional high water table influence. (old comment) wintergreen, blueberry, bracken fern, hummocky, but not lowland, relatively light stocking, some spots may be seasonally wet, traces of balsam fir, white spruce, numerous old white pine stumps,



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
85	42110 - Planted Red Pine	Sawtimber Well	34.7	60	111-140	Good quality red pine stand, responding fairly well to last treatment. Stocking within this stand falls at the upper end of the range identified, average overall is approximately 140 sq ft/ac. Stand has been row thinned and second thinned, relatively open and uniformly stocked. Little regen in understory, did not identify BC regen that is present, or the autumn olive that has crept in to stand in more open portions but there is a small amount of regen of these species present.
86	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	18.4	55	111-140	Similar to white pine stand to the north (77) however with hardwood more evenly distributed throughout, less pockets. Aspen is concentrated along edges, more prevalent in southern 1/2 of stand. Thick regen in places, mostly white pine <5' in height but advancing slowly. scattered beech regen along with some red maple and black cherry.
88	4117 - Mixed N. Hardwood - Pine	Sapling Medium	11.5	6	Immature	Upland mixed stand with naturally seeded jack pine throughout. Red maple is most dominant with some slightly larger saplings present in small pockets. Black cherry is also well represented throughout, aspen concentrated along western edge. Clearcut jack pine stand. Stand was treated in 2010
90	42110 - Planted Red Pine	Sawtimber Poor	13.3	60	1-50	Red pine logs with red maple and black cherry along with trace trembling aspen pockets in the understory/regen. Stand was a red pine plantation that was seed tree harvested and now the regeneration has become nearly fully stocked with red maple and black cherry dominant. Still featured red pine as the major canopy species however this stand is in the process of conversion.
93	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	40.9	51	51-80	Mixed upland deciduous stand with red maple and aspen dominant throughout, aspen is concentrated in clones throughout stand while red maple is more evenly distributed. Typed stand as upland w/ lowland, lowland or high water table areas of stand are concentrated along northern edge, adjacent to e-type with the eastern tip of stand quite wet as well. (old comment) Stand origin is the result of numerous cutting of aspen clones in the late 1960's through the early 1970's. Area of good black cherry near the south center of stand (hardwood inclusion).
94	42100 - Planted White Pine	Poletimber Well	10.3	56	141-170	White pine plantation, small DBH with stocking lower than typical, nearby plantations. recommend holding until next YOE as there are other WP plantations that are better suited for treatments this go around.
95	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	16.8	66	Unspecified	Lowland stand with seeps and high water table leading to the south towards lemon creek. (old comment) upland/lowland transition area between Lemon Creel and 13 Mile Rd.
96	42100 - Planted White Pine	Poletimber Well	12.1	53	141-170	White pine plantation with trace amounts of RM, BC and aspen throughout. White pine is of fair quality with minimal evidence of major weevil damage that's characteristic of most ~40-50 year old white pine plantations. Has not been thinned/treated, no understory present. (old comment) A few red maple, black cherry, and quaking aspen scattered throughout.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
98	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	274.5	61	Unspecified	Large lowland complex draining to the west - stand eventually chokes down, flows under railroad grade and becomes more channelized, eventually flowing into and through Healy lake and forming a trib to Bear creek. Heavy soils throughout, many areas of standing/sheet flow water and other pockets more hummocky but still with water present year round. Red maple and aspen, somewhat variable in terms of size class are the most dominant species with even distribution throughout. Black ash is declining rapidly. cedar is scattered with some more concentrated pockets. Some large red oak are present along perimeter of stand. (old comment) This stand consists of a large lowland area that drains to the west toward Healy Lake. The eastern portion of the stand is dominated more by aspen and pole size red maple. This is where the stand age was recorded. The drainages running to the west are more dominated by red maple logs/poles with some black ash and still retain an aspen component. These areas are likely an older age.
101	4117 - Mixed N. Hardwood - Pine	Sapling Well	77.9	6	1-50	White pine seed tree harvested last YOY. WP saplings evenly scattered throughout with overstory WP poles present that were left as seed trees from harvest. BA of poles averages between 0-10 sq ft/ac. BC regen, much of it in the form of stump sprouts is most numerous species overall. Red maple and aspen present in clumps and scattered - heavy browse on much of the red maple. This inventory cycle, stand was switched from a plantation of white pine to a naturally regenerating deciduous stand with white pine poles present.
103	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	6.8	41	81-110	Mixed stand, evenly distributed species around aspen clones that are present throughout stand. Some descent form sugar maple and black cherry, aspen is of fair quality.
105	4319 - Mixed Upland Forest	Poletimber Well	15.7	49	51-80	Hummocky ground in places with pockets of standing water. Spruce plantation is dense in places where deciduous species did not gain a foothold. Spruce is fairly descent quality, providing good wildlife habitat and thermal cover. Lots of deer activity at time of inventory and also quite a bit of grouse activity throughout.
106	42220 - Natural Jack Pine	Sapling Well	27.1	16	Unspecified	Fully stocked jack pine stand, black cherry saps and overstory individuals present throughout in descent numbers. Red maple also scattered throughout stand, however in lower numbers than nearby strips and not as concentrated. Evidence in heavy browse on hwdw regen, quite bushy along edges of stand.
110	42110 - Planted Red Pine	Poletimber Well	39.5	60	141-170	Good quality red pine stand, growing well following last treatment. scattered cherry throughout, multi stemmed, poor quality. Low density regen is present in places but overall understory is quite open. Average overall BA is in the middle of the 141-170 range on average. Stand has been thinned twice, small areas of stand have single rows of red pine however majority of stand is more typical with 1 row removed and 2 taken.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
114	4133 - Aspen, Mixed Pine	Poletimber Well	17.0	44	Unspecified	Aspen concentrated in south and along eastern edge with hardwoods evenly distributed throughout. Generally high water table but operable. Trace paper birch and yellow birch, concentrated along eastern edge. Aspen is of fair quality as is red maple. Aspen however is showing signs of decline. Delineated northeast portion of stand to be excluded and added to adjacent e-type due to standing water throughout. More hummocky with more white pine within this portion than is typical of most of stand 98 but this area is inoperable and is more accurately typed as an e-type and should be hard factored to preclude commercial timber management.
115	6113 - Lowland Maple	Sawtimber Well	16.5	104	Unspecified	Lowland red maple stand with flow/standing water draining to the west eventually joining Lemon Creek. Some spruce/fir along the eastern edge of stand, adjacent to stand 132, along with more concentrated aspen.
117	4130 - Aspen	Poletimber Well	26.0	47	81-110	This was part of original stand 71 however this portion was not treated. Mixed stand with aspen dominant. Red maple and black cherry pole/log sized trees evenly distributed throughout, mediocre quality. Scattered white pine/pockets, mostly concentrated in northern portion of stand. Adjacent to lowland/e-types, this stand contains wet pockets, mostly concentrated along edges of stand. Stand also has scattered red oak providing good source of mast.
123	42100 - Planted White Pine	Poletimber Well	10.1	64	141-170	Fully stocked white pine stand, has not been row thinned. Cherry present throughout along with some aspen along edges. White pine is of moderate quality, evidence of past weevil damage; multi-stemmed/forked tops, etc. Multi-part stand, includes small WP pocket of same age that was originally lumped in with stand 137 which is an M9 stand.
124	4130 - Aspen	Poletimber Medium	10.6	44	Unspecified	Relatively open stand with aspen concentrated in lowly stocked clones. Red maple and BC are open grown, fairly low quality. White pine saps and small poles present in trace numbers, mainly along stand perimeter.
125	4112 - Maple, Beech, Cherry Association	Poletimber Well	7.0	71	81-110	Mixed deciduous stand with variable sized red maple dominant throughout. Paper birch relatively numerous east of 2-track that bisects stand, virtually non-existent on west side of trail. Black cherry and quaking aspen throughout in low numbers. Trace red pine along western edges. High water table in small areas of stand, concentrated in eastern portion, hummocky with occasional standing water.
128	42110 - Planted Red Pine	Poletimber Well	22.6	59	171-200	Fully stocked red pine stand, growing well. Multi-part, consists of 6 rows oriented N/S. Some defect present - forked tops, crooks, etc. Has been row thinned, stocking is currently dense with BA measurements averaging 200 sq ft/ac. Understory is open with minimal regen present. Trace black cherry scattered throughout rows with some BC regen underneath these trees.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
129	42110 - Planted Red Pine	Sawtimber Well	29.8	63	81-110	Red pine stand, treated last YOE. Treatment was a heavy thinning that resulted in evenly spaced log sized red pine with some log sized black cherry left that are providing nice diversity. Some pole-sized red pine are present however overall the red pine averages log size. Regen is dense in places, with red maple being dominant. Red pine regen is short - <2' in height but is present in low numbers along with black cherry. other regen includes traces of beech, jack pine and aspen.
130	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	82.6	61	81-110	Mixed deciduous stand dominated by red maple with aspen pockets throughout. Variable stocking in places - typed stand in the 81-110 range but some pockets are slightly higher, most notably in areas where more uniform aspen clones are present and larger DBH trees exist. Other pockets more consistently red maple and black cherry with occasionally large quaking aspen. White pine also present as a significant component of stand with some small pockets of W6/W9 in places, most notably in the southern 1/2 of the stand. Not quite large enough, nor practical to map. Portions of stand have high water table with hummocky ground present in places - both along perimeter of stand adjacent to E6 type and also w/in interior of stand.
132	6112 - Lowland Aspen	Sapling Well	44.8	17	Unspecified	lowland stand treated 2 YOE's ago, removing aspen and red maple and leaving a log sized WP component. Stand is quite wet with stand water in many places. Ruts from previous harvest are still visible in many locations of stand and typically contain standing water. Aspen is growing well, red maple is poor form but growing fairly well.
135	6113 - Lowland Maple	Sawtimber Medium	19.2	85	51-80	E-type with overall relatively low stocking due to central portion of stand along 3rd creek being dominated by tag alder. Cedar is scattered evenly throughout. Density is more along the lines of E6 as stand progresses away from historic/typical flood range. Trace BTA, beech, red oak, yellow birch, beech and balsam fir along edges.
136	42201 - Natural White Pine, Mixed Deciduous	Sawtimber Well	66.1	85	81-110	Variable white pine stand with red maple and aspen present throughout. Some topography in stand, most notably along eastern edge where it drops off to lowland e-type. paper and yellow birch present along perimeter of stand, not recorded in canopy table. White pine is fair quality with multiple size classes present, as well as multi-aged. Some hummocky ground present within stand, pockets of high water table, most notably along edges but also some wet pockets in interior of stand. Southern portion of stand seems to have a bit more deciduous component to it. Small area of blow down in central portion of stand, linear, maybe a small occurrence of some straight line winds. (old comment) white pine is multi-aged. Recorded stand age is from an average dbh tree of 16" Traces of paper birch in stand.
137	4112 - Maple, Beech, Cherry Association	Sawtimber Well	6.3	66	111-140	Hardwood stand, initially contained WP that was plantation origin however that was split off to make this solely a hardwood stand with a WP component consisting of disjointed portions of WP plantation throughout. The WP that was originally part of the stand was lumped with stand 123 to the west to form a multi part stand more accurately representing overall cover types. Hardwood is of mediocre quality with red maple and BC dominant. Small stand, providing nice diversiyt in area that is largely dominated by red and white pine.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
138	4113 - R.Maple, Conifer	Sapling Well	17.7	17	1-50	Mixed stand, variable size and stocking along with mixed species composition throughout. Trace white pine scattered throughout, some ironwood regen present as well.
140	4112 - Maple, Beech, Cherry Association	Sawtimber Well	32.0	86	111-140	Upland stand with high water table, most notably along adjacent E-type. Dominated by red maple but aspen, BC and larger WP are scattered evenly throughout. Larger diameter overall than adjacent stand 130. Upland red maple stand with a few large (X size) white pines (visible on doq imagery).
145	6113 - Lowland Maple	Poletimber Well	65.8	92	Unspecified	Lowland stand with standing water throughout. Some scattered hummocks contain small groups of aspen as do perimeter portions of stand adjacent to upland areas of stands 136 & 152. Some blowdown can be attributed to small pockets of regen present. Small, trace areas of tag alder in places.
147	6113 - Lowland Maple	Poletimber Well	28.4	91	Unspecified	Wet stand with hummocky ground in places but standing water is present throughout much of stand. Large white pine present within stand, concentrated along edges. Left separated from stand 148 because this stand seems to have a greater concentration of cedar and yellow birch.
148	6113 - Lowland Maple	Poletimber Well	119.0	92	Unspecified	Large e-type stand, draining to the south. Water is flowing in a southerly direction. There is an old blown out trail/grade leading from stand 141 (well site) to the east with an areas that used to contain a culvert. This culvert has been washed away and the trail is impassable with standing water throughout much of it. Significant mortality of black ash throughout stand.
149	4191 - Mixed Upland Deciduous with Conifer	Poletimber Medium	15.4	69	51-80	Upland mix stand with pockets of lowland/high water table so typed as U/L. Stand is overall lightly stocked, typed in the 50-75% range but is in the upper end of this range. Red maple and white pine saplings/small poles beginning to make their way into canopy. Hemlock present along edges in two eastern fingers but I believe they fall into adjacent stands, also present along edge of V0 stand - 146. Western edge is more heavy to aspen as it fazes into stand 148 to the west. Some ridges traverse stand 3-4' in elevation above pockets with standing water.
151	6113 - Lowland Maple	Poletimber Well	28.1	78	51-80	E-type stand, similar to other surrounding e-type stands in the vicinity but with slight variations in size and species composition. Wet throughout with standing water and some hummocky ground present. Some red maple blow down in places. Very little understory present.
152	4319 - Mixed Upland Forest	Sawtimber Well	47.8	86	81-110	Mixed stand with white pine dominant. Patch of red pine in central portion of stand. Stand varies between upland and lowland, majority is upland. White pine bog present in central portion of stand, lumped with this stand as the bog characteristics extend through portions of stand that are more characteristic of the stand as a whole. Spruce present in these areas in the intermediate canopy. (old comment) Most of stand is upland, but contains a few lowland inclusions, multi-aged natural white pine. Age was taken from a 15" white pine.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
153	4112 - Maple, Beech, Cherry Association	Sawtimber Well	20.7	96	81-110	Stand treated in 2000. Descent quality red maple throughout, quite tall but is old aged. Other canopy species are present throughout in decent numbers however red maple is dominant and therefore the remaining canopy species are represented in low numbers in terms of canopy percentage. White pine tends to be more concentrated at perimeter of stand but is distributed throughout. Dense regeneration is present throughout most of stand, mainly dominated by red maple and beech along with concentrations of white pine in skid trails and more open/disturbed areas resulting from last harvest. Remainder of regen listed is scattered within stand however hemlock is concentrated along NW edge.
154	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	15.5	84	Unspecified	Wet stand, more of a mix of species than adjacent e-type including high concentration of cedar and larger white pine. Very wet throughout, hummocky in places.
155	4139 - Aspen, Mixed Deciduous	Poletimber Well	61.7	50	Unspecified	On the lower end of the identified stocking range with some pockets more heavily stocked while others are lighter stocked with more open pockets present. Portions of stand are lowland with high water table and water flow present, most notably in the northern finger with flow heading west to large e-type, stand 15. Southern portion of stand also has high water table, attempted to delineate these areas out and add to large lowland complex to the south. 4/3/16 - visited stand to see if standing water was present - significant water throughout stand, specifically in area south of Plagany rd, water was trickling across rd in a northerly direction. (old comment) wintergreen, blueberry, bracken fern, hummocky, but not lowland, relatively light stocking, some mortality in quaking aspen, some spots may be seasonally wet, traces of balsam fir, white spruce, numerous old white pine stumps,
156	4130 - Aspen	Poletimber Well	15.3	50	Unspecified	Water table high is southern portion of stand, adjacent to opening. Stand is hummocky but only evidence of wet ground within stand is in bottle neck between the two portions of stand 105. Trace paper birch within stand along with trace yellow birch adjacent to wet/more open pocket in southern portion of stand. Aspen is of poor quality, deteriorating, red maple is mediocre, clumpy in nature. (old comment) wintergreen, blueberry, bracken fern, hummocky, but not lowland, relatively light stocking, some mortality in quaking aspen, some spots may be seasonally wet, traces of balsam fir, white spruce, numerous old white pine stumps,
157	4112 - Maple, Beech, Cherry Association	Poletimber Medium	4.0	56	51-80	Mixed, low density hardwood stand with red maple dominant. Variable size class in the red maple, with poles most common. Saplings are quite dense, stand showing signs that red maple saplings will eventually take over. Aspen is present evenly throughout but not much of a component overall. Some decently formed sugar maple and black cherry. (old comment) older cherry, sugar maple, ans some red maple, Aspen is a minor component. Stand is succeeding to red maple.
158	42141 - Planted Mixed Pine, Mixed Deciduous	Sapling Well	72.6	5	Immature	Stand was planted in april of 2011. Significant deciduous regen is present along with a fair amount of jack pine throughout. Red pine is doing alright, however some areas are quite suppressed and other pockets have been overtopped with aspen with high water table present causing RP mortality.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
159	4130 - Aspen	Poletimber Well	5.5	50	111-140	Upland pocket of big tooth aspen between pine & e-type. Pole sized aspen w/ some log sized individual trees. Trace sugar maple and red oak scattered along with trace beech and yellow birch. BA hovers in the low end of 110-141 range. White pine relatively dense in understory, stand looks to be in the process of converting to white pine.
160	42110 - Planted Red Pine	Sawtimber Medium	2.1	70	51-80	Recently treated portion of original stand 25, this piece was shelterwood harvested and currently sits at a low stocking, in the ~50 sq ft/ac range. Typed as 51-80 sq ft/ac. Featured red pine as overstory while deciduous species continue to advance and the stand convert to red pine/mixed deciduous type. Dense hardwood regen is present throughout understory with some white pine and trace red pine regen is present.
161	4191 - Mixed Upland Deciduous with Conifer	Sapling Poor	9.5	6	Immature	Narrow stand, resulting in from removal harvest. Stand is regenerating to a mix of deciduous species with white pine present throughout along with a small pocket of larger pole/small log sized white pine south of well site/stand 143. Aspen regenerating fairly well throughout - as is expected, more so in more open areas where white pine density is less.
162	4112 - Maple, Beech, Cherry Association	Sawtimber Well	3.1	68	81-110	Mixed deciduous stand, follows outer edge of riparian area and extends down bank/slope to adjacent e-type stand. Previously typed as an A6 stand, did not find enough aspen to record species in the canopy table. Red maple is fair quality, BC is limby and beginning to die out/back. Beech is Ok quality, heavy BBD coverage on most stems. Trace yellow birch, paper birch throughout, mostly in pockets adjacent to e-type.
163	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	12.4	8	Immature	Fully stocked mixed deciduous stand w/ equal amounts red maple and trembling aspen. Some pockets of BTA mixed in as well but typed aspen as trembling throughout. Low stocking of WP, small pockets of 3-4" BC, RM and TA. Trace balsam fir at edges along e-type. red pine concentrated along western edge of stand, jack pine concentrated along south west edge. Trace witch hazel throughout.
164	42100 - Planted White Pine	Poletimber Well	3.4	64	141-170	WP stand, previously unmapped. Has not been treated, mediocre quality with deciduous species scattered throughout in low amounts. Low density beech saplings in understory.
165	4112 - Maple, Beech, Cherry Association	Sawtimber Well	6.6	91	111-140	Unmapped hardwood stand within red pine plantation. Red pine is present in low numbers, as a result of being adjacent to this stand. Hardwood is of mediocre quality with some descent log sized trees. Red maple dominant with concentrated pockets of SM & BC. BA is quite variable with some open pockets and other areas in the 140-170 range. Average is ~130-140.
166	42120 - Planted Jack Pine	Sapling Well	12.3	16	Unspecified	Stand is fully stocked with natural jack pine regeneration and it has been planted to red pine.
169	4139 - Aspen, Mixed Deciduous	Poletimber Well	10.8	41	Unspecified	New stand delineated from larger e-type. This stand is upland with aspen and red maple dominant, along with pockets of log and pole sized white pine present, most notably in eastern finger. Stand includes small lowland pocket on PVT line. Aspen is mediocre quality, red maple is variable in size with poles and logs present but also a sapling cohort advancing to the canopy.



S t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
172	42110 - Planted Red Pine	Sawtimber Well	20.0	59	111-140	mixed red pine stand consisting of strips - multi part stand. Dense regen in places consisting of mixed hardwood species, other areas of strips are more pure red pine with minimal regen present. trace jack pine and white pine regen along edges of strips. Overstory hardwood species are also scattered throughout with higher concentrations in certain locations of stand, most notably the western most strip. BA is hovering at the upper end of the range entered - 130-140 sq ft/ac with some pockets falling in the next BA range. Stand contains a number of monitoring wells associated with adjacent compression station south of plagany Rd.



Stand	Cover Type	Acres	Managed Site	General Comments:
4	3105 - Mixed Upland Herbaceous	2.7	No	
6	330 - Low-Density Trees	3.2	No	Changed type from GO to low density trees - u-type.
8	110 - Low Intensity Urban	1.5	No	
12	790 - Other Bare/Sparsely Vegetate	1.6	No	well site with tanks, pipe and other well site material present.
14	3105 - Mixed Upland Herbaceous	70.5		Stand was trenched in 2013 and planted in 2015 - FTP C61-472. Looks to be good seedling spacing/survival, minimal competition from hardwood saplings and jack pine volunteers. (old comment) Stand was harvested summer of 2013 under tsale contract 032-11 by Dan Bundy Logging. FTP was submitted - C61-472 - in 2008 when prescription was finalized.
18	3301 - Low Density Deciduous Trees	5.2	No	
19	3303 - Mixed Low Density Trees	5.2	No	
22	110 - Low Intensity Urban	20.1	No	
24	790 - Other Bare/Sparsely Vegetate	19.4	Yes	Pipeline
26	790 - Other Bare/Sparsely Vegetate	10.4	No	
27	3102 - Grass	1.2	No	
30	790 - Other Bare/Sparsely Vegetate	4.2	No	
35	3102 - Grass	2.0	No	This is an old well site. According to the YOE 1998 data it is inactive.
40	500 - Water	15.1	No	Healy Lake
42	3102 - Grass	1.9	No	This stand was a maintained wildlife opening.
43	790 - Other Bare/Sparsely Vegetate	1.5	No	
48	3303 - Mixed Low Density Trees	12.9	No	Portions of this stand was a maintained wildlife opening.



Stand	Cover Type	Acres	Managed Site	General Comments:
49	3303 - Mixed Low Density Trees	15.2	No	
50	3103 - Rubus-Fern	4.5		Oak and cherry along with white pine beginning to encroach on stand. (old comment) Some good red oak logs and poles in stand.
54	790 - Other Bare/Sparsely Vegetate	2.0	No	The forester thought that there was some autumn olive or other shrubs at this site.
57	6225 - Bog	2.0	No	
58	790 - Other Bare/Sparsely Vegetate	1.6	No	
59	3105 - Mixed Upland Herbaceous	10.6	No	
61	3303 - Mixed Low Density Trees	11.1	No	
64	3102 - Grass	1.7	No	
72	3205 - Mixed Upland Shrub	83.5	Yes	Similar species to stand # 97, but seems like there is more fuel here. Small clumps of red maple regen with deer browse. Occasional clone of quaking aspen all showing signs of decline.
73	3105 - Mixed Upland Herbaceous	2.6	No	
75	790 - Other Bare/Sparsely Vegetate	1.5	No	
78	6220 - Alder/willow	21.3	No	
82	790 - Other Bare/Sparsely Vegetate	2.1	No	
91	3303 - Mixed Low Density Trees	4.2	No	Unplanted area between pine plantations. Provides access and parking for hunters and other users.
92	3103 - Rubus-Fern	4.4	Yes	Daisy fleabane, golden rod, goats beard, St. John's wort, spotted knapweed, various forbs, vetch, sedges. White pine mangled by bear.
97	3205 - Mixed Upland Shrub	24.6	No	One juniper, old stumps, lyco in clumps. Quaking aspen is dying. Occasional wintergreen, blueberry, and St. Johns wort.
100	3102 - Grass	1.0	Yes	New well site.



Stand	Cover Type	Acres	Managed Site	General Comments:
102	3102 - Grass	1.7	No	
104	110 - Low Intensity Urban	13.1	No	
107	500 - Water	1.4	No	
108	3303 - Mixed Low Density Trees	6.7	No	Unplanted area between pine plantations. Provides access and parking for hunters and other users. Along 13 Mile Rd.
109	3102 - Grass	2.7	No	Nice component of grass here.
111	3105 - Mixed Upland Herbaceous	6.3	Yes	Oil well company has apparently just installed pipeline to new pad just off of the SW end of the opening. Pipe trench has been filled and seeded. There is established grass clover along access road and pipe location. Would like to maintain entire opening in herbaceous cover. 1. Remove some woody encroachment. 2. Plant remaining upland to grass/clover mix.
112	790 - Other Bare/Sparsely Vegetate	2.0	Yes	
113	3102 - Grass	2.1	No	
118	3104 - Degraded	1.9	No	Reclaim to CSG. Soil will need considerable work.
119	3301 - Low Density Deciduous Trees	7.7	No	Saps/poles beginning to encroach on site. High concentration of witch hazel old comment) Tree swallows, chipping sparrows, trout lily, lycopodium.
120	3102 - Grass	1.0	Yes	New well site.
121	3104 - Degraded	1.0	No	
122	500 - Water	1.1	No	
126	3105 - Mixed Upland Herbaceous	2.2	No	
127	3102 - Grass	1.0	Yes	New well site.
131	790 - Other Bare/Sparsely Vegetate	1.4	Yes	Well site.
133	6229 - Mixed lowland shrub	2.4	No	



Stand	Cover Type	Acres	Managed Site	General Comments:
139	790 - Other Bare/Sparsely Vegetate	2.2	No	
141	790 - Other Bare/Sparsely Vegetate	2.7	No	
142	3301 - Low Density Deciduous Trees	31.8	No	Found scattered cladonia, trout lily, lycopodia, and occassional juneberry sapling. Old stumps. Turkey habitat project sign. Possible planting of honeysuckle. Scattered aspen between bluff down to Third Creek and 2-track around perimeter of stand.
143	3102 - Grass	1.1	Yes	New well site.
144	790 - Other Bare/Sparsely Vegetate	10.0	Yes	Well facility.
146	6225 - Bog	3.3	No	
150	6225 - Bog	11.3	No	
167	790 - Other Bare/Sparsely Vegetate	1.7	Yes	Pipeline
168	790 - Other Bare/Sparsely Vegetate	2.0	Yes	Well site.