Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61059
Entry Year 2024
Acreage: 2,966
County Grand Traverse
Management Area: Manistee River Valley

Stand Examiner: Patrick Cotant

Legal Description:

T25N, R10W, section 31
T25N, R11W, sections 26-29, 32-36

Identified Planning Goals:

Vegetation management in the Manistee River Valley management area (MA) (Figure 4.23.1) will provide timber products; maintain or enhance wildlife habitat; protect areas of unique character including the Manistee River and its tributaries, a designated natural river; threatened, endangered and special concern species; and provide for forest-based recreational uses. Timber management for this 10-year planning period includes continuing aspen management to maintain early successional habitat for hunting and other wildlife-related recreational opportunities; increasing regeneration of oak; focusing on balancing the red pine age class structure through final harvests and re-planting; and on improving red pine quality through partial harvests. Expected trends within this 10-year planning period are increased recreational pressure, especially on the established trails and along the Manistee River and its tributaries; an increased wildland/urban interface and a need to restore barrens communities through prescribed fire; and invasive plant control.

Surveys have located the threatened, endangered or special concern species Hill's thistle, bald eagle, wood turtle, northern goshawk, great blue heron heronry, ginseng, eastern Massasauga, red-shouldered hawk and the common loon. In addition, listed communities include Upper Midwest type wet meadows and Upper Midwest type pine barrens are located in the management area.

Soil and topography:

Mainly Rubicon and Kalkaska sands. Rifle peat is found in low areas on the west side of the compartment.

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

State and private ownerships are intermingled within the compartment. Areas to the west, north, and east are entirely private and predominantly agricultural. Ownership to the south (Wexford County) is a combination of state and private. Relatively recent acquisitions in the compartment include; the W1/2SE of section 34. This parcel was previously inventoried as an addendum to the last inventory cycle. The state recently acquired the W1/2NE of section 35. This was the last private in holding that was completely surrounded by state land. There have been several subdivision developments in the surrounding area, mostly in former agricultural lands located north of the compartment. There is increasing evidence of parcel fragmentation around the compartment. While the area remains largely agricultural there are increasing numbers of single family residences being constructed on private property immediately adjacent to the compartment. The S1/2SE of section 32 was not identified and/or inventoried as state owned land last YOE. The parcel has been surveyed and inventoried this YOE.

Unique Natural Features:

MNFI records indicate several past occurrences and potential for new occurrence of wood turtle, goshawk, and red shouldered hawk within the compartment.

Archeological, Historical, and Cultural Features:

None known.

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

The North Branch of Anderson Creek, the South Branch of Anderson Creek, and several tributaries flow through Compartment 59. All are Designated Trout Streams. Both branches of Anderson Creek support naturally reproducing populations of brook trout. Per the Natural Rivers agreement between Forest Mgt. and Fisheries, any treatment prescribed must have the required buffers, which are 75' for both branches of Anderson Creek, and 50' for tributaries. We recommend managing for species other than aspen in the riparian corridor in order to discourage further beaver activity.

Wildlife Habitat Considerations:

This compartment lies at the conjunction of several landscape types, a ground moraine to the northeast and several outwash plains to the southwest. Proximity to human populations makes this compartment popular for hunting and other wildlife related activities. Hardwoods should be maintained in a as diverse a condition as possible. Species diversity, cavity trees, and down logs should be promoted when planning timber harvests in these types. Aspen harvest blocks will add age class diversity, benefiting a variety of game species and the numerous hunters that use this area. These cuts should incorporate snags, residual green trees, and down logs as much as possible to benefit herps, songbirds, and small mammals as well as the game species. Threatened red-shouldered hawks have been found in this area, so habitat guidelines should be incorporated into nearby sales.

The interface between the more fertile moraine formation and the sandy, dry outwash plains has a series of NE/SW oriented draws and drainages with low, forested ridges between. The soils in these draws, are still well drained and growing a significant amount of little bluestem and other xeric species. Openings and savanna-like habitat can be maintained via burning, mowing, and brush-hogging. Opening maintenance will benefit species like coyote, goldfinch, savanna sparrow, wild turkey, meadow vole, and smooth green snake.

Wetlands and drainages are found throughout the compartment and should be managed for their riparian habitat values. BMPs should be used in timber sales adjacent to any wetlands. Forested swamps, shrub swamps and beaver meadows provide habitat for species such as alder flycatcher, common yellowthroat, pileated woodpecker, sandhill crane, mink, winter wren, northern water snake, raccoon, and woodcock, as well as red-shouldered hawks and wintering deer.

Mineral Resource and Development Concerns and/or Restrictions

No active sand/gravel pits occur in the area. There is good potential for sand and gravel within the compartment, particularly in the southeast on the uplands. Any surface mining operations would have to avoid oil & gas infrastructure. The north and west portion of the compartment has seen past and current oil & gas production from Silurian reefs, and there are remaining active leases in the compartment. There could be potential for additional reef discoveries within the compartment as well as future gas storage potential. There is no known metallic mineral potential in this part of the state. The state does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights.

Vehicle Access:

There is a very poor quality bridge with a three ton weight limit crossing Anderson Creek on West County Line Rd. The bridge is on a County Rd and disposition/ownership of this bridge is either Grand Traverse or Wexford County. This bridge does impact access for logging and fire suppression equipment. In addition, the poor quality/design of this bridge is likely contributing to sedimentation in Anderson Creek.

Survey Needs:

The compartment is well surveyed for current prescribed treatments to be carried out in the 2024 YOE. There has been recent survey work in the compartment. A formal survey request has been submitted for the Northwest area of the compartment, within sections 28 & 29. Portions of the upland aspen in this area will likely be prescribed for harvest next YOE.

Recreational Facilities and Opportunities:

There are no recreational facilities or designated trails. Fishing, hunting, trapping, gathering, bird watching, snow shoeing and other dispersed recreational opportunities exist throughout the compartment.

Fire Protection:

Local volunteer coverage provided by Grand Traverse Rural Fire initially from Kingsley with additional resources available from Grawn and Fife Lake. In addition, local volunteer response or assistance may be available from Buckley in Wexford County located just one mile south west of the compartment. DNR response from Traverse City Field Office and additional resources if needed from the Manton Field Office are both approximately 30 minutes travel time from the compartment. The bridge on West County Line Road at Anderson Creek has a three ton weight limit and can not be used by fire suppression equipment.

Additional Compartment Information:

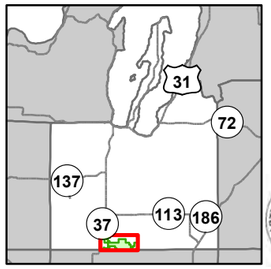
The following reports from the Inventory are attached:

- **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



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Map Phase: Post Review

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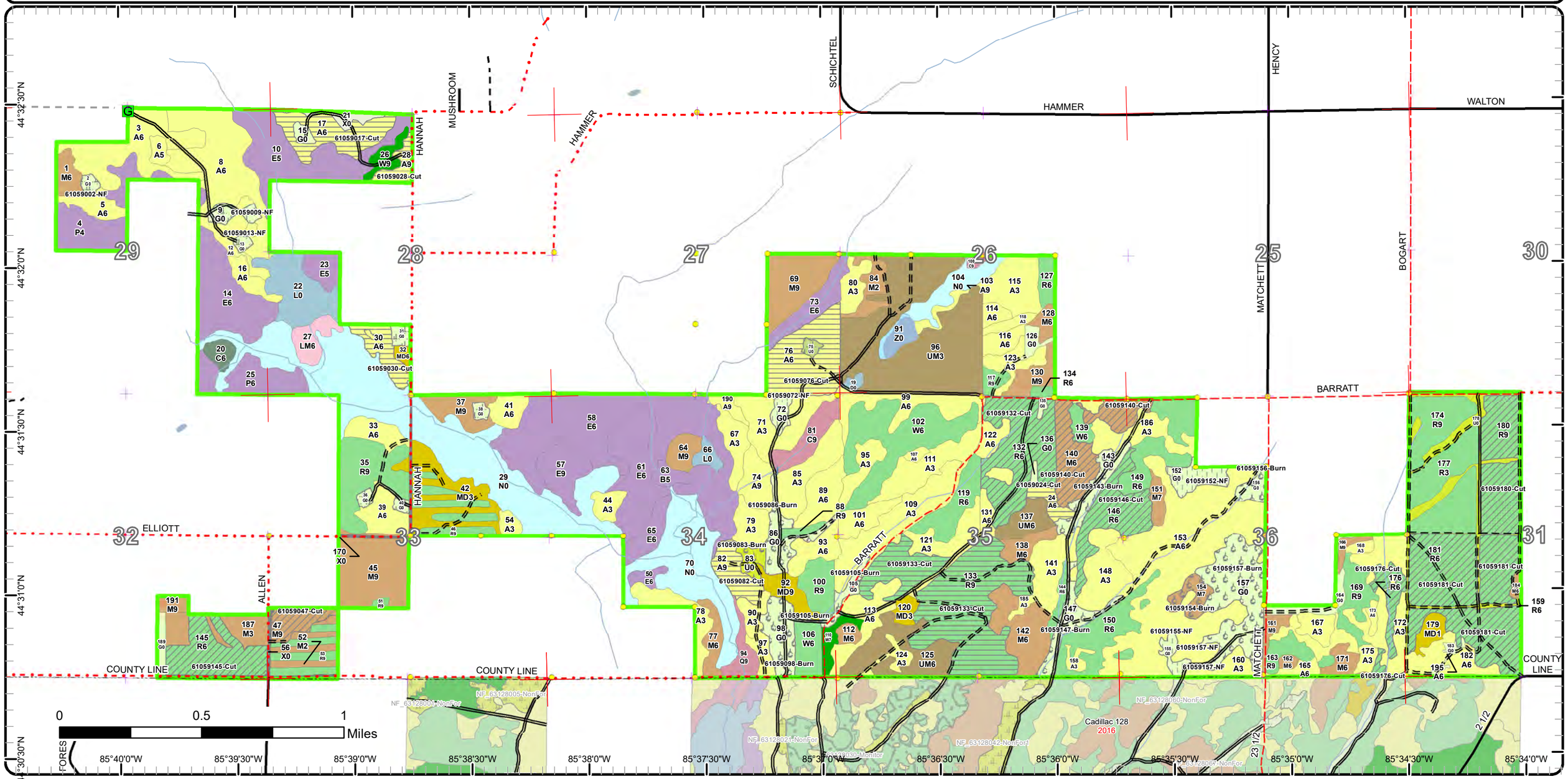

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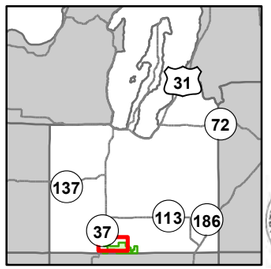

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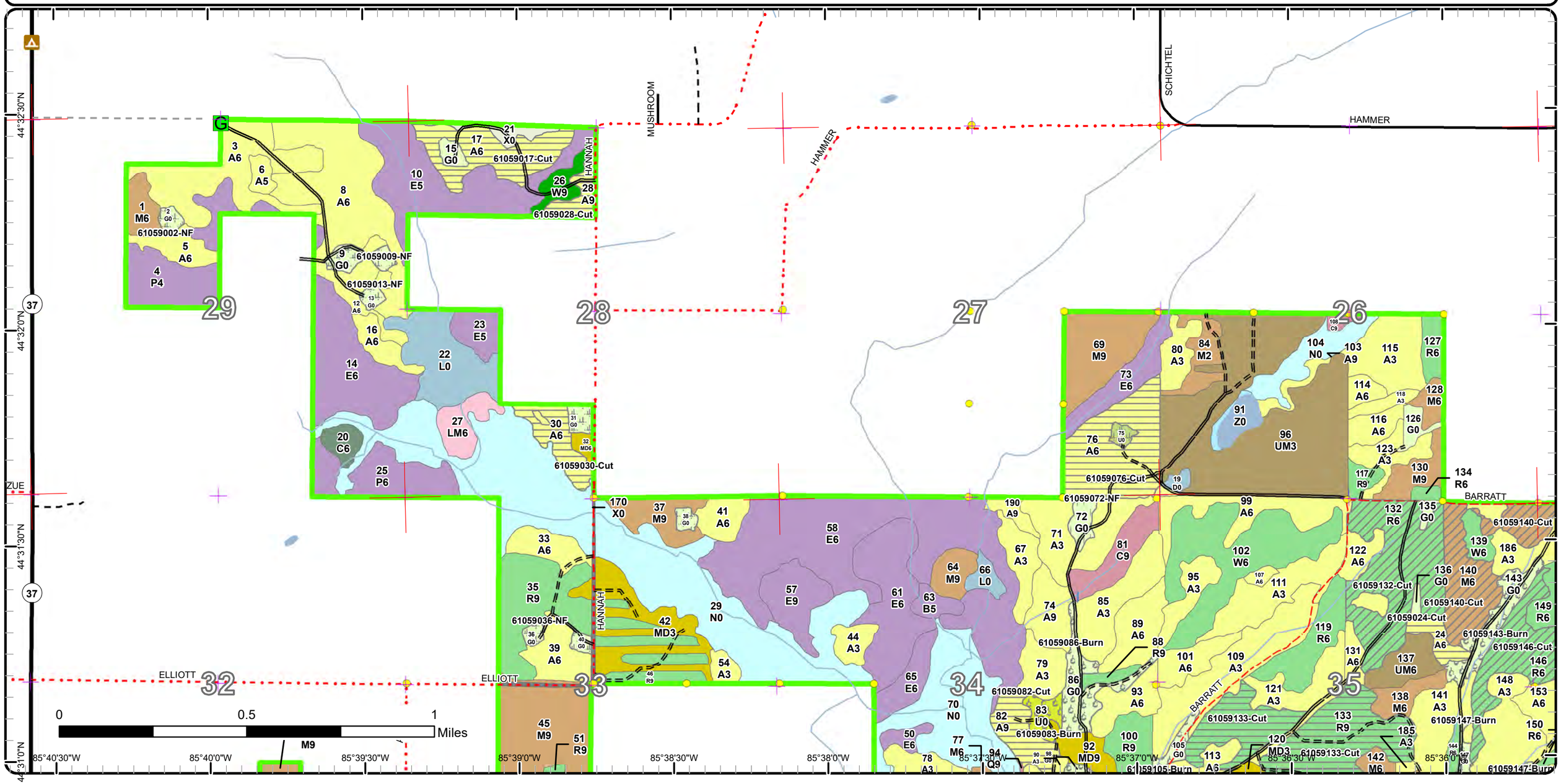

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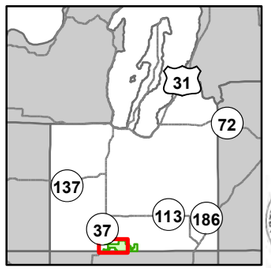

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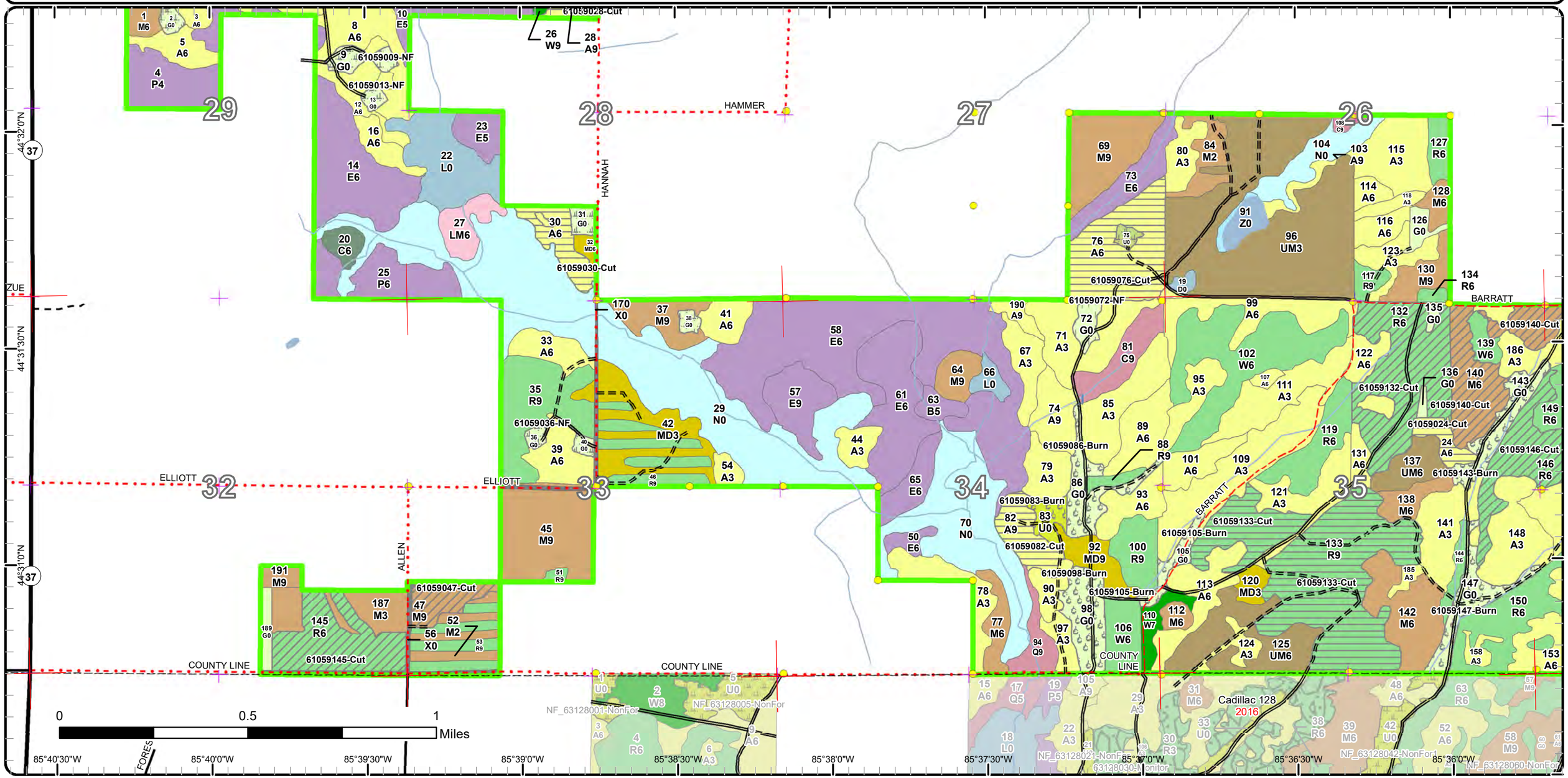

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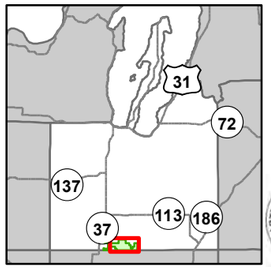

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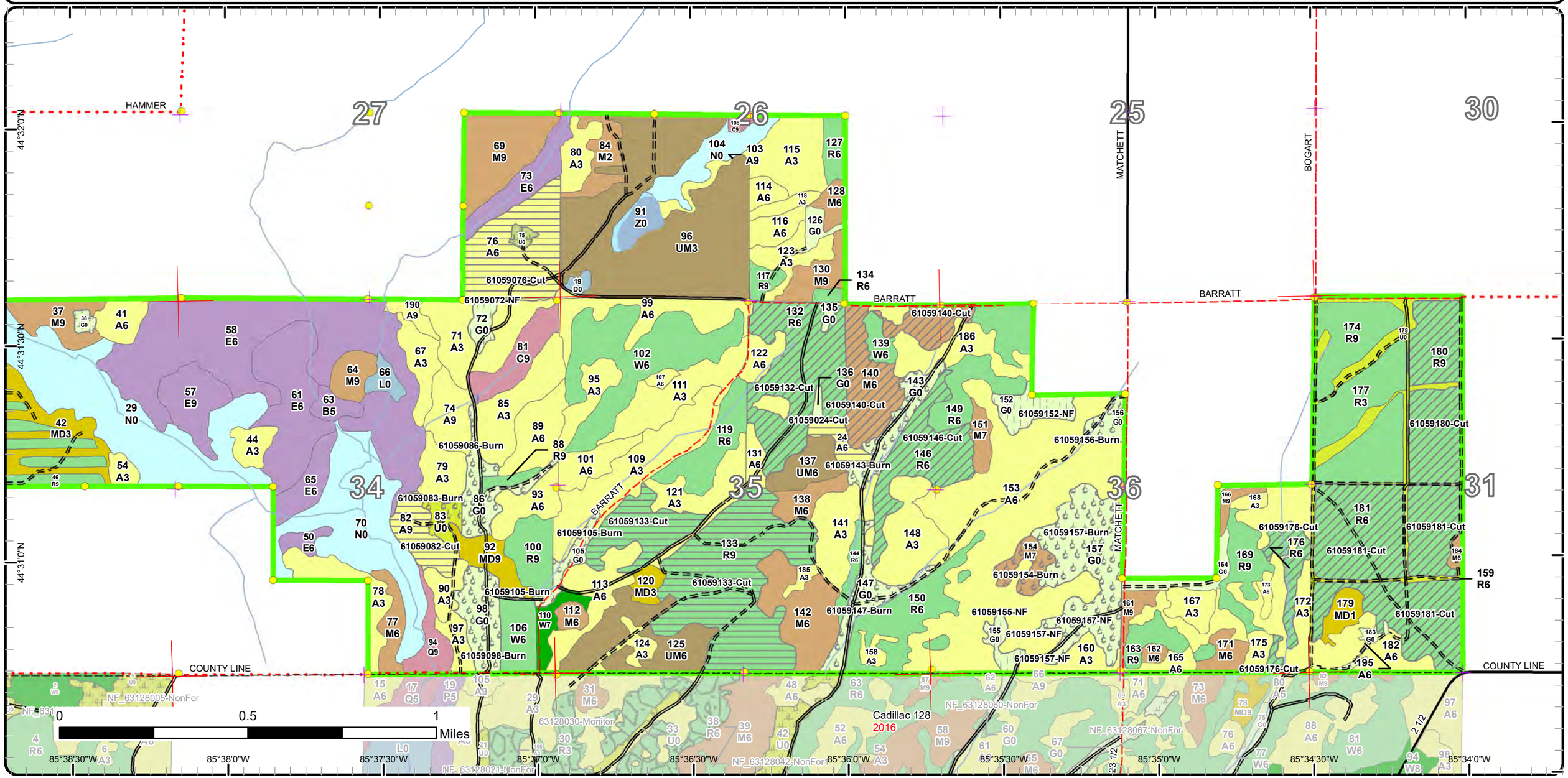

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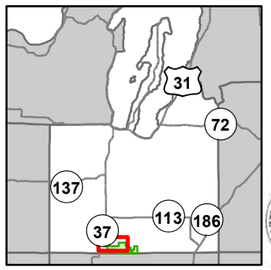

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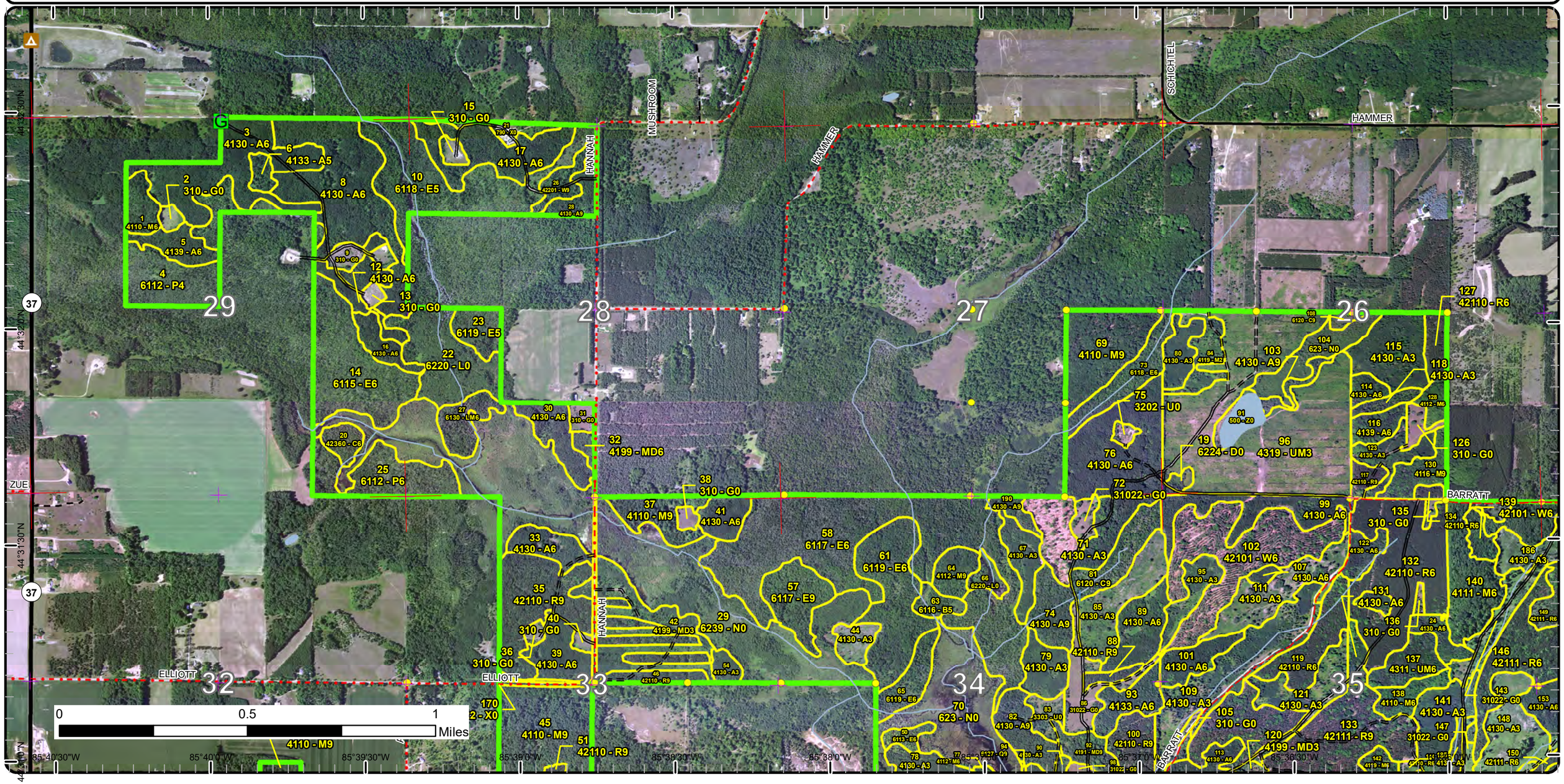

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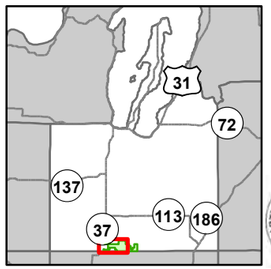

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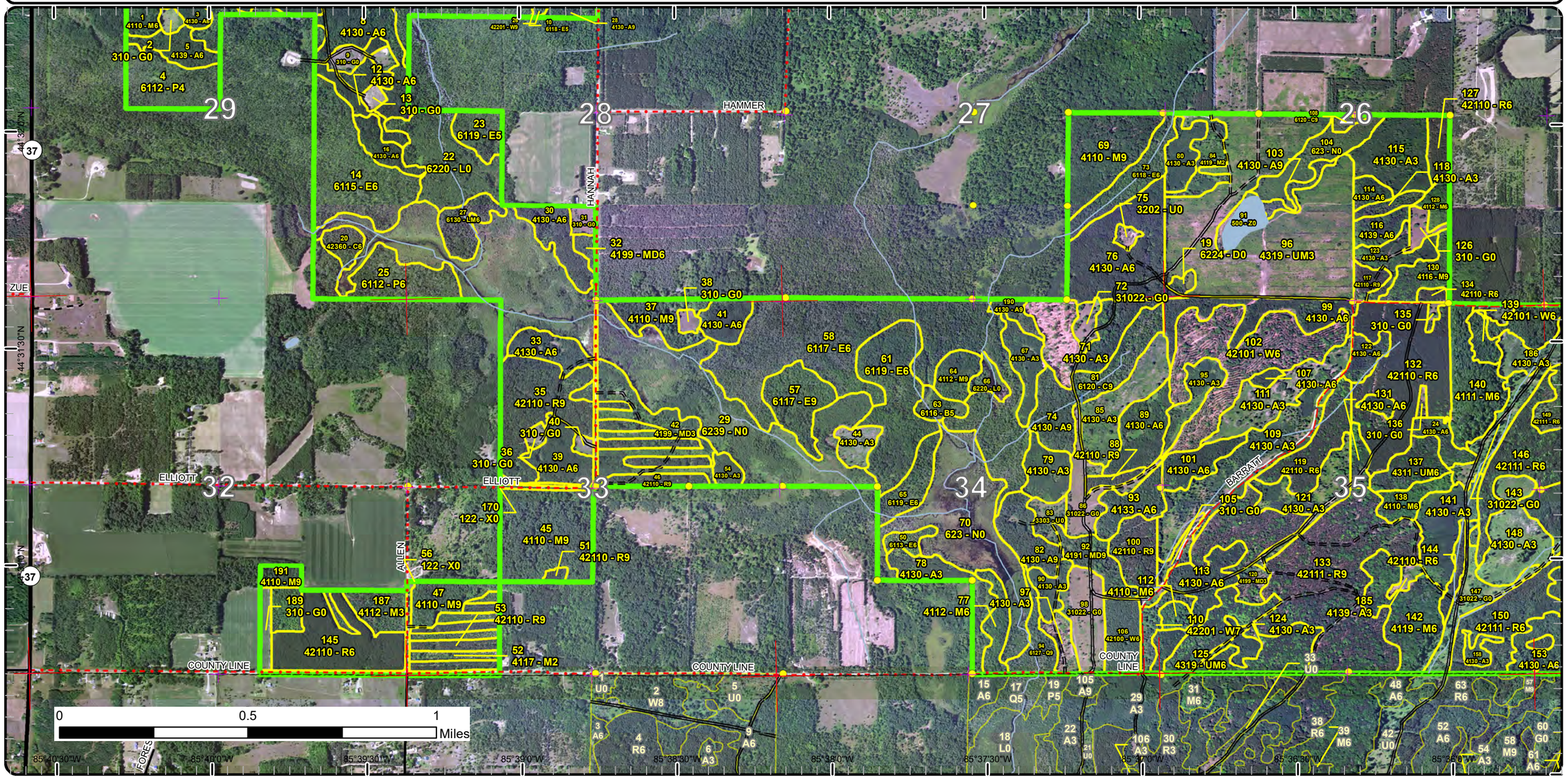

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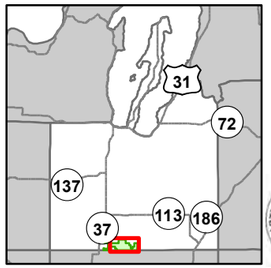

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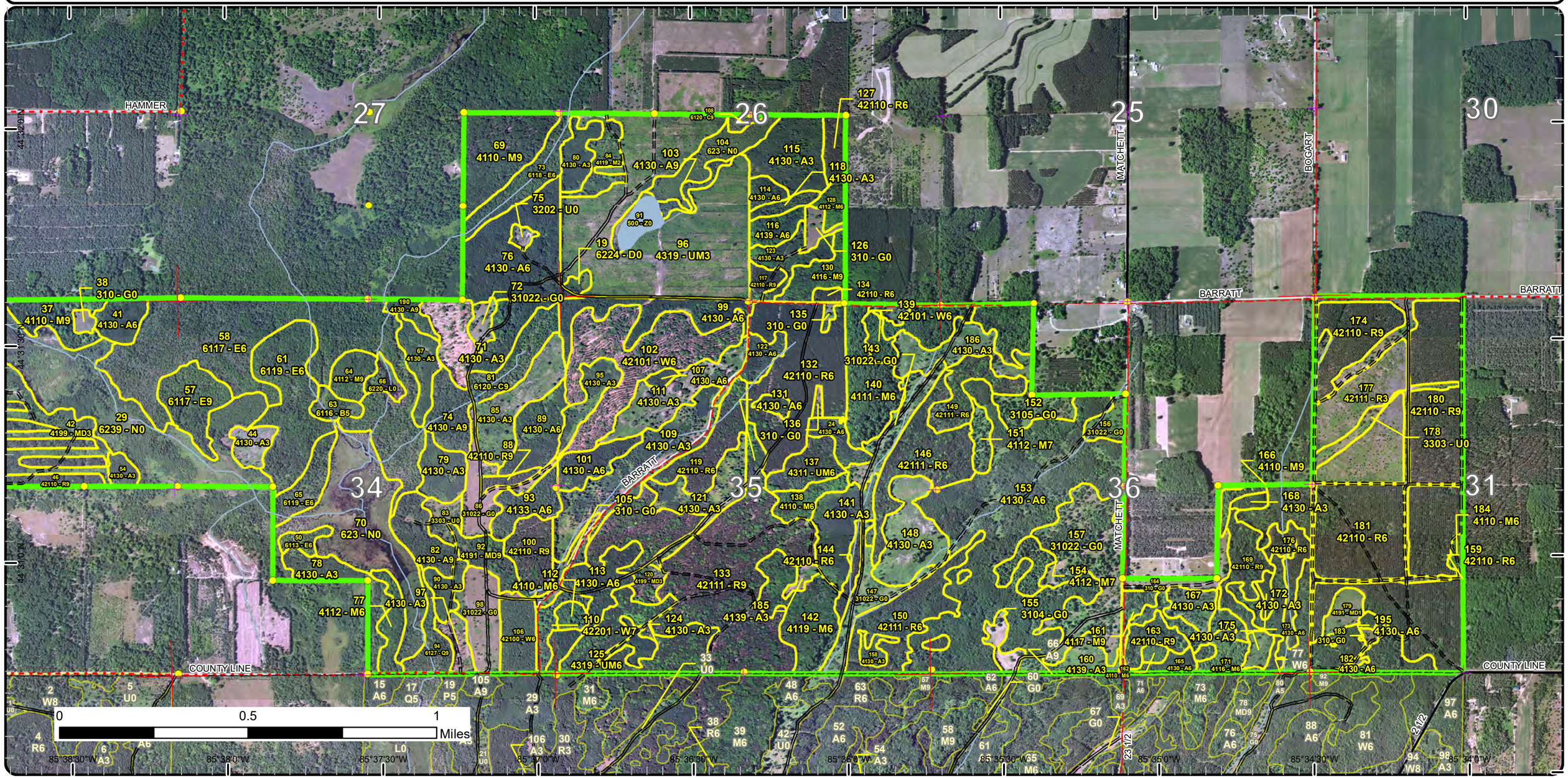
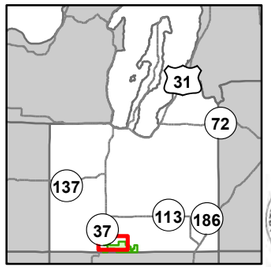


Special Conservation Areas



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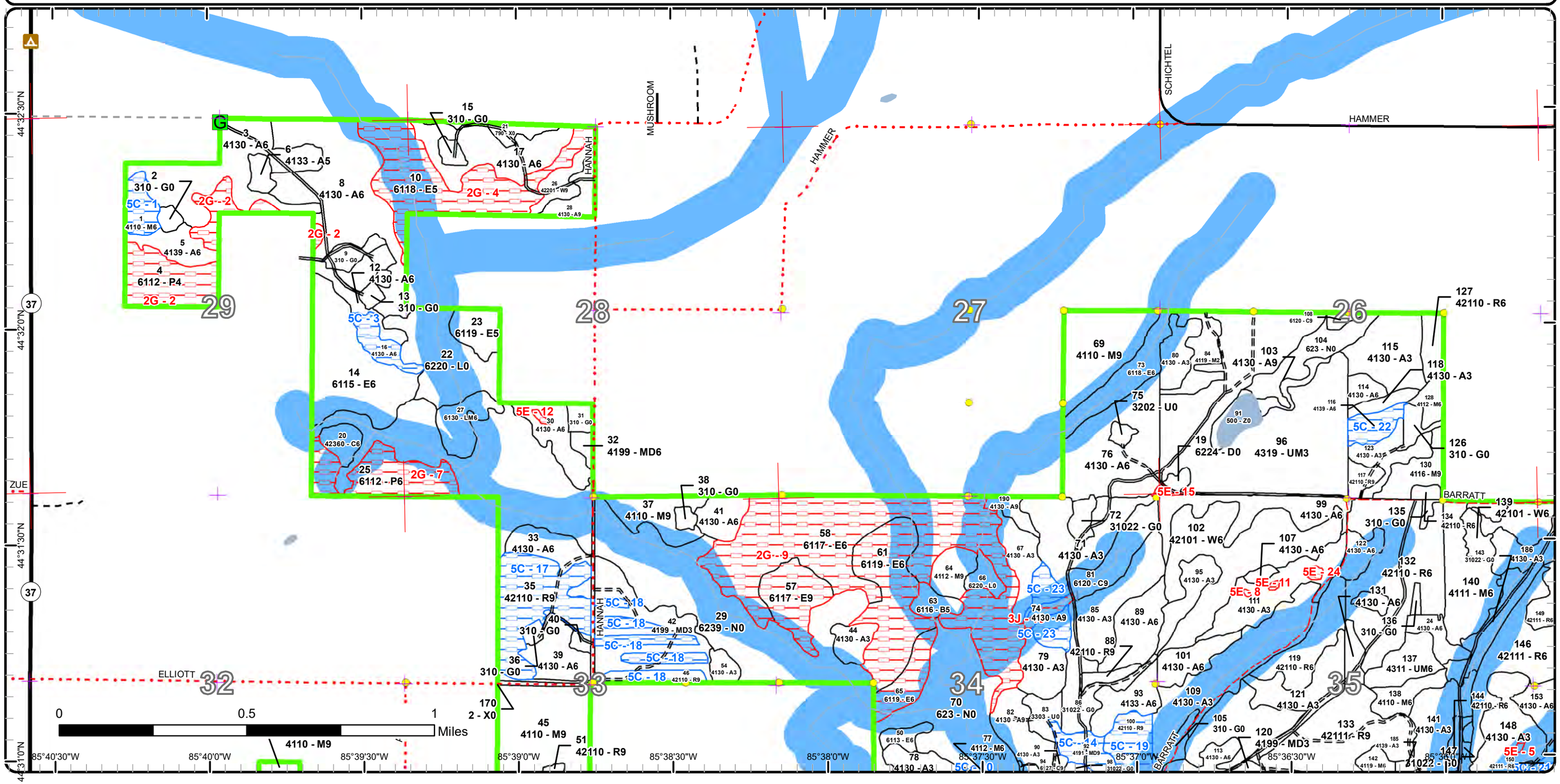
- Available w/ Constraints
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable
- 2G: Too wet (sensitive soils, does not include access issues)
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Cold Water Streams
- High Priority Trout Stream Buffer



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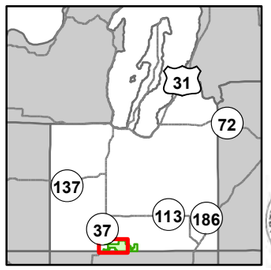

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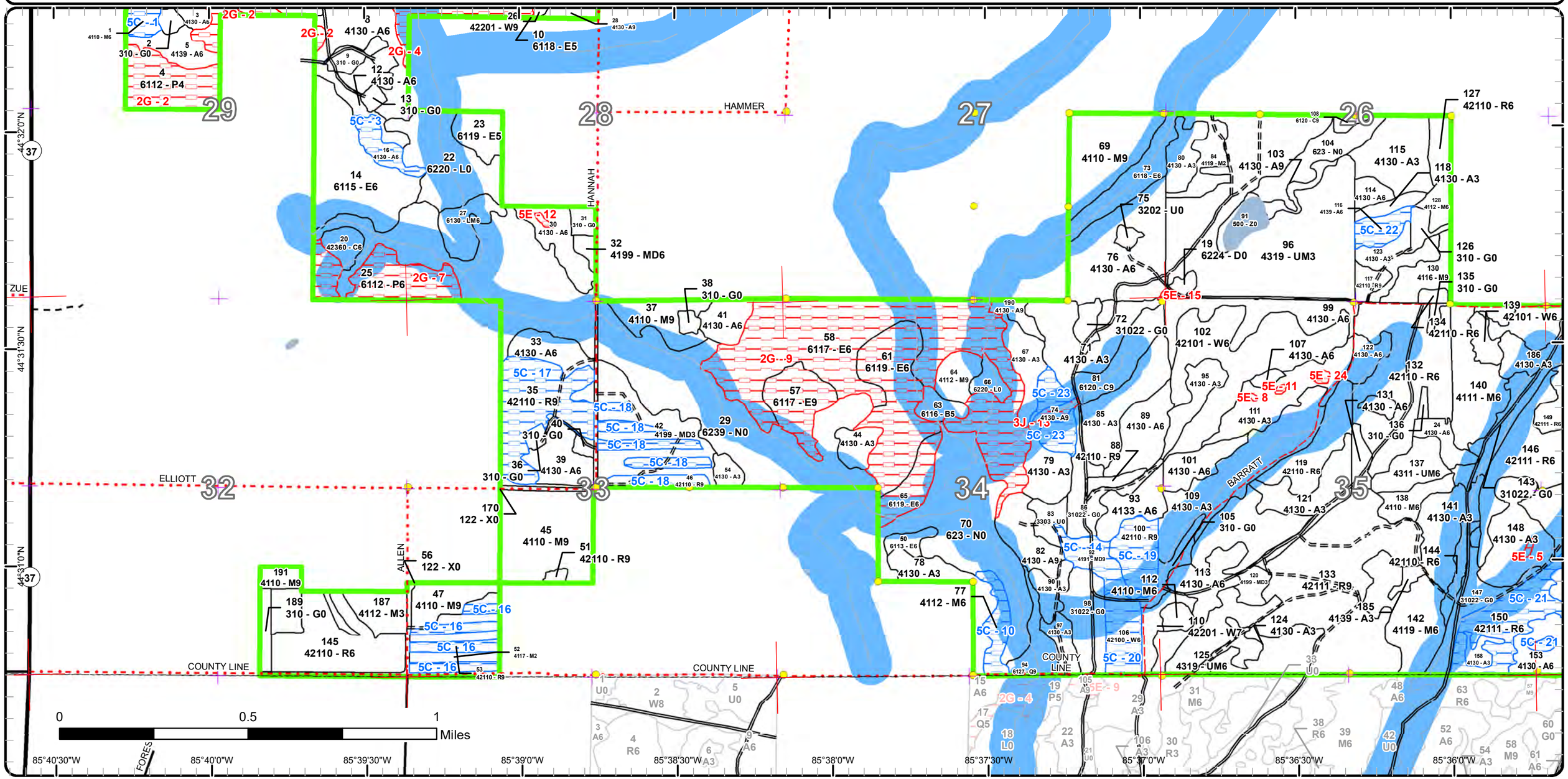
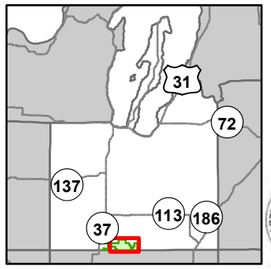


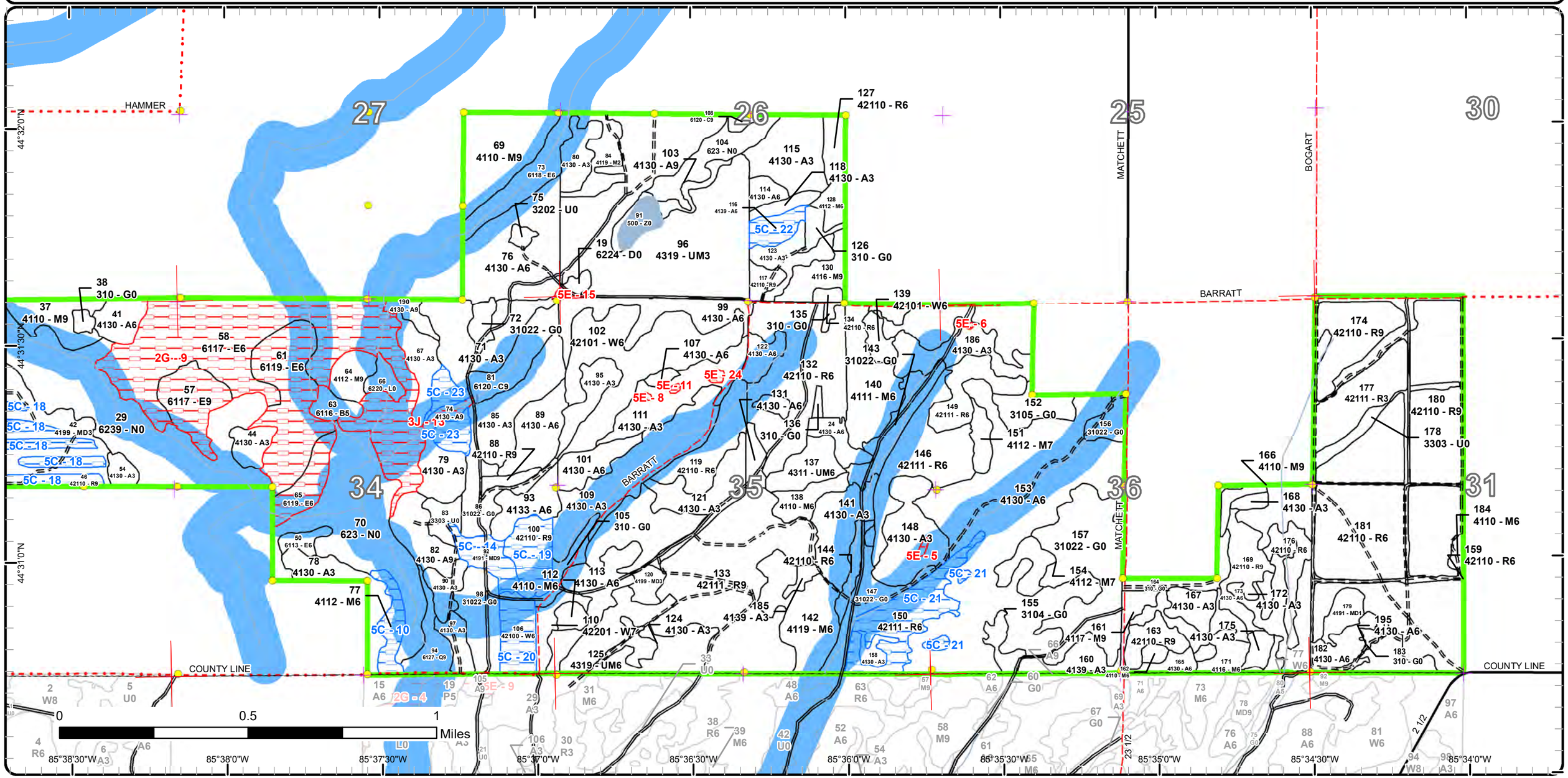
Special Conservation Areas



N

Compartment: 59
T25N, R11W, Sec. 26-29, 33-36
T25N, R10W, Sec. 31
County: Grand Traverse
Unit: Traverse City
Mgmt Area: Manistee River Valley
YOE: 2024
Acres: 2966.1 GIS Calculated
Examiner: Patrick Cotant
Map Revised: 10/17/2022
Map Phase: Post Review

- Miris Corners
- Remonumented Section Corners
- Survey Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Culvert
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Compartment Boundary
- Available w/ Constraints
  - 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable
  - 2G: Too wet (sensitive soils, does not include access issues)
  - 3J: Water quality / BMPs (stream, river, or lake)
  - 5E: Long-Term Retention
- Stand Boundaries
- Cold Water Streams
- High Priority Trout Stream Buffer



Report 1 – Total Acres by Cover Type and Age Class

Traverse City Mgt. Unit **Compartment 59** **Year of Entry 2024**

Patrick Cotant : Examiner

Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	146	213	21	276	153	51	36	17	0	0	0	0	0	0	0	0	0	**913**
Bare/Sparsely Vegetated	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Cedar	0	0	0	0	0	0	0	0	0	0	16	0	6	0	0	0	0	0	**22**
Herbaceous Openland	177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**176**
Low-Density Trees	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**35**
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	31	0	24	0	0	0	0	0	0	0	0	0	**55**
Lowland Conifers	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	**9**
Lowland Deciduous	0	0	0	0	0	0	49	0	15	4	223	0	0	0	0	0	0	0	**291**
Lowland Mixed Forest	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	**11**
Lowland Shrub	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**33**
Marsh	221	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**221**
Mixed Upland Deciduous	0	11	28	0	0	3	0	0	0	0	0	10	0	0	0	0	0	0	**51**
Northern Hardwood	0	0	38	0	0	0	0	0	41	47	98	52	0	0	0	0	0	0	**276**
Paper Birch	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Red Pine	0	40	0	0	50	0	158	364	0	0	0	0	0	0	0	0	0	0	**612**
Treed Bog	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Upland Mixed Forest	0	0	108	0	0	11	0	31	0	0	0	0	0	0	0	0	0	0	**149**
Upland Shrub	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Urban	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
Water	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
White Pine	0	0	0	0	0	0	0	79	0	0	0	0	0	0	0	0	0	0	**79**
Total	**493**	**197**	**387**	**21**	**326**	**172**	**289**	**521**	**106**	**51**	**337**	**62**	**6**	**0**	**0**	**0**	**0**	**0**	**2965**

BORUSZEWSKIA

Report 2 – Treatment Summary

Traverse City Mgt. Unit

Year of Entry: 2024

Compartment 59

Total Compartment Acres: 2,966

Acres of Harvest

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	103	0	0	0	0	0	0	0	0	**103**
Northern Hardwood	0	0	0	0	0	46	0	0	0	**46**
Red Pine	99	0	0	0	0	260	0	0	0	**359**
Total	**202**	**0**	**0**	**0**	**0**	**305**	**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	128	0	0	0	40	**675**
Next Step	0	99	99	0	0	99	302	0	128	**728**
Total	**508**	**99**	**99**	**0**	**128**	**99**	**302**	**0**	**168**	**1403**

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut

Approved Treatments:

2 61059002-NF 2.2 310 - Herbaceous Openland Nonstocked NonForestMgt Fruit Tree/Shrub Planting 3204 - Mast Producing Shrub No

Prescription Specs: 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.
Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

9 61059009-NF 5.5 310 - Herbaceous Openland Nonstocked NonForestMgt Fruit Tree/Shrub Planting 3204 - Mast Producing Shrub No

Prescription Specs: 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.
Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

13 61059013-NF 2.0 310 - Herbaceous Openland Nonstocked NonForestMgt Fruit Tree/Shrub Planting 3204 - Mast Producing Shrub No

Prescription Specs: 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.
Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
17	61059017-Cut	25.5	4130 - Aspen	Poletimber Well	47	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No

Prescription Specs: Final harvest stand, retaining some small in size pockets of balsam fir and white pine. Treatment boundary along adjacent stand 10 may need to be set back slightly but attempt to harvest right up to lowland edge and possibly dip into stand 10 along west edge of treatment area where more merchantable timber is present in lowland.

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

Acceptable Regen: Aspen, balsam fir, red maple, beech, black cherry and white pine are expected.

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
24	61059024-Cut	6.3	4130 - Aspen	Poletimber Well	45	81-110	Harvest	Clearcut	413 - Aspen	Even-Aged	No

Prescription Specs: Final harvest with adjacent stand 140. Recommend no retention due to small size of stand.

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

Acceptable Regen: Aspen, white pine, beech, red maple, ironwood and black cherry.

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
28	61059028-Cut	7.3	4130 - Aspen	Sawtimber Well	69	111-140	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Two-Aged	No

Prescription Specs: Final harvest aspen and other deciduous species. Retain scattered larger white pine for visual purposes, with no residual BA goal - a few clumps of 2-3 large white pine might be ideal so as not to hinder aspen regeneration too much.

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

Acceptable Regen: Aspen species, red maple, beech, white pine and black cherry.

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
30	61059030-Cut	12.1	4130 - Aspen	Poletimber Well	48	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No

Prescription Specs: Final harvest stand, treatment does not include vernal pond area, could expand this slightly to account for retention - in addition retain some larger hardwoods along Hannah Rd along with scattered, individual conifers throughout southern portion of stand area. Western edge of treatment area may need to be set back slightly in spots if its excessively wet, otherwise attempt to harvest right up to lowland edge.

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

Acceptable Regen: Aspen, red maple, black cherry, beech, balsam fir and white pine.

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
31	61059031-NF	3.2	310 - Herbaceous Openland	Nonstocked			NonForestMgt	Fruit Tree/Shrub Planting	3204 - Mast Producing Shrub		No

Prescription Specs: 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.
Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
36	61059036-NF	1.8	310 - Herbaceous Openland	Nonstocked			NonForestMgt	Fruit Tree/Shrub Planting	3204 - Mast Producing Shrub		No

Prescription Specs: 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.
Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
38	61059038-NF	1.9	310 - Herbaceous Openland	Nonstocked			NonForestMgt	Fruit Tree/Shrub Planting	3204 - Mast Producing Shrub		No

Prescription Specs: 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.

Next Step Treatments:

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
40	61059040-NF	1.7	310 - Herbaceous Openland	Nonstocked			NonForestMgt	Fruit Tree/Shrub Planting	3204 - Mast Producing Shrub		No

Prescription Specs: 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.
Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
47	61059047-Cut	11.3	4110 - Sugar Maple Association	Sawtimber Well	105	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	No

Prescription Specs: Thin hardwoods to more appropriate stocking level - target ~90 sq ft/ac as residual BA. Focus retention on highest quality sugar maple poles and otherwise best tree in place. Consider removing remaining beech and aspen this entry period. Corners present for PVT line running.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
72	61059072-NF	4.4	31022 - Warm Season Grass	Nonstocked			NonForestMgt	Herbaceous/Crop /Grass Planting	3105 - Mixed Upland Herbaceous		No

Prescription Specs: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs or Forest Certification approved forage, fertilizing, burning, or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
75	61059075-NF	2.0	3202 - Autumn Olive/Honeysuckle	Nonstocked			NonForestMgt	Fruit Tree/Shrub Planting	3204 - Mast Producing Shrub		No

Prescription Specs: Start replacing decadent autumn olive with native shrubs.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
76	61059076-Cut	38.3	4130 - Aspen	Poletimber Well	51	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No

Prescription Specs: Final harvest stand, retaining all conifers along with scattered red maple and other deciduous species. Be mindful of lowland area (stand 73) along western edge, and sensitive soils within riparian area in this vicinity. Treatment area should accommodate appropriate setback from creek. Corners are set for PVT line running.

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

Acceptable Regen: Aspen species, red maple, black cherry, white pine and beech.

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
82	61059082-Cut	13.4	4130 - Aspen	Sawtimber Well	65	81-110	Harvest	Clearcut with Retention	4133 - Aspen, Mixed Pine	Two-Aged	No

Prescription Specs: Final harvest, retain red and white pine component specifically along western edge - some areas are dense pine, mark to leave 20-40 BA along this edge only, ~a chain from treatment edge. Be mindful of sensitive soils along western edge of treatment, excluding portions that are deemed excessively wet.

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

Acceptable Regen: Aspen species, red maple, black cherry, balsam fir, red pine, white pine and beech.

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
83	61059083-Burn	5.6	3303 - Mixed Low Density Trees	Nonstocked			Burn	Opening	3204 - Mast Producing Shrub		No

Prescription Specs: Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.

Next Step Treatments: NonForestMgt, Other - Specify

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
86	61059086-Burn	13.9	31022 - Warm Season Grass	Nonstocked			Burn	Opening	31022 - Warm Season Grass		No

Prescription Specs: Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.

Next Step Treatments: NonForestMgt, Other - Specify

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
98	61059098-Burn	16.3	31022 - Warm Season Grass	Nonstocked			Burn	Opening	31022 - Warm Season Grass		No

Prescription Specs: Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.

Next Step Treatments: NonForestMgt, Other - Specify

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
105	61059105-Burn	6.4	310 - Herbaceous Openland	Nonstocked			Burn	Opening	31022 - Warm Season Grass		No

Prescription Specs: Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.

Next Step Treatments: NonForestMgt, Other - Specify

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
132	61059132-Cut	50.2	42110 - Planted Red Pine	Poletimber Well	37	141-170	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	No

Prescription Specs: Row thin red pine. Generally rows are N/S orientation, are straight and seem plenty wide for operability. Exclude interior aspen pocket, harvest deciduous trees if within cut rows or if necessary for operability.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
133	61059133-Cut	99.4	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	62	111-140	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	No

Prescription Specs: Final harvest red pine and replant to red pine at plantation spacing. Retain a pocket or two of hardwood, specifically sugar maple for aesthetic purposes.

Next Step Treatments: SitePrep, Trenching; Pesticide, Aerial - Site Prep; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Acceptable Regen: Red pine at plantation spacing. Also expect mixed deciduous scattered throughout, similar to current stand composition.

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
140	61059140-Cut	34.3	4111 - S.Maple, Hard Mast Association	Poletimber Well	93	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	No

Prescription Specs: Thin stand focusing removal on defected, forked or otherwise poorly formed trees. Focus retention on well formed sugar maple, red maple and black cherry. Retain most if not all white pine within NE portion of stand. Specify to remove all beech aside from a few scattered individuals for mast production and eventual standing snags/CWD. Target BA in areas where beech is concentrated will be variable. Remainder of stand where beech is less numerous, target an average BA of 80-90 sq ft/ac.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
143	61059143-Burn	13.0	31022 - Warm Season Grass	Nonstocked			Burn	Opening	31022 - Warm Season Grass		No

Prescription Specs: Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.

Next Step Treatments: NonForestMgt, Other - Specify

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
145	61059145-Cut	32.2	42110 - Planted Red Pine	Poletimber Well	63	201+	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	No

Prescription Specs: Row thin red pine. Rows seem generally operable with some area that may be tight due to a combination of row width and topography. Rely on producer to remove 1/3 of overall volume by row thinning, no more would be ideal to avoid issues with windthrow as this plantation is bounded on the windward sides by open agricultural fields. attempt to retain larger sugar maple unless this presents an issue with operability

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
146	61059146-Cut	28.9	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	62	171-200	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No

Prescription Specs: Thin red pine to more appropriate stocking levels, focusing removal on forked, suppressed or otherwise poorly formed trees. Current BA averages ~170 sq ft/ac, reduce BA to ~120-130 sq ft/ac. Retain better quality hardwoods, remove poor quality/clumpy hardwoods and open up a few small pockets of an acre or less around some concentrated aspen stems.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
147	61059147-Burn	13.8	31022 - Warm Season Grass	Nonstocked			Burn	Opening	31022 - Warm Season Grass		No

Prescription Specs: Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.

Next Step Treatments: NonForestMgt, Other - Specify

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
152	61059152-NF	10.3	3105 - Mixed Upland Herbaceous	Nonstocked			NonForestMgt	Brush Cutting	330 - Low-Density Trees		No

Prescription Specs: Brush hog (or hand fell) around select leave trees and/or patches . 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. Protect with wire cages or tubex. Considering adding native herbaceous/forbs ground cover for wildlife food source.

Next Step Treatments:

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, fertilizing, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
154	**61059154-Burn**	7.9	4112 - Maple, Beech, Cherry Association	Sawtimber Poor	83	51-80	Burn	Opening	330 - Low-Density Trees		No

Prescription Specs: Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.

Next Step Treatments: NonForestMgt, Herbaceous/Crop/Grass Planting

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
155	**61059155-NF**	5.1	3104 - Degraded	Nonstocked			NonForestMgt	Herbaceous/Crop /Grass Planting	3105 - Mixed Upland Herbaceous		No

Prescription Specs: This opening is a traditional wildlife planting. Disk in crab/quack grass, plant to annual rye for several years and then convert back to a pasture mix (i.e. clover/alfalfa). Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
156	**61059156-Burn**	5.8	31022 - Warm Season Grass	Nonstocked			Burn	Opening	3105 - Mixed Upland Herbaceous		No

Prescription Specs: Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.

Next Step Treatments: NonForestMgt, Herbaceous/Crop/Grass Planting

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
157	61059157-Burn	44.9	31022 - Warm Season Grass	Nonstocked			Burn	Opening	3105 - Mixed Upland Herbaceous		No

Prescription Specs: Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.

Next Step Treatments: NonForestMgt, Herbaceous/Crop/Grass Planting

Acceptable Regen:

Other Comment: Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs, burning, or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
153	61059157-NF	0.0	4130 - Aspen	Poletimber Well	33	1-50	NonForestMgt	Other - Specify	31022 - Warm Season Grass		No

Prescription Specs: Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment: Percent to Treat = 100%

Site Condition

Proposed Start Date: 5 /18/2022

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
176	61059176-Cut	11.8	42110 - Planted Red Pine	Poletimber Well	61	171-200	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No

Prescription Specs: Thin red pine to more appropriate stocking levels, focusing removal on suppressed, forked or otherwise poorly formed individual trees. Thin white pine and deciduous components in same manner. Target removal of approximately a third of overall volume with a goal of ~130-140 sq ft/ac as residual.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
180	61059180-Cut	42.5	42110 - Planted Red Pine	Sawtimber Well	55	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No

Prescription Specs: Thin red pine, focusing removal on forked, suppressed or otherwise poorly formed trees with better quality trees removed in order to achieve desired stocking. Near dieback pockets, remove any trees that are exhibiting canopy dieback or other visuals signs of stress. Current BA averages ~160 sq ft/ac - thin stand removing approximately a third of overall volume, with a target being ~120 sq ft/ac. Appropriate HRD specs should be used as an HRD occurrence was found within this stand in spring 2022.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
181	61059181-Cut	94.1	42110 - Planted Red Pine	Poletimber Well	51	171-200	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No

Prescription Specs: Thin red pine, focusing removal on supressed, forked or otherwise poorly formed individuals. Retain hardwoods if operability allows this entry period so as not to encourage sprouting and excessive natural regeneration of deciduous species going forward. In general, remove approximately a third of overall volume with a target BA of approximately 130-140 sq ft/ac.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Total Treatment Acreage Proposed: **675.3**

Report 4 – Site Conditions

Traverse City Mgt. Unit

Patrick Cotant : Examiner

Compartment: 59

Year of Entry: 2024

Availability for Management

Total Acres	Acres Available	*Acres Avail With Condition*	Acres Not Available		Dominant Site Conditions *5C*	2G	3J	5E
912	882	***24***	5	**Aspen**	***24***		3	3
5	5	***0***	0	**Bare/Sparsely Vegetated**				
22	22	***0***	0	**Cedar**				
177	177	***0***	0	**Herbaceous Openland**				
35	35	***0***	0	**Low-Density Trees**				
55	0	***0***	55	**Lowland Aspen/Balsam Poplar**		55		
9	9	***0***	0	**Lowland Conifers**				
291	68	***0***	223	**Lowland Deciduous**		223		
11	11	***0***	0	**Lowland Mixed Forest**				
34	34	***0***	0	**Lowland Shrub**				
221	221	***0***	0	**Marsh**				
52	41	***10***	0	**Mixed Upland Deciduous**	***10***			
277	260	***16***	0	**Northern Hardwood**	***16***			
5	5	***0***	0	**Paper Birch**				
613	508	***105***	0	**Red Pine**	***105***			
2	2	***0***	0	**Treed Bog**				
150	150	***0***	0	**Upland Mixed Forest**				
2	2	***0***	0	**Upland Shrub**				
11	11	***0***	0	**Urban**				
7	7	***0***	0	**Water**				
79	67	***12***	0	**White Pine**	***12***			
2,966	2,515	***168***	283	Total Forested Acres	***168***	278	3	3
	85%	***6%***	10%	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	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	8	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

2	**Unavailable**	**2G: Too wet (sensitive soils, does not include access issues)**	31	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
3	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	7	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	**Unavailable**	**2G: Too wet (sensitive soils, does not include access issues)**	48	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:						
5	**Unavailable**	**5E: Long-Term Retention**	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Island delineated from stand to serve as long term retention while also serving an aesthetic purpose.						
6	**Unavailable**	**5E: Long-Term Retention**	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	**Unavailable**	**2G: Too wet (sensitive soils, does not include access issues)**	24	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

8	**Unavailable**	**5E: Long-Term Retention**	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
9	**Unavailable**	**2G: Too wet (sensitive soils, does not include access issues)**	175	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
10	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	9	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
11	**Unavailable**	**5E: Long-Term Retention**	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
12	**Unavailable**	**5E: Long-Term Retention**	1	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
	Comments:						
13	**Unavailable**	**3J: Water quality / BMPs (stream, river, or lake)**	3	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

14	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
15	**Unavailable**	**5E: Long-Term Retention**	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
16	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	14	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
17	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	33	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
18	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	18	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
19	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	13	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

20	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	12	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
21	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	28	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
22	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	7	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
23	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
24	**Unavailable**	**5E: Long-Term Retention**	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres

Comments

Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	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.

Stand 1

4110 - Sugar Maple Association | Poletimber Well | 7.7 Acres | 85 Stand Age | 141-170 BA Range | N/A Managed Site

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	20	Log/Pole	10	
Black Cherry	25	Log/Pole	12	
Sugar Maple	55	Pole/Log	9	85

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	5 - 10 feet	Sapling

Fair quality hardwoods throughout, Sugar maple pole/small log class is good quality in spots, especially as you move south through stand - very little desirable, advanced regen present. trace birch, some fir present in understory bleeding in from adjacent pvt. Sugar maple regen is present in understory but is 1-2' tall with no pockets advancing. stand is providing a nice pocket of later successional species in area otherwise dominated by aspen and lowland. thin if/when adjacent aspen stands are treated.

Lambda Energy is the contact for the easement that allows vehicular access to this portion of state owned land and their easement language states that they likely are able to grant permission for access

Stand 2

310 - Herbaceous Openland | Nonstocked | 2.2

Sub-Canopy Species	Density	Avg. Height	Size
Scotch Pine	Low		Sapling

Stand 3

4130 - Aspen | Poletimber Well | 39.4 Acres | 30 Stand Age | Immature BA Range | N/A Managed Site

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	10	Sapling/Pole	4	30
Red Maple	10	Sapling/Pole	4	30
Bigtooth Aspen	30	Pole/Sapling	6	30
Quaking Aspen	50	Pole/Sapling	5	30

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	5 - 10 feet	Sapling
Balsam Fir	Low	5 - 10 feet	Sapling
Ironwood	Low	5 - 10 feet	Sapling
White Pine	Low	10 - 20 feet	Sapling

Good quality, fully stocked aspen stand. Recently transitioned to pole sized, pockets of stand have higher concentrations of red maple and black cherry, specifically in western lobe. Some high water table/wet soils in western area of stand as well - old skidder tracks visible in areas. Evaluate next yoe for treatment options.

Lambda Energy is the contact for the easement that allows vehicular access to this portion of state owned land and their easement language states that they likely are able to grant permission for access

Stand 4

6112 - Lowland Aspen | Poletimber Poor | 30.8 Acres | 50 Stand Age | Unspecified BA Range | N/A Managed Site

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	10	Pole	7	
Northern White Cedar	10	Pole	7	
Black Ash	20	Pole	7	
Red Maple	15	Pole	7	
Quaking Aspen	40	Pole/Sap/Log	7	50
Paper Birch	5	Pole	6	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	Variable	Sapling
Black Ash	Low	Variable	Sapling
Tag Alder	Medium	5 - 10 feet	Tall Shrub

Multi-part stand, part of a much larger lowland stand that covers both state and private ownership. Includes slivers of adjacent A6 stands where upland transitions to lowland and operability during aspen harvests would be difficult. Black ash is dying out but also resprouting in spots.

Stand 5

4139 - Aspen, Mixed Deciduous | Poletimber Well | 9.3 Acres | 30 Stand Age | Immature BA Range | N/A Managed Site

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	50	Pole/Sapling	5	30
Hemlock	5	Pole	5	
Black Cherry	30	Sapling	4	30
Red Maple	15	Sapling/Pole	4	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling

decent quality aspen stand with significant fir component in places. trace hemlock present in western portion of stand. high water table along southern edge where stand transitions to e-type - also areas within stand that seem wet at times, some old skidder ruts visible in spots. evaluate next yoe for treatment options. there is a small area south of adjacent well pad that is dominated by black cherry regeneration.

Lambda Energy is the contact for the easement that allows vehicular access to this portion of state owned land and their easement language states that they likely are able to grant permission for access

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
6	4133 - Aspen, Mixed Pine	Poletimber Medium	3.7	62	51-80	N/A	nice island of denser conifers in larger area of aspen, aspen component still dominant in stand. some larger white pine present. retain fir cover and diversity if/when surrounding asoen is harvested.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	25	Pole/Sap/Log	5	
Quaking Aspen	10	Pole/Sapling	5	
Bigtooth Aspen	30	Pole/Log/Sap	8	62
Black Cherry	20	Pole/Log	9	
Balsam Fir	15	Pole/Sapling	6	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Medium	Variable	Sapling
Balsam Fir	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
8	4130 - Aspen	Poletimber Well	57.4	47	81-110	N/A	Good quality Aspen stand with scattered larger, clumpy formed red and sugar maple scattered throughout. Black cherry poles are evenly distributed throughout stand as well. Slightly more advanced understory components of fir and deciduous species than adjacent stand 3. Stand will definitely hold another entry year with plenty of other aspen stands in compartment to fulfill aspen harvest needs. Recommend treating next yoe with portions of stand 3. Some lowland and vernal pond areas along stand edges and in Southern portion of stand. **Lambda Energy is the contact for the easement that allows vehicular access to this portion of state owned land and their easement language states that they likely are able to grant permission for access**

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	5	Pole	5	
Sugar Maple	2	Log	12	
Red Maple	10	Pole	7	
Bigtooth Aspen	50	Pole/Log	8	47
Quaking Aspen	33	Pole	7	47

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	High	10 - 20 feet	Sapling
Black Cherry	Low	10 - 20 feet	Sapling
Balsam Fir	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
9	310 - Herbaceous Openland	Nonstocked	5.5			No	Updated stand comments not "managed oil/gas". Phoenix Petroleum is not responsible for any additional surface restoration. R Merrick

Sub-Canopy Species	Density	Avg. Height	Size
Autumn Olive	Trace		Tall Shrub
Black Cherry	Trace		Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
10	6118 - Lowland Deciduous with Cedar	Poletimber Medium	47.5	95	Unspecified	N/A	Some large paper birch present, dense shrub layer in spots. Anderson Creek bisects stand and looks to have been historically flooded near PVT edge - this has influenced riparian edge composition as tag alder and cat tails have filled in pockets along creek edge where standing cedar snags remain. Inventory done from stand edge of adjacent stands 17 and 8.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	10	Pole/Sapling	6	
Quaking Aspen	15	Pole/Log	8	69
Balsam Fir	10	Pole	6	
Northern White Cedar	21	Pole/Log	9	95
Black Ash	14	Pole/Sapling	7	
Black Cherry	10	Pole	6	
Red Maple	20	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling
Black Ash	Low	Variable	Sapling
Tag Alder	Medium	10 - 20 feet	Tall Shrub
Red Maple	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
12	4130 - Aspen	Poletimber Well	8.3	37	Unspecified	N/A	Good quality Aspen stand, pole/sapling in size, overall average is small pole sized. Evaluate next yoe for treatment options.**Lambda Energy is the contact for the easement that allows vehicular access to this portion of state owned land and their easement language states that they likely are able to grant permission for access**

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	10	Pole/Sapling	6	
Black Cherry	10	Sapling/Pole	4	
Red Maple	10	Sapling/Pole	4	
Bigtooth Aspen	70	Pole	6	37

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling
Red Maple	Medium	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
13	310 - Herbaceous Openland	Nonstocked	2.0			No	shrub planting, looks like hawthorne perhaps, all browsed to a 1 foot tall bonsai shape, but still alive, couple of rows, north end of opening Updated stand data not "managed oil/gas". Phoenix Petroleum is not responsible for any additional surface restoration. R Merrick
14	6115 - Lowland Ash	Poletimber Well	40.1	50	Unspecified	N/A	Part of larger e/p-type that spans PVT/state land. Black ash seems to be persisting in this area a bit more than to the west but still seeing mortality from EAB and possibly some stand flooding.
15	310 - Herbaceous Openland	Nonstocked	2.7				Phoenix Petroleum well 6-28B
16	4130 - Aspen	Poletimber Well	7.4	51	81-110	N/A	decent asoen stand with red maple and some cherry throughout. some areas of lowland/high water table, especially along edges where stand transitions to adjacent e-type. a couple of fairly large stock nests present along southern edge of stand, not sure of occupancy. trace birch present, seems to be dying out of stand. balsam fir is think in spots. drainage oases through northern part of stand, deteriorating oil and gas access route crosses and allows some access to stand. **Lambda Energy is the contact for the easement that allows vehicular access to this portion of state owned land and their easement language states that they likely are able to grant permission for access**
17	4130 - Aspen	Poletimber Well	25.5	47	51-80	N/A	variable size and density, decent quality aspen stand, stand area has several small vernal ponds and has areas of lowland/high water table. understory is variable, some areas along southern edge of stand are dense balsam fir. could harvest portion of stand ghost entry year if areas are needed, otherwise recommend treating all of stand next yoe. whenever treatment occurs, wet pockets will need to be avoided.
19	6224 - Treed Bog	Nonstocked	1.9	0		No	Small wetland area with aspen, red maple and jack pine present in SW 1/2 of stand - seems to be part of complex with stands 91, 104 & 108. Small drainage depression present that seems to carry any flow from bog/pond to the south where it eventually surfaces as a creek in stand 81.

Stand 13

Sub-Canopy Species	Density	Avg. Height	Size
Autumn Olive	Trace		Tall Shrub

Stand 14

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	20	Pole/Sapling	7	
Quaking Aspen	10	Log/Pole	9	
Black Ash	60	Pole/Sapling	7	50
Balsam Fir	2	Pole	7	
Northern White Cedar	8	Pole	7	

Sub-Canopy Species	Density	Avg. Height	Size
Black Ash	Low	10 - 20 feet	Sapling
Red Maple	Low	10 - 20 feet	Sapling
Tag Alder	High	5 - 10 feet	Tall Shrub

Stand 16

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Pole	8	
Bigtooth Aspen	75	Pole/Log	9	51
Black Cherry	10	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Pole
Black Cherry	Low	Variable	Sapling
Red Maple	Medium	Variable	Sapling

Stand 17

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	40	Pole	8	47
Balsam Fir	5	Pole	5	
Quaking Aspen	40	Pole/Sapling	7	47
White Pine	2	Log/Pole	11	
Black Cherry	8	Pole/Sapling	5	
Red Maple	5	Pole/Sapling	6	

Sub-Canopy Species	Density	Avg. Height	Size
Witch Hazel	Low	10 - 20 feet	Tall Shrub
Balsam Fir	Medium	Variable	Sapling
Black Cherry	Low	Variable	Sapling
Red Maple	Low	Variable	Sapling

Stand 19

Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	Low	10 - 20 feet	Sapling
Jack Pine	Low	10 - 20 feet	Sapling
Red Maple	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
20	42360 - Upland Cedar	Poletimber Well	5.5	113	Unspecified	N/A	Stand is inaccessible, blocked by two tributaries to Anderson Creek and very wet e-type and lowland shrub types, possible access across private land to the west but not a priority to access this remote, lowland area. Could see cedar and red maple tops when inventorying edge of stand 14.
21	790 - Other Bare/Sparsely Vegetated	Nonstocked	5.0				Phoenix Petroleum well 2-28
22	6220 - Alder/willow	Nonstocked	29.2		Unspecified	No	tag alder in the north half of this stand appears to be an area that was flood killed timber some time ago, there are a few dead standing snags, area is sapling size black ash and tag alder. At the time of inventory the north half appears to be converting to a lowland shrub type. The south half is dominated by tag alder. Slivers of lowland aspen included from transition zones with upland A6 stands along western edge.
23	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	9.0	50	Unspecified	N/A	Quaking aspen limited to eastern upland edge of stand, black ash component dying out of stand, reducing live canopy closure to 50-60%.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	40	Pole/Sapling	6	50
Paper Birch	5	Sapling/Pole	4	
Quaking Aspen	35	Pole/Log	9	70
Black Ash	20	Pole/Sapling	6	70

Sub-Canopy Species	Density	Avg. Height	Size
Black Ash	Medium	10 - 20 feet	Sapling
Tag Alder	High	5 - 10 feet	Tall Shrub
Balsam Fir	Low	Variable	Sapling

24	4130 - Aspen	Poletimber Well	6.3	45	81-110	N/A	Mixed stand, dominated by aspen but has fragments of both red and white pine plantations from adjacent stand. Also significant hardwood component present. If aspen acres are needed this stand could be restarted if/when stand 140 is treated. Trembling aspen is in pretty rough shape, big tooth is much better quality overall.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	5	Pole	6	
Red Pine	5	Pole/Sapling	7	
Sugar Maple	2	Pole/Sapling	6	
Black Cherry	2	Pole	7	
Red Maple	10	Pole/Log	8	
Quaking Aspen	21	Pole	6	
Bigtooth Aspen	55	Pole	8	45

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	Variable	Sapling
Ironwood	Medium	5 - 10 feet	Sapling
Beech	Medium	5 - 10 feet	Sapling
White Pine	Low	10 - 20 feet	Sapling

25	6112 - Lowland Aspen	Poletimber Well	24.4	79	Unspecified	N/A	Stand edge was visible across Anderson Creek. Paper birch component along north edge, canopy composition estimated from imagery and a distant view of the stand edge.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	20	Pole	8	
Red Maple	30	Pole	7	
Quaking Aspen	50	Pole	8	79

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
26	42201 - Natural White Pine, Mixed Deciduous	Sawtimber Well	6.7	69	81-110	N/A	unique stand (large natural white pine) age of wp ranges from 25-85+, stand age estimated as an average of that and as the same as adjacent stand to reflect estimated average age, however older large super canopy trees are a component of this stand

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	20	Pole/Log	8	
White Pine	60	Log/Pole/XLog	17	69
Black Cherry	10	Pole/Sapling	6	
Red Maple	10	Pole/Sapling	6	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	Variable	Pole
Red Maple	Medium	Variable	Sapling
Beech	Low	5 - 10 feet	Sapling
Balsam Fir	Low	>20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
27	6130 - Fir, Aspen, Maple	Poletimber Well	10.6	68	Unspecified	N/A	Lowland stand of fir and aspen, hummocky but generally quite wet throughout. There is a small foot bridge that crosses creek in this stand.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	30	Log/Pole	9	68
Balsam Fir	50	Pole	7	68
Paper Birch	5	Pole/Log	8	
Red Maple	15	Pole/Log	7	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling
Musclewood/Hornbeam	Low	10 - 20 feet	Tall Shrub
Tag Alder	Low	10 - 20 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
28	4130 - Aspen	Sawtimber Well	7.3	69	111-140	N/A	good quality Aspen with component of large super canopy white pine. high water table in spots at edges. recommend final harvest at this time, retaining scattered large white pine and all hemlock which are present in stand transition, trace amount.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	30	Pole/Log	9	
Bigtooth Aspen	41	Log/Pole	10	69
Black Cherry	4	Pole	8	
White Pine	10	Log/XLog	17	
Red Maple	15	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	Variable	Sapling
Beech	Low	Variable	Sapling
Paper Birch	Low	10 - 20 feet	Sapling
Black Cherry	Low	Variable	Sapling
White Pine	Low	Variable	Pole
Ironwood	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Managed Site
29	6239 - Mixed Emergent Wetland	Nonstocked	150.1	No

Sub-Canopy Species	Density	Avg. Height	Size
Alder	Full		Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
30	4130 - Aspen	Poletimber Well	12.6	48	111-140	N/A	Decent quality pole/log sized Aspen stand. Minimal regen aside from some ironwood and balsam fir, trace hemlock present. Recommend final harvest, minimal retention aside from maybe area retention along western edge.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	45	Log/Pole	10	48
Quaking Aspen	45	Pole/Log	8	48
Red Maple	5	Pole	7	
Sugar Maple	5	Pole	6	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	Variable	Sapling
Musclewood/Hornbeam	Low	10 - 20 feet	Tall Shrub
Balsam Fir	Low	Variable	Sapling
Ironwood	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Managed Site	General Comments
31	310 - Herbaceous Openland	Nonstocked	3.2	No	old well site, scattered scotch pine throughout opening

Sub-Canopy Species	Density	Avg. Height	Size
Scotch Pine	Low		Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
32	4199 - Other Mixed Upland Deciduous	Poletimber Well	2.5	48	1-50	N/A	small stand of mixed hardwood regen with Aspen. likely same origin as adjacent Aspen stand but less aspen present throughout.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	10	Pole	7	
Black Cherry	20	Pole	5	
Ironwood	40	Sapling/Pole	3	48
Sugar Maple	30	Pole	5	

Sub-Canopy Species	Density	Avg. Height	Size
Musclewood/Hornbeam	Low	10 - 20 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
33	4130 - Aspen	Poletimber Well	9.9	32	Immature	N/A	Aspen growing fairly well, some variability in size but generally good stocking. some small pockets of larger Aspen, likely retention from last harvest. evaluate next yoe for treatment options. fair amount of beaver activity at nw edge of stand.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	15	Pole/Sapling	7	
Black Cherry	10	Pole/Sapling	6	
White Pine	2	XLog/Log	18	
Paper Birch	2	Pole	5	
Quaking Aspen	66	Pole/Sapling	6	32
Red Maple	5	Sapling/Pole	4	

Sub-Canopy Species	Density	Avg. Height	Size
Witch Hazel	Medium	5 - 10 feet	Tall Shrub
Black Cherry	Medium	5 - 10 feet	Sapling
Red Maple	Low	5 - 10 feet	Sapling
Beech	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
35	42110 - Planted Red Pine	Sawtimber Well	32.6	61	171-200	N/A	decent red pine with high overall stocking, some variability where deciduous species occupy canopy. dense deciduous understory throughout much of stand dominated by beech and red maple, trace sugar maple regen along stand edges. could thin stand to more desirable stocking levels with the expectation that understory will further advance. red pine restart would require significant competition control.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	91	Log/Pole	11	61
Black Cherry	5	Log	14	
Quaking Aspen	2	Pole/Sapling	5	
Red Maple	2	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Low	5 - 10 feet	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Red Maple	Medium	5 - 10 feet	Sapling
Beech	High	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
36	310 - Herbaceous Openland	Nonstocked	1.8				

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
37	4110 - Sugar Maple Association	Sawtimber Well	13.3	107	81-110	N/A	stand has a unique feel to it,, understory is open in places and quite dense in others. sugar maple dominates canopy but larger ironwood, cherry, elm etc are all components. lots of grouse activity throughout. prickly ash and musclewood subcanopy located along perimeter adjacent to lowland type.retain stand

Canopy Species	% Cover	Size Class	DBH	Age
Basswood	10	Log	14	
Black Cherry	5	Log	11	
White Ash	10	Pole/Log	8	
Ironwood	10	Pole/Sapling	5	
American Elm	5	Pole/Log	8	
Red Maple	5	Pole/Log	8	
Sugar Maple	55	Log/Pole	13	107

Sub-Canopy Species	Density	Avg. Height	Size
White Ash	Low	>20 feet	Sapling
Ironwood	Medium	>20 feet	Sapling
Musclewood/Hornbeam	Low	10 - 20 feet	Tall Shrub
Prickly Ash	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
38	310 - Herbaceous Openland	Nonstocked	1.9				abandoned well site

Sub-Canopy Species	Density	Avg. Height	Size
Scotch Pine	Low		Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
39	4130 - Aspen	Poletimber Well	13.1	32	1-50	N/A	Aspen stand with significant cherry and red maple throughout. recently transitioned to pole from sapling.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Sapling/Pole	4	
Bigtooth Aspen	10	Pole/Sapling	5	
Quaking Aspen	70	Pole/Sapling	5	32
Black Cherry	10	Sapling/Pole	4	

Sub-Canopy Species	Density	Avg. Height	Size
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Beech	Low	< 5 feet	Sapling
Black Cherry	Medium	5 - 10 feet	Sapling
Red Maple	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
40	310 - Herbaceous Openland	Nonstocked	1.7				

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
41	4130 - Aspen	Poletimber Well	8.5	28	Immature	N/A	decent quality Aspen, pole sized overall with sapling size present throughout. ironwood understory with scattered fir pockets as well. ironwood is primary overstory species in pockets along northern edge of stand.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	35	Pole/Sapling	6	28
Black Cherry	10	Pole/Sapling	5	28
Quaking Aspen	45	Pole/Sapling	5	28
Ironwood	10	Sapling	4	

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Low	10 - 20 feet	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Hawthorn (spp.)	Low	5 - 10 feet	Tall Shrub
Ironwood	Medium	10 - 20 feet	Sapling
Balsam Fir	Low	10 - 20 feet	Sapling
Serviceberry (Juneberry)	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
42	4199 - Other Mixed Upland Deciduous	Sapling Well	27.9	18	1-50	N/A	very good aspen regen in places, black cherry and red maple regen fairly well distributed, a few open areas with light regen, very little pine regen present aside from some pockets of jack pine. in se area if stand, aspen prevalence diminishes and more ironwood and beech are present.

Canopy Species	% Cover	Size Class	DBH	Age
Beech	10	Sapling	1	
Quaking Aspen	35	Sapling	1	18
Black Cherry	20	Sapling	1	
Red Maple	20	Sapling	1	
Jack Pine	5	Sapling	2	
Ironwood	10	Sapling	1	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
44	4130 - Aspen	Sapling Well	6.3	7	Immature	N/A	Aspen regenerating well along with red maple and trace other species throughout - will be easier to parse out additional species percentage next YOE. This harvest ended up being a WLD cut/RGS grant cut, felled and left wood on site for habitat creation. Will need to tighten up the lines of the harvest area next YOE for this compartment.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	30	Sapling	1	
Red Maple	30	Sapling	1	
Quaking Aspen	40	Sapling	1	7

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
45	4110 - Sugar Maple Association	Sawtimber Well	38.7	96	51-80	N/A	decent quality sugar maple stand with other species represented throughout. understory consists mainly of advanced ironwood regen fully stocked. variability in stocking in some areas of stand due to canopy gaps and ash pocket mortality. more uniformly stocked areas average 100-150 ba, recommend thinning stand to remove defect along with some larger basswood and sugar maple. majority of black cherry is fair quality, should be removed. avoid canopy gap and lower stocked areas during harvest operations.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	5	Log/Pole	10	
Basswood	4	Log/Pole	12	
Beech	2	Log	14	
Sugar Maple	89	Log/Pole	10	96

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Full	5 - 10 feet	Sapling
White Ash	Low	5 - 10 feet	Sapling
Beech	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
46	42110 - Planted Red Pine	Sawtimber Well	17.8	67	171-200	N/A	red pine strips, decent quality and relatively high stocking. Southern strip has pretty dense regen, remaining strups are low to moderately stocked with mainly beech along with some ironwood and red maple and trace white and red pine. adjacent strios have some desirable regen so cutting this whole area and replanting probably is not the best option. could thin one more time removing 1/3 of overall volume, focus removal on forked and defected trees and otherwise to achieve better spacing.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	2	Log	16	
Red Pine	90	Log/Pole	11	67
Black Cherry	8	Log	16	

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	10 - 20 feet	Sapling
Black Cherry	Low	5 - 10 feet	Sapling
Beech	High	5 - 10 feet	Sapling
Red Maple	Low	5 - 10 feet	Sapling
Quaking Aspen	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
47	4110 - Sugar Maple Association	Sawtimber Well	11.3	105	111-140	N/A	stand treated 2 entry periods ago, decent quality overall, specifically sugar maple. very minimal advanced, desirable regen. ba averages 130 - recommend thinning to more appropriate stocking levels, removing defect and some of the larger sugar maple.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	4	Log/Pole	11	
Beech	2	Log	16	
Bigtooth Aspen	2	Log	16	
Basswood	12	Log/Pole	12	
Sugar Maple	80	Log/Pole	10	105

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	5 - 10 feet	Sapling
Ironwood	High	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
50	6113 - Lowland Maple	Poletimber Well	3.8	82	81-110	N/A	lowland/upland transition zone, stand is generally quite wet especially as you move north. Looks to be periodically flooded depending on beaver activity.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	5	Pole/Log	8	
Red Maple	75	Pole/Log	8	82
Quaking Aspen	10	Log/Pole	10	
Basswood	10	Log/Pole	9	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling
Ironwood	Medium	Variable	Sapling
Musclewood/Hornbeam	Medium	10 - 20 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
51	42110 - Planted Red Pine	Sawtimber Well	1.3	67	111-140	N/A	small isolated pocket of red pine extending onto state land from adjacent private, there was a timber trespass in this stand two entry periods ago that was resolved, adjacent landowner, thinned every other row of this stand along with private sale. stand is providing some diversity within larger hardwood stand, is slowly converting to hardwood with dense understory, unfortunately not desirable hdwd species.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	100	Log/Pole	11	67

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	5 - 10 feet	Sapling
Beech	High	5 - 10 feet	Sapling
Red Pine	Low	< 5 feet	Sapling
Black Cherry	Low	10 - 20 feet	Sapling
Ironwood	Medium	5 - 10 feet	Sapling
Sugar Maple	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
52	4117 - Mixed N. Hardwood - Pine	Sapling Medium	10.7	18	1-50	N/A	jack pine strips that were clearcut in 2003, area was not replanted, natural regeneration. pockets of dense, advanced sugar maple regen in spots.

Canopy Species	% Cover	Size Class	DBH	Age
Jack Pine	15	Sapling	2	
Black Cherry	25	Sapling	3	18
Ironwood	5	Sapling	2	
Red Maple	10	Sapling	1	
Sugar Maple	15	Sapling	2	
Red Pine	10	Sapling	1	
Beech	20	Sapling/Pole	3	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
53	42110 - Planted Red Pine	Sawtimber Well	13.7	67	171-200	N/A	good quality red pine stand with pockets of advanced, desirable regen throughout. portions of stand have low understory but overall understory density is medium. recommend thinning one more time with the potential to restart or allow to convert to hardwood next yoe. stand thinned last entry period, assess along with adjacent regeneration strips to determine management direction (red pine vs. hardwood)

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	100	Log/Pole	10	67

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Medium	5 - 10 feet	Sapling
Red Pine	Low	< 5 feet	Sapling
Sugar Maple	Low	10 - 20 feet	Sapling
White Pine	Low	10 - 20 feet	Sapling
Black Cherry	Low	10 - 20 feet	Sapling
Ironwood	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
54	4130 - Aspen	Sapling Well	3.8	18	Immature	N/A	aspen stand, growing well. sapling sized with some small poles scattered throughout. stand is same origin as 56, but upland, bracken fern is predominant ground cover

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	80	Sapling/Pole	4	18
Black Cherry	10	Sapling	1	18
Red Maple	10	Sapling	3	18

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
56	122 - Road/Parking Lot	Nonstocked	6.4			No	road

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
57	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	17.0	94	111-140	N/A	portions of stand, specifically NE area is slightly higher than adjacent lowland stands however still quite wet throughout majority of stand area. Some large diameter trees, two stick nests found at SW edge of stand - uncertain of occupancy.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	25	Log	15	
Balsam Fir	15	Pole	6	
Northern White Cedar	10	Pole/Log	8	
Black Cherry	5	Pole	8	
Paper Birch	10	Log/Pole	11	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
58	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	111.6	94	141-170	N/A	Large, lowland complex. Mainly forested but plenty of areas are more open adjacent to larger N-types. Creek/tributary to Anderson creek flows through NW area of stand. Did not walk all of stand area however did find stick nest in area north of stand 57. Difficult to access, very wet throughout majority of stand.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	5	Log/Pole	10	
Northern White Cedar	10	Pole/Log	8	
Black Ash	20	Pole	7	
Red Maple	35	Pole/Log	8	94
Paper Birch	5	Pole/Log	8	
Basswood	15	Log/Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	High	Variable	Sapling
Black Ash	Medium	10 - 20 feet	Sapling
Tag Alder	Low	10 - 20 feet	Tall Shrub
Northern White Cedar	Medium	>20 feet	Pole

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
61	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	35.8	94	Unspecified	N/A	Part of larger lowland e-type stand, some pockets of slightly more "upland" aspen specifically in north and south lobes. Wet in majority of stand.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	15	Log	14	
Black Ash	10	Pole	8	
Balsam Fir	10	Pole	7	
Basswood	20	Pole/Log	9	
Paper Birch	5	Pole/Log	8	
Red Maple	40	Pole/Log	8	94

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Low	5 - 10 feet	Tall Shrub
Black Ash	Medium	Variable	Sapling
Balsam Fir	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
63	6116 - Lowland Birch	Poletimber Medium	5.0	43	Unspecified	N/A	Anderson creek trib runs through stand - relatively open, unique stand predominately made up of small, pole sized birch. majority of stand was quite wet at time of inventory.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	70	Pole/Sapling	5	43
Red Maple	20	Pole	7	
Balsam Fir	5	Pole	5	
Black Ash	5	Sapling/Pole	4	

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	5 - 10 feet	Tall Shrub
Balsam Fir	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
64	4112 - Maple, Beech, Cherry Association	Sawtimber Well	8.0	84	81-110	N/A	Small, upland pocket of hardwoods/red maple with cherry and aspen present. Stick nest present in stand, not certain of occupancy but looked like it had newer branches in it. Eastern edge transitions to lowland area.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	70	Pole/Log	9	84
Quaking Aspen	10	Pole/Log	9	
Black Cherry	20	Log/Pole	12	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	Variable	Sapling
Hawthorn (spp.)	Low	5 - 10 feet	Tall Shrub
Serviceberry (Juneberry)	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
65	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	10.8	94	81-110	N/A	E-type adjacent to larger flooding area - quite a few snags present along eastern edge. Cedar is concentrated in south. Pretty wet throughout.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	5	Pole	7	
Basswood	15	Pole/Log	9	
Northern White Cedar	10	Pole/Log	8	
Paper Birch	5	Pole	8	
Black Ash	25	Pole/Log	8	
Red Maple	40	Pole/Log	9	94

Sub-Canopy Species	Density	Avg. Height	Size
Hawthorn (spp.)	Low	5 - 10 feet	Tall Shrub
Musclewood/Hornbeam	Medium	10 - 20 feet	Tall Shrub
Serviceberry (Juneberry)	Low	10 - 20 feet	Sapling
Tag Alder	Medium	10 - 20 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
66	6220 - Alder/willow	Nonstocked	4.3			No	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
67	4130 - Aspen	Sapling Well	10.7	18	Immature	N/A	dense aspen regen with other deciduous species distributed throughout. traces of pole size balsam fir scattered throughout canopy

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	20	Sapling/Pole	3	18
Quaking Aspen	60	Sapling	2	18
Black Cherry	5	Sapling	2	18
Red Maple	15	Sapling	2	18

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
69	4110 - Sugar Maple Association	Sawtimber Well	27.8	106	81-110	N/A	Stand harvested under tsale contract 070-12-01. Good quality stand remains, dominated by sugar maple with good quality red maple, basswood and cherry making up the remainder of the stand. no sugar maple regen observed at time of inventory. Access to stand required crossing a small areas of wet soils at the northern tip of adjacent stand 73. Crew used corduroy to shore up this crossing then removed it and made every attempt to level it out on multiple occasions with minimal success. Access is adequately blocked to keep wheeled traffic out so area should heal over time, if not consider site for RDR work in the future internally. old comment - big tooth aspen concentrated along south east edge/slope

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	5	Log	14	
Red Maple	20	Log/Pole	12	
Sugar Maple	70	Log/Pole	12	106
Basswood	5	Log	14	

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Medium	5 - 10 feet	Sapling
Beech	Medium	5 - 10 feet	Sapling
Ironwood	Medium	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
70	623 - Emergent Wetland	Nonstocked	55.9			No	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
71	4130 - Aspen	Sapling Well	25.1	7	Immature	N/A	Aspen and red maple regenerating well throughout, some variability adjacent to stand 72 and some areas along western and eastern edges have been browsed slightly heavier but in general regeneration is in good shape and a fully stocked stand is expected.Stand was cut under tsale contract 037-14-01 by Dan Bundy Logging. Retention includes red and sugar maple in multiple size classes. traces of paper birch and beech in canopy

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	15	Sapling	1	
Bigtooth Aspen	59	Sapling	1	7
Balsam Fir	4	Pole/Sapling	6	
White Pine	2	Pole	8	
Sugar Maple	10	Pole/Sap/Log	8	
Red Maple	10	Log/Pole	10	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
72	31022 - Warm Season Grass	Nonstocked	4.4			No	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
73	6118 - Lowland Deciduous with Cedar	Poletimber Well	15.2	73	111-140	N/A	balsam fir sub canopy is patchy, traces of paper birch in canopy, springs and seeps present in stand, there is a flowing stream running through stand, it is approximately one foot wide and has no well defined stream bed

Canopy Species	% Cover	Size Class	DBH	Age
Black Ash	5	Pole	7	
Yellow Birch	10	Pole/Log	8	
Hemlock	10	Pole/Log	9	
Quaking Aspen	15	Log	14	
Red Maple	30	Log/Pole	10	
Northern White Cedar	30	Pole/Log	8	73

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
74	4130 - Aspen	Sawtimber Well	13.0	73	111-140	N/A	decent quality Aspen stand. traces of paper birch and black cherry in canopy, there is a creek flowing east/west through center of stand. understory is quite dense and advanced in places. consider final harvesting stand, excluding creek and appropriate buffer - consult w/ fisheries.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	18	Log/Pole	10	
White Pine	2	Log	10	
Bigtooth Aspen	50	Log/Pole	10	73
Black Cherry	5	Pole	8	
Quaking Aspen	25	Pole/Log	8	73

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	Variable	Sapling
Balsam Fir	Medium	Variable	Sapling
Hawthorn (spp.)	Low	5 - 10 feet	Tall Shrub
Serviceberry (Juneberry)	Low	10 - 20 feet	Tall Shrub
Musclewood/Hornbeam	Low	10 - 20 feet	Tall Shrub
Black Cherry	Low	Variable	Sapling
Witch Hazel	Low	10 - 20 feet	Tall Shrub
Red Maple	Medium	Variable	Sapling
Beech	Medium	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
75	3202 - Autumn Olive/Honeysuckle	Nonstocked	2.0				old well site successfully planted to autumn olive

Sub-Canopy Species	Density	Avg. Height	Size
Autumn Olive	Full		Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
76	4130 - Aspen	Poletimber Well	39.1	51	81-110	N/A	nice stand of pole sized aspen, some log sized trees distributed throughout. generally good quality. overall understory is relatively opwn, some denser areas. traces of paper birch in canopy, some autumn olive enccroachment in sub canopy around old well site. consider treating all or a portion of stand to regenerate Aspen. be mindful of creek along western edge, retain conifers throughout.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	40	Pole	8	51
Bigtooth Aspen	50	Pole/Log	8	51
Black Cherry	5	Pole	6	51
Red Maple	5	Pole	7	51

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	5 - 10 feet	Sapling
Black Cherry	Low	Variable	Sapling
Ironwood	Low	10 - 20 feet	Sapling
Red Maple	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
77	4112 - Maple, Beech, Cherry Association	Poletimber Well	8.6	82	111-140	N/A	stand occupies transition between upland and lowland, generally upland with areas of high water table especially along eastern edge. overall species composition is dominated by red maple with other deciduous species evenly scattered throughout. trace birch, one larger individual has sizable stick nest in it.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	75	Pole/Log	9	82
Basswood	8	Log/Pole	10	
Quaking Aspen	10	Log/Pole	10	
Black Cherry	5	Pole/Log	8	
American Elm	2	Log/Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	Variable	Sapling
Musclewood/Hornbeam	Medium	10 - 20 feet	Tall Shrub
Hemlock	Low	10 - 20 feet	Sapling
Balsam Fir	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
78	4130 - Aspen	Sapling Well	14.7	18	1-50	N/A	regenerating aspen stand, areas where bigtooth aspen are transitioning to pole sized but generally stand is sapling size. stand stocking is variable with pockets of ironwood regen and open areas where bramble makes up majority of ground cover. stocking is also influenced by beaver activity along eastern edge. some pockets of aspen have been mowed down leaving brambles and ironwood regen. scattered hemlock retained attime of harvest are present throughout stand.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Sapling	2	18
Quaking Aspen	38	Sapling	3	18
Black Cherry	5	Sapling	2	18
Ironwood	5	Sapling	2	
Hemlock	2	Pole	8	
Bigtooth Aspen	40	Sapling/Pole	4	18

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	High	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
79	4130 - Aspen	Sapling Well	10.8	18	Immature	N/A	fullt stocked, good quality Aspen stand. conifer component developing in undestory.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	10	Sapling	1	
Quaking Aspen	70	Sapling	2	18
Bigtooth Aspen	10	Sapling	3	18
Red Maple	10	Sapling	1	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	5 - 10 feet	Sapling
Balsam Fir	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
80	4130 - Aspen	Sapling Well	8.9	18	Immature	N/A	pure aspen stand with trace other deciduous species and scattered balsam fir. good quality, high stems per acre.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	10	Sapling	1	18
Bigtooth Aspen	75	Sapling	2	18
Red Maple	15	Sapling	1	18

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
81	6120 - Lowland Cedar	Sawtimber Well	14.2	97		N/A	traces of paper birch in canopy, seeps and springs present in stand, small stream flowing through stand approximately one foot wide with no well defined channel, numerous area of blow down in stand

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Log/Pole	12	
Yellow Birch	15	Pole/Log	10	
Quaking Aspen	5	Log	16	
Black Ash	5	Pole	8	
Northern White Cedar	60	Log/Pole	10	97

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
82	4130 - Aspen	Sawtimber Well	13.4	65	81-110	N/A	decent quality, well stocked quaking aspen stand. white pine scattered throughout, dense white pine regen in places. red pine along western edge. recommend final harvest, retain majority or all white and red pine overstory. be mindful of lowland along western edge, along with any wet areas in this vicinity of stand. lots of blowdown of larger fir along western edge, along with a fair amount of downed aspen from beaver activity.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	4	Log	12	
White Pine	4	Log/Pole	10	
Black Cherry	6	Log/Pole	10	
Quaking Aspen	86	Log/Pole	10	65

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	Variable	Sapling
White Pine	Medium	Variable	Sapling
Musclewood/Hornbeam	Low	10 - 20 feet	Tall Shrub
Hawthorn (spp.)	Low	10 - 20 feet	Tall Shrub
Balsam Fir	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
83	3303 - Mixed Low Density Trees	Nonstocked	5.6			No	numerous upland shrub species present, hawthorne, juneberry, black cherry, opening is likely of interest to WLD.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
84	4119 - Mixed Northern Hardwoods	Sapling Medium	10.3	18	1-50	N/A	deciduous regen with overstory red pine present, retained at time of last harvest. regen is dense, species composition is variable.

Canopy Species	% Cover	Size Class	DBH	Age
Beech	10	Sapling	1	
Red Maple	25	Sapling	1	18
Quaking Aspen	10	Sapling	2	
Red Pine	10	Log	10	71
Black Cherry	30	Sapling	1	18
Ironwood	10	Sapling	1	18
Sugar Maple	5	Sapling	1	18

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
85	4130 - Aspen	Sapling Well	20.7	7	Immature	N/A	Mixed regeneration with aspen the dominant species, growing well following recent harvest. conifers were retained so variable sized white pine and fir are present throughout stand. Stand harvested under tsale contract 037-14-01 by Dan Bundy Logging. Scattered sugar maple, balsam fir, red maple and trace white pine and yellow birch are present as residual.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	48	Sapling	1	7
Black Cherry	5	Pole	8	
Balsam Fir	6	Sapling/Pole	4	
White Pine	2	Pole/Log/Sap	8	
Red Maple	15	Sapling/Pole	4	
Sugar Maple	4	Log/Pole	10	
Bigtooth Aspen	20	Sapling	1	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
86	31022 - Warm Season Grass	Nonstocked	13.9			No	little bluetstem

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
88	42110 - Planted Red Pine	Sawtimber Well	2.9	62	171-200	N/A	decent quality red pine, high stocking. jnderstory is dense throughout, made up mainly of undesirable deciduous species. some defect in red pine, could thin to a more desirable ba removing poorly formed trees. also could do an overstory removal allowing regen to advance. stand does provide nice pocket of diversity in area dominated by aspen.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	5	Pole/Sapling	6	
Red Pine	95	Log/Pole	10	62

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	< 5 feet	Sapling
Beech	Low	< 5 feet	Sapling
White Pine	Low	5 - 10 feet	Sapling
Ironwood	Medium	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
89	4130 - Aspen	Poletimber Well	15.8	33	Immature	N/A	recently transitioned from sap to pole sized, decent quality throughout, quite a bit of size variability. traces of white pine in canopy, trace fir and white pine in subcanopy.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	50	Pole/Sap/Log	6	33
Black Cherry	10	Sapling/Pole	3	33
Quaking Aspen	20	Pole/Sapling	5	33
Red Maple	20	Pole/Sapling	5	33

Sub-Canopy Species	Density	Avg. Height	Size
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Black Cherry	Medium	Variable	Sapling
Beech	Low	5 - 10 feet	Sapling
Ironwood	Low	5 - 10 feet	Sapling
Red Maple	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
90	4130 - Aspen	Sapling Well	6.4	18	Immature	N/A	dense aspen regen, decent quality. some canker on aspen at eastern edges of stand.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	60	Sapling	3	18
Black Cherry	5	Sapling	1	18
Bigtooth Aspen	30	Sapling	3	18
Red Maple	5	Sapling	2	18

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	5 - 10 feet	Sapling
White Pine	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
91	500 - Water	Nonstocked	6.7			No	seasonally flooded/emergent wetland

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
92	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	10.2	105	81-110	N/A	large trees throughout, variable stocking creating pockets ghat are more dense to saplings and small poles. fair amount of standing snags, white pine rows along west edge. retain stand, very little laye succession timber in this area of compartment.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	35	Log	15	105
Black Cherry	5	Log/Pole	12	
Bigtooth Aspen	25	Log/Pole	12	
Red Maple	10	Log	14	

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	Medium	Variable	Sapling
Ironwood	High	Variable	Sapling
White Pine	Low	5 - 10 feet	Sapling
Black Cherry	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
93	4133 - Aspen, Mixed Pine	Poletimber Well	11.5	34	81-110	N/A	mixed stand with larger, order white pine and deciduous component of pole/sapling size. sugar maple regen is dense in areas of understory, mainly in pockets where aspen is mixed evenly with white pine. recommend holding to see how sugar maple progresses. overall size class is pole because white pine makes up more than 30% of the canopy, but aspen size is sapling beginning to transition to pole

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	10	Pole/Sapling	5	34
White Pine	35	Log/Pole	10	61
Red Maple	10	Sapling/Pole	3	
Quaking Aspen	40	Pole/Sapling	5	34
Sugar Maple	5	Sapling/Pole	4	

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	High	Variable	Sapling
Black Cherry	Low	Variable	Sapling
Red Maple	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
94	6127 - Lowland Pine	Sawtimber Well	9.2	76	81-110	N/A	traces of tamarack, paper birch, and hemlock in canopy

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	10	Pole/Log	9	
Red Maple	20	Pole/Log	8	
Balsam Fir	5	Pole	7	
Northern White Cedar	10	Pole	7	
White Pine	5	Log/XLog	18	
Red Pine	50	Log/Pole	14	76

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
95	4130 - Aspen	Sapling Well	9.7	16		N/A	

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	70	Sapling	1	16
Black Cherry	5	Sapling	1	16
Quaking Aspen	20	Sapling	1	16
Red Maple	5	Sapling	1	16

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
96	4319 - Mixed Upland Forest	Sapling Well	108.1	11	Immature	N/A	Stand planted to red pine in 2011. Clumps of quaking aspen in north end.This stand has been updated from a field evaluation for a project on free to grow red pine.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	40	Sapling	1	11
Black Cherry	25	Sapling	1	
Red Maple	20	Sapling	1	
Jack Pine	15	Sapling	1	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
97	4130 - Aspen	Sapling Well	6.0	7	Immature	N/A	regenerating well, some retention has toppled over creating dense cover for wildlife. Adequate stems/acre of aspen, red maple and species that were retained at time of harvest.Stand was cut under tsale contract 037-14-01 by Dan Bundy Logging. Retention included scattered red pine, white pine, red maple and balsam fir.
98	31022 - Warm Season Grass	Nonstocked	16.3			No	little bluestem
99	4130 - Aspen	Poletimber Well	20.7	45	81-110	N/A	goid quality, fully stocked aspen pole sized stand. pockets of dense regen while majority of understory is lightly stocked with red maple, beech, white pine and so e cherry and ironwood. quaking aspen is only in the western most part of the stand. could harvest now with stand 76, or retain til next yoe, should have no issues holding another entry cycle.
100	42110 - Planted Red Pine	Sawtimber Well	13.1	62	171-200	N/A	goid quality red pine stand with variable understory component. Western and northwest edges have somewhat dense and advanced sugar maple regen while remainder if stand is more open with evenly distributed white pine and beech. recommend thinning stand to more desirable stocking levels, exclude west and northwest area of stand from harvest to protect sugar maple regen and allow to advance.
101	4130 - Aspen	Poletimber Well	10.1	44		N/A	
102	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	48.5	62	111-140	N/A	white pine responding well to row thinning, decent quality overall. density is variable as rows were non-uniform and so.e areas were left with less overstory stocking. this has led to understofy stocking variability as well. pockets of dense aspen, red maple and beech present, along with areas of open understory. consider removing remaining white pine at this time, or leave stand as is until next yoe. would not recommend thinning as much opportunity for operability without damaging advancing regen will be lost. Stand was treated under tsale contract 043-14-01 in summer of 2016. Two rows were removed and two were left. All aspen was removed and some pockets were created within stand to allow for expanded aspen regen areas - some aspen regen pockets may need to be mapped/delineated next inventory cycle.

Stand 97

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	6	Pole/Log	9	
Red Pine	4	Log/Pole	12	
Balsam Fir	4	Pole/Sapling	6	
Quaking Aspen	30	Sapling	1	
Bigtooth Aspen	50	Sapling	2	7
Red Maple	6	Sapling/Pole	4	

Stand 99

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	75	Pole	8	45
Red Maple	5	Pole/Sapling	7	45
Quaking Aspen	20	Pole	8	45

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Medium	Variable	Sapling
Red Maple	Low	Variable	Sapling
Balsam Fir	Low	10 - 20 feet	Sapling

Stand 100

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	100	Log/Pole	10	62

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Medium	5 - 10 feet	Sapling
Sugar Maple	Medium	10 - 20 feet	Sapling
Ironwood	Low	< 5 feet	Sapling
Black Cherry	Low	< 5 feet	Sapling
Beech	Low	5 - 10 feet	Sapling
Red Maple	Medium	< 5 feet	Sapling

Stand 101

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Pole/Sapling	4	
Bigtooth Aspen	90	Pole	5	44

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	Variable	Sapling
Black Cherry	Low	Variable	Sapling

Stand 102

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	5	Log/Pole	12	
Red Maple	5	Log/Pole	12	
White Pine	80	Pole/Log	9	62
Black Cherry	10	Log/Pole	12	

Sub-Canopy Species	Density	Avg. Height	Size
Bigtooth Aspen	Medium	10 - 20 feet	Sapling
Beech	Medium	5 - 10 feet	Sapling
Red Maple	Medium	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
103	4130 - Aspen	Sawtimber Well	4.4	77	81-110	N/A	retained when adjacent area was cut and replanted, recommend retaining along lowland edge.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	60	Log/Pole	10	77
Bigtooth Aspen	30	Log/Pole	10	
Black Cherry	10	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	Low	Variable	Sapling
White Pine	Low	Variable	Sapling
Black Cherry	Low	Variable	Sapling
Balsam Fir	Low	5 - 10 feet	Sapling
Alder	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
104	623 - Emergent Wetland	Nonstocked	14.9			No	tag alder/balsam fir poles

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
105	310 - Herbaceous Openland	Nonstocked	6.4			No	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
106	42100 - Planted White Pine	Poletimber Well	12.0	62	201+	N/A	white pine stand that is heavily stocked, average bas 200+. decent quality, typical of plantation white pine. understory is generally medium to highly stocked with white pine and beech. trace overstory black cherry and large sugar maple. some advanced sugar maple regen in areas surrounding these larger trees. could seed tree stand, or retain islands of white pine. the goal being to release regen and allow to advance. otherwise retain stand for cover.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	100	Pole/Log	9	62

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Low	5 - 10 feet	Sapling
White Pine	High	< 5 feet	Sapling
Beech	Medium	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
107	4130 - Aspen	Poletimber Well	1.9	44		N/A	

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Pole	5	45
Bigtooth Aspen	90	Pole	5	44

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	Variable	Sapling
White Pine	Low	>20 feet	Pole

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
108	6120 - Lowland Cedar	Sawtimber Well	1.9	95	171-200	N/A	canopy has traces of quaking aspen, paper and yellow birch, black ash

Canopy Species	% Cover	Size Class	DBH	Age
Hemlock	10	Pole/Log	9	
Northern White Cedar	90	Log/Pole	11	95

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	High	10 - 20 feet	Sapling
Alder	Low	10 - 20 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
109	4130 - Aspen	Sapling Well	36.0	16		N/A	Regeneration growing well, very dense in many areas of stand, some areas a bit more open creating pockets of edge that are heavily used by wildlife. Larger red and white pine that were retained at time of last harvest are doing well, some trees have tipped over and/or snapped off but in general are in good condition.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	70	Sapling	3	16
White Pine	2	Pole/Log	9	
Red Pine	3	Pole/Log	9	62
Black Cherry	5	Sapling	1	
Quaking Aspen	10	Sapling	2	
Red Maple	10	Sapling	2	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
110	42201 - Natural White Pine, Mixed Deciduous	Sawtimber Poor	6.7	62	81-110	N/A	stand made up of larger, generally open grown white pine. slme better quality trees present. small stand, provides good diversity in area of mainly early succession stands.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	10	Pole	6	
Red Maple	10	Pole/Log	9	
White Pine	70	Log/Pole	12	62
Bigtooth Aspen	10	Pole	7	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	5 - 10 feet	Sapling
White Pine	Low	Variable	Sapling
Red Maple	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
111	4130 - Aspen	Sapling Well	22.0	7	1-50	N/A	Stand is regenerating well, dominated by aspen. Larger white pine and sugar maple that were retained are growing well, however very little sugar maple regeneration observed. Some browse on regen in areas of stand.Stand was treated under tsale contract 043-14-01 in summer of 2015 by Bazuin logging. canopy contains traces of black cherry and beech

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	5	Pole/Log/Sap	8	62
Red Maple	10	Pole/Sapling	7	
Bigtooth Aspen	80	Sapling	1	7
Sugar Maple	5	Log/Pole/Sap	10	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
112	4110 - Sugar Maple Association	Poletimber Well	3.4	97	81-110	N/A	

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	10	Log/Pole	12	
Sugar Maple	85	Pole/Log	9	97
Red Maple	5	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	Variable	Sapling
Beech	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
113	4130 - Aspen	Poletimber Well	17.6	33	51-80	N/A	decent quality Aspen stand, variable diameters but generally small pole, 5-6" average. scattered larger white pine throughout, leading to areas of dense white pine regen.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	80	Pole/Sapling	5	33
Quaking Aspen	10	Pole/Sapling	5	
Red Maple	5	Sapling/Pole	4	
White Pine	5	Log/Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	5 - 10 feet	Sapling
Red Maple	Low	Variable	Sapling
Black Cherry	Low	Variable	Sapling
Beech	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
114	4130 - Aspen	Poletimber Well	4.1	53		N/A	white pine in sub canopy is concentrated along north edge of stand

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	20	Log/Pole	12	
White Ash	10	Sapling/Pole	5	
Quaking Aspen	20	Pole/Log	8	
Bigtooth Aspen	50	Pole	7	53

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	Variable	Sapling
White Pine	Medium	>20 feet	Sapling
White Ash	Low	Variable	Sapling
Beech	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
115	4130 - Aspen	Sapling Well	21.5	15	1-50	N/A	regenerating stand of Aspen and mixed deciduous, with white pine log/pole sized trees scattered throughout that were retained at time of harvest.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	5	Log	12	
Quaking Aspen	10	Sapling	2	15
Black Cherry	10	Sapling	2	15
Red Maple	10	Sapling	2	15
Bigtooth Aspen	65	Sapling	3	15

116	4139 - Aspen, Mixed Deciduous	Poletimber Well	6.8	67	81-110	N/A	Small, mixed deciduous stand of hardwoods and aspen, some decent quality sugar maple and aspen is of fair quality as well. Retain this entry year.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	35	Pole/Log	8	
Red Maple	10	Pole/Log	8	
White Ash	10	Pole	5	
Bigtooth Aspen	40	Pole/Log	8	67
Ironwood	5	Sapling/Pole	4	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	< 5 feet	Sapling
Ironwood	Low	< 5 feet	Sapling

117	42110 - Planted Red Pine	Sawtimber Well	4.1	60	141-170	N/A	good quality red pine stand, understory open in areas, more dense to aspen, beech and red maple along southern and Eastern edges. ba averages 160-170, could thin again with other red pine nearby.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	100	Log/Pole	10	60

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	5 - 10 feet	Sapling
Ironwood	Low	5 - 10 feet	Sapling
White Pine	Low	5 - 10 feet	Sapling
Bigtooth Aspen	Low	10 - 20 feet	Sapling
Beech	Medium	5 - 10 feet	Sapling

118	4130 - Aspen	Sapling Well	4.0	15		N/A	

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Sapling	1	15
Bigtooth Aspen	20	Sapling	1	15
Red Pine	5	Pole	8	60
Black Cherry	10	Sapling	1	15
Quaking Aspen	60	Sapling	1	15

119	42110 - Planted Red Pine	Poletimber Well	17.3	62	141-170	N/A	red pine stand with significant hardwood component. in areas where red pine is of more uniform stocking, ba averages 160-170, in areas where hardwoods are more numerous ba is a bit more variable. red pine is ready to be thinned for the second time, focus removal on defect and suppressed trees. this entry should be a good opportunity to remove some lower quality hardwoods, focus retention of hardwoods on better quality sugar maple for seed source.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	85	Pole/Log	9	62
Black Cherry	5	Log	12	
Red Maple	5	Log	12	
Sugar Maple	5	Log/Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Medium	5 - 10 feet	Sapling
Red Maple	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
120	4199 - Other Mixed Upland Deciduous	Sapling Well	4.6	6	1-50	N/A	aspen removed, aspen regen throughout along with red maple and beech, red maple is variable in size. sugar maple and red pine present as well. Stand was treated under contract 610381601 in summer of 2015 by biewer/bazuin FP. New stand added.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	10	Log/Pole	11	
Red Maple	20	Sapling/Pole	4	
Red Pine	15	Pole/Sapling	7	62
Beech	25	Sapling	1	
Quaking Aspen	30	Sapling	1	6

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
121	4130 - Aspen	Sapling Well	17.8	16	1-50	N/A	regenerating well in spots however, as was referenced in previous inventory comments the eastern portion of the stand continues to have open pockets with bramble common. this area is more dense to ironwood as well.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	65	Sapling	2	16
Black Cherry	10	Sapling	1	16
Ironwood	5	Sapling	2	
Red Pine	5	Pole/Log	9	
Sugar Maple	5	Log/Pole	10	
Red Maple	10	Sapling	2	16

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
122	4130 - Aspen	Poletimber Well	9.0	45	51-80	N/A	fair quality Aspen, some variability in quality, dbh is relatively small. sugar and red maple distributed throughout along with some scattered beech. areas of advanced beech regen along with pocketscof nice sugar maple saplings in the 10-20' range. white pine in understory as well. could final harvest or wait another entry year to see how sugar maple regen progresses and allow aspen to add more volume. if harvest occurs, retain sugar maple and attempt to protect regen.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	5	Pole/Log	9	
Red Maple	5	Pole/Sapling	7	
Bigtooth Aspen	70	Pole	7	45
Quaking Aspen	20	Pole	6	

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	Medium	10 - 20 feet	Sapling
Red Maple	Medium	Variable	Sapling
Black Cherry	Low	Variable	Sapling
White Pine	Low	5 - 10 feet	Sapling
Beech	Medium	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
123	4130 - Aspen	Sapling Well	10.5	15		N/A	

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	80	Sapling	1	15
Black Cherry	10	Sapling	1	15
Red Maple	10	Sapling	1	15

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
124	4130 - Aspen	Sapling Well	5.2	24	Immature	N/A	small aspen stand, relatively small dbh at age. seems to be growing fine with minimal defect.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	60	Sapling	2	24
Red Maple	15	Sapling	2	
Black Cherry	15	Sapling	2	
Bigtooth Aspen	10	Sapling	2	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
125	4319 - Mixed Upland Forest	Poletimber Well	30.5	62	141-170	N/A	mixed stand, variable composition. majority of stand area is contiguous red pine that has not been thinned with typical plantation stocking, other areas of clumpy, somewhat open grown hardwoods with conifer component present, likely resulting from failed plantation. some aspen distributed throughout. consider row thinning red pine and removing or retaining deciduous component aside from aspen. could retain scattered sugar maple. red pine rows are decipherable but not very uniform, likely resulting from topography. stocking is quite high in red pine areas.
126	310 - Herbaceous Openland	Nonstocked	3.8			No	
127	42110 - Planted Red Pine	Poletimber Well	6.4	60	141-170	N/A	thinned 2 entry periods ago, average ba of 170 warrants thinning now, removing 1/3 of volume focusing on defected and forked trees. pockets of dieback in Northern portion of stand, recommend cutting out this pocket with a 1/2 chain buffer to try and stop further dieback.
128	4112 - Maple, Beech, Cherry Association	Poletimber Well	4.9	85	81-110	N/A	small hardwood stand, decent quality poles present but generally mediocre in quality. aspen a component mainly in Northern portions of stand.
130	4116 - Mixed N. Hardwood - Aspen	Sawtimber Well	10.2	88	81-110	N/A	fair quality sugar maple, generally clumpy and limby but some good stems present. Aspen makes up a decent component of stand and I'd generally good quality. recommend converting to aspen/mixed hardwood regen by final harvest. retain a couple small islands of pure sugar maple as seed source.
131	4130 - Aspen	Poletimber Well	4.6	40	51-80	N/A	Aspen stand with significant advanced sugar maple regen throughout understory, 1-3" dbh. retain stand and potentially allow aspen to fall out so that sugar maple can continue to advance and hopefully grow decent quality.

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Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	5	Pole	8	
White Pine	5	Pole/Log	9	
Red Pine	50	Pole/Log	9	62
Sugar Maple	30	Log/Pole	11	
Red Maple	10	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	< 5 feet	Sapling
White Pine	Low	< 5 feet	Sapling

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Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	100	Pole/Log	9	60

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	5 - 10 feet	Sapling
Ironwood	Low	5 - 10 feet	Sapling
White Pine	Low	5 - 10 feet	Sapling

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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Pole/Sapling	5	
Ironwood	10	Sapling/Pole	4	
Sugar Maple	70	Pole	7	85
Beech	2	Pole/Sapling	5	
Bigtooth Aspen	8	Pole	8	

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	Variable	Sapling
Beech	Low	Variable	Sapling

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Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	55	Pole/Log	9	88
Red Maple	10	Pole	8	
Bigtooth Aspen	35	Log/Pole	12	

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	< 5 feet	Sapling
Beech	Low	Variable	Sapling

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Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	50	Pole/Sapling	5	40
Quaking Aspen	25	Pole/Sapling	5	40
Sugar Maple	10	Pole	5	
Red Maple	15	Pole/Sapling	6	

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	High	>20 feet	Sapling
Beech	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
132	42110 - Planted Red Pine	Poletimber Well	50.2	37	141-170	N/A	stand is ready to be row thinned with ba's averaging 200+ throughout stand. 4-6 sticks on average with 7" dbh average, slightly higher in spots. recommend taking every third row, row width is adequate for machines and operability should not be an issue. understory in general is minimal.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	2	Pole	6	
Red Pine	90	Pole	7	37
Black Cherry	3	Pole	6	
Bigtooth Aspen	5	Pole	5	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
133	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	99.4	62	111-140	N/A	respondind fine to recent thinning, although beech regen is advancing. ba hovers in the 110-140 range with variability depending on species composition. evaluate next yoe for treatment options. Stand was thinned under contract 610381601 by Biewer FP/Bazuin FP during summer, 2015.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	5	Pole/Log	8	
Red Maple	10	Log/Pole	12	
Red Pine	70	Log/Pole	10	62
Black Cherry	5	Log/Pole	12	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	5 - 10 feet	Sapling
Beech	Medium	5 - 10 feet	Sapling
Ironwood	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
134	42110 - Planted Red Pine	Poletimber Well	1.8	60	141-170	N/A	somewhat dense hardwood rdgen in understory, decent quality red pine with trace cherry in canopy. small stand, recommend either thinning again or final harvesting and allowing to convert to hardwood stand.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	100	Pole/Log	9	60

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Medium	5 - 10 feet	Sapling
Ironwood	Medium	5 - 10 feet	Sapling
Red Maple	Low	5 - 10 feet	Sapling
White Ash	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
135	310 - Herbaceous Openland	Nonstocked	1.3			No	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
136	310 - Herbaceous Openland	Nonstocked	1.1			No	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
137	4311 - Pine, Aspen Mix	Poletimber Well	11.4	45	81-110	N/A	stand looks to be a plantation that didn't fair as well in terms of red pine survival and current stocking as plantations to north and south. remainder of stand has filled in with deciduous species and some aspen clones. red pine pockets that are more uniform are decent quality. white pine in sub canopy is patchy - currently a mixed stand with overall a relatively small average dbh. retain until next yoe and treat by thinning.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	15	Pole	6	
Red Pine	46	Pole/Sapling	5	45
White Pine	2	Pole	5	
Ironwood	2	Sapling/Pole	3	
Bigtooth Aspen	10	Pole	6	45
Black Cherry	10	Pole	7	
Sugar Maple	5	Pole/Sapling	6	
Red Maple	10	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	Variable	Sapling
Beech	Low	5 - 10 feet	Sapling
White Pine	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
138	4110 - Sugar Maple Association	Poletimber Well	7.8	78	81-110	N/A	decent quality sugar maple throughout, other species evenly scattered throughout, red pine concentrated along south edge of stand near adjacent plantation. understory stocking is minimal aside from some dense pockets of ironwood at edges. sugar maple is relatively small dbh, retain stand for diversity as there aren't many pure hardwood stands in vicinity. evaluate next yoe for treatment options.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Pole	7	
Ironwood	5	Pole	6	
Sugar Maple	80	Pole/Log	8	78
Red Pine	10	Pole	8	62

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	Variable	Sapling
Beech	Low	< 5 feet	Sapling
Red Maple	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
139	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	4.8	62	141-170	N/A	white pine plantation with significant hardwood component, has not been thinned but is providing a nice pocket of thermal cover and structural diversity. recommend retaining and evaluating for treatment options next yoe. deer are using stand for winter thermal cover.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	75	Pole/Log	9	62
Black Cherry	5	Pole/Log	8	
Sugar Maple	10	Log/Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	< 5 feet	Sapling
Witch Hazel	Low	< 5 feet	Tall Shrub
Red Maple	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
140	4111 - S.Maple, Hard Mast Association	Poletimber Well	34.3	93	111-140	N/A	decent quality sugar maple throughout, some pockets are pretty heavy to fair quality beech in sw area. there are areas where more clumpy formed hardwoods are common but majority of stems are fair/OK quality across all species. trace white pine and aspen at northern edge of sw portion of stand, white pine a bit more numerous in ne portion. recommend thinning stand to a ba of 50-70 square ft, removing all beech and focusing retention on better quality, single stem sugar and red maple and black cherry. areas where beech are removed will be significantly less stocking, remainder of stand should fall in the 60-70 ba range.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Pole/Log	9	
Beech	15	Log/Pole	11	
Black Cherry	5	Pole	8	
Sugar Maple	62	Pole/Log	9	93
White Pine	3	Log/Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	Variable	Sapling
Beech	Low	5 - 10 feet	Sapling
Ironwood	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
141	4130 - Aspen	Sapling Well	19.2	17	Immature	N/A	Aspen regen of decent quality. cankers on trees in pockets and some signs of stunted growth but overall growing fairly well. see how stand progresses next yoe.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Sapling	1	17
Quaking Aspen	35	Sapling	1	17
Bigtooth Aspen	50	Sapling	1	17
Red Pine	5	Pole/Log	9	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
142	4119 - Mixed Northern Hardwoods	Poletimber Well	26.2	73	81-110	N/A	Portion of original stand was treated by final harvest in the northeast corner.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	30	Pole/Log	8	
Quaking Aspen	10	Pole	7	
Red Pine	10	Pole/Log	8	62
Bigtooth Aspen	5	Pole/Log	9	
Sugar Maple	45	Pole/Log	8	73

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	Variable	Sapling
Beech	Low	< 5 feet	Sapling
Ironwood	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
143	31022 - Warm Season Grass	Nonstocked	13.0			No	little bluestem. wild bergamont

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
144	42110 - Planted Red Pine	Poletimber Well	4.4	62	141-170	N/A	decent quality red pine in narrow strip. ba averages 170, defect and forks present, thin stand to a more desirable stocking focusing on removal of these trees with some better quality individuals as well to get ba to more appropriate level. trace Aspen and cherry within stand.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	93	Pole/Log	8	62
Black Cherry	5	Log	12	
Quaking Aspen	2	Pole	6	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	High	10 - 20 feet	Sapling
Ironwood	Medium	5 - 10 feet	Sapling
Beech	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
145	42110 - Planted Red Pine	Poletimber Well	32.2	63	201+	N/A	previously not mapped as state of Michigan land. has not been row thinned, good quality overall with sugar maple and beech in understory. tall heights. relatively small average dbh overall. fair amount of suppressed trees in areas with some individual tree mortality, one pocket of dieback in north central finger - would recommend a row thin at this time without removal of additional trees to avoid problems with windthrow and bending of stems if more room is allowed throughout stand.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	4	Log	12	
Red Pine	96	Pole/Log	9	63

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	10 - 20 feet	Sapling
Sugar Maple	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
146	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	28.9	62	171-200	N/A	decent quality red pine with substantial deciduous component, especially in larger portion of stand. ba averages ~170. could treat stand by thinning red pine removing defect and reducing ba to more appropriate stocking levels. final harvest some of the deciduous pockets that contain aspen component to establish some aspen regen within plantation area.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	2	Pole/Log	8	
Red Pine	73	Pole/Log	8	62
Sugar Maple	5	Log/Pole	10	
Red Maple	10	Log/Pole	11	
Black Cherry	5	Log/Pole	11	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	5 - 10 feet	Sapling
Red Maple	Medium	10 - 20 feet	Sapling
Beech	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
147	31022 - Warm Season Grass	Nonstocked	13.8			No	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
148	4130 - Aspen	Sapling Well	22.5	8	Immature	N/A	regenersting well, aspen fully stocked with small pocket of lower density regen on east edge of retention pocket. Stand was harvested under tsale contract 034-14-01 in winter 2014-2015 but Lutke FP. Individual tree retention along with one island served as retention for stand.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	5	Sapling	1	
Bigtooth Aspen	75	Sapling	2	8
Red Pine	5	Pole/Log	8	
Red Maple	10	Sapling	1	
Sugar Maple	5	Pole/Log	8	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
149	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	25.4	62	141-170	N/A	mixed stand with red pine generally dominant but hardwood pockets are present that are devoid of red pine. recommend managing as a mixed stand instead if trying to separate fragments of hardwood or plantation dominated areas. thinned last yoe, regeneration of pockets in progress, recommend evaluating next yoe for treatment options. Stand was treated under tsale contract 033-14 by Lutke FP. Rows were irregular and crew had to determine where trees would be harvested by cutting in straight lines, most notably on slopes in southern portion of stand. Hardwoods are present within stand, all aspen was cut so some aspen regen can be expected in these areas. Northern portion of stand adjacent to Barratt rd is dominated by more deciduous trees with scattered red pine rows, most likely from failed plantation areas.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	15	Pole/Log	8	
Red Maple	20	Pole/Log	8	
White Pine	5	Log	12	
Red Pine	60	Pole/Log	9	62

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	Variable	Sapling
Beech	Medium	5 - 10 feet	Sapling
White Pine	Low	< 5 feet	Sapling
Red Maple	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
150	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	27.6	62	171-200	N/A	variable stand in terms of stocking and size, looks like some areas if red pine were row thinned while other portions of stand were not. red pine is decent quality in spots, in other areas it is stressed with lower si's. aspen poles scattered throughout stand, along with black cherry, both mediocre quality. aspen saplings are concentrated in one patch, southern part of stand, this area was treated with adjacent stand in Wexford County by Manton Field Office. should be its own stand of 2-3" aspen regen, need to determine age. also nearby dense povket of white pine regen in understory. could thin majority of stand, or clearcut and convert to aspen with deciduous component.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	10	Pole	7	
Black Cherry	5	Log/Pole	10	
Red Pine	75	Pole	9	62
Quaking Aspen	10	Sapling	1	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	10 - 20 feet	Sapling
Beech	Medium	5 - 10 feet	Sapling
Red Maple	High	5 - 10 feet	Sapling
Ironwood	Medium	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
151	4112 - Maple, Beech, Cherry Association	Sawtimber Poor	5.3	72	1-50	N/A	failed oak planting

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	20	Log/Pole	10	
Red Maple	80	Log/Pole	10	72

Sub-Canopy Species	Density	Avg. Height	Size
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Ironwood	Low	5 - 10 feet	Sapling
Beech	Low	< 5 feet	Sapling
Red Maple	Low	Variable	Sapling
White Pine	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
152	3105 - Mixed Upland Herbaceous	Nonstocked	10.3			No	Entire north edge planted with 2 rows of autumn olive. Old plow furrows. Pieces of old foundation.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
153	4130 - Aspen	Poletimber Well	133.1	33	1-50	N/A	variably stocked aspen stand with variable size classes throughout as well. scattered concentrations of open grown white pine throughout stand lending to higher stocking of white pine regen in understory - small, scattered red pine pockets present as well, mainly near stands 146 & 150. These are fragments of adjacent plantations. generally aspen is pole sized but there are areas of large sapling/small poles, and some larger pole in the 7-8" class, generally big tooth. recommend waiting til next entry year to harvest portion of stand to break up large even age class. sub canopy is patchy, ironwood and white pine variable, dependent on overstory - black cherry fairly uniform throughout

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	5	Log/Pole	10	
Black Cherry	5	Sapling/Pole	3	33
Ironwood	13	Sapling/Pole	2	
Bigtooth Aspen	20	Pole/Sapling	6	33
Red Pine	2	Pole/Log	8	
Red Maple	10	Sapling/Pole	4	33
Quaking Aspen	45	Pole/Sapling	6	33

Sub-Canopy Species	Density	Avg. Height	Size
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Red Maple	Medium	Variable	Sapling
Beech	Low	Variable	Sapling
White Pine	Low	Variable	Sapling
Black Cherry	Low	5 - 10 feet	Sapling
Ironwood	High	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
154	4112 - Maple, Beech, Cherry Association	Sawtimber Poor	7.9	83	51-80	N/A	small stand dominated by sugar and red maple pole/logs at low stocking with white pine scattered throughout. relatively dense regen in understory dominated by ironwood. stand provides some fiversity in area dominated by younger aspen, recommend retaining.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	50	Log/Pole	10	83
White Pine	10	Pole/Log	8	
Red Maple	40	Log/Pole	10	83

Sub-Canopy Species	Density	Avg. Height	Size
Witch Hazel	Low	5 - 10 feet	Tall Shrub
White Pine	Low	Variable	Sapling
Red Maple	Low	Variable	Sapling
Ironwood	Medium	5 - 10 feet	Sapling
Beech	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
155	3104 - Degraded	Nonstocked	5.1			No	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
156	31022 - Warm Season Grass	Nonstocked	5.8			No	little bluestem
157	31022 - Warm Season Grass	Nonstocked	44.9			No	Part of this opening was a planted wildlife food plot several inventory cycles ago. Rejuvenate planted portion as needed.
158	4130 - Aspen	Sapling Well	3.1	20	Immature	N/A	This small stand was treated with adjacent plantation in 61233 and plantation in Wexford County by Manton Field Office. This pocket was final harvested with aspen and other mixed deciduous species regenerating fairly well.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	15	Sapling	1	
Red Maple	25	Sapling	2	
Quaking Aspen	60	Sapling	2	20

159	42110 - Planted Red Pine	Poletimber Well	0.0	51	141-170	N/A	Stand was treated under tsale contract 001-14-01 in spring 2015 by cherry creek forestry/proctor logging.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	2	Log	14	
Red Pine	96	Pole	7	51
Red Maple	2	Log	14	

160	4139 - Aspen, Mixed Deciduous	Sapling Well	9.5	8	1-50	N/A	Regeneration looks good, fully stocked with aspen, red maple and white pine present. White pine overstory is generally concentrated in western lobe of stand. Stand was harvested under tsale contract 034-14-01 in winter 2014-2015 by Lutke FP. Retention was applied as individual tree retention scattered throughout stand.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	26	Sapling/Pole	1	8
Sugar Maple	20	Pole/Log/Sap	8	
Quaking Aspen	30	Sapling	1	8
White Pine	5	Pole/Sap/Log	8	
Bigtooth Aspen	19	Sapling	1	8

161	4117 - Mixed N. Hardwood - Pine	Sawtimber Well	4.8	97	81-110	N/A	generally poor quality

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	15	Pole/Log	9	
Bigtooth Aspen	20	Log/Pole	9	
White Pine	5	Log/Pole	9	
Sugar Maple	60	Log/Pole	9	97

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	Variable	Sapling

162	4110 - Sugar Maple Association	Poletimber Well	1.9	72	81-110	N/A	canopy contains traces of white ash, bigtooth aspen, red maple, and black cherry

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	100	Pole/Log	8	72

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	10 - 20 feet	Sapling
Sugar Maple	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
163	42110 - Planted Red Pine	Sawtimber Well	9.3	62	111-140	N/A	Stand was harvested under tsale contract 034-14-01 by Lutke FP during the winter of 2014-2015. sub canopy maple is heavily browsed

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	90	Log/Pole	10	62
Sugar Maple	3	Log	14	
Black Cherry	2	Log	14	
White Pine	5	Pole/Log	9	62

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	Medium	< 5 feet	Sapling
Red Maple	Low	< 5 feet	Sapling
Ironwood	Medium	< 5 feet	Sapling
Beech	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
164	310 - Herbaceous Openland	Nonstocked	8.6			No	Ground cover made up primarily of little bluestem. Trespass is occurring in northern portion of stand where approximately an acre of state owned land is being farmed. A survey was completed and a corner is in place. A trespass has been submitted on 1/5/2022.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
165	4130 - Aspen	Poletimber Well	4.5	44	51-80	N/A	

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	85	Pole/Sapling	5	44
Black Cherry	5	Pole/Sapling	5	44
Ironwood	5	Sapling	3	44
Red Maple	5	Pole/Sapling	5	44

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	10 - 20 feet	Sapling
Ironwood	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
166	4110 - Sugar Maple Association	Sawtimber Well	3.2	96	51-80	N/A	Mediocre quality, small stand of hardwood. recent survey indicates small trespass by farmer to north, could plant several rows of conifer to establish property line. Trespass entered in trespass tracking system on 1/5/2022. Recommend to leave stand for diversity in area dominated by aspen and red pine.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	90	Log/Pole	10	96
Basswood	10	Log/Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	5 - 10 feet	Sapling
Ironwood	Medium	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
167	4130 - Aspen	Sapling Well	7.4	8	Immature	N/A	Stand was harvested under tsale contract 034-14-01 by Lutke FP in winter of 2014-2015. Individual tree retention was left throughout stand, mainly red and white pine with scattered larger diameter hardwoods left as well for diversity and stand representation.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	5	Pole	8	
Sugar Maple	5	Pole/Sapling	6	
White Pine	2	Pole	7	
Quaking Aspen	83	Sapling	1	8
Red Maple	5	Sapling	1	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
168	4130 - Aspen	Sapling Well	2.3	28	Immature	N/A	Aspen sapling/pole sized stand with significant ironwood component and scattered red pine poles. Aspen ranges from 3-7" but on average is still large sapling, 4" dbh.

Canopy Species	% Cover	Size Class	DBH	Age
Ironwood	25	Sapling/Pole	3	
Red Pine	5	Pole	7	
Bigtooth Aspen	70	Sapling/Pole	4	28

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Medium	5 - 10 feet	Sapling
Ironwood	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
169	42110 - Planted Red Pine	Sawtimber Well	14.0	61	141-170	N/A	red pine overstory of variable density with pockets of relatively low stocking, advanced deciduous understory throughout, with decent sugar maple regen in places. some red pine dominated areas are higher stocking, in these areas of stand beech and ironwood become dominant in understory. white pine scattered throughout. any harvest this yoe is going to destroy established understory, evaluate next yoe for harvest options, allowing red pine to out on a bit more growth before removal.

Canopy Species	% Cover	Size Class	DBH	Age
Basswood	2	Log/Pole	10	
Bigtooth Aspen	2	Pole/Log	9	
Black Cherry	2	Pole/Log	9	
Sugar Maple	10	Log/Pole	10	
White Pine	5	Log/Pole	11	
Red Pine	79	Log/Pole	10	61

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Medium	5 - 10 feet	Sapling
Red Maple	High	10 - 20 feet	Sapling
Ironwood	Medium	10 - 20 feet	Sapling
Sugar Maple	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
170	122 - Road/Parking Lot	Nonstocked	4.6	0		No	Road & ROW.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
171	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	7.1	96	81-110	N/A	

Canopy Species	% Cover	Size Class	DBH	Age
Ironwood	10	Sapling	3	
Sugar Maple	40	Pole/Log	8	96
Quaking Aspen	20	Log/Pole	10	
Red Maple	30	Pole/Log	8	96

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
172	4130 - Aspen	Sapling Well	39.1	18	1-50	N/A	Aspen stand with pockets of red pine retained when this stand was cut. red pine is generally concentrated in pockets but some individuals are scattered throughout aspen sapling dominated areas.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	50	Sapling	2	18
Bigtooth Aspen	20	Sapling	2	18
Red Pine	10	Pole/Log	9	61
Black Cherry	10	Sapling	1	18
Red Maple	10	Sapling	1	18

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
173	4130 - Aspen	Poletimber Well	2.2	28	1-50	N/A	small pocket of small-pole sized Aspen with red pine scattered throughout. 5-6" dbh on average.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	5	Pole	7	
Red Maple	5	Pole/Sapling	6	
Bigtooth Aspen	90	Pole/Sapling	5	28

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	< 5 feet	Sapling
Sugar Maple	Low	< 5 feet	Sapling
Ironwood	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
174	42110 - Planted Red Pine	Sawtimber Well	21.5	55	141-170	N/A	decent quality red pine, responding well to recent thinning. ba averages 160 with some variability throughout, mainly dependent on diameter variability. overall stocking is fairly uniform. could lightly thin again to remove remaining defect or leave til next yoe. should this stand be cut and replanted in the future or should red pine replacement be focused on larger plantations to east and south? Stand was treated under tsale contract 001-14-01 in spring 2015 by cherry creek forestry/proctor logging.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	98	Log/Pole	10	55
Black Cherry	2	Pole	8	

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Low	10 - 20 feet	Sapling
Beech	Medium	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
175	4130 - Aspen	Sapling Well	3.9	8	1-50	N/A	Stand harvested under tsale contract 034-14-01 in winter of 2014-2015 by Lutke FP. Individual tree retention was utilized throughout stand, most notably in NE corner. Aspen was removed from this hardwood pocket, hardwoods were marked to leave per treatment recommendations.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	45	Sapling	1	8
Bigtooth Aspen	30	Sapling	1	8
Sugar Maple	10	Log/Pole	10	
Red Maple	15	Sapling/Pole	1	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
176	42110 - Planted Red Pine	Poletimber Well	11.8	61	171-200	N/A	decent quality red pine stand that has been row thinned. white pine is areas along with scattered cherry and red maple. understory generally open with evenly distributed beech and white pine. recommend conducting second thinning on stand, removing approximately 1/3 of overall volume focusing on forked, defected and suppressed trees.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	94	Pole/Log	9	61
White Pine	2	Pole/Log	9	
Black Cherry	2	Pole/Log	8	
Red Maple	2	Log/Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	Low	5 - 10 feet	Sapling
Beech	Low	5 - 10 feet	Sapling
White Pine	Low	5 - 10 feet	Sapling
Ironwood	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
177	42111 - Planted Red Pine, Mixed Deciduous	Sapling Well	40.4	9	Immature	N/A	red pine growing fairly well in spots with diameters ranging from 3-6", other portions of stand are a bit heavier to cherry and red pine is somewhat suppressed with lower trees/ac and smaller diameters/heights. average height of red pine is 8-12', cherry is 12-20' in height on average. small area of failed plantation in NE corner of south portion of stand - with recently dead red pine around perimeter of pocket.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	25	Sapling/Pole	3	
Red Pine	75	Sapling/Pole	3	9

Sub-Canopy Species	Density	Avg. Height	Size
Blackberry/Raspberry	Medium	< 5 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
178	3303 - Mixed Low Density Trees	Nonstocked	29.0			No	Stand is made up of fuel breaks and forest access routes between plantation areas. Seedlings/saplings are present throughout much of stand area at low densities, consisting primarily of red pine, black cherry, red maple, aspen and serviceberry. Old farmstead/foundations/etc located in north central area of stand along Barratt Rd, should be protected as much as possible when management activities occur.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
179	4191 - Mixed Upland Deciduous with Conifer	Sapling Poor	6.3	6	Immature	N/A	This stand was originally part of stand 181 but was part of a wildfire that occurred in 2014. The red pine was salvage harvested when 181 was thinned. This stand is regenerating slowly to red pine and mixed deciduous and is approximately 30% canopy coverage of 3-10' saplings. When 181 is cut and replanted this stand will be included, until then it should be allowed to naturally regenerate - it should not be managed as an opening at this time. Stand was treated under tsale contract 001-14-01 in spring 2015 by cherry creek forestry/proctor logging - within this stand the red pine was salvaged.

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	20	Sapling	1	
Red Maple	25	Sapling	1	
Red Pine	25	Sapling	1	6
Black Cherry	30	Sapling	1	6

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
180	42110 - Planted Red Pine	Sawtimber Well	42.5	55	141-170	N/A	good quality red pine, responding well post thinning. a couple die back pockets were cut out last thinning and are filling in with thick bramble, along with beech around perimeter. understory of remainder of stand is moderately stocked with beech, cherry and red maple. some cherry still present in overstory. ba averages 160, could thin again or final harvest and replant. consider options based on decision made on stand 181. 4/27/22 - Received notification from forest health staff that an occurrence of HRD was found in this stand. Future management will need to take this into account. Stand was treated under tsale contract 001-14-01 in spring 2015 by cherry creek forestry/proctor logging.
181	42110 - Planted Red Pine	Poletimber Well	94.1	51	171-200	N/A	decent quality red pine stand with scattered red maple and cherry, generally concentrated in nw portion of stand. row thinned last yoe, responding fairly well. quality is variable as is size, some stocking variability mainly dependent on prevalence of overstory hardwood component. overall ba averages 170-180 - recommend thinning by removing about 1/3 of overall volume, focusing on forked, suppressed and defected trees. see how stand responds and potentially cut and replant next yoe. Stand was treated under tsale contract 001-14-01 in spring 2015 by cherry creek forestry/proctor logging.
182	4130 - Aspen	Poletimber Well	17.6	33	51-80	N/A	Aspen stand growing well overall. generally small pole sized with some larger trees present as well as pockets of saplings. scattered white pine throughout stand, concentrated in eastern 1/2, trace oak. evaluate next yoe for harvest options.
183	310 - Herbaceous Openland	Nonstocked	2.5			No	
184	4110 - Sugar Maple Association	Poletimber Well	2.0	95	81-110	N/A	stand also contains a few ash, basswood, black cherry, ironwood, and beech trees
185	4139 - Aspen, Mixed Deciduous	Sapling Well	2.3	7	Immature	N/A	Regenerating well to a mix of aspen species and red maple. Stand was treated under tsale contract 610381401 by biewer/bazuin FP in summer, 2015.

180

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	97	Log/Pole	10	55
Black Cherry	3	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	10 - 20 feet	Sapling
Blackberry/Raspberry	Medium	5 - 10 feet	Tall Shrub
Black Cherry	Medium	10 - 20 feet	Sapling
Beech	Medium	5 - 10 feet	Sapling

181

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	2	Log	14	
Red Maple	2	Log	14	
Red Pine	96	Pole/Log	8	51

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	5 - 10 feet	Sapling
Black Cherry	Low	5 - 10 feet	Sapling

182

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	30	Pole/Sapling	6	33
White Pine	10	Log/Pole	10	
Black Cherry	10	Pole/Sapling	5	
Bigtooth Aspen	50	Pole/Sapling	6	33

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Low	5 - 10 feet	Sapling
White Pine	Low	10 - 20 feet	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub

184

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	85	Log/Pole	8	95
Red Maple	15	Pole/Log	8	

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Medium	5 - 10 feet	Sapling

185

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	50	Sapling	1	7
Red Maple	50	Sapling	1	7

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
186	4130 - Aspen	Sapling Well	20.0	7	Immature	N/A	aspen and red maple regen growing well, dense and good quality overall. red maple is evenly distributed in areas heavier to aspen but is also dominant in pockets.Stand harvested under tsale contract 033-14 by Lutke FP. Scattered sugar maple and white pine were retained for retention, scattered red pine also present adjacent to red pine plantation areas. of stand 148.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	20	Sapling	1	
White Pine	5	Log/Pole	12	
Sugar Maple	5	Log/Pole	10	
Bigtooth Aspen	70	Sapling	2	7

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
187	4112 - Maple, Beech, Cherry Association	Sapling Well	17.3	15	Immature	N/A	Stand was originally a jack pine plantation but jack pine has slowly been dying out and falling down allowing hardwood regeneration to advance. Jack pine poles are still present, most notably in eastern most portion of multi-part stand. In general beech dominates hardwood component, advanced regeneration is very dense throughout much of stand area. Allow to convert to hardwood stand, evaluate next YOE to determine desirable regen presence.

Canopy Species	% Cover	Size Class	DBH	Age
Ironwood	10	Sapling	2	
Sugar Maple	10	Sapling	2	
Black Cherry	25	Sapling/Pole	3	
Jack Pine	10	Pole	7	63
Beech	45	Sapling/Pole	3	15

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
189	310 - Herbaceous Openland	Nonstocked	4.3			No	Previously farmed by landowner to the west - now correctly identified as state of Michigan land, fence in place identifying boundary.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
190	4130 - Aspen	Sawtimber Well	4.2	65		N/A	traces of paper birch and beech in canopy

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Pole/Log	9	
Quaking Aspen	20	Pole/Log	9	
Bigtooth Aspen	65	Log/Pole	9	65

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	Variable	Sapling
Ironwood	Low	Variable	Sapling
Red Maple	Medium	Variable	Sapling
Balsam Fir	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
191	4110 - Sugar Maple Association	Sawtimber Well	4.0	90	111-140	N/A	Decent quality sugar maple dominated hardwood stand. Western 1/3 of stand was thinned with adjacent PVT property so density is slightly less. Understory is made up of mostly sugar maple <5' in height - either suppressed or heavily browsed. Lots of deer activity in stand with adjacent agriculture.

Canopy Species	% Cover	Size Class	DBH	Age
Basswood	5	Log	12	
Black Cherry	10	Log/Pole	11	
Sugar Maple	85	Log/Pole	11	90

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
195	4130 - Aspen	Poletimber Well	0.0	33	51-80	N/A	Aspen stand growing well overall. generally small pole sized with some larger trees present as well as pockets of saplings. scattered white pine throughout stand, concentrated in eastern 1/2, trace oak. evaluate next yoe for harvest options.

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	10	Log/Pole	10	
Quaking Aspen	30	Pole/Sapling	6	33
Bigtooth Aspen	50	Pole/Sapling	6	33
Black Cherry	10	Pole/Sapling	5	

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Low	5 - 10 feet	Sapling
White Pine	Low	10 - 20 feet	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub