



Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61120

Entry Year 2017

Acreage: 2,316

County Kalkaska

Management Area: Grayling Outwash

Revision Date: 2015-05-01

Stand Examiner: Steve Crigier

Legal Description:

T27N, R6W, Sec. 35
T26N, R6W, Sec. 1, 2
T26N, R5W, Sec. 6

Identified Planning Goals:

Management in the Grayling Outwash management area (MA) will emphasize continuing balancing the age class of aspen on suitable sites and thinning the northern hardwoods, balancing age classes of red pine and jack pine and regenerating the aging swamp hardwood and conifer resource where possible. Management will strive to sustainably produce various timber products, enhance game and non-game wildlife habitat, protect areas of unique character and provide for forest-based recreational uses. Management activities are constrained by poor access in the swampy (16% lowland) portions of this area, some of which fall in the riparian zone of the Manistee River, a dedicated natural river. Expected trends within this 10-year planning period are increased recreational pressure, introduced pests and diseases and the difficulty in regenerating swamp types.

Soil and topography:

Much of the compartment is low wet ground, containing the Sigma Swamp and the Cranberry Lake Swamp which are typically on a Lupton Muck soil. The upland areas are on well drained Saugatuck and Rubicon sand.

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

Ownership within compartment is primarily state but there are three private inholdings. Ownership to the south and west is nearly all state. East of the compartment is private and there is mixed ownership to the north. Private inholdings are rural in nature.

Unique Natural Features:

This compartment falls within landtype associations (LTAs) 3121 and 5149 of sub-subsection VII.2.2. LTA 3121, which occurs along the eastern edge of the compartment, is characterized by large irregular ice-contact ridges, few kettle lakes, and well drained loamy sand. LTA 5149, found on the remainder of the compartment, is a broad outwash plain with very poorly drained peat or muck. Circa 1800, almost 70% of the LTA supported conifer-dominated wetlands (7% of this area was bog and muskeg). Forests of white pine with red pine or hemlock collectively covered another 11% of the LTA and occurred on better drained, sandy inclusions often within the extensive peatlands. In addition, both white pine and hemlock were probably also important components of the beech/sugar maple forests that covered another 6% of the LTA. The remainder of the LTA supported small amounts of pure hemlock forests, alder/willow thickets, marshes, and aspen/white birch forests. Lowland-conifer forests, which once covered almost 70% of the LTA, now occur on only 22% of the landtype. Conversely, lowland hardwood swamps and shrub/scrub wetlands, which did not occur here circa 1800, now cover about 16% and 15% of the LTA, respectively. Further, aspen/white birch forests have increased from about 1% to 21% cover today. Pine-dominated forests persist on only about 6% of the LTA and northern hardwoods on another 5%. For more on these LTAs, refer to Appendix 1 where we have provided detailed information on the LTAs that are contained in the Traverse City 2007 YOE Compartments.

A high quality rich conifer swamp was documented southwest of the compartment. Rich conifer swamps are groundwater influenced, or minerotrophic, forested wetlands dominated by northern white cedar and occurring on organic soils (e.g., peat and muck). Situated primarily along streams and lakes, but also in drainageways, and in depressions in shallow drift over limestone and dolomite, rich conifer swamps are found on glacial outwash, glacial lake plains, and in coarse to medium-textured ground moraines (especially in drumlin fields), and on foot slopes of morainal ridges. Rich conifer swamps have saturated peat that is typically very strongly acid at the surface, and neutral to mildly alkaline below the surface, in areas of groundwater influence. These systems are characterized by diverse microtopography and ground cover.

Part of Cranberry Lake is on state ownership as well as part of the Sigma Swamp Deer Yard which is one of the major deer yards in Kalkaska County.

Archeological, Historical, and Cultural Features:

There is an old logging camp located on the southern border of this compartment called Angling Siding.

Special Management Designations or Considerations:

There are three Stands in the north west part of the compartment that are nominated for SCAs. One is an MNFI Natural Community, the other 2 are nominated based on forest inventory data.

Watershed and Fisheries Considerations:

The North Branch of the Manistee River runs through the western portion of this compartment. Most of this stretch of river has been rehabilitated from the old Flowing Well Hatchery. Apply appropriate BMP's and buffer with adjacent treatments around the Manistee River. Cranberry Lake has an access site.

Wildlife Habitat Considerations:

Consider enhancing Snowshoe Hare habitat during timber sales if possible.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 200 and 400 feet. Beneath the glacial drift is the Mississippian Marshall Sandstone. The Marshall was previously used as a building stone. The nearest gravel pit is located 2.5 miles to the east, but there should be potential on the uplands. This area is located six miles southwest of the Niagaran reef trend. There are no leases currently in the Compartment, but leases are located to the south.

Vehicle Access:

unset Road passes through the compartment and is a moderately traveled county road. Kniss Road follows the south boundary and Cranberry Lake road gives access to Cranberry Lake boat launch. There are not many interior roads due to the low/wet ground conditions.

Survey Needs:

Might need corners placed around the private 40 acre parcel in section 6.

Recreational Facilities and Opportunities:

The Kalkaska ORV Route, which is also the Craneberry Lake Snowmobile Trail (trail #76) in the winter is along the Eastern edge of this compartment. The Kalkaska ORV Trail, which is designed for ORV's that are <50 inches wide runs North/South thru the Eastern portion of this compartment. A boating access site is located on the shores of Craneberry Lake. A Director's Order prohibiting camping at this boating access site is in effect. Protection specifications, and guidance provided by Policy and Procedures 32.22XX (Best Management Practices for Forest and Wildlife Management Adjacent to Recreational Trails) should be followed. (T.M.N. 12/10/14)

Fire Protection:

This area is protected by the Kalkaska DNR Field Office as well as Stations 6 and 8-township fire departments.

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:

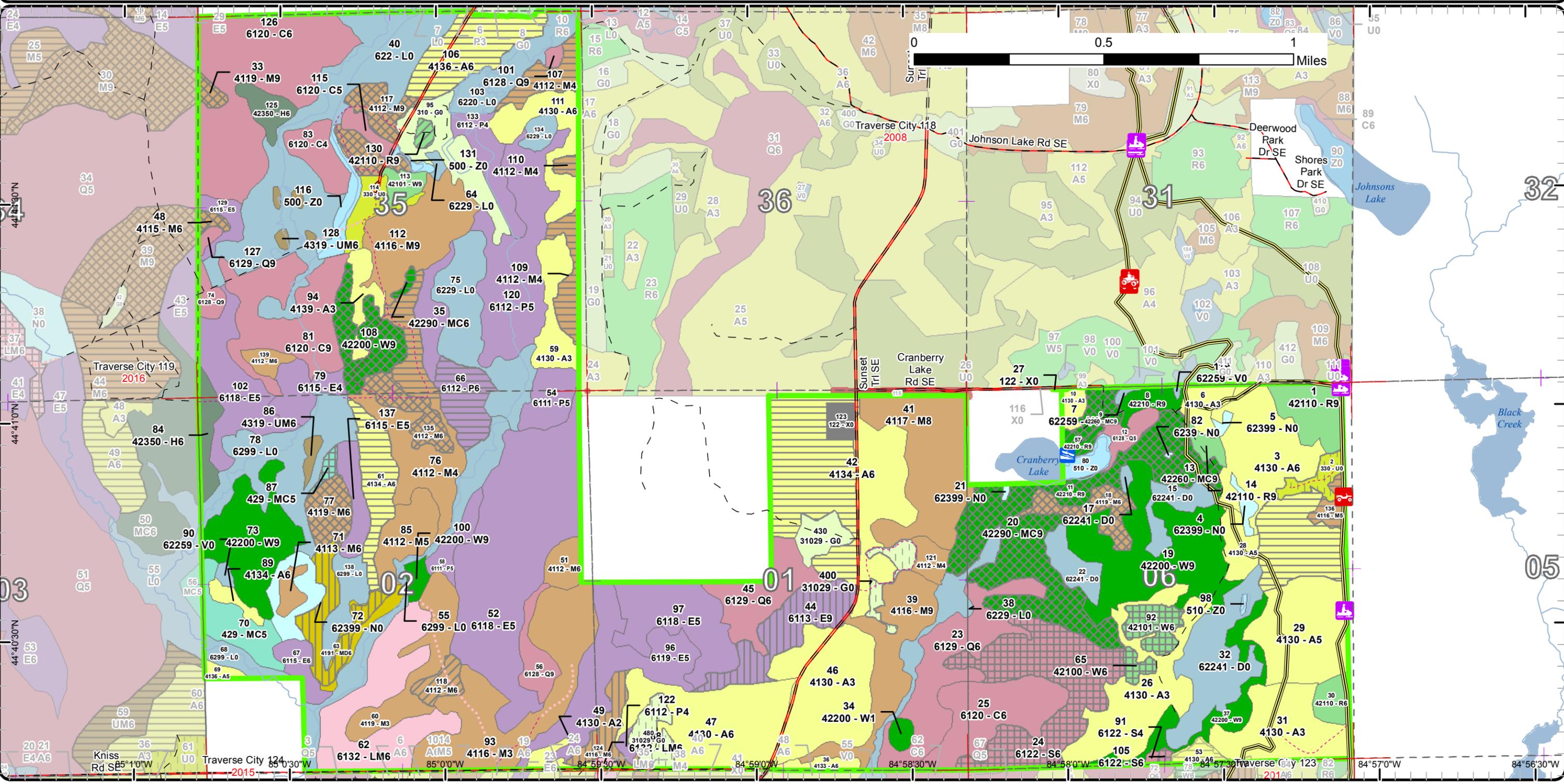
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments

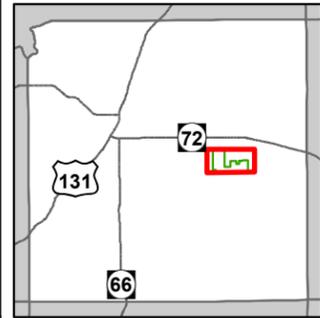


Compartment: 120
 T27N R06W 35
 T26N R06W 01-02
 T26N R05W 06
 Kalkaska
 Unit: Traverse City
 Mgmt Area: Grayling Outwash
 YOE: 2017
 Acres: 2316 GIS Calculated
 Examiner: Steve Crigier
 Map Revised: 6/18/2015
 Map Phase: Pre-Review

- + Remonumented Section Corners
- Miris Corners
- County Gravel Roads
- = Gravel Roads
- - Poor Dirt Roads
- County Poor Dirt Roads
- - - Trail (Non-Recreation)
- - - Closed Roads
- Boating Access Site
- ORV Trails
- ORV Routes
- Snowmobile Trails
- Rivers
- Lakes
- Treatments**
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Opening Maintenance
- Thinning (Crown, Low, Systematic)
- Shelter Wood (w/Reserves)
- Seed Tree (w/Reserves)
- Forest Covertypes**
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forests
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- Non-Forest Covertypes**
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

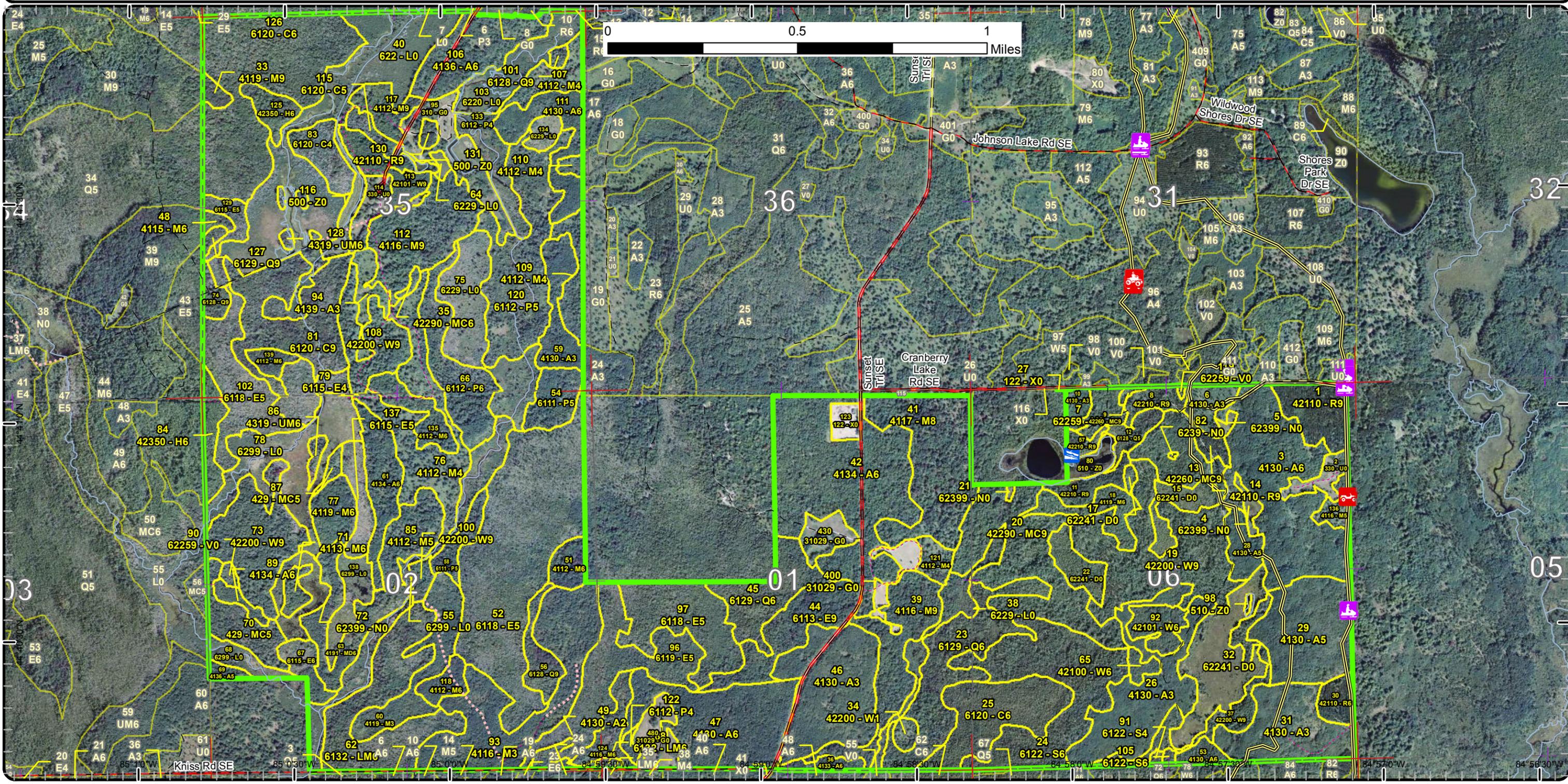


Stand Boundary Map



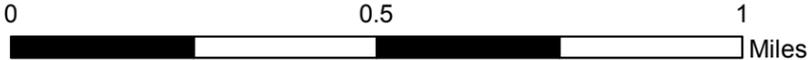
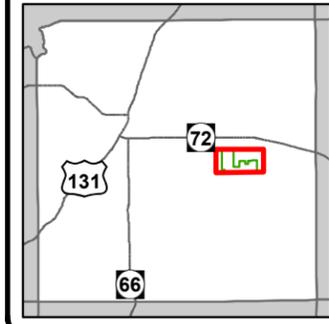
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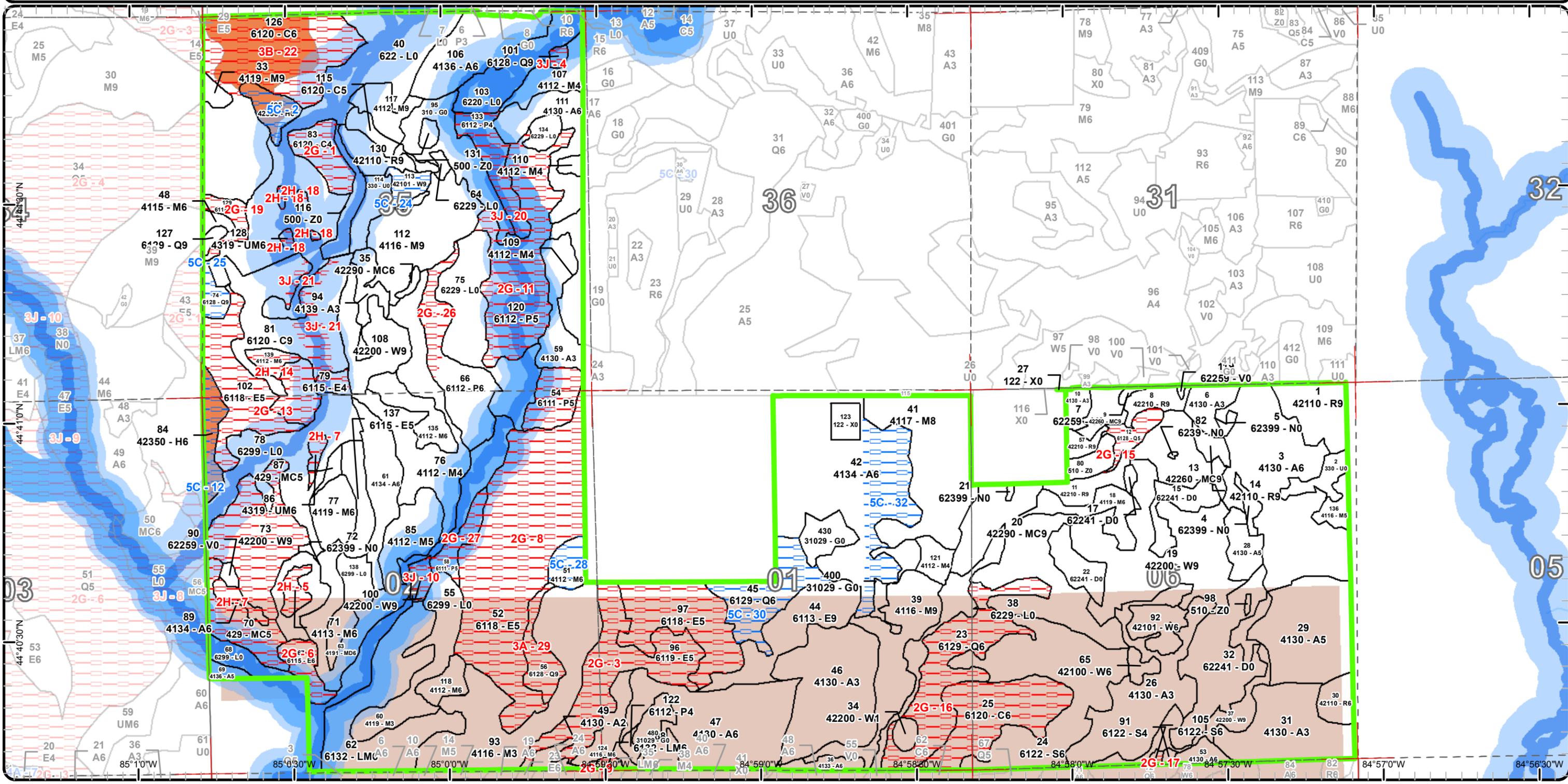
Special Conservation Areas & Site Conditions Map

Compartment: 120
 T27N R06W 35
 T26N R06W 01-02
 T26N R05W 06
 Kalkaska
 Unit: Traverse City
 Mgmt Area: Grayling Outwash
 YOE: 2017
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 Examiner: Steve Crigier
 Map Revised: 6/17/2015
 Map Phase: Pre-Review



- Miris Corners
- Stand Boundaries
- Site Condition
- Available w/ Constraints
- Unavailable
- Available Factors W/ Constraints
 - 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable Factors
 - 2G: Too wet (sensitive soils, does not include access issues)

- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3A: Potential old growth / biodiversity
- 3B: Threatened, endangered, and special concern species/communities
- 3J: Water quality / BMPs (stream, river, or lake)
- Natural Rivers Zoning District
- Cold Water Streams
- High Priority Trout Stream Buffer
- Research, Development, and Military Lands
- Other Habitat Area
- Natural Rivers Vegetative Buffer



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	8	91	131	69	55	129	0	4	0	0	0	0	0	0	0	0	0	487
Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Cedar	0	0	0	0	0	0	0	0	0	120	4	44	0	0	0	0	0	0	168
Hemlock	0	0	0	0	0	0	0	0	0	8	9	0	0	0	0	0	0	0	17
Herbaceous Openland	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
Low-Density Trees	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Lowland Aspen/Balsam Poplar	0	0	0	0	14	51	46	0	0	0	0	0	0	0	0	0	0	0	111
Lowland Conifers	0	0	0	0	0	0	0	0	6	41	28	9	2	0	0	0	0	0	86
Lowland Deciduous	0	0	0	0	0	0	31	34	59	139	0	0	0	0	0	0	0	0	263
Lowland Mixed Forest	0	0	0	0	0	0	0	0	1	45	0	0	0	0	0	0	0	0	46
Lowland Shrub	240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	2	0	55	0	0	0	0	0	0	0	57
Marsh	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Mixed Upland Deciduous	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	21
Natural Mixed Pines	0	0	0	0	0	0	1	18	0	0	0	0	0	0	0	0	0	59	78
Northern Hardwood	0	0	23	57	5	6	49	71	34	20	0	0	0	0	0	0	0	104	369
Red Pine	0	0	0	0	0	0	27	6	13	0	0	0	0	0	0	0	0	0	46
Treed Bog	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
Upland Conifers	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	15	17
Upland Mixed Forest	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3	5
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Water	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
White Pine	0	0	0	3	13	0	5	35	0	0	0	23	0	0	0	0	0	74	153
Total	391	8	114	191	101	133	288	168	119	373	96	76	2	0	0	0	0	255	2315



Report 2 – Treatment Summary

Traverse City Mgt. Unit
Year of Entry: 2017

Acres of Harvest

Compartment 120
Total Compartment Acres: 2,316

Commercial Harvest - 0
Harvests with Site Condition - 0
Next Step Harvest - 5
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	127	0	0	0	0	0	0	0	0	127
Lowland Aspen/Balsam Poplar	16	0	0	0	0	0	0	0	0	16
Lowland Deciduous	0	0	0	0	26	0	0	0	0	26
Lowland Spruce/Fir	0	0	0	56	0	0	0	0	0	56
Mixed Upland Deciduous	0	0	0	0	16	0	0	0	0	16
Natural Mixed Pines	1	77	0	0	0	0	0	0	0	78
Northern Hardwood	40	56	0	0	11	6	0	0	0	113
Red Pine	0	8	0	0	0	5	0	0	0	13
Upland Conifers	0	0	0	2	0	0	0	0	0	2
White Pine	0	20	0	13	0	0	0	0	0	33
Total	184	160	0	71	52	11	0	0	0	479

Proposed and Next Step Treatments by Harvest Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	479	0	0	0	0	0	0	0	0	479
Next Step	5	0	36	0	0	0	427	0	0	468
Total	484	0	36	0	0	0	427	0	0	947



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
3	61120003-17-New	28.9	4130 - Aspen	Poletimber Well	39	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal

Habitat Cut: No

Site Condition:

Prescription Look to clear cut a portion of the stand (south 1/2). Focus retention along wetland types. Make a brush pile every 2 acres or so for wildlife habitat. Apply trail protection specs for ORV trail and snow trail.

Next Step
Treatments:

Acceptable aspen, red maple, cherry.
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

9	61120009-Cut	6.6	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	74	81-110	Harvest	Single Tree Selection	42260 - Natural Pine, Mixed Deciduous	Uneven-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Select cut stand. The residual BA will be variable. Target aspen to remove and then thin through the poor quality pine and maple areas.

Next Step
Treatments:

Acceptable Any mix of current overstory species.
Regen:

Other Put with stand 57 for timber sale. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

11	61120011-Cut	7.5	42210 - Natural Red Pine	Sawtimber Well	76	141-170	Harvest	Single Tree Selection	42210 - Natural Red Pine	Uneven-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Select cut. big tree type management. Keep the BA a bit higher 130-140 for visual management around the lake.

Next Step
Treatments:

Acceptable red pine, black spruce, white pine, red maple
Regen:

Other There is a small perennial drain running through the western part of the stand. I didn't look for the property corner yet. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

13	61120013-Cut	18.0	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	64	111-140	Harvest	Single Tree Selection	42141 - Planted Mixed Pine, Mixed Deciduous	Uneven-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Cut most of the aspen out and mark the pine and maple to be cut. Residual BA will be variable. Shoot for 100sqft/ac but also create some canopy gaps to allow for regeneration. Buffer out the wetland pocket in the middle of the stand. Also try to run the redline to capture some of the black spruce along the southern edge.

Next Step
Treatments:

Acceptable aspen, maple, white pine, red pine, black spruce, birch.
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
18	61120018-Cut	11.6	4119 - Mixed Northern Hardwoods	Poletimber Well	78	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Proposal

Habitat Cut: No **Site Condition:**

Prescription Remove poor quality stems, residual BA target~70. Create a few canopy gaps to allow for regeneration. Harvest most if not all the aspen.
Specs:

Next Step
Treatments:

Acceptable white pine, red maple, birch, aspen,
Regen:

Other Some scattered white pine. Ok quality red maple with white pine in the understory. Small perennial drain at the north west end of the stand.
Comment: Average BA is 120sqft/ac. Ground looks like it might be a bit soft in areas. Old next step comments:

Proposed Start Date: 10/1 /2016

20	61120020-Cut	51.9	42290 - Natural Mixed Pine	Sawtimber Well	89	141-170	Harvest	Single Tree Selection	429 - Mixed Upland Conifers	Uneven-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Select cut stand, mark the pine areas down to ~100sqft/ac and also try to make some canopy gaps to allow for natural regen. Remove most of the black spruce and aspen. These areas will naturally have a lower BA. Apply BMPs when adjacent to lowland types. MO is mixed conifer (wp and spruce).
Specs:

Next Step
Treatments:

Acceptable Black spruce, balsam fir, white pine, aspen, red maple, birch, etc.
Regen:

Other Ground is hummocky and is a mix of low ground and high ground. Not sure about the property corners for the north line. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

24	61120024-Cut	55.1	6122 - Black Spruce	Poletimber Well	97	81-110	Harvest	Seed Tree with Retention	6124 - Lowland Spruce-Fir	Even-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Seed tree stand by marking clumps of black spruce to leave. Leave retention around the wetter areas or areas with less stocking. treatment area will probably be smaller than what is mapped depending on what looks to be operable. Maybe cut trees greater than 4"??
Specs:

Next Step
Treatments:

Acceptable Black spruce, balsam fir, red maple, birch, white pine.
Regen:

Other Some wetter pockets or fingers of tag alder. Probably gets wetter to west and south.
Comment: Will want a cut to length system and cut during the winter or a dry summer. Old next step comments:

Proposed Start Date: 10/1 /2016

33	61120033-Cut	2.8	4119 - Mixed Northern Hardwoods	Sawtimber Well	86	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription West end has some very nice black cherry logs. Some of stand was previously thinned and some was not. some advanced sugar maple and red maple present. Thin stand this YO. OK to leave nice pole areas a bit thicker, more of a thinning but overall try to do a heavy select cut with gaps to promote cherry and maple regeneration. OK to dip into adjacent Qtypes where ground and timber will allow it. Leave tops unchipped as much as possible to provide horizontal habitat
Specs:

Next Step
Treatments:

Acceptable maple, cherry, balsam fir, white pine, birch
Regen:

Other Some pockets of cedar and hemlock. Set up with st 30 in comp 119 in 2016. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2015



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
35 61120035-Cut	1.3	42290 - Natural Mixed Pine	Poletimber Well	50	141-170	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Proposal

Habitat Cut: No

Site Condition:

Prescription Remove the scotch pine and plant to red pine with the northern part of 76.

Specs:

Next Step

Treatments:

Acceptable red pine.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

42 61120042-Cut	52.1	4134 - Aspen, Spruce/Fir	Poletimber Well	52	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Clear-cut a portion of the stand. Leave some of the oak and mark a few cherry and white pine to leave. Create a brush pile/2 acres for rabbitat.

Specs:

Next Step

Treatments:

Acceptable Aspen, balsam fir, red maple, cherry.

Regen:

Other As of now I haven't found the corners but I believe they are there. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

44 61120044-Cut	25.7	6113 - Lowland Maple	Sawtimber Well	72	111-140	Harvest	Shelterwood	6117 - Lowland Deciduous, Mixed Coniferous	Two-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Shelter wood harvest stand. Mark a mix of species for residual ~ 20-30sqft/ac. Also create a brush pile ever 2 acres for snowshoe hare habitat.

Specs: Try to run the redline into stand 45 as much as possible to harvest the mature black spruce. Also, leave the cedar and hemlock as residual timber.

Next Step

Treatments:

Acceptable red maple, aspen, balsam fir

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

48 61120048-Cut	2.1	4115 - Y.Birch, Hemlock NH	Poletimber Well	70	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Target removal of poor formed hazard trees and mark from all species and size classes to desired density. OK to put in some regen gaps to try to recruit cherry regeneration. Overall goal 50-90BA. poor quality areas can cut a bit harder and nice pole areas leave a bit thicker. South of the grade looks to have some areas where aspen was removed. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible.

Next Step

Treatments:

Acceptable maple, birch, balsam fir, white pine. etc

Regen:

Other Harvest with stand 39 in comp 119 in 2016. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2015



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
57 61120057-Cut	3.2	42210 - Natural Red Pine	Sawtimber Well	76	141-170	Harvest	Crown Thinning	42210 - Natural Red Pine	Even-Aged	Draft Proposal

Habitat Cut: No

Site Condition:

Prescription Just do a light thinning to get the high risk red pine out before it dies. Big tree management.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other Comment: This stand has the access site in it so keeping the road in good shape is a must. Protect the sign or any other infrastructure. Old next step comments:

Proposed Start Date: 10/1 /2016

61 61120061-Cut	18.5	4134 - Aspen, Spruce/Fir	Poletimber Well	52	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Final harvest stand. Mark a few white pine to leave. Make a brush pile every 2 acres for rabbitat.

Specs:

Next Step

Treatments:

Acceptable balsam fir, aspen, cherry, red maple, white pine.

Regen:

Other Comment: Old next step comments:

Proposed Start Date: 10/1 /2016

63 61120063-Cut	16.1	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	45	81-110	Harvest	Shelterwood	4191 - Mixed Upland Deciduous with Conifer	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Would be nice to treat the stand along with 77. Would recommend a clearcut/seed tree harvest. Mark scattered white pine, cherry and red maple to leave. Will have to buffer for the Natural river. Access would be through 77 across 137. Crane mats and frozen ground will be needed for this project.

Specs:

Next Step

Treatments:

Acceptable balsam fir, aspen, birch, white pine, red maple,

Regen:

Other Comment: Old next step comments:

Proposed Start Date: 10/1 /2016

65 61120065-Cut	3.1	42100 - Planted White Pine	Poletimber Well	30	141-170	Harvest	Seed Tree	4319 - Mixed Upland Forest	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription mark to leave white pine and cherry 0-20sqft/ac. Let stand convert to aspen/maple.

Specs:

Next Step

Treatments:

Acceptable red maple, aspen, white pine, cherry.

Regen:

Other Comment: Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
66 61120066-Cut	16.2	6112 - Lowland Aspen	Poletimber Well	54	Unspec ified	Harvest	Clearcut with Retention	61119 - Lowland Aspen/Balsam Poplar (OI)	Even-Aged	Draft Proposal

Habitat Cut: No

Site Condition:

Prescription Clear cut a portion of the stand in the southern tip. Run the redline where the ground is most operable.

Specs:

Next Step

Treatments:

Acceptable aspen, red maple, balsam poplar.

Regen:

Other Parts of stand, especially northern part, may be too wet to cut. Canopy is variable, densest at the southern end. Old road/grade runs east-west through southern part of stand. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

76 61120076-Cut	12.6	4112 - Maple, Beech, Cherry Association	Poletimber Poor	40	1-50	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Possibly cut the north half, chipper job, to clean the site up and prep it for planting red pine.

Specs:

Next Step

Treatments:

Acceptable red pine, aspen, red maple, cherry

Regen:

Other Some pockets of scotch pine exists and might be some competition for the red pine where it is already seeded in. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

77 61120077-Cut	11.3	4119 - Mixed Northern Hardwoods	Poletimber Well	68	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Heavy select cut. Target the older birch and aspen for harvest. Thin the maple area to ~ 80sqft/ac.

Specs: It looks like we can skid across 137 with the use of crane mats and frozen ground.

Next Step

Treatments:

Acceptable birch, aspen, white pine, balsam fir, red maple, sugar maple

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

87 61120087-Cut	2.1	429 - Mixed Upland Conifers	Poletimber Medium	60	51-80	Harvest	Seed Tree	4319 - Mixed Upland Forest	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Seed tree harvest stand. Mark a few white pine and red maple to leave. Cut all 4" and greater.

Specs:

Next Step

Treatments:

Acceptable white pine, red maple, aspen balsam fir.

Regen:

Other Pair stand up with st 77 for a timber sale. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
92	61120092-Cut	9.6	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	30	141- 170	Harvest	Seed Tree	4319 - Mixed Upland Forest	Even-Aged	Draft Proposal

Habitat Cut: No

Site Condition:

Prescription mark some white pine, cherry and oak to leave 0-20sqft/ac. Let stand convert to a mix of aspen/maple.

Specs:

Next Step

Treatments:

Acceptable red maple, white pine, aspen, cherry.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

105	61120105-Cut	0.9	6122 - Black Spruce	Poletimber Well	71	51-80	Harvest	Seed Tree	6122 - Black Spruce	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Seed tree stand. Mark a few clumps to leave. See if we can amend to the '123 Monster sale'

Specs:

Next Step

Treatments:

Acceptable black spruce, red maple, aspen, white pine

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

106	61120106-Cut	27.5	4136 - Aspen, Mixed Conifer	Poletimber Well	52	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription clear cut stand leaving the retention along the North Branch edge. Also try to create a brush pile/ 2 acres for small game habitat.

Specs:

Next Step

Treatments:

Acceptable aspen, cherry, red maple, balsam fir, white pine.

Regen:

Other Patchy stand but many parts are ready to go. Understory is variable: dense W3 to small openings to M3. Some areas already regenerated to

Comment: aspen could be avoided in the sale. Some tamarack and beaver activity at the edge near the North Branch. Old next step comments:

Proposed Start Date: 10/1 /2016

107	61120107-Cut	10.3	4112 - Maple, Beech, Cherry Association	Poletimber Poor	50	1-50	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Consider removing everything and planting red pine. It would not be too far behind red pine in adjacent compartment 118 and could be managed

Specs: together in the future. Leave buffer strip along the stream. Have the site chip harvested.

Next Step

Treatments:

Acceptable red pine

Regen:

Other Former landowners maintained an opening and elevated blind in the west end which now contains spotted knapweed. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
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108	61120108-Cut	19.9	42200 - Natural White Pine	Sawtimber Well	100	141-170	Harvest	Single Tree Selection	4220 - Natural White Pine	Uneven-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Select cut stand removing poor formed trees. Probably remove most of the aspen and balsam fir. Try to create some canopy gaps large enough
Specs: to allow white pine to seed in. Target BA ~ 80-100. leave the cedar.

Next Step
Treatments:

Acceptable white pine, aspen, red maple,
Regen:

Other West end of stand is on some transition ground, slightly wetter. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

109	61120109-Cut	9.9	4112 - Maple, Beech, Cherry Association	Poletimber Poor	50	1-50	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Consider removing everything and planting red pine. It would not be too far behind red pine in adjacent compartment 118 and could be managed
Specs: together in the future.

Next Step
Treatments:

Acceptable red pine
Regen:

Other chip harvest stand with st 107 and 110. No retention due to small size and converting to red pine. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

110	61120110-Cut	2.0	4112 - Maple, Beech, Cherry Association	Poletimber Poor	50	1-50	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Consider removing everything and planting red pine. It would not be too far behind red pine in adjacent compartment 118 and could be managed
Specs: together in the future.

Next Step
Treatments:

Acceptable red pine
Regen:

Other chip harvest the stand along with st 107 and 109. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

117	61120117-Cut	16.7	4112 - Maple, Beech, Cherry Association	Sawtimber Well	80	141-170	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Select cut stand down to a BA of ~80sqft/ac. Create a few regen gaps and leave the residual BA slightly higher along the creek.
Specs:

Next Step
Treatments:

Acceptable maple, birch, cherry, balsam fir, white pine. etc
Regen:

Other Nice stand of timber with mostly red maple logs. North pockets is a little poorer quality with more balsam fir on the edges. More of a birch
Comment: component to the west. Stand has an old trail road looping through it. Old next step comments:

Proposed Start Date: 10/1 /2016



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
118	61120118-Cut	6.1	4112 - Maple, Beech, Cherry Association	Poletimber Well	48	141-170	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	Draft Proposal

Habitat Cut: No

Site Condition:

Prescription Thin the stand down to ~80 sqft/ac. Remove poor quality stems and give crop trees room to grow.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other Pair stand up with 124 for a sale. Re close road after use. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

124	61120124-Cut	10.7	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	59	81-110	Harvest	Shelterwood	4199 - Other Mixed Upland Deciduous	Two-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Shelter wood Harvest stand. Mark ~ 20sqft/ac of trees to be left. Harvest all of the aspen. Be on the heads up for a drain in the southern portion

Specs: of the stand.

Next Step

Treatments:

Acceptable aspen, red maple, white pine, balsam fir

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

130	61120130-Cut	2.1	42110 - Planted Red Pine	Sawtimber Well	72	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Small stand of red pine that could use thinning. Red pine north of road is bigger. Mark BA down to 120 sqft/ac.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other Contains various infrastructure: old dog houses, wire in trees, elevated blind.

Comment: Possibly put with the white pine thinning to the south for a timber sale. Old next step comments:

Proposed Start Date: 10/1 /2016

135	61120135-Cut	11.6	4112 - Maple, Beech, Cherry Association	Poletimber Well	72	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Remove poor form trees and create some canopy gaps to allow for regeneration. South end of the stand is poorer quality with more cherry so

Specs: maybe more of a group selection cut where the quality drops off to the south.

Next Step

Treatments:

Acceptable cherry, red maple, white pine, aspen, sugar maple.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
136	61120136-Cut	5.1	4116 - Mixed N. Hardwood - Aspen	Poletimber Medium	35	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal

Habitat Cut: No

Site Condition:

Prescription Look to clear cut the stand. Make a brush pile every 2 acres or so for wildlife habitat. Set stand up with stand 3 for a timber sale.

Specs:

Next Step

Treatments:

Acceptable aspen, red maple, cherry.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

**Total Treatment
Acreage Proposed: 479.3**

Dominant Site Conditions

	2H	3A	3B	3J	5C
Aspen	4				29
Bog					
Cedar			48	12	
Hemlock					17
Herbaceous Openland					
Low-Density Trees					
Lowland Aspen/Balsam Poplar				13	
Lowland Conifers		9		2	27
Lowland Deciduous					
Lowland Mixed Forest					
Lowland Shrub					
Lowland Spruce/Fir					
Marsh					
Mixed Upland Deciduous					
Natural Mixed Pines					
Northern Hardwood	8				7
Red Pine					
Treed Bog					
Upland Conifers	15				
Upland Mixed Forest	5				
Urban					
Water					
White Pine	35			3	5
Total Forested Acres	67	9	48	30	85
Relative Percent					

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Traverse City Mgt. Unit

Steve Crigier : Examiner

Compartment: 120

Year of Entry: 2017

2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	73	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	56	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Traverse City Mgt. Unit
Steve Crigier : Examiner

Compartment: 120
Year of Entry: 2017

8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	111	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: natural river							
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	51	4A: No Markets Available for these Forest Products	Unspecified	Unspecified	Unspecified
Comments:							
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	41	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Traverse City Mgt. Unit

Steve Crigier : Examiner

Compartment: 120

Year of Entry: 2017

14	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	73	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
18	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Traverse City Mgt. Unit
Steve Crigier : Examiner

Compartment: 120
Year of Entry: 2017

20	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
21	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Unavailable	3B: Threatened, endangered, and special concern species/communities	48	Unspecified	Unspecified	Unspecified	Unspecified
Comments: MNFI designated 'Rich Conifer Swamp'							
23	Unspecified	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
24	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
25	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Traverse City Mgt. Unit
Steve Crigier : Examiner

Compartment: 120
Year of Entry: 2017

26	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
27	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
28	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
29	Unavailable	3A: Potential old growth / biodiversity	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
30	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	23	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
32	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.
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.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42110 - Planted Red Pine	Sawtimber Well	16.8	54	111-140	ts # 023-07 Cranberry Lake Pine completed 7-13-2010 Good quality pine. Western 1/2 of stand has a heavy hardwood understory.
3	4130 - Aspen	Poletimber Well	65.6	39	81-110	4-5 stick trees. Decent quality.
6	4130 - Aspen	Sapling Well	7.8	5	1-50	OPIC - FMD: MAY NEED TO SCARIFY SITE. 2005 pmr- no evidence of this treatment taking place. Follow prescription. ts # 023-07 Cranberry Lake Pine completed 7-13-2010 Scattered red pine logs over an aspen stand. Trees are about 10' tall. It doesn't look like the seed tree harvest is working and may be a bit late to try anything.
8	42210 - Natural Red Pine	Sawtimber Well	6.3	65	81-110	ts # 023-07 Cranberry Lake Pine completed 7-13-2010 dkj Nice quality pine. There are a few different age/size classes. A2/m2 understory.
9	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	6.6	74	81-110	Scattered large white pine. Aspen and maple pole timber underneath. Poor quality white pine in the northern part of stand. The aspen is dying out.
10	4130 - Aspen	Sapling Well	4.0	17	Immature	Stand was clearcut in 1998 as part of a timber sale 017-97-1. Trees are about 20-30' tall and has good stem density.
11	42210 - Natural Red Pine	Sawtimber Well	7.5	76	141-170	Park like stand. high quality red pine. 7+ stick pine. Look like there is a small perennial drain in the western part of the stand.
12	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	6.2	78	51-80	
13	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	18.0	64	111-140	Aspen in the stand is mature and starting to see some mortality. Black spruce along the edge of the bog to the south. Decent red pine logs. White pine in the northeast is pretty rough looking, limby. Average BA is 132
14	42110 - Planted Red Pine	Sawtimber Well	3.7	54	111-140	Third row thin 2005. ts # 023-07 Cranberry Lake Pine completed 7-13-2010 dkj Nice quality pine. Little hardwood in the understory. Some scattered oak seedlings.
18	4119 - Mixed Northern Hardwoods	Poletimber Well	11.6	78	111-140	Some scattered white pine. Ok quality red maple with white pine in the understory. Small perennial drain at the north west end of the stand. Average BA is 120sqft/ac

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Traverse City Mgt. Unit

Report 8 – Forested Stands

Compartment: 120
Year of Entry: 2017

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	42200 - Natural White Pine	Sawtimber Well	57.1	78	81-110	Most of the stand had the aspen and maple removed out of it in 2010. The pine was also thinned down to a BA ~ 80-100. Parts of the stand were left untreated (retention) along some of the softer ground. This is where the bulk of the black spruce is. Good quality pine with an A3/M3 understory.
20	42290 - Natural Mixed Pine	Sawtimber Well	51.9	89	141-170	Unique stand. Western edge is rougher more open grown white pine. Interior areas are have large diameter trees with ~7 clear logs in them. Grounds is a mix of upland and lowland, hummocky. Pockets of black spruce throughout. KKA: Canopy also contains traces of: black cherry, tamarack, and balsam fir. Cut stumps are evidence that stand has been managed in the past.
23	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	39.9	83	81-110	Variable stand with diverse canopy. Contains fingers of tag alder and pockets of nearly pure hemlock.
24	6122 - Black Spruce	Poletimber Well	55.1	97	81-110	Variable stand. Hummocky ground but much of it looks operable. Scattered wetter areas with leatherleaf.
25	6120 - Lowland Cedar	Poletimber Well	33.5	83	81-110	Too wet to be operable.
26	4130 - Aspen	Sapling Well	41.9	17	Immature	White pine along the edges of the stand. Aspen is 20-30' tall and is well stocked.
28	4130 - Aspen	Poletimber Medium	8.6	27	Immature	Stand is converting from a sapling stand to a pole stand. Some parts are more of an A3. Red maple in the understory. Decent quality 3-4 stick trees.
29	4130 - Aspen	Poletimber Medium	39.2	27	51-80	Stand is converting from a sapling stand to a pole stand. Some parts are more of an A3. Red maple in the understory. Decent quality 3-4 stick trees.
30	42110 - Planted Red Pine	Poletimber Well	7.0	52	111-140	Cranberry Lake Pine completed 7-13-2010 dkj Decent quality pine. Nice diameters and 6-7 sticks. Quite a bit of hardwood in the understory.
31	4130 - Aspen	Sapling Well	33.3	17	Immature	Stand was clearcut as part of timber sale 017-97-1, in 1998. Central and eastern part of stand has a few less TPA. there are some scattered oak and white pine. Trees are about 20' tall.
33	4119 - Mixed Northern Hardwoods	Sawtimber Well	2.8	86	111-140	Pockets of cedar and hemlock.
34	42200 - Natural White Pine	Sapling Poor	3.0	22	1-50	Isolated upland within swamp, filling in with scattered trees.
35	42290 - Natural Mixed Pine	Poletimber Well	1.3	50	141-170	



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	4133 - Aspen, Mixed Pine	Poletimber Well	4.4	49	Unspecified	Decent red maple (2" dbh and a few small poles) in understory in some places. Heavily browsed red maple seedlings in others.
37	42200 - Natural White Pine	Sawtimber Well	17.4	64	111-140	Transition ground. Log sized stuff on the high ground and more poles and black spruce in the lower ground. Decent quality.
39	4116 - Mixed N. Hardwood - Aspen	Sawtimber Well	32.0	62	81-110	Variable stand. Average BA is 100 sf. Clumpy red maple and aspen is in rough shape. Balsam fir understory is heavy in places. Wetter along western edge. Some white pine and spruce in canopy there. Heavy browse on red maple seedlings and saplings.
41	4117 - Mixed N. Hardwood - Pine	Sawtimber Medium	47.0	68	51-80	Mostly open grown maple with poor quality aspen. Stand has lot of advanced hardwood in the understory.
42	4134 - Aspen, Spruce/Fir	Poletimber Well	82.9	52	81-110	Aspen quality on the west side of the road isn't the greatest. Seeing some pockets of mortality. Mostly 4-5 stick trees. Lots of red maple in the understory. There are some scattered oak and white pine. There are balsam pockets (F3) in the west side of the sunset trail. N 1/3 of the stand appears to be better quality/healthier.
44	6113 - Lowland Maple	Sawtimber Well	25.7	72	111-140	Well stocked stand, quite a bit of red maple saw timber. Balsam fir understory. Western tip has a dense hemlock/cedar grove. North end of stand looks like it might have a small drainage.
45	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	22.9	96	81-110	Some nice black spruce along the southern boundary. Lots of wind throw interior, more of a Q5, and those wind throw pockets are filling in with balsam and spruce.
46	4130 - Aspen	Sapling Well	47.1	25	Immature	Stand is starting to convert to a pole stand. Not quite there yet. Well stocked.
47	4130 - Aspen	Poletimber Well	48.8	46	51-80	Some scattered oak. Decent quality timber, mostly 5 stick aspen with a heavy red maple understory. Healthy stand.
48	4115 - Y.Birch, Hemlock NH	Poletimber Well	2.1	70	111-140	Some hemlock pockets. Transition ground.
49	4130 - Aspen	Sapling Medium	4.0	16	Immature	Maple is coming through aspen pretty well and cherry. Also a little white pine and balsam.
51	4112 - Maple, Beech, Cherry Association	Poletimber Well	7.1	67	111-140	west and north edge fir and spruce edge. some larger diameter stuff but most is pretty small yet. some nice pole areas. stand filling in nicely. OPIC - FMD: Open grown maple and cherry.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
52	6118 - Lowland Deciduous with Cedar	Poletimber Medium	99.3	81	1-50	Some BAM areas, some ash, some tag, some paper birch. Most or all is to wet to manage and there isn't enough merchantable timber to chase. possible habitat cuts may be needed in the future but doesn't look to grow commercially viable timber. South end more cedar mixed in but a lot has blown over. KKA: Heavier to ash at the north end, but mostly dead. Lots of blowdown. OPIC - FMD: 2005 pmr ash, elm, aspen poor stocking.
53	4130 - Aspen	Poletimber Well	4.2	71	81-110	Nice clone of popple.
54	6111 - Lowland Balsam Poplar	Poletimber Medium	12.1	54	51-80	Very wet. Patchy canopy cover. Bam fades into QA to north.
56	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	9.3	105	201+	some large diameter Hemlock and some smaller. nice thick mature stand. good deer yard area in large swamp complex. may qualify as a SCA due to the large dense hemlock cover type which is pretty rare nowadays.
57	42210 - Natural Red Pine	Sawtimber Well	3.2	76	141-170	This is the stand of the boat access site. Pretty awesome pine 8 + sticks and 6 ish clear logs.
58	6111 - Lowland Balsam Poplar	Poletimber Medium	7.5	55	51-80	OPIC - FMD: Stand is inside of Natural River Corridor. No treatment possible. Dropped at comp review 2005 pmr 1994 inventory called for treatment but none took place. Ash/aspens/maple/spruce/cedar. 10"avg medium stocking. Spruce/fir and cherry understory.
59	4130 - Aspen	Sapling Well	15.5	27	Immature	Just reaching pole size. Wet around west and south edges.
60	4119 - Mixed Northern Hardwoods	Sapling Well	23.2	16	Immature	Stand filling in nicely for the most part. good mix of species. birch around wet edges. OPIC - FMD: LEAVE SOME MAPLE ON EDGE FOR SEED SOURCE. Sale #115-97. 2005 pmr. Maple is getting browsed. Cherry is growing through.
61	4134 - Aspen, Spruce/Fir	Poletimber Well	18.5	52	81-110	Nice 6-7 stick popple. Ground looks hummocky. Stocking has a bit less TPA towards the west along the swamp edge. Some scattered white pine log.
62	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	45.3	85	51-80	highly variable swamp. most looks to be undesirable to manage as it is very wet for the most part and has a pretty high percentage of cedar and hemlock throughout. may be able to do some commercial habitat improvement cuts in the future.
63	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	21.4	45	81-110	Stand is variable. Pockets of white pine and balsam. Some parts are more like an aspen stand others are heavier to red maple. Lots of timber falling over some of which is due to the beaver.
65	42100 - Planted White Pine	Poletimber Well	3.1	30	141-170	Part of same plantation as stand 92. Poor quality, poor form and never thinned. Heavy browse on red maple understory.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
66	6112 - Lowland Aspen	Poletimber Well	26.2	54	Unspecified	Parts of stand, especially northern part, may be too wet to cut. Canopy is variable, densest at the southern end. Old road/grade runs east-west through southern part of stand.
67	6115 - Lowland Ash	Poletimber Well	7.8	59	51-80	black ash swamp
69	4136 - Aspen, Mixed Conifer	Poletimber Medium	2.5	42	51-80	OPIC - FMD: openmixed aspen, b.cherry, w.pine, r.maple,balsam fir. Understory =balsam fir, white pine, r. maple
70	429 - Mixed Upland Conifers	Poletimber Medium	15.0	45	51-80	Lots of age and size classes. Some scattered red oak. Some black spruce along southern edge.
71	4113 - R.Maple, Conifer	Poletimber Well	4.2	75	81-110	Hardwood island with scattered white pine. Beaver activity along the edges.
73	42200 - Natural White Pine	Sawtimber Well	35.0	60	81-110	Eastern portion of the stand is more of a W5 with a higher component of balsam fir in the understory. Some area have some rough looking trees but overall is an average quality. Southern tip is has lots of large white pine 24" +. Lots of size classes. Some pockets of black spruce.
74	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	4.6	92	141-170	Neat hemlock stand. Has a grove of large white pine also. Some of the red maple has decent logs in them. Also some scattered cedar and black spruce.
76	4112 - Maple, Beech, Cherry Association	Poletimber Poor	38.1	40	1-50	North end is a total hodgepodge. Relatively open with scattered white pine pole/log trees, a few clumps of aspen and scotch pine and white pine saplings throughout. Pocket of M6/A5 south of stand 108. South end is more of an opening filling in with cherry and white pine. Looks like it wants to grow white pine.
77	4119 - Mixed Northern Hardwoods	Poletimber Well	11.3	68	111-140	Hardwood knoll. Birch and aspen are dying out. Some scattered basswood. Western half is heavy to birch. Some white pine seeding into the northern 1/3. Beaver activity along the west side.
79	6115 - Lowland Ash	Poletimber Poor	13.0	58	1-50	Kind of an L0 with scattered timber. Mostly black ash.
81	6120 - Lowland Cedar	Sawtimber Well	43.8	100	51-80	The old grade at the north end of the stand seems to be effect tree density, wetter soil. Some nice pockets of hemlock. Some scattered yellow birch.
83	6120 - Lowland Cedar	Poletimber Poor	11.5	80	1-50	Spare TPA. Cedar has thin tops. Nice pocket of white pine on the far western tip of stand.
84	42350 - Upland Hemlock	Poletimber Well	9.2	92	201+	Very dense canopy! A few scattered cedar along the east edge. Very unique stand. Trees are 5-6 stick tall.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
85	4112 - Maple, Beech, Cherry Association	Poletimber Medium	16.0	58	51-80	Stand is variable with a few scattered oak here and there. Mostly open grown tree of poor quality. A few well stocked pockets of A6 or M6. More balsam fir along rivers edge.
86	4319 - Mixed Upland Forest	Poletimber Well	2.4	60	51-80	
87	429 - Mixed Upland Conifers	Poletimber Medium	2.1	60	51-80	Rough looking white pine. Looks like an opening filling in.
88	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	1.3	79	81-110	
89	4134 - Aspen, Spruce/Fir	Poletimber Well	3.6	33	51-80	Some scattered oak. 4-5 stick aspen.
91	6122 - Black Spruce	Poletimber Poor	0.8	71	1-50	
92	42101 - Planted White Pine, Mixed Deciduous	Poletimber Well	9.6	30	141-170	Poor quality white pine plantation that has never been thinned. Fair amount of aspen mixed in.
93	4116 - Mixed N. Hardwood - Aspen	Sapling Well	57.3	27	1-50	South end more solid aspen, north fingers more mixed cherry and maple with some aspen and some open brushy areas. Some A6ish areas but overall most is still un-merchantable size yet.
94	4139 - Aspen, Mixed Deciduous	Sapling Well	8.1	10	Immature	Small cultivated area in central part of stand.
96	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	39.7	86	51-80	small diameter trees. Heavy E3 understory. Very wet ground. Some pockets of P3.
97	6118 - Lowland Deciduous with Cedar	Poletimber Medium	32.8	71	81-110	Lots of wind throw, canopy gaps are filling in with birch and balsam fir. Stand has more of a cedar component in the north.
100	42200 - Natural White Pine	Sawtimber Well	3.4	105	171-200	Nice super canopy white pine mixed with maple. could pluck some of the maple out and lightly thin out the poor formed white pine but leave pretty thick as its a pretty unique stand. bulk of stand is in the natural river corridor so likely best just to stay out and leave as mature timber.
101	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	1.5	85	81-110	Small patch of forested lowland next to the North Branch of the Manistee and the tag alder around it. 2-5' bluff between this stand the adjacent upland.
102	6118 - Lowland Deciduous with Cedar	Poletimber Medium	28.0	68	51-80	Black ash swamp. 1-2 stick trees in the northern part of the stand but is more of an E6 stand to the south with a heavier mix of cedar and birch (4 stick trees).
105	6122 - Black Spruce	Poletimber Well	0.9	71	51-80	Decent black spruce stand.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
106	4136 - Aspen, Mixed Conifer	Poletimber Well	27.5	52	Unspecified	Patchy stand but many parts are ready to go. Understory is variable: dense W3 to small openings to M3. Some areas already regenerated to aspen could be avoided in the sale. Some tamarack and beaver activity at the edge near the North Branch.
107	4112 - Maple, Beech, Cherry Association	Poletimber Poor	10.3	50	1-50	2-aged stand with residual red maple and black cherry in the overstory (BA 0-30 sf) and planted white spruce and volunteer white pine in the understory. Traces of oak, balsam fir and white pine in the canopy at the edge. Former landowners maintained an opening and elevated blind in the west end which now contains spotted knapweed.
108	42200 - Natural White Pine	Sawtimber Well	19.9	100	141-170	Variable stand. Wetter along western edge. Some white pine mortality. Red maple in understory is heavily browsed. BA: 120, 160, 190.
109	4112 - Maple, Beech, Cherry Association	Poletimber Poor	9.9	50	1-50	Two-aged stand with residual red maple and black cherry in the overstory (BA 0-30 sf) and planted white spruce in the understory (dbh 1-5").
110	4112 - Maple, Beech, Cherry Association	Poletimber Poor	2.0	50	1-50	Two-aged stand with residual red maple and black cherry in the overstory (BA 0-30 sf) and planted white spruce in the understory. Spruce is very dense in spots with small gaps in between the clumps.
111	4130 - Aspen	Poletimber Well	20.1	25	Immature	Well-stocked aspen just reaching pole size. Some patches of mostly cherry. Wetter along western edges.
112	4116 - Mixed N. Hardwood - Aspen	Sawtimber Well	34.2	65	81-110	Variable stand with patchy BA. Generally poor quality hardwoods with patches of aspen. Wetter along eastern edge. Heavy browse on understory.
113	42101 - Planted White Pine, Mixed Deciduous	Sawtimber Well	5.2	50	171-200	Mediocre quality white pine plantation. Has been row-thinned. Thick understory of red maple seedlings/saplings in places but heavily browsed.
115	6120 - Lowland Cedar	Poletimber Medium	4.2	90	Unspecified	A drainage running through the stand.
117	4112 - Maple, Beech, Cherry Association	Sawtimber Well	17.1	80	141-170	Nice stand of timber with mostly red maple logs. North pockets is a little poorer quality with more balsam fir on the edges. More of a birch component to the west. Stand has an old trail road looping through it.
118	4112 - Maple, Beech, Cherry Association	Poletimber Well	6.1	48	141-170	clumpy stand of mainly red maple and cherry. will hold fine 10 years or could be cut now if needed. likely even age management via seed tree or final harvest is best as the stem quality is pretty poor. OPIC - FMD: 2005 pmr. Cherry and rm sprouts-origin.7"avg dia. Low quality hardwoods.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
120	6112 - Lowland Aspen	Poletimber Medium	48.7	48	51-80	Extremely variable stand. Photo makes it look better stocked than it is. Scattered mortality, possibly due to changes in water table. North Branch of the Manistee runs through stand. Beaver activity throughout. Flowing well owners maintained a food plot in the south end, which has an elevated blind and knapweed.
121	4112 - Maple, Beech, Cherry Association	Poletimber Poor	5.5	68	1-50	Stand is an opening filling in. Mostly cherry.
122	6112 - Lowland Aspen	Poletimber Poor	1.7	45	1-50	Stand is on some low hummocky ground. I was struggling whether to call it a P3 or a P4 stand. Lots of understory and not much for pole timber.
124	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	10.7	59	81-110	Aspen is starting to fall out of the stand, lots of wood already on the ground. Western edge might be a bit wet.
125	42350 - Upland Hemlock	Poletimber Well	7.6	86	141-170	Hemlock ridge. Very dense stocking.
126	6120 - Lowland Cedar	Poletimber Well	74.6	86	141-170	Some pockets of wind throw but overall a pretty dense swamp. South end of the stand has more of a deciduous component. Northern part of the stand is an ERA.
127	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	1.7	110	141-170	neat stand!! mostly hemlock.
128	4319 - Mixed Upland Forest	Poletimber Well	2.8	78	81-110	Saw 2 eagles perched in the northwest pocket there might be a nest out there somewhere. Upland islands in the middle of.
129	6115 - Lowland Ash	Poletimber Medium	5.9	60	1-50	1-2 stick black ash
130	42110 - Planted Red Pine	Sawtimber Well	2.1	72	141-170	Small stand of red pine that could use thinning if possible. Red pine north of road is bigger. Contains various infrastructure: old dog houses, wire in trees, elevated blind.
133	6112 - Lowland Aspen	Poletimber Poor	13.7	32	Immature	Poorly stocked with lots of tag alder. North Branch of the Manistee runs through this stand. West edge is bounded by manmade channel. Lots of beaver activity.
135	4112 - Maple, Beech, Cherry Association	Poletimber Well	11.6	72	81-110	Stand is predominately red maple pole timber with some scattered log sized trees. South end of stand turns a bit more M5 with a heavier component of cherry.
136	4116 - Mixed N. Hardwood - Aspen	Poletimber Medium	5.1	35	51-80	Looks like part of the opening that has filled in with aspen and red maple.
137	6115 - Lowland Ash	Poletimber Medium	10.1	52	51-80	Black ash swamp. Look ok to maybe freeze across with some crane mat to skid the wood out of st 87, 77 and 63.

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Traverse City Mgt. Unit

Report 8 – Forested Stands

Compartment: 120
Year of Entry: 2017



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
139	4112 - Maple, Beech, Cherry Association	Poletimber Well	4.2	78	111-140	Real hummocky ground but looks mostly upland. Some scattered cedar, hemlock and white pine. Some pockets of log sized timber.



Stand	Cover Type	Acres	Managed Site	General Comments:
2	330 - Low-Density Trees	6.4	No	OPIC - FMD: POSSIBLE PRESCRIBED BURN
4	62399 - Marsh (OI)	2.7	No	
5	62399 - Marsh (OI)	1.1	No	
7	62259 - Bog (OI)	0.9	No	OPIC - FMD: OI Stand Year Origin was
15	62241 - Treed Bog (OI)	9.7	No	Wet opening seeding in on humps F1W2 1-4" dbh Leatherleaf
17	62241 - Treed Bog (OI)	1.2	No	OPIC - FMD: OI Stand Year Origin was
21	62399 - Marsh (OI)	0.5	No	small boggy opening. Labador tea around edge.
22	62241 - Treed Bog (OI)	9.4	No	Wet spot with leatherleaf . Some small white pine and larch seeding in on humps. 2"dbh.
27	122 - Road/Parking Lot	0.0	No	
32	62241 - Treed Bog (OI)	31.8	No	
38	6229 - Mixed lowland shrub	14.8	No	
40	622 - Lowland Shrub	82.5	No	
55	6299 - Lowland Shrub (OI)	26.4	No	LO, VO, E4 along north branch of the Manistee.
64	6229 - Mixed lowland shrub	1.5	No	
68	6299 - Lowland Shrub (OI)	7.0	No	Tag alder along drainage.
72	62399 - Marsh (OI)	10.4	No	east part is flooded out by the beavers
75	6229 - Mixed lowland shrub	34.9	No	North Branch of the Manistee runs through the east end. Has some upland areas, one of which was maintained as a food plot by the former landowners.
78	6299 - Lowland Shrub (OI)	37.8	No	Tag Alder bottom and open boggy



Stand	Cover Type	Acres	Managed Site	General Comments:
80	510- Water (OI)	5.5	No	PORTION OF CRANBERRY LAKE
82	6239 - Mixed Emergent Wetland	0.2	No	
90	62259 - Bog (OI)	1.5	No	Small bog opening with leatherleaf
95	310 - Herbaceous Openland	21.0	No	Area of multiple disturbances from previous landowners. Scattered trees: RM, BC, WP and some aspen. Some RP and spruce were planted but deer appear to have killed much of it. Knapweed is present in multiple openings maintained by previous landowners.
98	510- Water (OI)	0.5	No	
103	6220 - Alder/willow	19.7	No	
114	330 - Low-Density Trees	8.8	No	Stand is a mixed bag of some cedar along the old ponds and a scotch pine pocket. Used to be the where the old buildings were at on the property.
116	500 - Water	7.4	No	
119	62259 - Bog (OI)	0.4	No	
123	122 - Road/Parking Lot	4.6	No	Relatively new natural gas well
131	500 - Water	1.6	No	
134	6229 - Mixed lowland shrub	4.3	No	Used to have scattered black ash but it looks mostly dead. Wet or seasonally wet.
138	6299 - Lowland Shrub (OI)	11.1	No	Tag Alder bottom and open boggy
400	31029 - Grass (OI)	6.3	Yes	Managed rye field.
430	31029 - Grass (OI)	8.1	Yes	Manage rye field.
480	31029 - Grass (OI)	10.4	Yes	Managed rye field.