



Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61247

Entry Year 2018

Acreage: 1,944

County Kalkaska

Management Area: Manistee River Valley

Revision Date: 2016-06-10

Stand Examiner: Kelly Standerfer

Legal Description:

T25N, R8W, Sections, 27, 28, 32, 33 & 34.

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.

Soil and topography:

Soils are mostly Rubicon & Kalkaska sands. The area is relatively flat & in some cases poorly drained. The Manistee River flows from the NE to the SW of the compartment. There is some relief next to the river & its tributaries.

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

Mostly block state ownership. A large island of private property is just south of Rainbow Jim's bridge, where Coster Road cross the Manistee River. This area has a number of permanent & seasonal residences. Two other in-holdings are in the compartment. They are both former Consumers Power cabin leases which were sold to the leasers. One 30 year Consumers Power lease is still active.

Unique Natural Features:

This compartment falls within landtype associations (LTAs) 2221, 5131, and 5211 of sub-subsection VII.2.2. LTA 5211, a pitted outwash plain with excessively drained sand, occurs in the southeastern and northwestern portions of the compartment. LTA 2221, characterized by broad moraine ridges, few or no lakes, and well drained sand, occurs along the northwestern portion of the compartment. Circa 1800, 91% of the LTA supported northern hardwood forests of American beech and sugar maple. Wetlands were forested with various types of lowland conifers. The LTA has become quite fragmented with 19% consisting of various types with less than 5% cover. Cropland, now the most wide spread cover type, occurs on about 29% of the LTA with old fields occurring on another 13%. Pine forests, which occurred on only about 2% of the LTA circa 1800, now cover 20%; these are largely plantations. Northern hardwood forests also occur on 20% of the LTA, however this represents a significant reduction compared to circa 1800 acreage. The remainder of the compartment occurs in LTA 5131, which is a broad flat outwash plain with poorly drained sand or loamy sand. The variety of circa 1800 vegetation types which occur reflect the LTAs complexity. Forests of hemlock, usually mixed white pine or American beech, were common on poorly drained sands whereas mixed conifer swamps dominated very poorly drained organic soils. Finally, well drained inclusions supported northern hardwood forests of American beech and sugar maple while forests of mixed red and white pine occurred on excessively drained, fire-prone areas within the LTA. The LTA has become quite fragmented and 23% of its surface area supports cover types with less than 5% individual cover. Hemlock dominated forests have been virtually eliminated whereas aspen/white birch forests, rare circa 1800, have become the predominant cover type. Conifer dominated wetlands, which covered more that one quarter of the LTA circa 1800, have been reduced to about 8% cover, while formerly absent hardwood and shrub/scrub swamps now collectively cover 24% of the area. The remaining northern hardwood forests, which now occur on only about 5% of the LTA, are second growth, often fragmented, woodlots that lack the original white pine or hemlock component. Finally, another 6% of the LTA is in old fields. MNFI records show one species as Special Concern. The Manistee River & the tributaries of Ham Creek, Bourne Creek & Spring Creek are in the Compartment.

Archeological, Historical, and Cultural Features:

None listed though there is likely historical sites within the compartment due to the proximity to the Manistee River.

Special Management Designations or Considerations:

No Special Management designation has been made in this compartment. This compartment was inventoried for the first time last YOY. This is a relatively wild area with high wildlife values. Significant road work will need to be done on the forest road off of Maple Hill Road which crosses Bourne Creek.

The Manistee River is a designated Natural River, so all Natural Rivers restrictions apply to both the mainstem and all tributaries. This includes a 175' natural vegetation buffer on the Manistee River, and a minimum 100' buffer on smaller tributaries.

Spring Creek, Bourne Creek, Ham Creek, Haynes Creek and the Manistee river are all designated Natural Rivers.

Watershed and Fisheries Considerations:

The Manistee River and the tributaries of Ham Creek, Bourne Creek, and Spring Creek flow through Compartment 247. All are Designated Trout Streams. The Manistee River is stocked with brown trout by Fisheries Division. Spring Creek holds a population of wild brook trout. Ham Creek is a wild brook trout stream further upstream, and used to hold multiple species of wild trout in Compartment 247. However, just upstream of Compartment 247, Ham Creek has been severely degraded by beavers, to the point where the stream is now too warm to hold trout. Fisheries Division would like to see Ham Creek restored to the point where wild trout again can survive in the vicinity of Compartment 247. All BMPs and Natural Rivers standards should be adhered to when cutting near water.

Wildlife Habitat Considerations:

The bulk of Compartment 247 falls on poorly drained soils of a glacial outwash plain. However, this glacial landform does include pockets of excessively drained sandy soils, usually situated on low rises or hummocks in the landscape. The northwestern edge of compartment is underlain by broad ridges that transitions into an outwash plain both of which consist of sandy well drained soils.

According to the National Wetlands Inventory layer, upland inclusions of drier soils seem to dominate the otherwise poorly drained outwash plain within compartment 247. Aspen and scattered pine plantations are the typical cover here. Prolific balsam fir serves as a cover for species such as snowshoe hare. Harvests planned on these drier inclusions should incorporate retention of snags, down logs, saplings, conifers, and some sturdy, mature leave trees to mimic natural blowdown patches. Tops should be left unchipped if possible for horizontal cover. When timber sales are adjacent to appropriate lowland stands the new snowshoe hare habitat spec should be utilized to create horizontal cover. Several cuts are planned this entry period in order to provide age class and structural diversity for wildlife like grouse, woodcock, golden-winged warbler, gray catbirds, and deer. Islands of longer lived tree species should be left for structural diversity and to provide habitat components like den and cavity trees, hard and soft mast, future horizontal cover, and areas of lower stem density with a closed canopy. Species taking advantage of some of these older islands might include eastern box turtles, little brown and northern myotis bats, rat snakes, and gray foxes.

Long-term management of the lowland segments of this landscape should emphasize mature mixed conifers as much as possible, as this area is important for yarding deer. Future natural blowdowns may add to the diversity of this landscape and should be left unsalvaged if they occur.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and coarse-textured till. The glacial drift thickness varies between 200 and 600 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan is quarried for gypsum in other areas of the State. A gravel pit is located in Section 32 and there is good potential in this area. Springfield 32 Field is located in this area. The Field is an abandoned Traverse Limestone gas field and a Deep gas producing Field. A large portion of this Compartment is surface only and a lesser amount of mineral rights only. There are no current leases of State land in the Compartment.

Vehicle Access:

Significant road work will need to be done on the forest road off of Maple Hill Road which crosses Bourne Creek. A

culvert and equalization tubes were installed with a timber sale however the road could still use significant amount of gravel to make it an all season road. Some ORV issues on a small drain on the trail to the west of stand 78, close this trail off with the timber sale.

Survey Needs:

Stand 5 and 50 may need survey help but it is believed that the needed corners are already in place.

Recreational Facilities and Opportunities:

There are no DNR designated trails within this compartment. (T.N. 1/28/16)

Fire Protection:

road access for the bulk of this compartment is pretty good though some roads are very wet in the spring. If the it gets dry enough some of the mixed swamp cover types could present an issue for suppression efforts. Most is not high risk for large fires.

Additional Compartment Information:

The following reports from the Inventory are attached:

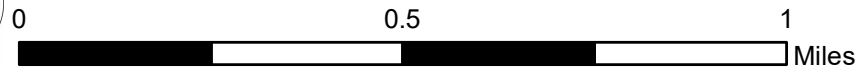
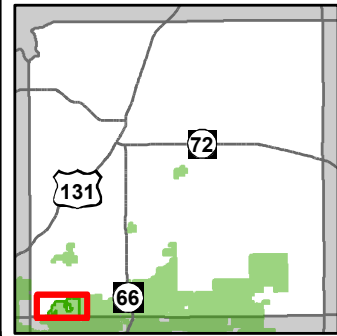
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

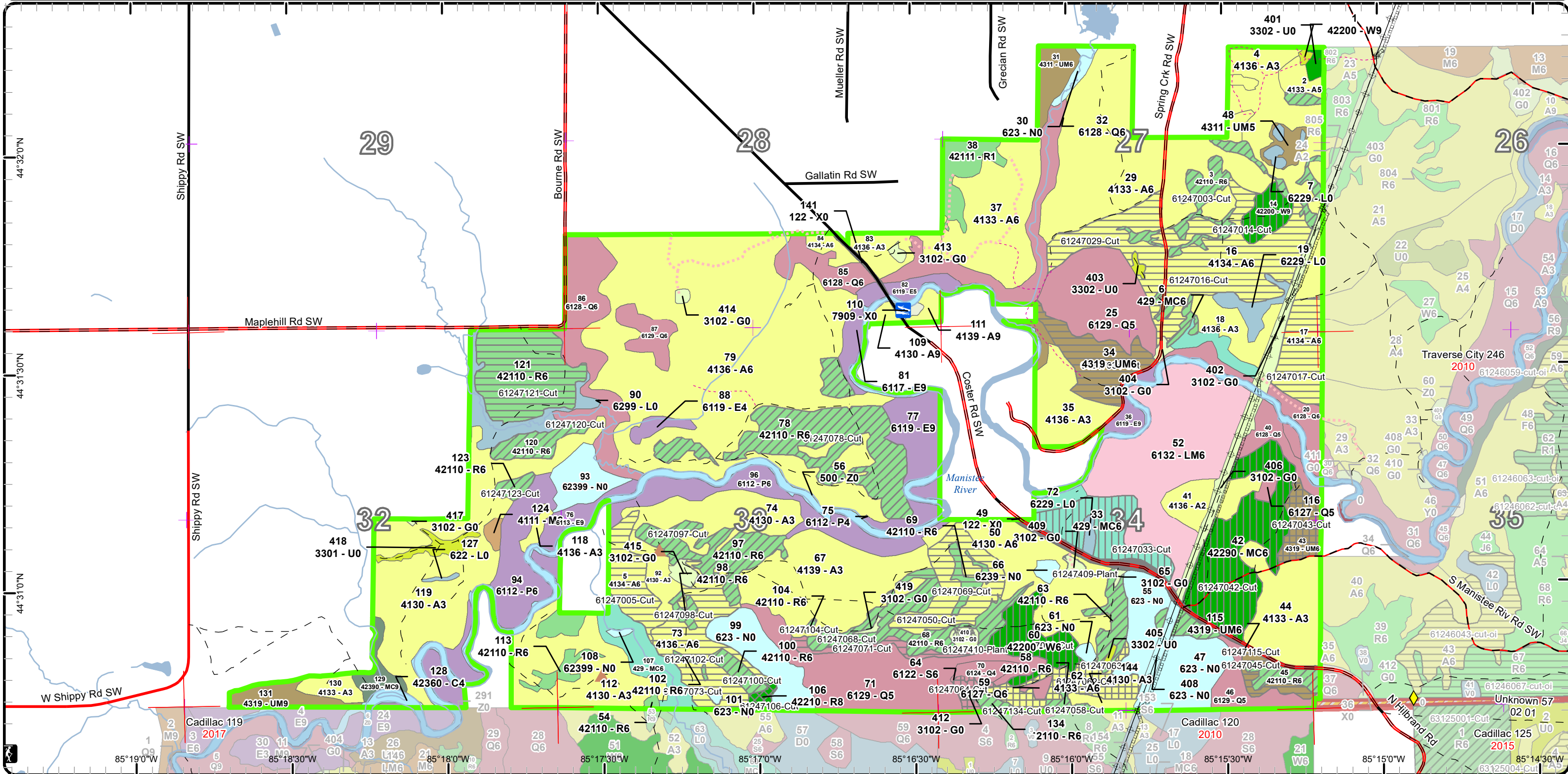
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 247
 T25N R08W Sec. 27, 28, 32-34
 County: Kalkaska
 Unit: Traverse City
 Mgmt Area: Manistee River Valley
 YOE: 2018
 Acres: 1944 GIS Calculated
 Examiner: Kelly Standerfer
 Map Revised: 6/6/2016
 Map Phase: Web - Post

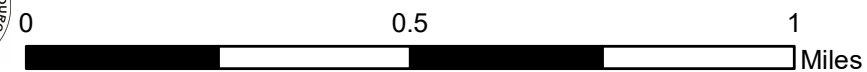
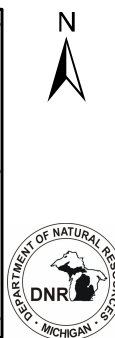
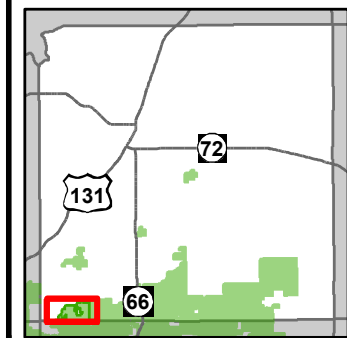


- Miris Corners
- Remonumented Section Corners
- Survey Grade GPS Corners
- Berms
- Boating Access Site
- Hiking Trails
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Rivers
- Pipeline
- Powerline
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Planting (tree species)
- Thinning (Crown, Low, Systematic)
- Shelter Wood (w/Reserves)
- Seed Tree (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 790 - Other Bare/Sparsely Vegetated
- Lakes

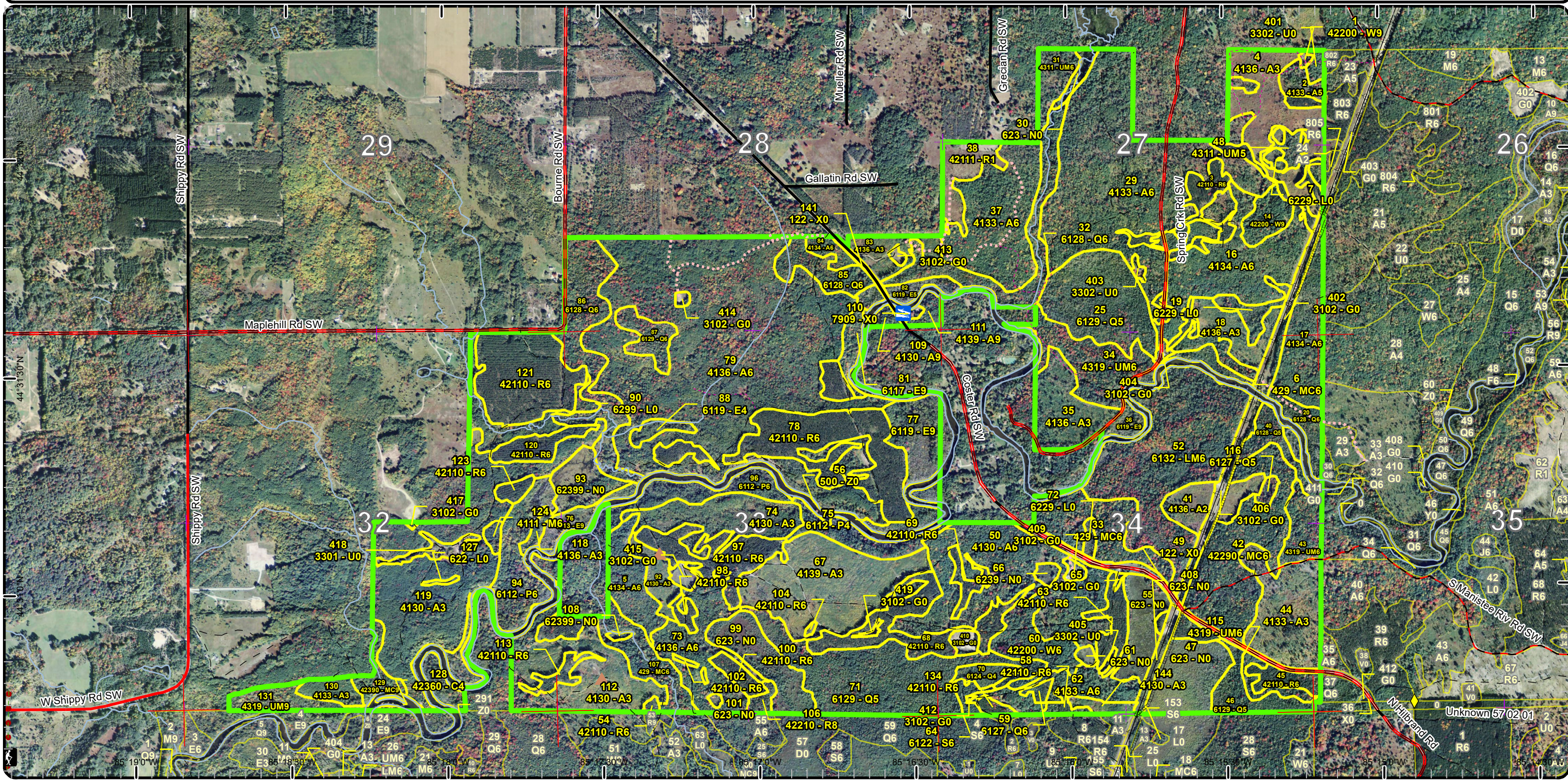


Stand Boundary Map

Compartment: 247
 T25N R08W Sec. 27, 28, 32-34
 County: Kalkaska
 Unit: Traverse City
 Mgmt Area: Manistee River Valley
 YOE: 2018
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 Map Phase: Web - Post

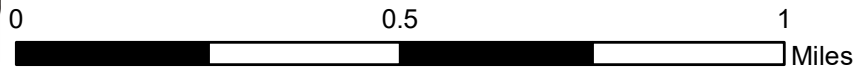
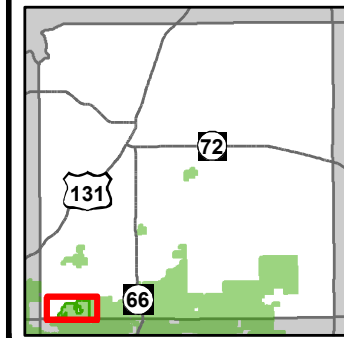


- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ▲ Berms
- Boating Access Site
- Hiking Trails
- County Paved Roads
- Paved Roads
- County Gravel Roads
- - Poor Dirt Roads
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- - - Trail (Non-Recreation)
- - - - Closed Roads
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- Stand Boundaries
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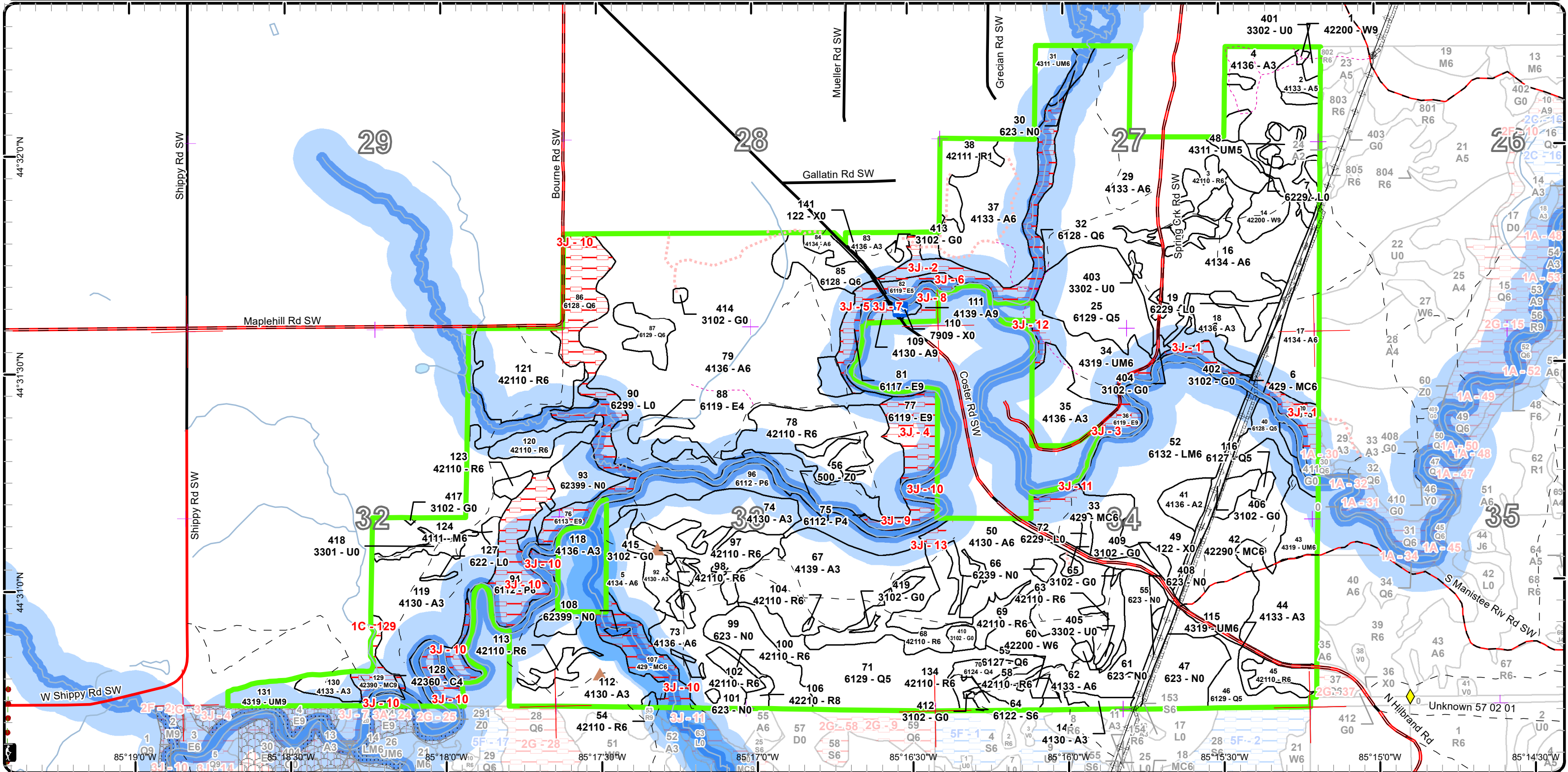


Special Conservation Areas & Site Conditions Map

Compartment: 247
 T25N R08W Sec. 27, 28, 32-34
 County: Kalkaska
 Unit: Traverse City
 Mgmt Area: Manistee River Valley
 YOE: 2018
 Acres: 1944 GIS Calculated
 Examiner: Kelly Standerfer
 Map Revised: 6/6/2016
 Map Phase: Web - Post



- Miris Corners
- Remonumented Section Corners
- Survey Grade GPS Corners
- Berms
- Boating Access Site
- Hiking Trails
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Rivers
- Pipeline
- Powerline
- Compartment Boundary
- Unavailable
- 1C: Other dept or div proc/practices
- 3J: Water quality / BMPs (stream, river, or lake)
- Stand Boundaries
- Special Conservation Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Other SCA (No Category Assigned)



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	225	3	494	0	177	0	16	2	0	0	0	0	0	0	0	0	3	920
Bare/Sparsely Vegetated	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Herbaceous Openland	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Low-Density Trees	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Lowland Aspen/Balsam Poplar	0	0	0	0	0	27	28	0	0	0	0	0	0	0	0	0	0	0	55
Lowland Conifers	0	0	0	0	0	0	0	76	105	14	0	0	0	0	0	0	0	20	215
Lowland Deciduous	0	0	0	0	0	0	4	5	21	5	0	0	0	0	0	0	0	24	59
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74	74
Lowland Shrub	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Lowland Spruce/Fir	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Marsh	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	46
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Red Pine	0	12	0	0	0	164	23	24	0	0	0	0	0	0	0	0	0	0	223
Upland Conifers	0	0	0	0	6	0	0	0	16	0	0	0	6	0	0	0	0	25	53
Upland Mixed Forest	0	0	0	9	0	15	0	5	0	0	0	0	0	0	0	0	0	33	62
Urban	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Water	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
White Pine	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	8	27
Total	204	237	3	503	6	383	55	129	163	19	0	0	6	0	0	0	0	235	1943



Report 2 – Treatment Summary

Traverse City Mgt. Unit
Year of Entry:

Acres of Harvest

Compartment 247
Total Compartment Acres: 1,944

Commercial Harvest - 511
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	Oversory Removal	Salvage	Other	Total Acres
Aspen	156	0	0	17	0	0	0	0	0	173
Lowland Conifers	5	0	0	0	0	0	0	0	0	5
Lowland Spruce/Fir	0	0	0	3	0	0	0	0	0	3
Natural Mixed Pines	0	0	0	0	46	0	0	0	0	46
Red Pine	42	3	0	0	0	157	0	0	0	202
Upland Conifers	0	0	0	0	21	0	0	0	0	21
Upland Mixed Forest	26	0	0	11	0	0	0	0	0	37
White Pine	0	0	0	0	25	0	0	0	0	25
Total	229	3	0	31	92	157	0	0	0	511

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	511	0	4	0	0	0	0	0	0	516
Next Step	0	74	40	0	0	35	390	0	0	539
Total	511	74	44	0	0	35	390	0	0	1054



Standa	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
3	61247003-Cut	22.1	42110 - Planted Red Pine	Poletimber Well	53	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription lightly thin stands
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

5	61247005-Cut	16.1	4134 - Aspen, Spruce/Fir	Poletimber Well	63	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription mark pine to take out at north end residual target BA 30-70 to encourage regeneration advancement, cut all aspen and fir over 3" dbh, OK to mark a few seed trees and take some corners off of stand during red line to make sure ~3% retention is left. think there is a drain through eastern 1/3 of stand but hard to tell how wet, most looks to be manageable. Cable on road into north end of stand needs to be removed ASAP and put at private property line.

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

Acceptable mixed aspen, conifer or mixed deciduos
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

14	61247014-Cut	8.3	42200 - Natural White Pine	Sawtimber Well	70	141-170	Harvest	Shelterwood	4319 - Mixed Upland Forest	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription shelterwood stand, not enough nice single stems to justify thinning the stand, remove most short lived trees, red maple, aspen, balsam fir over 4" dbh and green tree mixed pine. target residual 20-50BA OK to clear cut some areas as well if aspen present.

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

Acceptable mixed conifer with mixed deciduous, expect it to push back to white pine
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

16	61247016-Cut	45.1	4134 - Aspen, Spruce/Fir	Poletimber Well	46	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription clearcut, save 3-10% for retention and diversity along LO @ se end and scattered as desired by wildlife division. save fir under 3" DBh and save some white pine. save some or all oak.

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

Acceptable aspen, mixed with fir, conifer and deciduous is ok post harvest
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
17	61247017-Cut	18.4	4134 - Aspen, Spruce/Fir	Poletimber Well	47	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			Treat south 2/3 of the stand this YOY, treat north 1/3 with compartment to the east. Final harvest, save fir under 3" dbh and some scattered pine and								
<u>Specs:</u>			save most or all oak. make sure 175' buffer in place along river. retention will be the buffer and scattered residual understory fir and scattered oak and conifer.								
<u>Next Step</u>			Monitoring, Natural Regen (Re-Inventory)								
<u>Treatments:</u>											
<u>Acceptable Regen:</u>			aspen, mixed conifer and mixed deciduous								
<u>Other Comment:</u>											
<u>Proposed Start Date:</u>			10/01/2017								
29	61247029-Cut	23.9	4133 - Aspen, Mixed Pine	Poletimber Well	28	Immature	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			cut southern ~1/4 of stand to break up aspen age in area. this appears to be more mature with quite a bit of fir mixed in. cut aspen, fir and maple over								
<u>Specs:</u>			3" dbh, ok to dip into Q type when feasible to restart some of the Qtype. save most oak as there isn't much in this area and save some pine as well for visual and retention. long term retention for stand will be scattered pine and riparian buffer along the creek on the west edge of stand. buffer creek by atleast 100'. leave some hare trees along swamp edge								
<u>Next Step</u>			Monitoring, Natural Regen (Re-Inventory)								
<u>Treatments:</u>											
<u>Acceptable Regen:</u>			aspen with mixed conifer and mixed deciduous								
<u>Other Comment:</u>											
<u>Proposed Start Date:</u>			10/01/2017								
33	61247033-Cut	21.4	429 - Mixed Upland Conifers	Poletimber Well	65	111-140	Harvest	Shelterwood	4319 - Mixed Upland Forest	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			remove most short lived species over 3" dbh and mark pine down to 20-50 BA. buffer river by 175' save all or most oak. probably wont be taking out								
<u>Specs:</u>			much pine to get down to the 20-50 BA range. leave nicer formed trees. overall its a regen cut to get mixed species back, leaving enough residual BA to come back for in 20 years or so after regen is fully established.								
<u>Next Step</u>			Monitoring, Natural Regen (Re-Inventory)								
<u>Treatments:</u>											
<u>Acceptable Regen:</u>			mixed aspen, deciduous and conifer								
<u>Other Comment:</u>											
<u>Proposed Start Date:</u>			10/01/2017								
34	61247034-Cut	21.0	4319 - Mixed Upland Forest	Poletimber Well	45	1-50	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			cut all aspen, fir and red maple over 3 or 4" dbh and mark some pine and other species to remove if needed. overall should look like a seed tree cut								
<u>Specs:</u>			post harvest with scattered to clumpy residual. may need to buffer drain area that appears to be going down the center of the stand but hard to tell what it looks like with all of the snow. buffer river by 175 natural river. river buffer and scattered residual will be retention, will be way over the 10% minimum. leave some hare trees along swamp edges.								
<u>Next Step</u>			Monitoring, Natural Regen (Re-Inventory)								
<u>Treatments:</u>											
<u>Acceptable Regen:</u>			aspen with mixed conifer and mixed deciduous.								
<u>Other Comment:</u>											
<u>Proposed Start Date:</u>			10/01/2017								



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
42	61247042-Cut	45.5	42290 - Natural Mixed Pine	Poletimber Well	60	171-200	Harvest	Shelterwood	429 - Mixed Upland Conifers	Even-Aged	Proposal

Habitat Cut: No

Site Condition:

Prescription cut all aspen, red maple, jack pine and fir over 3" dbh. mark red and white pine areas down to 20-50BA. shelterwood harvest, will come back for
Specs: overstory in 20 years or so after stand has regenerated. few wet holes throughout.

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

Acceptable miced conifer and deciduous ok post harvest
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

43	61247043-Cut	11.0	4319 - Mixed Upland Forest	Poletimber Well	47	81-110	Harvest	Seed Tree with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription cut out short lived species and mark some red and white pine to leave for good, save most or all oak. regeneration cut via seed tree.
Specs:

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

Acceptable aspen, mixed deciduous and mixed conifer
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

45	61247045-Cut	10.4	42110 - Planted Red Pine	Poletimber Well	66	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription stand ready for another light thin
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

50	61247050-Cut	23.8	4130 - Aspen	Poletimber Well	46	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription final harvest, retention will be along the natural river to the north as well as saved scattered oak and pine. ok to same some or all oak and conifer,
Specs: some pine is in rough shape so may want to cut some. probably green tree leave a mixed bag for seed, diversity and retention but aspen to be saved will be along the river.

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

Acceptable aspen, mixed deciduous or conifer.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
58 61247058-Cut	2.4	42110 - Planted Red Pine	Poletimber Well	66	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription lightly thin again this YOE with stand to the south out of manton in 2020

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2020

60 61247060-Cut	16.5	42200 - Natural White Pine	Poletimber Well	76	141-170	Harvest	Shelterwood	4319 - Mixed Upland Forest	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription remove short lived species over 3" dbh and mark pine down to 20-50 leaving enough to come back for in 10-20 years after it has regenerated. most

Specs: stems are multi topped.

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

Acceptable mixed conifer, or any mixed deciduous, expect a nice mixture of conifer and deciduous.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

62 61247062-Cut	16.8	4133 - Aspen, Mixed Pine	Poletimber Well	46	51-80	Harvest	Seed Tree with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription green tree pine and oak to save. cut fir, aspen and red maple over 3" dbh. save some along wet areas as well for retention.

Specs:

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

Acceptable mixed aspen, deciduous and conifer is acceptable post harvest, mixed bag stand now, mixed bag regen would be great.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

63 61247063-Cut	8.7	42110 - Planted Red Pine	Poletimber Well	66	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription thinned last YOE but ready for another light thin.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
64	61247064-Cut	3.1	6122 - Black Spruce	Poletimber Well	66	111-140	Harvest	Seed Tree	612 - Lowland Coniferous Forest	Even-Aged	Proposal

Habitat Cut: No

Site Condition:

Prescription cut spruce and tamarack over 4" dbh, work around younger regen areas. ok to mark some seed if needed but most should have pretty good seed coverage from adjacent stand.
Specs:

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

Acceptable Regen: mixed swamp conifer with deciduous

Other Comment:

Proposed Start Date: 10/01/2017

68	61247068-Cut	23.1	42110 - Planted Red Pine	Poletimber Well	49	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription mark stand, thinned last YOE but ready for another light thin.
Specs:

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

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2017

69	61247069-Cut	5.6	42110 - Planted Red Pine	Poletimber Well	49	141-170	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription small red pine stand (only 2 rows wide in some spots) final harvest and convert to aspen... ok to mark a few trees to leave and ok to cut all... retention
Specs: not needed due to small stand size.

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

Acceptable Regen: aspen, mixed deciduous or mixed conifer. should regenerate very nicely

Other Comment:

Proposed Start Date: 10/01/2017

71	61247071-Cut	5.3	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	66	1-50	Harvest	Clearcut	613 - Lowland Mixed Forest	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription final harvest narrow strip along transition ground. nicer spruce here, should regenerate nicely to mixed swamp conifer, no seed trees needed as its
Specs: super narrow

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

Acceptable Regen: mixed swamp conifer and mixed deciduous ok and expected post harvest

Other Comment:

Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
73	61247073-Cut	29.0	4136 - Aspen, Mixed Conifer	Poletimber Well	46	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription final harvest short lived species over 3" dbh. ok to mark some pine to leave or mark to take which ever is less work. treat stand 55 in compartment to the south with this stand as this is the only access point.

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

Acceptable aspen, with mixed deciduous and conifer is expected and desired.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

78	61247078-Cut	49.5	42110 - Planted Red Pine	Poletimber Well	49	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription thinned last YOE but ready for another light thin now
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

97	61247097-Cut	20.4	42110 - Planted Red Pine	Poletimber Well	49	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription thinned last YOE but ready for another light thin,
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

98	61247098-Cut	2.4	42110 - Planted Red Pine	Poletimber Well	49	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription lightly thin stand while we are here
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
100	61247100-Cut	4.5	42110 - Planted Red Pine	Poletimber Well	49	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription crown thin stand
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

102	61247102-Cut	0.7	42110 - Planted Red Pine	Poletimber Well	49	141-170	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription narrow strips of pine surrounded by aspen. clear cut and push to mixed aspen and mixed deciduous.
Specs:

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

Acceptable mixed aspen, deciduous or conifer
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

104	61247104-Cut	0.4	42110 - Planted Red Pine	Poletimber Well	49	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription final harvest and push to aspen
Specs:

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

Acceptable aspen, mixed conifer and deciduous
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

106	61247106-Cut	2.6	42210 - Natural Red Pine	Sawtimber Medium	69	51-80	Harvest	Single Tree Selection	4221 - Natural Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription remove a few of the higher risk trees while we are here.. stand already has pretty good spacing but should lightly thin stand while we are here.
Specs:

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

Acceptable mixed conifer and mixed deciduous
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
115	61247115-Cut	4.5	4319 - Mixed Upland Forest	Poletimber Well	65	81-110	Harvest	Clearcut	4319 - Mixed Upland Forest	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription cut all trees over 3 or 4" except do not cut cedar or hemlock. plenty of seed left along edge and narrow enough where seed trees should not be needed. retention is rest of stand.
Specs:

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

Acceptable aspen with mixed conifer and deciduous
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

120	61247120-Cut	8.2	42110 - Planted Red Pine	Poletimber Well	49	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription thinned last YOE but ready for another light thin, winter cut likely needed due to poor shape of road.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

121	61247121-Cut	35.4	42110 - Planted Red Pine	Poletimber Well	49	141-170	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription final harvest and replant back to red pine. chip harvest.
Specs:

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

Acceptable planted red pine with some other species mixed in but goal is a well established red pine stand that is free to grow.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

123	61247123-Cut	2.8	42110 - Planted Red Pine	Poletimber Well	49	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription thinned last YOE but ready for another light thin, winter cut likely needed due to poor shape of road.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
134	61247134-Cut	2.3	42110 - Planted Red Pine	Poletimber Well	46	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription crown this stand
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

409	61247409-Plant	1.6	3102 - Grass	Nonstocked		Unspecified	Planting	Initial Plant	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription site is seeing quite a bit of ORV use. close trail and disperse plant red pine or jack pine or any mix of conifer to help speed up recovery process.
Specs:

Next Step Planting, Initial Plant
Treatments:

Acceptable red pine mixed with any upland conifer to help site recover. not a commercial plantation.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

410	61247410-Plant	2.7	3102 - Grass	Nonstocked		Unspecified	Planting	Initial Plant	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription old abandoned well pad, trench and plant to red pine if possible, pretty small stand.
Specs:

Next Step Planting, Initial Plant; SitePrep, Trenching
Treatments:

Acceptable red pine
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

**Total Treatment
Acreage Proposed: 515.5**

Report 4 – Site Conditions

Traverse City Mgt. Unit
Kelly Standerfer : Examiner

Compartment: 247
Year of Entry: 2018

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	1C	3J
		With Condition	Not Available			
921	914	0	7	Aspen		7
1	1	0	0	Bare/Sparsely Vegetated		
0	0	0	0	Cedar		
30	30	0	0	Herbaceous Openland		
7	7	0	0	Low-Density Trees		
55	27	0	28	Lowland Aspen/Balsam Poplar		28
214	143	0	71	Lowland Conifers		71
59	4	0	55	Lowland Deciduous		55
74	74	0	0	Lowland Mixed Forest		
24	24	0	0	Lowland Shrub		
3	3	0	0	Lowland Spruce/Fir		
81	81	0	0	Marsh		
46	46	0	0	Natural Mixed Pines		
2	2	0	0	Northern Hardwood		
223	223	0	0	Red Pine		
53	27	0	25	Upland Conifers	6	19
62	60	0	2	Upland Mixed Forest		2
11	11	0	0	Urban		
50	50	0	0	Water		
27	27	0	0	White Pine		
1,944	1,755		189	Total Forested Acres	6	182
	90%		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	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	12	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Report 4 – Site Conditions

Traverse City Mgt. Unit
Kelly Standerfer : Examiner

Compartment: 247
Year of Entry: 2018

2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	24	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Traverse City Mgt. Unit
 Kelly Standerfer : Examiner

Compartment: 247
 Year of Entry: 2018

9	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	95	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	3	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:							
12	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	3	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:							
129	Unavailable	1C: Other dept or div proc/practices	6	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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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 Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
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	42200 - Natural White Pine	Sawtimber Well	2.2	75	141-170	Stand could easily hold 10 years or could be cut now as needed, only a 2 acre stand so hold until aspen to the south is cut next YOE. pretty nice stem quality especially compared to other pine stands in this compartment. few scattered red oak. consumers red pine to the east, DONT thin theirs. OPIC - FMD: 12/22/2005 White pine stand coming along well. Look at in 20 years. (Grieve)
2	4133 - Aspen, Mixed Pine	Poletimber Medium	10.1	28	1-50	Pretty poor shape aspen, should make it to mostly merchantable size by next YOE. should hold ok. likely treat these three pockets with stand to the east (st 23). stand converting from A3 to A5ish. western two pockets a bit sparser density wise and have some larger aspen present, likely the small residual trees that were left when cut previously. OPIC - FMD: 12/22/2005 Poor looking stand. Had residual left during the last cut. WP stumps. Cut in 20 years. Will add age diversity to area.. (Grieve)
3	42110 - Planted Red Pine	Poletimber Well	22.1	53	141-170	Most is in the 140-180 BA range so give another light thin to keep trees growing well. take poor formed first and trees that have lost the race. most or all of these stands will likely convert to surrounding covertypes as they are all small and fingery stands OPIC - FMD: 12/22/2005 Old Consumers Energy plantings. Look good, ready for a thinning. Stands 3, 10, 13, 15, 23, 24, 26 & 27 are all the same. (Grieve) Sale #024-05 Yellow Trees Red Pine completed 8-19-2010 dkj
4	4136 - Aspen, Mixed Conifer	Sapling Well	32.3	4	Immature	Site looks to have pretty good coverage overall. Nice mix of conifer along with red maple and aspen. aspen and white pine left around LO's as there are pretty steep slopes. leave those for good, not much timber and will push to white pine. OPIC - FMD: Stand harvested in 2012 under tsale contract 027-08-01-P.C. 12/22/2005 Poor form aspen. Needs to start over. Could cut now or in 10 years. Will be a chip job. Highly varriable. Stand to be managed for aspen but oak & red maple would be expectable. (Grieve) 10/17/2006 Agreement with Wildlife, split stand, cut this half this year. Wildlife reserves the right to mark leave trees & line out leave areas. Timber sale will not be held up if wildlife work is not completed. Clearcut with retention. (Grieve)
5	4134 - Aspen, Spruce/Fir	Poletimber Well	16.1	63	111-140	Bulk of stand is very nice aspen mixed with dense balsam fir understory and mid canopy. North end more W9 but still has aspen mixed throughout. OPIC - FMD: 12/1/2005 White pine stand along Ham Creek. (Grieve)



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
6	429 - Mixed Upland Conifers	Poletimber Well	5.8	39	51-80	some younger aspen clones and some mixed fir and white piñon with older aspen. left for retention on larger stand and riparian buffer. some of this stand may be able to be cut in future but bulk of it is within river/ bluff buffer. OPIC - FMD: Stand harvested in 2012 under tsale contract 027-08-01-P.C. 12/22/2005 Near river, high water table, clearcut & leave white pine. (Grieve) 10/17/2006 Wildlife reserves the right to mark leave trees & line out leave areas. Timber sale will not be held up if wildlife work is not completed. Stand to be managed for aspen but oak & red maple would be expectable. Clearcut with retention. (Grieve) 12/28/2006 Per review add wording, "Include buffer to bluff along Manistee plus 175' buffer. If bluff is within 175 feet incorporate an additional 50' buffer from top of the bluff. (Follow Natural Rivers Guidelines". (Grieve)
14	42200 - Natural White Pine	Sawtimber Well	8.3	70	141-170	pretty poor form white pine, some nicer single stems. fingers of red pine at northend. mixed deciduous here and there but mainly white pine. OPIC - FMD: 12/22/2005 Open grown White Pine. Poor form weeviled badly. Look at in 10 years. (Grieve)
16	4134 - Aspen, Spruce/Fir	Poletimber Well	45.1	46	111-140	Some at north end is pretty rough shape, some is very nice. some areas with thick balsam fir. OPIC - FMD: 12/22/2005 Poor form aspen. Needs to start over. Could cut now or in 10 years. Will be a chip job. Highly varriable. (Grieve) 10/17/2006 Agreement with Wildlife, split stand, cut this half in ten this years. (Grieve)
17	4134 - Aspen, Spruce/Fir	Poletimber Well	23.5	47	51-80	Stand big enough to manage on its own. north 1/3 is pretty poor aspen, sparse and much is not merchantable size. south half has better stand density and overall tree size is bigger. More fir and conifer as you go south in stand. block off trail along edge of ridge down to river, don't need to drive back into stand as there is good access via powerline and from the SE in adjacent compartment. OPIC - FMD: 12/22/2005 Manage this with compartment 246 to the east. (Grieve)
18	4136 - Aspen, Mixed Conifer	Sapling Well	12.6	4	Immature	Nice regen overall, scattered conifer throughout, some mature timber remained along the wet LO, to small to map out but will be left for good for retention and long term age diversity. OPIC - FMD: Stand harvested in 2012 under tsale contract 027-08-01-P.C. 12/22/2005 Near river, high water table, clearcut & leave white pine. (Grieve) 10/17/2006 Wildlife reserves the right to mark leave trees & line out leave areas. Timber sale will not be held up if wildlife work is not completed. Stand to be managed for aspen but oak & red maple would be expectable. Clearcut with retention. (Grieve) 12/28/2006 Per review add wording, "Include buffer to bluff along Manistee plus 175' buffer. If bluff is within 175 feet incorporate an additional 50' buffer from top of the bluff. (Follow Natural Rivers Guidelines". (Grieve)
20	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	13.6	84	81-110	slope also included in this stand. all falls in natural river vegetative buffer so will never be managed. OPIC - FMD: 12/22/2005 Cedar swamp next to Manistee River (Grieve)
25	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	37.1	75	51-80	Looks to wet to manage, timber is pretty scattered in much of it. thick around the edges. heavy deer use. OPIC - FMD: 12/22/2005 swamp at base of old river cut (Grieve)



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
29	4133 - Aspen, Mixed Pine	Poletimber Well	110.5	28	Immature	<p>White pine condensed along drain at northwest edge of stand and scattered through out. red pine mainly north end as well, some thicker pockets. south end has quite a bit of balsam mixed in. south end appears to have had more residual left wen cut before so some larger aspen mixed in. cut south 1/4 of the stand now to break up age class, portion being cut appears to be more mature than the bulk of the stand. OK to dip into adjacent Q type when possible to restart some of the spruce edge.</p> <p>OPIC - FMD: 12/22/2005 Poor looking stand. Had residual left during the last cut. WP stumps. Cut in 20 years. Will add age diversity to area.. (Grieve)</p>
31	4311 - Pine, Aspen Mix	Poletimber Well	9.2	28	51-80	<p>Aspen is in rough shape... pine is mostly muti topped, look to treat with stand to the south in 10-20 yrs as needed. probably best to push towards white pine in the future as aspen is pretty rough.</p> <p>OPIC - FMD: 12/13/2005. Old Consumers Energy clearcut. Looks very good. Has many patches of residual, cedar, balsam & white pine. Sometimes solid small stands. Imagery is not very good for this compartment & is difficult to delineate stands well. (Grieve)</p>
32	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	24.2	75	111-140	<p>OPIC - FMD: 1/3/2006 Sometimes this is solid hemlock, sometimes solid cedar & sometimes solid balsam fir. Steep hill sides from creeks & the Manistee River. (Grieve)</p>
33	429 - Mixed Upland Conifers	Poletimber Well	24.6	65	111-140	<p>this is an upland area in the old Q type stand, far west edge has some wet area. puch of this stand reverted back to state just in 2012, there is an old home site with road into it at the north end of stand.</p> <p>OPIC - FMD: 12/20/2005. Large conifer swamp next to Manistee River. Parts of this swamp are high enough to support white pine. (Grieve)</p>
34	4319 - Mixed Upland Forest	Poletimber Well	23.5	45	1-50	<p>Highly variable, quite a bit has dense fir understory, some cedar fingers along wet areas... hard to pick out on map :-/</p> <p>OPIC - FMD: 12/22/2005 Beech in understory, high water table, very mixed stand. Changes each time you move. Look at in 10 or twenty years. (Grieve)</p>
35	4136 - Aspen, Mixed Conifer	Sapling Well	21.8	4	Immature	<p>Stand fully regenerated. some cedar pockets and residual scattered pine remained. nice mix of regen.</p> <p>OPIC - FMD: Stand harvested in 2012 under tsale contract 027-08-01-P.C. 12/23/2005 Close to river. Has been posted & I have found a discrepancy with ownership lines. Will look in to this and correct by time of review. Cut now & leave all red & white pine & oak. High risk & high water table. Put in rutting spec. Should only be cut in the winter or during a dry summer or fall. Stand to be managed for aspen but oak & red maple would be expectable. (Grieve) 10/17/2006 Wildlife reserves the right to mark leave trees & line out leave areas. Timber sale will not be held up if wildlife work is not completed. Clearcut with retention. (Grieve) 12/28/2006 Per review add wording, "Include buffer to bluff along Manistee plus 175' buffer. If bluff is within 175 feet incorporate an additional 50' buffer from top of the bluff. (Follow Natural Rivers Guidelines". (Grieve)</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	5.4	89	111-140	<p>mixed fir, ash, aspen and maple along river. all falls within natural river buffer, will never be managed.</p> <p>OPIC - FMD: 11/23/2005 Low lands next to Manistee River. (Grieve)</p>
37	4133 - Aspen, Mixed Pine	Poletimber Well	43.6	28	51-80	<p>still looking good, some is more A6 but most is A3/A5.</p> <p>OPIC - FMD: 12/13/2005. Old Consumers Energy clearcut. Looks very good. Has many patches of residual, cedar, balsam & white pine. Sometimes solid small stands. Imagery is not very good for this compartment & is difficult to delineate stands well. (Grieve)</p>
38	42111 - Planted Red Pine, Mixed Deciduous	Sapling Poor	12.2	4	Immature	<p>looks like decent stocking but lots of snow yet so cant see all trees :-/ regen survey should have the numbers.</p> <p>OPIC - FMD: 12/20/2005. This is an old CP red pine planting which missed its first thinning. Clearcut & plant to red pine per Red Pine Project recommendations. (Grieve) Stand Clearcut Coster Road Clearcuts 61-031-08-01. FTP submitted for tenching and planting back to red pine KJS</p>
40	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	8.8	79	111-140	<p>some aspen mixed in with dead ash and mixed swamp conifer, birch and red maple. most will fall in natural river vegetation buffer. some appears to be manageable but most is pretty very. OK to dip into this stand if ground allows on west edge near powerline. tons of deer activity this winter.</p> <p>OPIC - FMD: 12/20/2005. Large conifer swamp next to Manistee River. Parts of this swamp are high enough to support white pine. (Grieve)</p>
41	4136 - Aspen, Mixed Conifer	Sapling Medium	12.9	7	Immature	<p>deer hitting regen pretty hard, most has regenerated but some is more open. OPIC - FMD: 12/20/2005. Clearcut along with stand on the other side of power line. Stand to be managed for aspen but oak & red maple would be expectable. (Grieve) 10/17/2006 Wildlife reserves the right to mark leave trees & line out leave areas. Timber sale will not be held up if wildlife work is not completed. Clearcut without retention, acreage small. (Grieve) Stand cut with Coster road clearcuts 61-031-08-01 Looks good KJS</p>
42	42290 - Natural Mixed Pine	Poletimber Well	45.5	60	171-200	<p>jack pine mixed throughout that is falling apart. some more red pine but most more white pine. fir, aspen and red maple scattered throughout. Far north finger around the wet stand has more fir and paper birch that is falling apart. buffer river by atleast 175' ok to leave a bit thicker at north end as there is some more wet ground up there. keep an eye out for homestead/logging camp when setting sale up.</p> <p>OPIC - FMD: 12/22/2005 White pine stand coming along well. Look at in 20 years. (Grieve)</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
43	4319 - Mixed Upland Forest	Poletimber Well	11.0	47	81-110	<p>aspen is pretty rough shape overall. mixed conifer with red maple aspen and oak. cut now to regenerate stand. keep an eye out for historical logging sites when setting up and adjust sale accordingly if needed as directed by state Arc folks.</p> <p>OPIC - FMD: 12/22/2005. Old white pine stumps. Aspen very poor quality, white pine weeviled but looks good. Look at in 20 years. (Grieve)</p>
44	4133 - Aspen, Mixed Pine	Sapling Well	32.1	7	Immature	<p>Manage for the younger species, residual trees that were left are to scattered to chase. short lived species taken out, scattered red pine, white pine and oak remain post harvest, some clumps of mature but most is scattered... 0-50 BA remained post harvest but most is probably 10BA or less.</p> <p>OPIC - FMD: 12/16/2005. Very mixed stand age wise. Lets cut & improve the aspen. Stand to be managed for aspen but oak & red maple would be expectable. (Grieve) 10/17/2006 Wildlife reserves the right to mark leave trees & line out leave areas. Timber sale will not be held up if wildlife work is not completed. Encourage under representative species. (Grieve) Stand cut with Coster road clearcuts 61-031-08-01 Looks good KJS</p>
45	42110 - Planted Red Pine	Poletimber Well	10.4	66	141-170	<p>stands thinned in 2010 and 2011... doing good, could lightly thin again. will likely let stands convert to other species over time due to small stand size.</p> <p>OPIC - FMD: Stand was harvested in 2010/2011 under tsale contract 0300801. Sale closed 5/11/11-PC. 12/16/2005. Old CP plantation, thinned once. Nice looking. Mark job, take about 1/3. Stands 63, 48, 51, 45, & 59 all the same. (Grieve)</p>
46	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	11.7	80	51-80	<p>Most is pretty wet and sparse. thicker areas had a ton of deer activity this year. took out the transitional stand area to be treated with adjacent red pine to get some conifer, aspen and maple restarted.</p> <p>OPIC - FMD: 12/20/2005. Large conifer swamp next to Manistee River. Parts of this swamp are high enough to support white pine. (Grieve)</p>
48	4311 - Pine, Aspen Mix	Poletimber Medium	4.2	45	1-50	<p>This area was taken out of the surrounding timber sale. steeper sloped that go down to ponds. mixed poor shape aspen with quite a bit of white pine. will function as long term retention and will help buffer vernal ponds.</p> <p>OPIC - FMD: Stand harvested in 2012 under tsale contract 027-08-01-P.C. 12/22/2005 Poor form aspen. Needs to start over. Could cut now or in 10 years. Will be a chip job. Highly variable. Stand to be managed for aspen but oak & red maple would be expectable. (Grieve) 10/17/2006 Agreement with Wildlife, split stand, cut this half this year. Wildlife reserves the right to mark leave trees & line out leave areas. Timber sale will not be held up if wildlife work is not completed. Clearcut with retention. (Grieve)</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
50	4130 - Aspen	Poletimber Well	62.5	46	81-110	<p>some areas more A3 yet and some decent quality and stocking of primarily aspen. maple, white pine and fir mixed throughout. east end seems to have some younger pockets mixed in. will treat western ~1/2 to 1/3 this year of entry to break up age class and will cut the red pine finger stand to have it regenerate to aspen as well.</p> <p>OPIC - FMD: 12/1/2005 Nice looking stand. Cut ½ in 10 the other ½ in 20. (Grieve)</p>
52	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	73.7	75	81-110	<p>Highly variable stand. drain at south end. there are some upland ridges that are tricky to pick out on imagery. there is a steep ridge at edge of stand 41. may be able to treat some of this stand in the future but it will be very tricky. nothing needed at this time. ash is dead. Some LO inclusions as well. OPIC - FMD: 12/20/2005. Large conifer swamp next to Manistee River. Parts of this swamp are high enough to support white pine. (Grieve)</p>
54	42110 - Planted Red Pine	Poletimber Well	0.9	56	111-140	<p>row thinned with stand to south in comp 119 out of the Manton office. probably be ready for another thin in 10ish years</p>
58	42110 - Planted Red Pine	Poletimber Well	2.4	66	141-170	<p>lightly thin again this year to keep it growing... Manton likely will thin this one</p> <p>OPIC - FMD: 12/16/2005. Old CP plantation, thinned once. Nice looking. Mark job, take about 1/3. Stands 63, 48, 51, 45, & 59 all the same. Manton office treated this stand with the part which was in Missakee County in 2004. (Grieve)</p>
59	6127 - Lowland Pine	Poletimber Well	1.7	66	141-170	<p>give light thin while in the area treating surrounding stand.</p> <p>OPIC - FMD: Stand was harvested in 2010/2011 under tsale contract 0300801. Sale closed 5/11/11-PC. 12/16/2005. Old CP plantation, thinned once. Nice looking. Mark job, take about 1/3. Stands 63, 48, 51, 45, & 59 all the same. (Grieve)</p>
60	42200 - Natural White Pine	Poletimber Well	16.5	76	141-170	<p>a few red pine pockets, some pretty low stocking but overall thick with good density. some wet areas on west and south edge</p> <p>OPIC - FMD: 12/16/2005. High watertable. Some nice white pine coming along. (Grieve)</p>
62	4133 - Aspen, Mixed Pine	Poletimber Well	16.8	46	51-80	<p>Aspen appears to be two aged, some is in pretty rough shape and sparsly stocked. cut now to promote good thick stem density, should be great grouse and woodcock habitat along wet areas.</p> <p>OPIC - FMD: 12/16/2005. High water table. Some nice white pine also. (Grieve)</p>
63	42110 - Planted Red Pine	Poletimber Well	8.7	66	141-170	<p>Lightly thin again this YOE to keep it growing good. take poor formed and overtopped trees first and mark rest down to 90-120 BA. some mixed deciduous throughout but not much. ok to mark some if needed for operability.</p> <p>OPIC - FMD: Stand was harvested in 2010/2011 under tsale contract 0300801. Sale closed 5/11/11-PC. 12/16/2005. Old CP plantation, thinned once. Nice looking. Mark job, take about 1/3. Stands 63, 48, 51, 45, & 59 all the same. (Grieve)</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
64	6122 - Black Spruce	Poletimber Well	3.1	66	111-140	<p>transition ground supporting pretty good stocked black spruce and mixed swamp conifer. treat this area to promote young Q type regen. thin strip of a stand so most should get pretty good seed drop from adjacent residual stands. OK to leave some scattered trees and younger regen if possible.</p> <p>OPIC - FMD: 12/16/2005. Swamp, scattered "L" type. Not really well stocked. (Grieve)</p>
67	4139 - Aspen, Mixed Deciduous	Sapling Well	54.6	5	Immature	<p>Stand has regenerated nicely to mixed red maple and aspen with some fir and white pine areas as well. OPIC - FMD: Stand harvested in 2011/2012 under tsale contract 028-08-01-(2/7/12 P.C.) 12/1/2005 Nice looking stand. Cut ½ in 10 the other ½ in 20. Stand to be managed for aspen but oak & red maple would be expectable. (Grieve) 10/17/2006 Wildlife reserves the right to mark leave trees & line out leave areas. Timber sale will not be held up if wildlife work is not completed. Clearcut with retention. (Grieve) 12/28/2006 Per review add wording, "follow Natural Rivers Guidelines". (Grieve)</p>
68	42110 - Planted Red Pine	Poletimber Well	24.4	49	141-170	<p>stand looks good. lightly thin again this YOE to keep it growing. some of the very narrow fingers at north end will be final harvested and encourage to push to mixed aspen and red maple. fingers have advanced regen already.</p> <p>OPIC - FMD: Stand was harvested in 2010/2011 under tsale contract 0300801. Sale closed 5/11/11-PC. 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. (Grieve)</p>
69	42110 - Planted Red Pine	Poletimber Well	4.3	49	141-170	<p>very narrow stand. final harvest now with surrounding aspen and push to mixed aspen and red maple. ok to mark a few red pine to save for diversity and retention but cut most to encourage natural regen.</p> <p>OPIC - FMD: Stand was harvested in 2010/2011 under tsale contract 0300801. Sale closed 5/11/11-PC. 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. (Grieve)</p>
70	6124 - Lowland Spruce- Fir	Poletimber Poor	4.8	66	1-50	<p>almost tag swamp but scattered Q throughout. to wet of a stand to ever treat.</p> <p>OPIC - FMD: 12/16/2005. Swamp, scattered "L" type. Not really well stocked. (Grieve)</p>
71	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	54.7	66	1-50	<p>west end more tamaracky/ LO, central more cedar/ hemlock, east sprucy LO. most looks to wet to cut, heavy deer use in thicker areas.</p> <p>OPIC - FMD: 12/16/2005. Swamp, scattered "L" type. Not really well stocked. (Grieve)</p>
73	4136 - Aspen, Mixed Conifer	Poletimber Well	29.0	46	81-110	<p>some is sparsely stocked with smaller diameter aspen but most is pretty decent. should regenerate nicely and aspen wont get much better on this site. buffer creek on west edge by 100', and ok to leave some residual pockets by the VO stands. treat tand to the south in comp 119 out of manton with this stand.</p> <p>OPIC - FMD: 12/1/2005 Nice looking stand. Cut ½ in 10 the other ½ in 20. (Grieve)</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
74	4130 - Aspen	Sapling Well	26.5	29	1-50	Still looks good, some seems to be older than 29 years old along north edge of red pine stand. all should hold good 10-20 years as needed. OPIC - FMD: 12/1/2005 Nice looking stand. (Grieve)
75	6112 - Lowland Aspen	Poletimber Poor	4.7	53	1-50	Not a manageable stand OPIC - FMD: 12/13/2005. Semi low area in bend of river. (Grieve)
76	6113 - Lowland Maple	Sawtimber Well	21.0	79	111-140	oxbow stand not manageable. eye balled from across the river. OPIC - FMD: 11/23/2005 Low lands next to Manistee River. (Grieve)
77	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	16.4	79	111-140	may be able to cut some of the aspen on west edge along slope but majority of stand should be left alone. Center of stand looks like its under water for much of the year. stand down slope to slightly above river elevation. not a manageable stand. OPIC - FMD: 11/23/2005 Low lands next to Manistee River. (Grieve)
78	42110 - Planted Red Pine	Poletimber Well	49.5	49	141-170	lightly thin again this YOE, very nice red pine for the most part. OPIC - FMD: 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. (Grieve) Stand thinned under 61-029-08-01. Looks good
79	4136 - Aspen, Mixed Conifer	Poletimber Well	211.8	28	1-50	Highly variable stand. some drain throughout as well as wet swamp conifer inclusions. will likely find some of all local species out here. look to break stand up in 10 & 20 years. nothing quite ready just yet OPIC - FMD: 12/13/2005. Old Consumers Energy clearcut. Looks very good. Has many patches of residual, cedar, balsam & white pine. Sometimes solid small stands. Imagery is not very good for this compartment & is difficult to delineate stands well. (Grieve)
81	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	7.5	79	111-140	OPIC - FMD: 11/23/2005 Low lands next to Manistee River. (Grieve)
82	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	4.9	69	51-80	ash maple and aspen along river. all within the natural river veg. buffer
83	4136 - Aspen, Mixed Conifer	Sapling Well	10.7	7	Immature	nice mixed regen overall... OPIC - FMD: 12/20/2005. Starting to move toward northern hardwoods. Clearcut & keep in aspen. Leave scattered clumps of aspen. Stand to be managed for aspen but oak & red maple would be expectable. (Grieve) 10/17/2006 Wildlife reserves the right to mark leave trees & line out leave areas. Clearcut with retention. (Grieve)



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
84	4134 - Aspen, Spruce/Fir	Poletimber Well	4.1	28	81-110	stand in good shape, most is A6 but some is A3/A5ish yet. should hold good 10 years. OPIC - FMD: 12/13/2005. Old Consumers Energy clearcut. Looks very good. Has many patches of residual, cedar, balsam & white pine. Sometimes solid small stands. Imagery is not very good for this compartment & is difficult to delineate stands well. (Grieve)
85	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	11.9	62	51-80	mainly lowland but some upland, drain through stand, may be able to treat a portion of stand with surrounding aspen but nothing needed at this time. OPIC - FMD: 12/13/2005. Low area, but no standing water. (Grieve)
86	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	34.7	79	81-110	bed and banky stream down center of stand, doesn't look like any is manageable due to proximity to creek. nice deer yarding area. OPIC - FMD: 12/13/2005 There is a creek through this stand. Some times it has very high banks, other times not so much. Some big white pine, with sometimes pure small blocks of hemlock. Should never be treated because of the water. (Grieve)
87	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	8.9	71	81-110	mixed swamp conifer and deciduous, likely will be to wet to manage in future but take a closer look when cutting surrounding aspen areas. nothing needed this YO. OPIC - FMD: 12/13/2005 Perched water table. Mostly in patches of cedar or balsam. (Grieve)
88	6119 - Mixed Lowland Deciduous Forest	Poletimber Poor	3.8	51	1-50	almost not stocked. OPIC - FMD: 12/13/2005. Almost a treed bog. (Grieve)
92	4130 - Aspen	Sapling Well	8.1	5	Immature	Nice thick regent!. OPIC - FMD: Stand harvested in 2011/2012 under tsale contract 028-08-01-(2/7/12 P.C.) 12/1/2005 Gate cable trespass in this stand & posting. Good stand for a cut as it is ready. Stand to be managed for aspen but oak & red maple would be expectable. (Grieve) 10/17/2006 Wildlife reserves the right to mark leave trees & line out leave areas. Clearcut with retention. (Grieve)
94	6112 - Lowland Aspen	Poletimber Well	23.1	51	51-80	Like to wet to treat. Lots of beaver activity. OPIC - FMD: 11/29/2005 No cut, not this time anyway, maybe never, to wet. Also, to close to the Manistee River with this stand between the river & the bluff. (Grieve)
96	6112 - Lowland Aspen	Poletimber Well	27.2	46	81-110	aspen and along river... all falls within the naturalriver veg buffer. will never be treated. OPIC - FMD: 12/1/2005 This is the hill side & the run out along the river. No cutting, stand comes & goes from wooded to "L" type & the amount of timber. (Grieve)
97	42110 - Planted Red Pine	Poletimber Well	20.4	49	141-170	stand thinned last yoe. ready for another light thin. OPIC - FMD: Stand was harvested in 2010/2011 under tsale contract 0300801. Sale closed 5/11/11-PC. 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. (Grieve)
98	42110 - Planted Red Pine	Poletimber Well	2.4	49	141-170	stand thinned last yoe. ready for another light thin to keep it growing good. OPIC - FMD: Stand was harvested in 2010/2011 under tsale contract 0300801. Sale closed 5/11/11-PC. 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. (Grieve)



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
100	42110 - Planted Red Pine	Poletimber Well	4.5	49	141-170	nice stand ready for another light thin while we are in the area treating the adjacent stand. OPIC - FMD: Stand was harvested in 2010/2011 under tsale contract 0300801. Sale closed 5/11/11-PC. 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. (Grieve)
102	42110 - Planted Red Pine	Poletimber Well	0.7	49	141-170	Small sliver stands, regen to aspen. .73 acres not worth managing for red pine. OPIC - FMD: 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. (Grieve)
104	42110 - Planted Red Pine	Poletimber Well	0.4	49	111-140	push to aspen OPIC - FMD: 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. (Grieve)
106	42210 - Natural Red Pine	Sawtimber Medium	2.6	69	51-80	stand continues into adjacent compartment to the south. lightly thin this while we are here as we likely wont be back in for 20 years after this thinning. BA is pretty low overall but some high risk stuff that could com eout...treat with stand 55 and 58 in compartment to the south.OPIC - FMD: Stand was harvested in 2010/2011 under tsale contract 0300801. Sale closed 5/11/11-PC. 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. (Grieve)
107	429 - Mixed Upland Conifers	Poletimber Well	15.9	73	141-170	bulk of stand will fall within the natural river buffer recommendation of 100' for the ham creek. nice pine mixed with hemlock, cedar, maple, fir and spruce. separated stand 5 out this YOE as this had mainly aspen and balsam fir. noth end has some larger pine. OPIC - FMD: 12/1/2005 White pine stand along Ham Creek. (Grieve)
109	4130 - Aspen	Sawtimber Well	2.1	75	111-140	right along river, mostly aspen but some maple as well... all within natural river buffer so will never be managed. OPIC - FMD: OI Stand Year Origin was 555
111	4139 - Aspen, Mixed Deciduous	Sawtimber Well	3.3	75	111-140	mixed aspen and maple stand by boat launch parking lot. most falls within natural river buffer. High rec use area and river BMP so no treatment. OPIC - FMD: OI Stand Year Origin was 555
112	4130 - Aspen	Sapling Well	40.4	8	Immature	Cut with sale out of manton office. excellent mixed regen.'OPIC - FMD: 11/23/2005 Aspen not in good shape. Needs a cut, high risk on east side. Looks good in other areas. Stand to be managed for aspen but oak & red maple would be expectable. (Grieve) 10/17/2006 Wildlife reserves the right to mark leave trees & line out leave areas. Clearcut with retention. (Grieve) 12/28/2006 Per review add wording, "follow Natural Rivers Guidelines". (Grieve) Stand set up as part of a sale with Cadillac Unit (Manton)



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
113	42110 - Planted Red Pine	Poletimber Well	8.5	49	141-170	thinned last yoe out of manton... access is via Missaukee county, this little area will be managed out of the manton office. will hold ok 10 years... if manton sets something up near this area would be nice to lightly thin again pretty soon but overall should hold good 10 years. when thinned thin all of this stand even the portion within natural river buffer. otherwise bark beetle may become an issue in unthinned portion. OPIC - FMD: 11/23/2005 Ready for cut. Best to cut with Manton's sale to the south and have just one sale. 3rd row thinning. (Grieve) 12/28/2006 Per review add wording, "follow Natural Rivers Guidelines". (Grieve) Stand set up for sale with Manton Unit. Along with 112 & 114
115	4319 - Mixed Upland Forest	Poletimber Well	4.5	65	81-110	this is an upland transition ground stand that was separated out of the larger Q type to try to regenerate some mixed conifer and deciduous along swamp edge. Balsam is definitely past its prime :-/
116	6127 - Lowland Pine	Poletimber Medium	1.8	65	51-80	tag swail area with mixed conifer and deciduous thoruhgout. Stand will be too wet to treat.
118	4136 - Aspen, Mixed Conifer	Sapling Well	2.4	28	Immature	Must have been a habitat cut... beaver have taken care of most of it for flooding to the north dams... looks like they may be running out of food. OPIC - FMD: 11/29/2005 Aspen cut 17 years ago. Cedar was left We will call this an aspen stand. (Grieve)
119	4130 - Aspen	Sapling Well	79.4	28	1-50	Stand will hold good 10-20 years. some almost still A3 and some approaching A6. nice mixture of species. OPIC - FMD: 11/29/2005 Stand was not a clean cut by Consumers, pockets of residual were left in places. Therefore, some aspen is of commercial age & size, but is widely scatters & not practical to harvest. Also, I don't believe the S.I. I took at all. (Grieve)
120	42110 - Planted Red Pine	Poletimber Well	8.2	49	141-170	thinned last YOE ready for another light thin from below, remove storm damaged and poor shape trees Marked job. Stream crossing is in bad shape. Needs new culvert & a few loads of gravel. (Grieve) Stand thinned under 61-005-09-01 Looks good. Beiwer installed new culvert for access. KJS
121	42110 - Planted Red Pine	Poletimber Well	35.4	49	141-170	ready for another thin. has seen some storm damage. pretty tall and skinny so may be best to final harvest and restart back to red pine... see what the numbers show. OPIC - FMD: 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. (Grieve) Stand thinned under 61-005-09-01 Looks good. Beiwer installed new culvert for access. KJS
123	42110 - Planted Red Pine	Poletimber Well	2.8	49	141-170	Thinned last YOE. ready for another light thin OPIC - FMD: 11/29/2005 Old Consumers Energy plantation. Has been thinned once. Take about a 1/3 of the trees. Marked job. Stream crossing is in bad shape. Needs new culvert & a few loads of gravel. (Grieve) Stand thinned under 61-005-09-01 Looks good. Beiwer installed new culvert for access. KJS



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
124	4111 - S.Maple, Hard Mast Association	Poletimber Well	1.9	75	51-80	<p>small firewood sale last YOE 80% done... nothing needed at this time. clumpy not great stuff.</p> <p>OPIC - FMD: 11/29/2005 Not in good shape, small and needs a selection cut. Very weak sale. Road in to sale needs work before it can be hauled on. Encourage under representative species. (Grieve) Stand thinned via small firewood negotiated sale. They cut most marked trees but some remain uncut. The SE end has .25 acres that was cut and they never made it back in to get the wood due to wet weather. Overall pretty poor job from producer however the trees that were cut and left will add structural diversity to the stand and helped to release smaller pole sized trees. Pretty poor quality stand KJS</p>
128	42360 - Upland Cedar	Poletimber Poor	0.3	70	1-50	OPIC - FMD: 11/29/2005 Island in the Manistee River. (Grieve)
129	42390 - Mixed Non-Pine Upland Conifers	Sawtimber Well	6.3	115	141-170	<p>cool stand, cedar hemlock and pine mixed with deciduous along pretty substantial creek . lots of deer use this winter.</p> <p>OPIC - FMD: 11/23/2005 Steep banks along un-named creek in center of stand & than the creek becomes the property line. Even has a little water fall in it. Part of Natural Rivers, and besides, could not be log well anyway. (Grieve)</p>
130	4133 - Aspen, Mixed Pine	Sapling Well	5.9	28	Immature	<p>mixed bag stand. some A3 some A5/A6 some M5 M6 some W5/W8. must have come across private to the north.</p> <p>OPIC - FMD: 11/29/2005 Stand was not a clean cut by Consumers, pockets of residual were left in places. Therefore, some aspen is of commercial age & size, but is widely scatters & not practical to harvest. Also, I don't believe the S.I. I took at all. (Grieve)</p>
131	4319 - Mixed Upland Forest	Sawtimber Well	9.5	75	111-140	mixed deciduous of aspen, red maple a little oak and fir and white pine. most falls within the natural river buffer. wet swails through stand.
134	42110 - Planted Red Pine	Poletimber Well	2.3	46	141-170	stand thinned last YOE, ready for another light thin. treat stand 2 in compartment to the south as well with this stand. stand 2 has not been thinned before :-/ probably take every third row out and lightly mark remaining rows or cut all trees under 4" dbh in adjacent rows.
144	4130 - Aspen	Sapling Well	3.4	12	Immature	<p>Treat with stand 11 to the south. good thick stem density.</p> <p>OPIC - FMD: 12/22/2005 This small sale was an add on of a Cadillac timber sale, # 63-018-01-1 (Grieve)</p>



Stand	Cover Type	Acres	Managed Site	General Comments:
7	6229 - Mixed lowland shrub	2.5	No	Some aspen along edges, some pretty big pot holes with steep slopes down to them so will leave the stands surrounding these for long term retention and soil stabilization. OPIC - FMD: 12/22/2005 Pot holes "L" type. (Grieve)
19	6229 - Mixed lowland shrub	6.2	No	Scattered aspen and conifer throughout edges. long term retention will surround this very wet stand. OPIC - FMD: 12/22/2005 L-type with some scattered trees. (Grieve)
30	623 - Emergent Wetland	3.3	No	Still lots of beaver activity! OPIC - FMD: 12/22/2005 Active beaver flooding. Mostly water & marsh grass. Very old beaver dams & in good repair. They have trees growing out of them. (Grieve)
47	623 - Emergent Wetland	21.2	No	OPIC - FMD: 12/16/2005. Low land brush, some old beaver evidence. (Grieve)
49	122 - Road/Parking Lot	9.9	No	OPIC - FMD: 12/22/2005 County Roads (Grieve)
55	623 - Emergent Wetland	15.4	No	OPIC - FMD: 12/16/2005. Low land brush, some old beaver evidence. (Grieve)
56	500 - Water	50.3	No	OPIC - FMD: 12/22/2005 Manistee River (Grieve)
61	623 - Emergent Wetland	1.4	No	OPIC - FMD: 12/16/2005. Marsh grass pot hole. (Grieve)
65	3102 - Grass	0.4	No	OPIC - FMD: 12/16/2005. Old landing (well not really that old, one year & will use as a landing again. Knapweed, aspen saps & other stuff. (Grieve)
66	6239 - Mixed Emergent Wetland	1.9	No	OPIC - FMD: 12/16/2005. Low land brush, pot hole. (Grieve)
72	6229 - Mixed lowland shrub	1.8	No	mostly Tag swamp but some scattered swamp conifer as well...
90	6299 - Lowland Shrub (OI)	13.4	No	OPIC - FMD: 11/29/2005 L-type with scattered aspen, sometimes in clones of A6, sometimes just L. Intermittent stream flows through stand. Beaver activity at this time. Stream crossing is in bad shape. Needs new culvert & a few loads of gravel. (Grieve)
93	62399 - Marsh (OI)	12.4	No	OPIC - FMD: 1/3/2006 This is an old beaver flooding. Looks like there is still a lot of activity but the pond have turned to mostly marsh. A few trees (pole size) still are in stand. A few cattails and a lot of marsh grass. (Grieve)
99	623 - Emergent Wetland	19.5	No	OPIC - FMD: 12/1/2005 Leatherleaf bog. (Grieve)
101	623 - Emergent Wetland	0.6	No	OPIC - FMD: 12/1/2005 Leatherleaf bog. (Grieve)



Stand	Cover Type	Acres	Managed Site	General Comments:
108	62399 - Marsh (OI)	0.7	No	OPIC - FMD: 11/23/2005 Old beaver flooding, now marsh grass & cedar snags. (Grieve)
110	7909 - Nonstocked (OI)	1.5	No	OPIC - FMD: 12/22/2005 County Road & parking lot to Rainbow Jim's Publice Access Site. (Grieve)
127	622 - Lowland Shrub	0.6	No	OPIC - FMD: OI Stand Year Origin was
141	122 - Road/Parking Lot	1.5	No	OPIC - FMD: 12/22/2005 County Roads (Grieve)
401	3302 - Low Density Conifer Trees	0.7	Yes	OPIC - FMD: 12/22/2005. Stand has a fire pit & post in the ground. Not sure who is using this. (Grieve)
402	3102 - Grass	9.1	No	OPIC - FMD: 12/22/2005 Power line & pipe line ROW (Grieve)
403	3302 - Low Density Conifer Trees	0.9	Yes	OPIC - FMD: 12/22/2005 Over looking the swamp on a ridge. (Grieve)
404	3102 - Grass	1.1	No	OPIC - FMD: 12/22/2005 Over looking Manistee River with County road through the center of stand. Two rows of red pine planted on south side of stand next to river bluff. (Grieve)
405	3302 - Low Density Conifer Trees	0.7	Yes	OPIC - FMD: 12/16/2005. Well, mostly grass. Some small white pine saps coming in. This stand was an unplanted area bounded on three sides by a red pine plantation. (Grieve)
406	3102 - Grass	9.7	No	OPIC - FMD: 12/22/2005 Power line & pipe line ROW (Grieve)
408	623 - Emergent Wetland	5.0	No	Some low and wet with NO coverytype and some upland grass.. all an open power line corridor OPIC - FMD: 12/22/2005 Power line & pipe line ROW (Grieve)
409	3102 - Grass	1.6	No	Seeing quite a bit of illegal ORV use. needs reclosed by road. OPIC - FMD: 12/16/2005. Old barrow pit. Starting to recover. (Grieve)
410	3102 - Grass	2.7		Plant to red pine I fpossible, pretty small stand, maybe plant with a user group if possible. OPIC - FMD: 12/13/2005. Old well site. Lots of little knapweed. Plant to red pine. (Grieve)
412	3102 - Grass	0.2	Yes	OPIC - FMD: 12/16/2005. Parking area at the end of a two track. (Grieve)



Stand	Cover Type	Acres	Managed Site	General Comments:
413	3102 - Grass	0.9	Yes	OPIC - FMD: 12/20/2005. NO Knapweed! (Grieve)
414	3102 - Grass	0.8	Yes	OPIC - FMD: 12/13/2005. Old well site growing in very well. Mostly weeds, very little knapweed. (Grieve)
415	3102 - Grass	2.3	No	OPIC - FMD: 12/1/2005 Old well site. Plant to red pine or other. Lots of knapweed. (Grieve)
417	3102 - Grass	0.3	No	OPIC - FMD: 11/29/2005. Part of a well pad on state land. All of this happened before the state got the land. Looks like the oil company has made an attempt to fence the property line. (Grieve)
418	3301 - Low Density Deciduous Trees	4.9	Yes	OPIC - FMD: 11/29/2005. Some knapweed. (Grieve)
419	3102 - Grass	0.6	No	OPIC - FMD: 1/3/2006 Old landing. Will be used as one again. (Grieve)