



# Compartment Review Presentation

## Traverse City Forest Management Unit

Compartment 61151

Entry Year 2019

Acreage: 1,909

County Kalkaska

Management Area: Manistee River Valley

---

**Revision Date:** 2017-06-12

**Stand Examiner:** Kelly Standerfer

**Legal Description:**

T25N, R6W, Sec. 34-36

**Identified Planning Goals:**

Vegetation management in the Manistee River Valley management area (MA) 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:**

Roselawn and Rubicon sands and Newton loamy sand comprise the compartment. Generally the terrain is flat with some small rolling hills near Big Cannon Creek.

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

Ownership is all State owned except for half of a section south of section 35. No development in or around the compartment. Land use is mainly hunting with snowmobile and ORV use being a secondary use. New pipeline and well pad established in section 36. No new development in the western two compartments.

**Unique Natural Features:**

**Archeological, Historical, and Cultural Features:**

Multiple archaeological sites are listed for this compartment. Work with Lansing HAL staff to ensure proposed activity does not disturb known sites.

**Special Management Designations or Considerations:**

Big Cannon Creek flows north through section 35. There are several archaeological sites throughout the compartment. This compartment was also part of the 75% quarter township research cuts of the early 1970's. The 2004 agreement with The Department of Military and Veteran Affairs covers this entire compartment. This agreement is a renewable ten year agreement that may be terminated by mutual agreement at any time.

**Watershed and Fisheries Considerations:**

Big Cannon Creek flows through Compartment 151. It is a Designated Trout Stream. Big Cannon Creek has naturally reproducing populations of brook, brown, and rainbow trout. No treatments this YOY should have an impact on this watershed.

**Wildlife Habitat Considerations:**

Compartment 151 is located along the Missaukee County line in south-central Kalkaska County. Big Cannon Creek bisects this compartment and adds diversity to this dry and sandy landscape. Also, several small isolated wetland communities can be found within this compartment. Generally, the landscape undulates between flat sandy outwash plains (LTA 5111) and low, sandy ice-contact ridges (LTA 3111). The well drained soils of this compartment support communities of aspen, jack pine, oak, open barrens, as well as minor occurrences of several other cover types. Forest treatments should maintain a variety of successional stages of pine-oak-aspen forest and grass-shrub openings, with some mid to late successional forest in places, which is typical of a fire driven landscape.

The barrens communities should be treated with prescribed fire. Burning will benefit these communities by setting back woody encroachment, stimulating native herbaceous vegetation and berry production, and recycling nutrients. Aspen harvests should be designed to mimic wildfires of various intensities. This creates a mosaic of age classes and increases structural diversity within an area. The creation of dead and downed logs should be incorporated into timber prescriptions to provide habitat for various wildlife species. Standing dead timber is usually left during harvest operations unless deemed a safety hazard. Species associated with pine, oak and aspen mixed upland forests and openland habitats, such as deer, badger, wild turkey, scarlet tanager, hog-nosed snake, ruffed grouse, Cooper's hawk, red-backed salamander, and gray squirrel will benefit from management here.

### **Mineral Resource and Development Concerns and/or Restrictions**

There is no known metallic mineral potential in this region. A former sand/gravel pit is located in sections 33-34. There appears to be some sand and gravel potential within the compartment. The Fletcher Field is located to the northeast of the compartment. The field produces from the Ordovician St. Peter Sandstone. In addition, the State Garfield Collingwood well is in the same area. The entire compartment was under lease and held by production under the Garfield Unitized Area. The UA has since been terminated along with the most of the leases in the compartment. Two leases in Section 36 are still active. Large Devonian (Detroit River Group) oil fields are located farther to the northeast and southeast of the compartment.

### **Vehicle Access:**

Naples road is the main county road access and there are many two-track roads for access... Some of these should try to be blocked.

### **Survey Needs:**

None

### **Recreational Facilities and Opportunities:**

Numerous designated motorized recreational trails are located within this rectangular compartment. The 50 inch North Missaukee ORV trail and Michigan Cross Country Cycle Trail (MCCCT) share the same tread in this compartment. The Mis-Kal snowmobile trail #6, the 72 inch North Missaukee ORV Route, and the narrow North Missaukee motorcycle trail are also located within this compartment. Policy and Procedure 32.22-01 (Best Management Practices for Forest and Wildlife Management Adjacent to Recreational Trails).should be considered if forest treatments impact these motorized recreational trails. (T.M.N. 11/3/16).

### **Fire Protection:**

This compartment has some pine and is located in our zone 5 fire dispatch area. This area is protected by the Garfield Twp. Fire Department, and DNR protection is from the Kalkaska Field Office. Because of its location, travel time from the Kalkaska Field Office becomes an issue. Access is acceptable, there is no urban interface issue as it is entirely state land.

### **Additional Compartment Information:**

#### **The following reports from the Inventory are attached:**

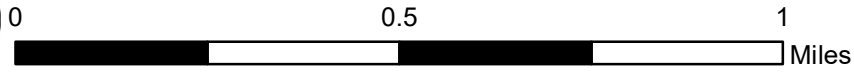
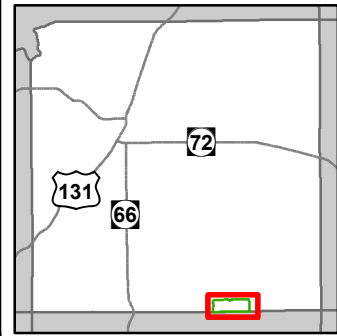
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

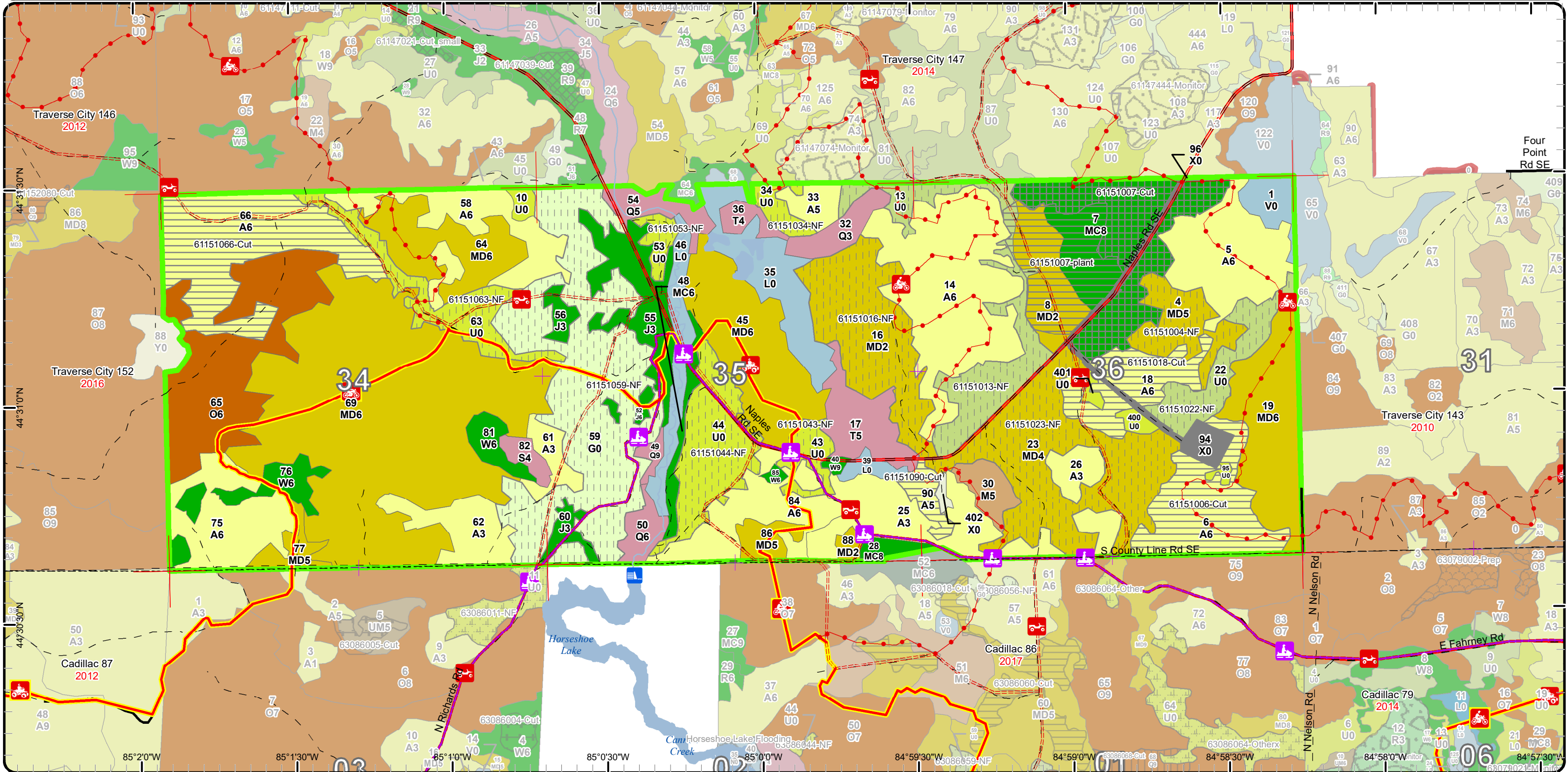
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatments Map

Compartment: 151  
 T26N R06W Sec. 34-36  
 County: Kalkaska  
 Unit: Traverse City  
 Mgmt Area: Manistee River Valley  
 YOE: 2019  
 Acres: 1909.2 GIS Calculated  
 Examiner: Kelly Standerfer  
 Map Revised: 8/7/2017  
 Map Phase: Post-Review



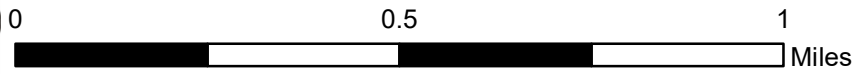
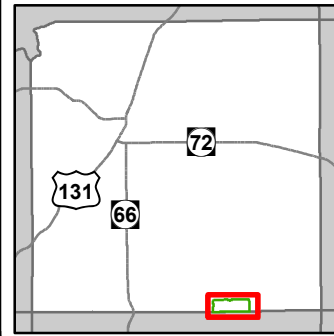
- Miris Corners
- + Remonumented Section Corners
- Counties
- Dams
- 🏍️ Motorcycle Trails (DNR License)
- 🏍️ MCCCT Trails
- 🏍️ ORV Trails
- 🏍️ ORV Routes
- 🏍️ Snowmobile Trails
- 🏍️ ORV License & Trail Permit
- Designated ATV
- - - Designated ORV Route
- Designated Snowmobile Trails
- Michigan Cross Country Cycle Trail (MCCCT)
- Paved Roads
- County Gravel Roads
- - - County Poor Dirt Roads
- - - Poor Dirt Roads
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Clearcut (w/Reserves)
- Opening Maintenance
- Seed Tree (w/Reserves)
- 412 - Oak Types
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 622 - Lowland Shrub
- 790 - Other Bare/Sparingly Vegetated
- Lakes



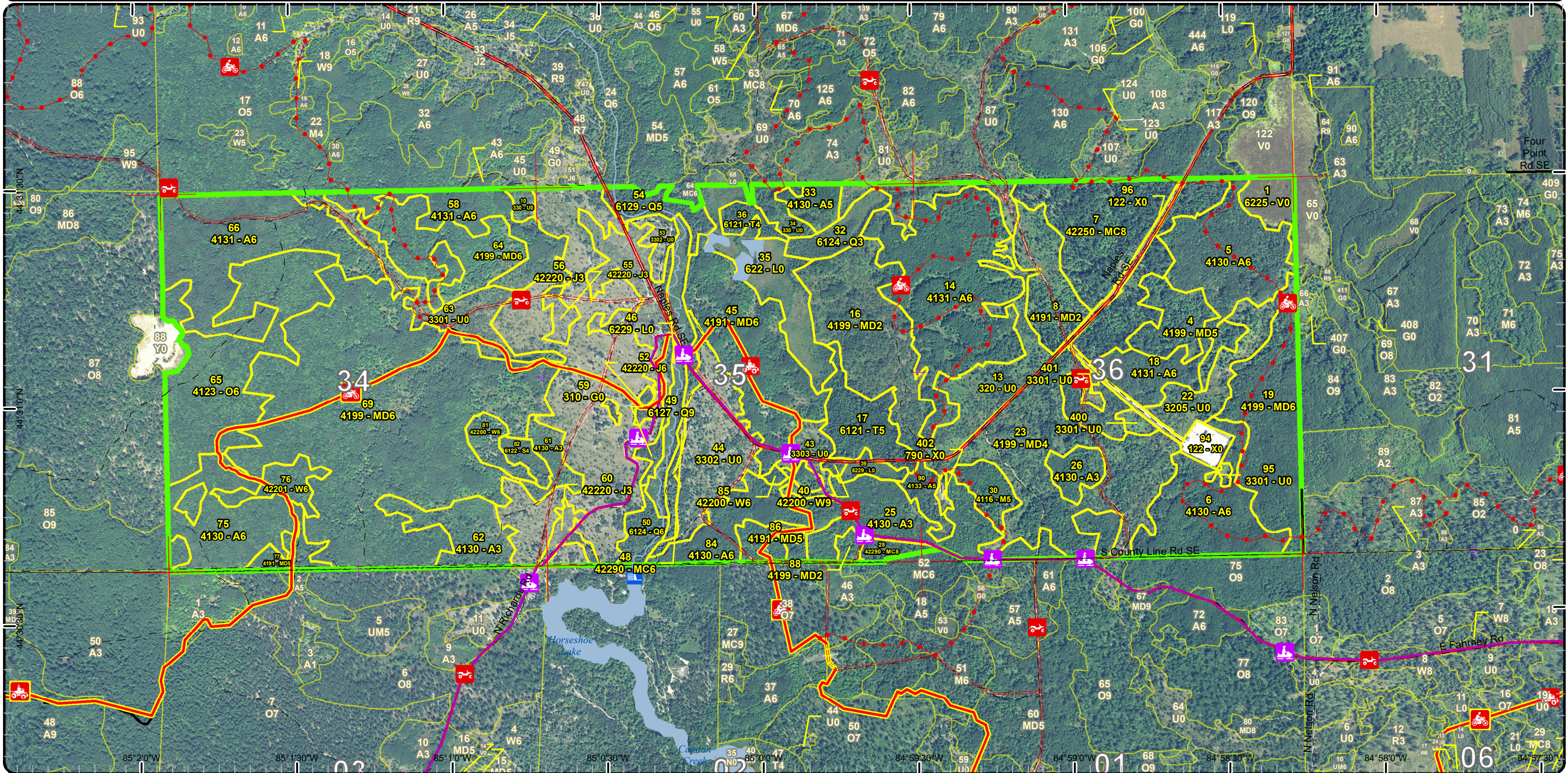


# Stand Boundary Map

Compartment: 151  
 T26N R06W Sec. 34-36  
 County: Kalkaska  
 Unit: Traverse City  
 Mgmt Area: Manistee River Valley  
 YOE: 2019  
 Acres: 1909.2 GIS Calculated  
 Examiner: Kelly Standerfer  
 Map Revised: 8/7/2017  
 Map Phase: Post-Review



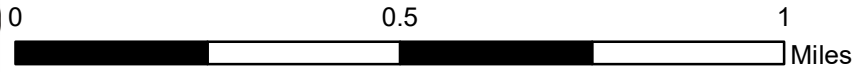
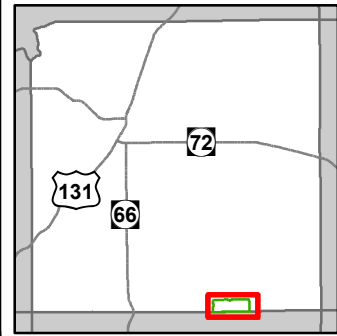
- Miris Corners
- + Remonumented Section Corners
- Counties
- Dams
- 🏍️ Motorcycle Trails (DNR License)
- 🏍️ MCCCT Trails
- 🏍️ ORV Trails
- 🏍️ ORV Routes
- 🏍️ Snowmobile Trails
- 🏍️ ORV License & Trail Permit
- Designated ATV
- Designated ORV Route
- Designated Snowmobile Trails
- Michigan Cross Country Cycle Trail (MCCCT)
- Paved Roads
- County Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Stand Boundaries
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 622 - Lowland Shrub
- 790 - Other Bare/Sparsely Vegetated



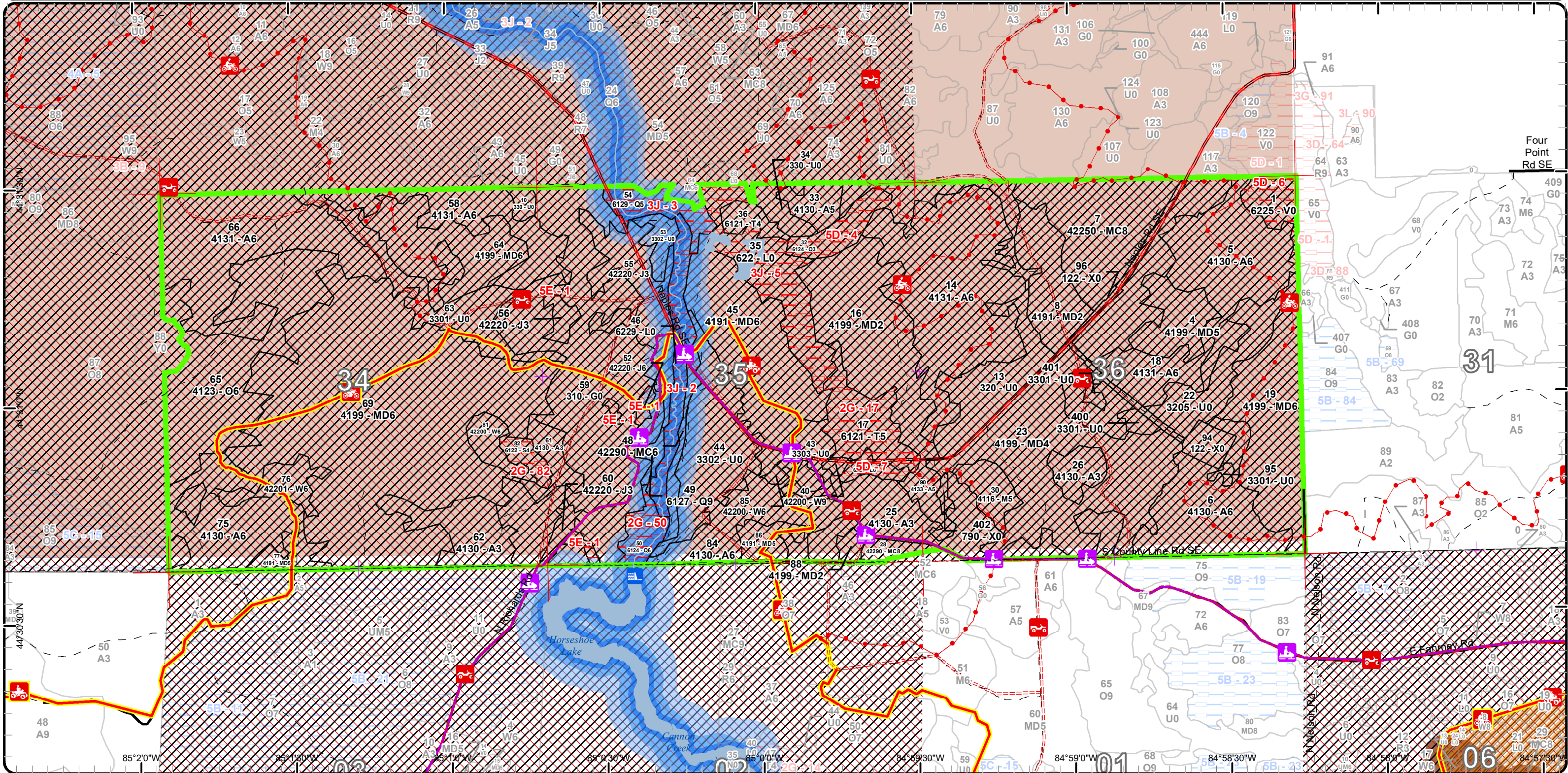


# Special Conservation Areas & Site Conditions Map

Compartment: 151  
 T26N R06W Sec. 34-36  
 County: Kalkaska  
 Unit: Traverse City  
 Mgmt Area: Manistee River Valley  
 YOE: 2019  
 Acres: 1909.2 GIS Calculated  
 Examiner: Kelly Standerfer  
 Map Revised: 8/7/2017  
 Map Phase: Post-Review



- Miris Corners
- + Remonumented Section Corners
- Counties
- Dams
- 🏍️ Motorcycle Trails (DNR License)
- 🏍️ MCCCT Trails
- 🏍️ ORV Trails
- 🏍️ ORV Routes
- 🏍️ Snowmobile Trails
- 🏍️ ORV License & Trail Permit
- Designated ATV
- - - Designated ORV Route
- Designated Snowmobile Trails
- Michigan Cross Country Cycle Trail (MCCCT)
- Paved Roads
- County Gravel Roads
- County Poor Dirt Roads
- - - Poor Dirt Roads
- Streams
- Lakes and Rivers All
- Compartment Boundary
- - - Unavailable
- - - 2G: Too wet (sensitive soils, does not include access issues)
- 3J: Water quality / BMPs (stream, river, or lake)
- 5D: Unproductive Forest Land
- 5E: Long-Term Retention
- Stand Boundaries
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Eastern Massasauga Managed Land
- Cold Water Streams
- High Priority Trout Stream Buffer
- Wildlife Management Areas
- Research, Development, and Military Lands





# Report 1 – Total Acres by Cover Type and Age Class

Traverse City Mgt. Unit  
 Kelly Standerfer : Examiner

Compartment 151 Year of Entry 2019



## 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	95	0	0	0	433	0	0	0	0	0	0	0	0	0	0	0	0	528
Bare/Sparsely Vegetated	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Bog	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Herbaceous Openland	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145
Jack Pine	0	43	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	47
Low-Density Trees	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108
Lowland Conifers	0	0	0	0	13	0	0	3	0	23	0	0	0	0	0	0	0	0	39
Lowland Shrub	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
Lowland Spruce/Fir	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6
Mixed Upland Deciduous	0	0	27	0	219	380	0	0	0	0	0	0	0	0	0	0	0	0	626
Natural Mixed Pines	0	0	0	0	0	0	0	89	0	5	0	0	0	0	0	0	0	0	94
Northern Hardwood	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Oak	0	0	0	0	0	81	0	0	0	0	0	0	0	0	0	0	0	0	81
Tamarack	0	0	0	0	0	0	6	0	0	0	25	0	0	0	0	0	0	0	31
Upland Shrub	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74
Urban	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
White Pine	0	0	0	0	0	27	0	0	0	0	2	0	0	0	0	0	0	0	29
<b>Total</b>	<b>418</b>	<b>138</b>	<b>27</b>	<b>0</b>	<b>243</b>	<b>921</b>	<b>12</b>	<b>92</b>	<b>5</b>	<b>28</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1910</b>





## Report 2 – Treatment Summary

Traverse City Mgt. Unit  
Year of Entry: 2019

Compartment 151  
Total Compartment Acres: 1,909

### Acres of Harvest

Commercial Harvest - 269  
Harvests with Site Condition - 0  
Next Step Harvest - 0  
Habitat Cut - 0

### Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	162	0	0	0	0	0	0	0	0	162
Mixed Upland Deciduous	48	0	0	0	0	0	0	0	0	48
Natural Mixed Pines	0	0	0	60	0	0	0	0	0	60
<b>Total</b>	<b>210</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>269</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	269	0	0	0	0	0	0	497	0	766
Next Step	0	95	48	0	0	48	317	0	0	508
<b>Total</b>	<b>269</b>	<b>95</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>317</b>	<b>0</b>	<b>497</b>	<b>1273</b>





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
4 61151004-NF	25.1	4199 - Other Mixed Upland Deciduous	Poletimber Medium	43	51-80	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on current needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date: 10/01/2018

6 61151006-Cut	47.7	4130 - Aspen	Poletimber Well	43	111-140	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Draft Field Boundary
----------------	------	--------------	-----------------	----	---------	---------	-------------------------	-------------------------------	-----------	----------------------

**Habitat Cut: No**

**Site Condition:**

Prescription Nice aspen stand, cut or hold as needed. some thicker white pine areas and some larger red and white pine here n there. if cut leave a pocket by well pad for retention and mark some pine n oak to save for diversity but not enough to hinder regenerating aspen.

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

Acceptable aspen with mixed deciduous and mixed conifer. expect to mainly be aspen regen.  
Regen:

Other  
Comment:

Proposed Start Date: 10/01/2018

7 61151007-Cut	59.5	42250 - Pine, Oak	Sawtimber Medium	65	1-50	Harvest	Seed Tree with Retention	4221 - Natural Red Pine	Even-Aged	Draft Field Boundary
----------------	------	-------------------	------------------	----	------	---------	--------------------------	-------------------------	-----------	----------------------

**Habitat Cut: No**

**Site Condition:**

Prescription mark to leave ~10BA or less of red pine and do a overstory removal. OK to leave a bit thicker in camping spot by well pad road and ok to leave some thicker pockets inermixed. generally whats left will not be enough to come back for but will function as seed/ shade for understory. some thicker oak and aspen and maple understory areas, save as much of the advanced regen as possible. far NE end more A3 under white pine, some of this may not be cut depending on how it looks when setting the sale up.

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

Acceptable mixed conifer and mixed deciduous.  
Regen:

Other  
Comment:

Proposed Start Date: 10/01/2018





Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
8	61151007-plant	47.7	4191 - Mixed Upland Deciduous with Conifer	Sapling Medium	17	Immature	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription final harvest all trees 2" and up, herbicide (if needed) roller chop (if needed) trench and plant to red pine. scattered residual left when stand cut  
Specs: before. looking to get some conifer in compartment re-established for species diversity and to restart some red pine as this is good red pine ground

Next Step Pesticide, Skidder/Mechanical; SitePrep, Roller Chopping; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr);  
Treatments: Monitoring, Artificial Regen(3yr)

Acceptable Regen: planted red pine with other mixed conifer and deciduous however the red pine should generally be free to grow to make the investment in chopping and planting with it.

Other Comment:

Proposed Start Date: 10/01/2018

13	61151013-NF	45.5	320 - Upland Shrub	Nonstocked		Unspecified	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary
----	-------------	------	--------------------	------------	--	-------------	--------------	---------------	-----------------------------	--	----------------------

**Habitat Cut: No**

**Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on current needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2018

16	61151016-NF	63.4	4199 - Other Mixed Upland Deciduous	Sapling Medium	36	1-50	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary
----	-------------	------	-------------------------------------	----------------	----	------	--------------	---------------	-----------------------------	--	----------------------

**Habitat Cut: No**

**Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on current needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2018





Site ID	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
18	61151018-Cut	29.7	4131 - Aspen, Oak	Poletimber Well	43	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

**Habitat Cut: No Site Condition:**

Prescription south of road more quaking aspen, north end has some nicer bigtooth, some oak and maple pockets as well. would likely hold 10 years but treat now  
Specs: as some of the quaking aspen is in pretty rough shape. 2" spec, save some oak via green tree mark or via spec. save island by stand 400 for retention... keep retention at the lower end of 3-10% via one or two islands.

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

Acceptable Regen: aspen with mixed deciduous and mixed conifer is ok and expected post harvest.

Other Comment:

Proposed Start Date: 10/01/2018

22	61151022-NF	25.9	3205 - Mixed Upland Shrub	Nonstocked		Unspecified	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary
----	-------------	------	---------------------------	------------	--	-------------	--------------	---------------	-----------------------------	--	----------------------

**Habitat Cut: No Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on current needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2018

23	61151023-NF	93.2	4199 - Other Mixed Upland Deciduous	Poletimber Poor	36	1-50	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary
----	-------------	------	-------------------------------------	-----------------	----	------	--------------	---------------	-----------------------------	--	----------------------

**Habitat Cut: No Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on current needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2018





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
34	61151034-NF	7.8	330 - Low-Density Trees	Nonstocked		Unspecified	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on current needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date: 10/01/2018

43	61151043-NF	10.8	3303 - Mixed Low Density Trees	Nonstocked		Unspecified	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary
----	-------------	------	--------------------------------	------------	--	-------------	--------------	---------------	-----------------------------	--	----------------------

**Habitat Cut: No**

**Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on current needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date: 10/01/2018

44	61151044-NF	43.1	3302 - Low Density Conifer Trees	Nonstocked		Unspecified	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary
----	-------------	------	----------------------------------	------------	--	-------------	--------------	---------------	-----------------------------	--	----------------------

**Habitat Cut: No**

**Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on current needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date: 10/01/2018



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
53	61151053-NF	6.7	3302 - Low Density Conifer Trees	Nonstocked		Unspec ified	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on currents needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date: 10/01/2018

59	61151059-NF	144.9	310 - Herbaceous Openland	Nonstocked		Unspec ified	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary
----	-------------	-------	------------------------------	------------	--	-----------------	--------------	---------------	--------------------------------	--	-------------------------

**Habitat Cut: No**

**Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on currents needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date: 10/01/2018

63	61151063-NF	30.5	3301 - Low Density Deciduous Trees	Nonstocked		Unspec ified	NonForestMgt	Brush Cutting	3204 - Mast Producing Shrub		Draft Field Boundary
----	-------------	------	---------------------------------------	------------	--	-----------------	--------------	---------------	--------------------------------	--	-------------------------

**Habitat Cut: No**

**Site Condition:**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. Possibly target red maple and some cherry for felling into brush piles, leaving scattered individuals and thickets of mast producing trees, shrubs, and conifers for wildlife food and cover. Possibly via adjacent timber sales. Should be cut in winter to protect herbaceous ground cover. Goal is to maintain semi-open community with mix of food and cover. Eventually controlled burning should be applied to restore and maintain this grassland/barrens ecosystem. The timing and frequency of the burns will be based on currents needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. Work with FRD to utilize/harvest merchantable timber when setting back woody encroachment.

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date: 10/01/2018





S  
t  
a  
n  
d

Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
66 61151066-Cut	76.2	4131 - Aspen, Oak	Poletimber Well	43	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

**Habitat Cut: No**

**Site Condition:**

Prescription final harvest, save some or all white pine and save some oak... cut the bulk of the oak to stump sprout it along with the aspen. leave about 3% retention in islands at far east end and maybe one by gravel pit

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Regen: aspen with mixed deciduous and mixed conifer ok... expect mostly thick aspen as this is a great big tooth aspen site.

Other

Comment:

Proposed Start Date: 10/01/2018

90 61151090-Cut	8.2	4133 - Aspen, Mixed Pine	Poletimber Medium	44	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
-----------------	-----	--------------------------	-------------------	----	-------	---------	-------------------------	-------------	-----------	----------------------

**Habitat Cut: No**

**Site Condition:**

Prescription final harvest, save some or all pine and save a few oak. leave sliver retention island along VO at NW end, may be less than 3% due to small size of the stand... try to leave wildlife brush piles.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Regen: aspen with mixed deciduous and mixed conifer ok post harvest.

Other

Comment:

Proposed Start Date: 10/01/2018

**Total Treatment Acreage Proposed: 765.9**

## Report 4 – Site Conditions

Traverse City Mgt. Unit  
Kelly Standerfer : Examiner

Compartment: 151  
Year of Entry: 2019

### Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions			
		With Condition	Not Available		2G	3J	5D	5E
527	527	0	0	Aspen				
2	2	0	0	Bare/Sparsely Vegetated				
11	0	0	11	Bog			11	
145	145	0	0	Herbaceous Openland				
48	42	0	5	Jack Pine				5
108	108	0	0	Low-Density Trees				
38	3	0	35	Lowland Conifers	10	13	13	
62	0	0	62	Lowland Shrub		57	5	
6	0	0	6	Lowland Spruce/Fir	6			
627	627	0	0	Mixed Upland Deciduous				
94	94	0	0	Natural Mixed Pines				
11	11	0	0	Northern Hardwood				
81	81	0	0	Oak				
31	7	0	24	Tamarack	24			
74	74	0	0	Upland Shrub				
16	16	0	0	Urban				
29	29	0	0	White Pine				
1,909	1,766		143	Total Forested Acres	39	70	29	5
	93%		7%	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	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	20	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							



Report 4 – Site Conditions

Traverse City Mgt. Unit  
 Kelly Standerfer : Examiner

Compartment: 151  
 Year of Entry: 2019

3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	5D: Unproductive Forest Land	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	37	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	5D: Unproductive Forest Land	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	5D: Unproductive Forest Land	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	24	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Traverse City Mgt. Unit  
Kelly Standerfer : Examiner

Compartment: 151  
Year of Entry: 2019

50	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
82	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	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
----------	--------------	-------------	----------------	-------

---

Comments

---



**Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS**

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

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

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	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:
4	4199 - Other Mixed Upland Deciduous	Poletimber Medium	25.1	43	51-80	some more open with cherry brush but a decent amount of oak, maple and aspen mixed in. manage with adjacent stands... if cut would likely  OPIC - FMD: 2007-Hagan-West part heavy to cherry.
5	4130 - Aspen	Poletimber Well	48.8	43	51-80	nice thick aspen for the most part... could hold good 10 yrs or cut now as needed... leave retention along VO if cut now.  OPIC - FMD: OI Stand Year Origin was 1974
6	4130 - Aspen	Poletimber Well	47.7	43	111-140	Nice aspen stand, cut or hold as needed. some thicker white pine areas and some larger red and white pine here n there. if cut leave a pocket by well pad for retention and mark some pine n oak to save for diversity but not enough to hinder regenerating aspen.
7	42250 - Pine, Oak	Sawtimber Medium	79.9	65	1-50	short lived species removed last YOE... some areas of pretty thick red pine post harvest... thick enough to hinder regenerating stand. mark to leave 10BA or less of red pine and do a overstory removal. some thicker oak and aspen and maple understory areas, save as much of the advanced regen as possible. far NE end more A3 under white pine, some of this may not be cut depending on how it looks when setting the sale up.  OPIC - FMD: 2011 - DAH - East 151 Jamaspenn #004-09. 2007-Hagan-Remove red maple and any jack pine.
8	4191 - Mixed Upland Deciduous with Conifer	Sapling Medium	27.1	17	Immature	scattered thick pockets of oak, some jack pine regen areas, lots of maple and cherry.. scattered large red and white pine, not enough to chase and its sheltering along the regen nicely, manage for understory regenerated stand.  OPIC - FMD: 2011 - DAH - East 151 Jamaspenn # 004-09. All jack pine, maple and aspen were cut. 2007-Hagan-Take out jack and any aspen and red maple.
14	4131 - Aspen, Oak	Poletimber Well	93.9	44	81-110	some areas oak, smaller diameter yet, some more aspen... overall mixed upland deciduous, some is aspen, some is oak and some is red maple.. overall pretty small diameters for the most part, merchantable... maybe cut half the stand if needed for age class diversity.OPIC - FMD: OI Stand Year Origin was 1973
16	4199 - Other Mixed Upland Deciduous	Sapling Medium	63.4	36	1-50	some aspen clones mixed in... most is sub merchantable cherry but some decent size cherry and maple in areas. could likely do a commercial harvest  OPIC - FMD: 2007-Hagan-A mixture of sweet fern and grass for ground cover. Heavy to cherry in most places.
17	6121 - Tamarack	Poletimber Medium	24.6	98	51-80	most looks to be tamarack, most of stand is over tag alder/ flooded. not manageable ground for most part, may be able to grab some from edges when adjacent stand is cut.  OPIC - FMD: very dense growth.





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4131 - Aspen, Oak	Poletimber Well	29.9	43	81-110	south of road more quaking aspen, north end has some nicer bigtooth, some oak and maple pockets as well. would likely hold 10 years but treat now as some of the quaking aspen is in pretty rough shape. 2" spec, save some oak via green tree mark or via spec. save island by stand 400 for retention... keep retention at the lower end of 3-10% via one or two islands. OPIC - FMD: OI Stand Year Origin was 1974
19	4199 - Other Mixed Upland Deciduous	Poletimber Well	54.8	43	81-110	mostly stump sprout oak mixed with maple and aspen... hold 10-20.  OPIC - FMD: 2007-Hagan- Heavier to oak.
23	4199 - Other Mixed Upland Deciduous	Poletimber Poor	93.2	36	1-50	highly variable stand, some nice oak regen in areas... most is scattered to thick cherry, some aspen clones present. could commercially harvest, save all or most oak... could also 2" spec some of the stand and herbicide and replant to red pine to help offset the red pin in the area that has been lost, should be excellent red pine ground.OPIC - FMD: Coming back to cherry. 2007-Hagan- Heavy cherry in this stand.
25	4130 - Aspen	Sapling Well	39.6	6	Immature	nice aspen regen under mixed cherry and a few oak mixed in as well. center of stand has more of an open U type. OPIC - FMD: 2011 - DAH - East 151 Jamaspen # 004-09. All jack pine, maple and aspen were cut. 2007 - Hagan - Could cut this stand to break up the age classes in the compartment. Clearcut w/reserves. Maple or oak would also be an acceptable management objective also. 1997 - Grieve - This is a nice stand but the SI worked out to be an 88. I don't believe that one. Used an est. of 65 SI.
26	4130 - Aspen	Sapling Well	20.9	6	Immature	stand cut last YOE, most cherry left, some thicker oak areas also.  OPIC - FMD: Create some (approximately 1-2 trees per acre) coarse woody debris (CWD) during harvest operations, preferably via timber sale specs. CWD trees should be log sized or bigger, the more decay resistant the tree species is the better, and cut approximately at breast height (4.5 feet). The log should be left within 3 feet it's stump. OI Stand Year Origin was 2011
28	42290 - Natural Mixed Pine	Sawtimber Medium	5.1	82	1-50	OPIC - FMD: 2011 - DAH - East 151 Jamaspen # 004-09. All jack pine, maple and aspen were cut. 2007 - Hagan - Variable stand. Leave all oak and pine.
30	4116 - Mixed N. Hardwood - Aspen	Poletimber Medium	10.9	36	51-80	mixed aspen, cherry and maple... picked out the thicker aspen area from the U type to the east. will hold 10-20 years easy or could treat this YOE for age class diversity if the plan calls for it. ... should fill back in to a mix of cherry, maple and aspen. maple is pretty small yet so may be best to hold it  OPIC - FMD: Coming back to cherry. 2007-Hagan- Heavy cherry in this stand.
32	6124 - Lowland Spruce- Fir	Sapling Well	12.6	38	1-50	wet area boggy filling in with trees, pretty thick along edges. OPIC - FMD: Fir, black spruce and tamarack
33	4130 - Aspen	Poletimber Medium	9.3	43	51-80	mostly aspen, cherry and maple and oak mixed in as well. hold or cut as needed, not great stocking, more A5ishOPIC - FMD: OI Stand Year Origin was 1974



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	6121 - Tamarack	Poletimber Poor	6.3	52	1-50	small lowland swamp conifer stand... doesn't look to be manageable ground, poor stocking, scattered, some Lo some Vo and some Q5ish. OPIC - FMD: OI Stand Year Origin was 1965
40	42200 - Natural White Pine	Sawtimber Well	1.6	92	141-170	larger diameter white pine and red pine, along snowmobile trail, cool pocket of mature timber. may be able to lightly thin stand in future but for now will hold good 10-20 years.  OPIC - FMD: OI Stand Year Origin was 1925
45	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	62.8	34	51-80	OPIC - FMD: 1997 - Grieve - Stand comes and goes, maple & oak mixed in. 2007 - Hagan - Agree with Grieve. A2 in understory also.
48	42290 - Natural Mixed Pine	Poletimber Well	8.6	66	81-110	same as last YOE, most falls within the natural river mgmt. zone... mixed red and white pine  OPIC - FMD: 2007 - Hagan - A mix of white, red and jack along the east side of stream.
49	6127 - Lowland Pine	Sawtimber Well	3.1	65	141-170	big mixed conifer down in swamp area, most falls in natural river corridor... likely leave for good.  OPIC - FMD: 2007-Hagan-Small stand west of creek.
50	6124 - Lowland Spruce-Fir	Poletimber Well	9.5	88	51-80	east end more open.. west thicker, east more LO... all down in the swamp and along a natural river... likely no management desired or feasible.  OPIC - FMD: 1997 - Grieve - very dense growth.
52	42220 - Natural Jack Pine	Poletimber Well	5.3	70	111-140	4 small jack pine pockets that were left for long term retention, will likely continue to fall over and function as "old jack pine" for 10-20 more years until it ends up jack strawed on the ground or dead.  OPIC - FMD: 1997 - Grieve - Small patches of jack pine cut in ten years. 2007 - Hagan - Leave one patch for retention. Leave any oak. Leave tops for natural regeneration after prescribed burn.
54	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	13.0	85	51-80	A lowland cedar and spruce stand next to the creek. Stand has scattered red and white pine logs on the transition ground in the overstory. Stand has Big Cannon Creek running through it. Stand is a mixed Natural Pine stand that transitions down to a lowland conifer stand next to the creek.  OPIC - FMD: 1997 - Grieve - Along creek no cut
55	42220 - Natural Jack Pine	Sapling Well	33.6	6	Immature	stand fillin gin nicely, some J1ish but most has regenerated very nicely. DO NOT burn this stand with adjacent U type if it is burned.  OPIC - FMD: KJS stand cutwith West 151 Jaspen, Finger left @ aouth and as well as stands 51 & 52 were left for retention. Area to belightly burned with surrounding U types to promote naturel jack pine regen. If it fills in prior to burning than avoid burning regeneration. 1997 - Grieve - Small patches of jack pine cut in ten years. 2007 - Hagan - Leave one patch for retention. Leave any oak. Leave tops for natural regeneration after prescribed burn.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
56	42220 - Natural Jack Pine	Sapling Well	4.5	7	Immature	<p>filling in nicely with young jack pine, natural regen cut worked great, some scattered larger red and white pine poles and logs.</p> <p>OPIC - FMD: KJS stand cut with West 151 Jaspens, Finger left @ aouth and stand area north of two track was left for retention. Area to belightly burned with surrounding U types to promote natureal jack pine regen. If it fills in prior to burning than avoid burning regeneration. 1997 - Grieve - Small patches of jack pine cut in ten years. 2007 - Hagan - Leave one patch for retention. Leave any oak and cherry. Leave tops for natural regeneration after prescibed burn.</p>
58	4131 - Aspen, Oak	Poletimber Well	37.9	43	81-110	<p>most is merchantable but could easily hold 10 years. hold if possible but check out what the plan says.</p>
60	42220 - Natural Jack Pine	Sapling Well	4.4	7	Immature	<p>Filling in nicely with young jaspine, natural regen cut worked great, some scattered oak and white pine mixed with regenerating jack pine... looks to be a nice fully stocked stand!</p> <p>OPIC - FMD: KJS stand cut with West 151 Jaspens, Area east of snow trail was left for retention. Area to belightly burned with surrounding U types to promote natureal jack pine regen. If it fills in prior to burning than avoid burning regeneration. 1997 - Grieve - Small patches of jack pine cut in ten years. 2007 - Hagan - Leave one patch for retention. Leave any oak and cherry. Leave tops for natural regeneration after prescibed burn.</p>
61	4130 - Aspen	Sapling Well	10.1	7	Immature	<p>nicely regenerated aspen mixed with red maple and a little pine.</p> <p>OPIC - FMD: Stand was cut with west 151 jaspens, should regenerate nicely, retention left along west edge by the lowland type. 2007-Hagan- Stand could be cut now to start breaking up age classes in this compartment. Clearcut w/reserves.</p>
62	4130 - Aspen	Sapling Well	24.0	7	Immature	<p>Nice A3 with scattered 6" oak and some scattered conifer, some may have enough residual to impact understory aspen however nice mixed stand should result with the oak really taking off.</p> <p>OPIC - FMD: stand was cut with west 151 jaspens, should regenerate nicely, retention is scattered Maple advanced regen and oak, should regenerate very nicely. 2007-Hagan- Stand could be cut now to start breaking up age classes in this compartment. Clearcut w/reserves.</p>
64	4199 - Other Mixed Upland Deciduous	Poletimber Well	37.7	43	51-80	<p>small stem diameters yet, coming along good... more mixed deciduous than surrounding aspen type</p> <p>OPIC - FMD: 1997 - Grieve - Mostly stump sprouts, sugar maple, red maple &amp; red oak in that order. 2007 - Hagan - O2 in understory also.</p>
65	4123 - Red Oak	Poletimber Well	81.4	44	81-110	<p>thick stump sprouted red oak and red maple some white oak and aspen mixed in as well... small diameter yet... some nicer stems but probably one to manage via clear cut due to stump sprout nature. will hold good 10-20 yrs.</p> <p>OPIC - FMD: 2007 - Hagan - No ground cover to speak of.</p>





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
66	4131 - Aspen, Oak	Poletimber Well	76.2	43	111-140	nice big tooth aspen area... oak and aspen area transition is pretty tricky to follow. likely treat this stand this YOE, stand will hold 10 years fine or could be cut now.
69	4199 - Other Mixed Upland Deciduous	Poletimber Well	240.7	44	51-80	Some is more oak/maple and some more aspen, south end more oak, west side more oak, east more aspen and north more aspen. hold oakey areas for sure as the diameters are pretty small yet. try to cut 25% to 50% of the stand concentrating on aspen areas as directed by management plan. OPIC - FMD: 2007 - Hagan - Some areas heavier to red maple and oak. Understory of M2, O2 also.
75	4130 - Aspen	Poletimber Well	41.6	44	111-140	OPIC - FMD: 2007 - Hagan - Some areas heavier to red maple and oak. Understory of M2, O2 also.
76	42201 - Natural White Pine, Mixed Deciduous	Poletimber Well	17.0	43	81-110	clumpy oak and maple mixed with white pine, overall pretty small diameters yet. nice conifer cover in a pretty deciduous dominated area, will hold good 10-20 years as is.  OPIC - FMD: OI Stand Year Origin was 1974
77	4191 - Mixed Upland Deciduous with Conifer	Poletimber Medium	9.5	43	1-50	clumpy oak and maple mixed with aspen and pine, small diameters, hold 10-20.  OPIC - FMD: OI Stand Year Origin was 1974
81	42200 - Natural White Pine	Poletimber Well	8.9	43	51-80	mostly open grown white pine filling in, nice conifer cover in mostly deciduous area. old grade through stand.  OPIC - FMD: OI Stand Year Origin was 1974
82	6122 - Black Spruce	Poletimber Poor	5.8	58	1-50	still a spruce bog, not merchantable/commercial tree growing ground OPIC - FMD: 2007 - Hagan - Spruce bog.
84	4130 - Aspen	Poletimber Well	39.2	43	111-140	south end is very nice! north and down slope stuff not near as nice. cut or hold as needed... stand can easily hold 10 years. oak/maple clump areas are smaller diameter yet. cut or hold as guided by the mgmt. plan. OPIC - FMD: 2007 - Hagan - Understory has M3 in places also.
85	42200 - Natural White Pine	Poletimber Well	1.3	43	51-80	gnarly pine for the most part, multi topped... leave for thick conifer cover for now, likely thin down the road, doing good for now.
86	4191 - Mixed Upland Deciduous with Conifer	Poletimber Medium	9.0	43	51-80	mixed oak and maple stump sprouts mixed with white pine and some aspen, small diameters yet... hold 10-20 as needed.  OPIC - FMD: OI Stand Year Origin was 1974
88	4199 - Other Mixed Upland Deciduous	Sapling Medium	3.3	43	51-80	clumpy oak and maple knob.  OPIC - FMD: 2007 - Hagan - Mix of U, M4, M2.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
90	4133 - Aspen, Mixed Pine	Poletimber Medium	8.2	44	51-80	north end nice aspen, south end more sparse with falling over aspen, recreation trail through stand.  OPIC - FMD: A2 M2 understory



Stand	Cover Type	Acres	Managed Site	General Comments:
1	6225 - Bog	11.4	No	OPIC - FMD: OI Stand Year Origin was
10	330 - Low-Density Trees	3.3	No	scattered cherry red maple and a aspen clone right at north end along comp boundary.
13	320 - Upland Shrub	47.9	Yes	likely could commercially cut this stand, some aspen, red maple mixed in but mostly open to thick cherry brushy areas OPIC - FMD: Heavy cherry in areas.
22	3205 - Mixed Upland Shrub	25.9	Yes	OPIC - FMD: 2007-Hagan-West part heavy to cherry.
34	330 - Low-Density Trees	7.8	No	mostly open area, filling in with cherry and a little conifer and maple OPIC - FMD: Heavy cherry in areas.
35	622 - Lowland Shrub	36.9	No	OPIC - FMD: Next to old beaver flooding. Flooding is gone.
39	6229 - Mixed lowland shrub	5.1	No	some LO, some VO, some low density trees, OPIC - FMD: OI Stand Year Origin was
43	3303 - Mixed Low Density Trees	10.8	Yes	OPIC - FMD: 2007 - Hagan - Heavy to cherry.
44	3302 - Low Density Conifer Trees	43.1	Yes	scattered pockets of jack pine and white pine and cherry and maple... OPIC - FMD: 2007 - Hagan - Scattered cherry.
46	6229 - Mixed lowland shrub	20.1	No	Some scattered trees as well... mostly open along creek OPIC - FMD: Next to Cannon Creek
53	3302 - Low Density Conifer Trees	6.7	No	OPIC - FMD: SG 11/20/07 - Nice upland brush community. Same species composition as nearby U types. Clumps of J8. BC, JB, and RM spaced widely apart. No maintenance needed at this time. OI Stand Year Origin was
59	310 - Herbaceous Openland	144.9	Yes	OPIC - FMD: SG 11/20/07 - Much more open than # 63. Widely scattered shrub BC and JB. Hair grass, sedge, poverty grass, sand cherry. Patches of BB. Some clad/moss. Sweetfern, scattered old stumps, sheep sorrel. Scattered clumps of J6. Occasional WP and RP. RR grades. Trace of LBS. At least several WO logs. Burn stand at least once per entry period in order to set back woody encroachment, stimulate native herbaceous vegetation and/or berry production, and recycle nutrients. OI Stand Year Origin was
63	3301 - Low Density Deciduous Trees	30.5	Yes	likely commercially viable to cut this stand if desired with adjacent aspen stands. OPIC - FMD: Coming back to heavy cherry.
94	122 - Road/Parking Lot	6.9	Yes	new LARGE well pad!
95	3301 - Low Density Deciduous Trees	1.4	Yes	OPIC - FMD: Coming back to cherry. 2007-Hagan- Heavy cherry in this stand.





Stand	Cover Type	Acres	Managed Site	General Comments:
96	122 - Road/Parking Lot	8.8	Yes	OPIC - FMD: SG 11/20/07 - Lots of encroachment. QA mostly, suckers and small clones. LBS, sweetfern, strawberry, csg, sedges, poverty. Old RR grades. Pussytoes, yarrow, mullin, SJW, ragweed, willow shrubs, dandelion, sheep sorrel, choke cherry, bb, ricegrass, rubus, hawthorn. Game trails. Occassional old stump. Terrain is flat but rough. Loads of dead herbaceous matter. Selectively hand fell woody encroachment and then burn it at least once per entry period in order to set back woody encroachment, stimulate native herbaceous vegetation and/or berry production, and recycle nutrients. OI Stand Year Origin was
400	3301 - Low Density Deciduous Trees	2.9	Yes	OPIC - FMD: SG 11/20/07 - Lots of encroachment. QA mostly, suckers and small clones. LBS, sweetfern, strawberry, csg, sedges, poverty. Old RR grades. Pussytoes, yarrow, mullin, SJW, ragweed, willow shrubs, dandelion, sheep sorrel, choke cherry, bb, ricegrass, rubus, hawthorn. Game trails. Occassional old stump. Terrain is flat but rough. Loads of dead herbaceous matter. Selectively hand fell woody encroachment and then burn it at least once per entry period in order to set back woody encroachment, stimulate native herbaceous vegetation and/or berry production, and recycle nutrients. OI Stand Year Origin was
401	3301 - Low Density Deciduous Trees	1.9	Yes	OPIC - FMD: SG 11/20/17 - Lots of encroachment. QA mostly, suckers and small clones. LBS, sweetfern, strawberry, csg, sedges, poverty. Old RR grades. Pussytoes, yarrow, mullin, SJW, ragweed, willow shrubs, dandelion, sheep sorrel, choke cherry, bb, ricegrass, rubus, hawthorn. Game trails. Occassional old stump. Terrain is flat but rough. Loads of dead herbaceous matter. Selectively hand fell woody encroachment and then burn it at least once per entry period in order to set back woody encroachment, stimulate native herbaceous vegetation and/or berry production, and recycle nutrients. OI Stand Year Origin was
402	790 - Other Bare/Sparsely Vegetate	1.6	Yes	still an old abandoned gravel pit... people turning into a make shift shooting range... not sure if there is any good gravel?  OPIC - FMD: 1997 - Grieve - This is an old gravel pit. Could be called grass but is mostly spotted knapweed. Pit has been abandond. Needs to have some reclamation. Old piles of dirt and gravel need to be spread out.