



Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61158

Entry Year 2019

Acreage: 1,900

County Kalkaska

Management Area: Boardman Plains

Revision Date: 2017-06-12

Stand Examiner: Thomas Peterson III

Legal Description:

T27N R8W Sections 31, 32, and 33

Identified Planning Goals:

This compartment is part of the Boardman Plains Management Area, which is primarily managed to provide forest products, maintain or enhance wildlife habitat, protect areas of unique character, and provide for forest-based recreational uses. Timber management objectives for this 10-year planning period include improving the age-class structure of aspen and red pine, increasing regeneration of oak, and managing the northern hardwood resource for stand quality, age and species diversity, wildlife values, and continued production of wood products. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation opportunities. Expected trends within this 10-year planning period are: increased recreational pressure, increased oil and gas development, increased wildland/urban interface, a need to restore oak/pine barrens, invasive plant control and conversion of poor oak sites to mixed pine/oak sites.

Soil and topography:

Ranges from Rubicon to Grayling sands. Topography is generally flat.

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

The entire compartment is state land with the exception of 80 acres in Section 32 along the North Branch of the Boardman River. The compartment is surrounded by state land on the west, south, and east sides. There is mixed ownership along the north boundary.

Unique Natural Features:

This compartment falls within land type associations (LTA) 5111 of sub-subsection VII.2.2. LTA 5111 is characterized by broad flat outwash plains with few kettle lakes and excessively drained sand. GLO surveyors frequently reported the occurrence of large wildfires within LTA 5111. These fires were among the largest in the state, covering several square miles.

Archeological, Historical, and Cultural Features:

None listed at this time.

Special Management Designations or Considerations:

The North Branch of the Boardman River and its tributaries are protected by Natural Rivers regulations and are also considered a High Conservation Value Area. The North Branch is also a blue ribbon trout stream.

Watershed and Fisheries Considerations:

The North Branch of the Boardman River flows through the north side this compartment. It is a designated trout stream, a Natural River, and supports a cold water fishery of brook and brown trout.

Wildlife Habitat Considerations:

All of compartment 158 is underlain by a dry sandy outwash plain (LTA 5111). The sandy soil found here was often the setting for large wildfires. These fires sustained a variety of fire driven communities, mainly conifer forests at the time of the GLO surveys. Present habitat types include upland mixed stands of pine-oak-aspen, of various ages. Upland non-forested stands currently consist mainly of old well pads. Opportunities to increase productive non-forested stands should be pursued. A jack pine final harvest with very low jack pine regeneration has been proposed for conversion to a grassland/barrens complex. This project should be designed to add important habitat components (i.e. forage, nesting habitat, bugging areas, etc) to the landscape. Also, the compartment should continue to be managed for a variety of successional stages of pine-oak-aspen forest and grass-shrub openings, with some mid to late successional forest in and adjacent to stream corridors. Oak is a very important component of forests here and should be maintained or regenerated as much as possible. Timber harvests should be designed to mimic wildfires of various intensities, when possible. An

aspen stand and several pine stands have been proposed for treatment this entry period. The creation of dead and down logs will be included in some sales. Standing dead timber is usually left during harvest operations unless deemed a safety hazard. Some species found in these early to mid-successional communities include: white-tailed deer, ruffed grouse, wild turkey, eastern bluebird, smooth green snake, long-tailed weasel, and red-tailed hawk. Also, many endangered, threatened, or special concern species can be found in these fire maintained ecosystems. The North Branch Boardman River runs through this sandy outwash plain, but only barely makes it into this compartment. However, the proximity of the river to this compartment does provide habitat diversity as well as a riparian corridor through an otherwise dry landscape.

Mineral Resource and Development Concerns and/or Restrictions

There is no known metallic mineral potential in this region. Sand/gravel pits are not located in the immediate area. The Smith Lake Pit is located more than three miles to the northeast. There does appear to be some sand and gravel potential within the compartment. The compartment is within the prolific Niagaran reef trend. Nearly all of the wells have been plugged and abandoned and most of the leases have been terminated. Potential for additional future production within the compartment is considered low.

Vehicle Access:

There is sufficient vehicle access throughout the compartment. County roads include: Boardman River Road, Crofton, Vroom, and Section 6 Road.

Survey Needs:

None needed at this time.

Recreational Facilities and Opportunities:

Snowmobile Trail #55, and the Michigan Cross Country Cycle Trail (MCCCT) are both located within this compartment. DNR Policy and Procedure 32.22-01 (BMPs for Forest and Wildlife Management Adjacent to Recreation Trails) should be taken into consideration if these designated trail systems have the potential to be impacted by forest treatments. (T.M.N. 11/1/16).

Fire Protection:

This compartment is protected by the Kalkaska Fire Department, and DNR protection is from the Kalkaska Field Office. This compartment is located within Zone 6, so on High and above fire days, several surrounding DNR offices also respond. Urban Interface is not an issue, as most all of this is state land. It is heavily used for recreation purposes, with a nearby state forest campground, an ORV and snowmobile trail, and nearby lakes and rivers. Access is not an issue.

Additional Compartment Information:

The following reports from the Inventory are attached:

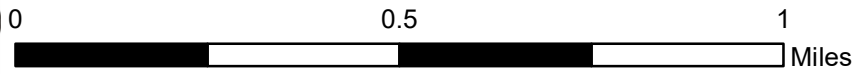
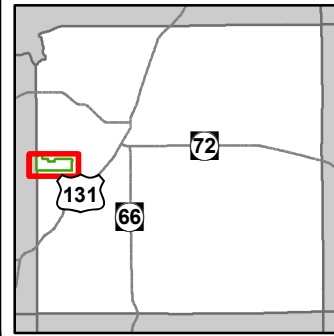
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

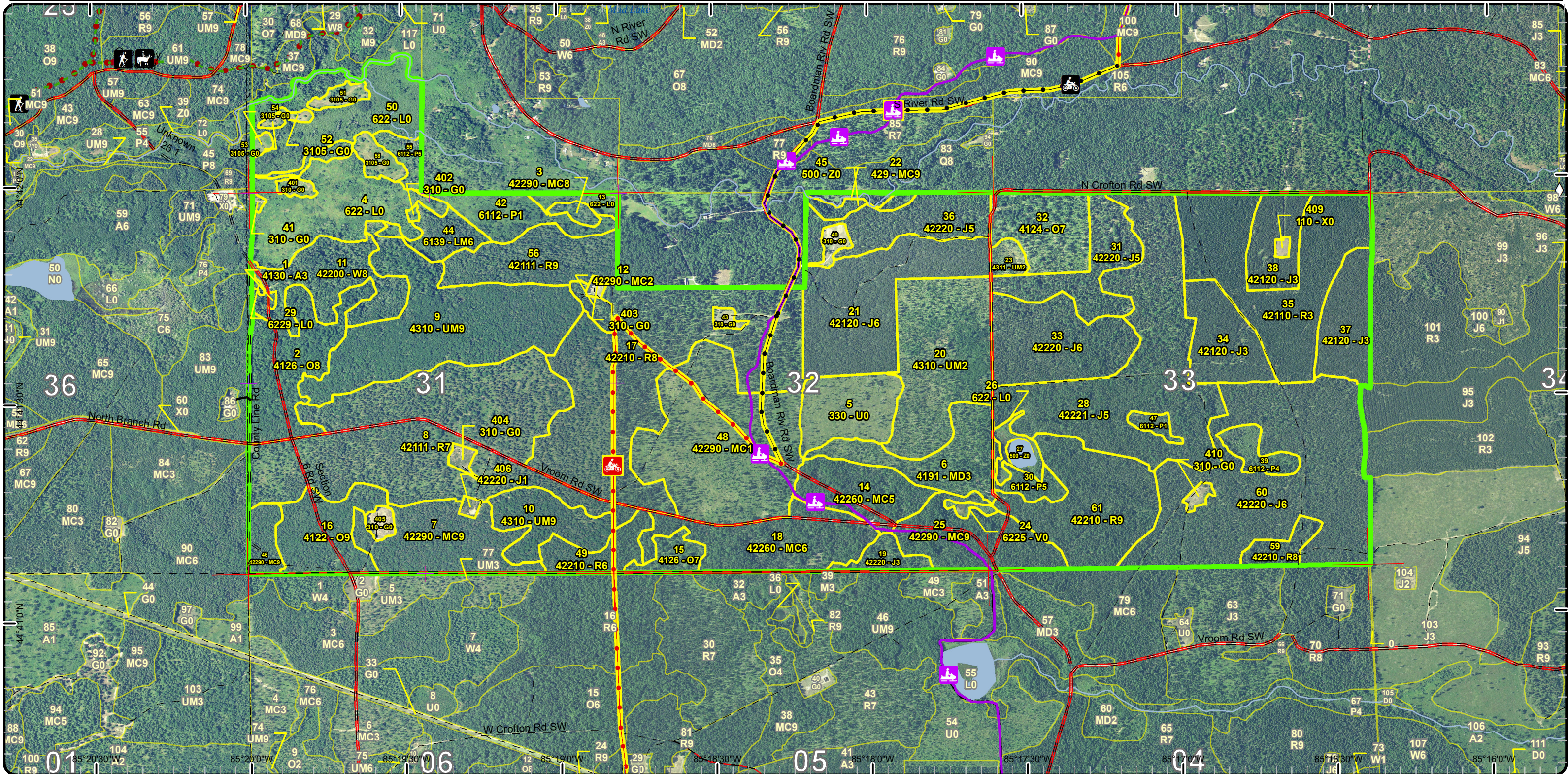
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Stand Boundary Map

Compartment: 158
 T27N R08W Sec. 31-33
 County: Kalkaska
 Unit: Traverse City
 Mgmt Area: Boardman Plains
 YOE: 2019
 Acres: 1899.8 GIS Calculated
 Examiner: Thomas Peterson III
 Map Revised: 8/7/2017
 Map Phase: Post-Review

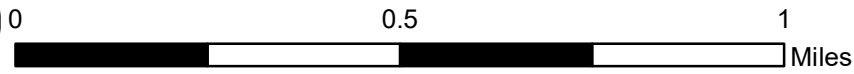
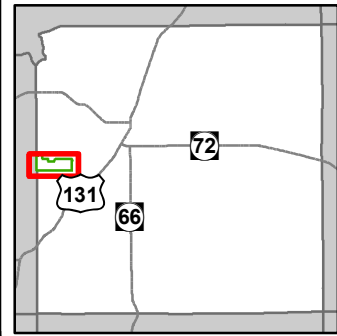


- Miris Corners
- Remonumented Section Corners
- ◇ Field Grade GPS Corners
- ▭ Counties
- Culvert
- 🏍 Motorcycle Trails (SOS License)
- 🚶 Hiking Trails
- 🐎 Horse Trails
- 🛵 MCCCT Trails
- 🏠 Snowmobile Trails
- Designated Hiking Trails
- Designated Bicycle Trails
- Designated Equestrian Trails
- Designated Ski Trails
- ORV License
- ORV License & Trail Permit
- Designated Snowmobile Trails
- Michigan Cross Country Cycle Trail (MCCCT)
- Paved Roads
- County Gravel Roads
- Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Stand Boundaries
- 412 - Oak Types
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 613 - Lowland Mixed Forest
- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub

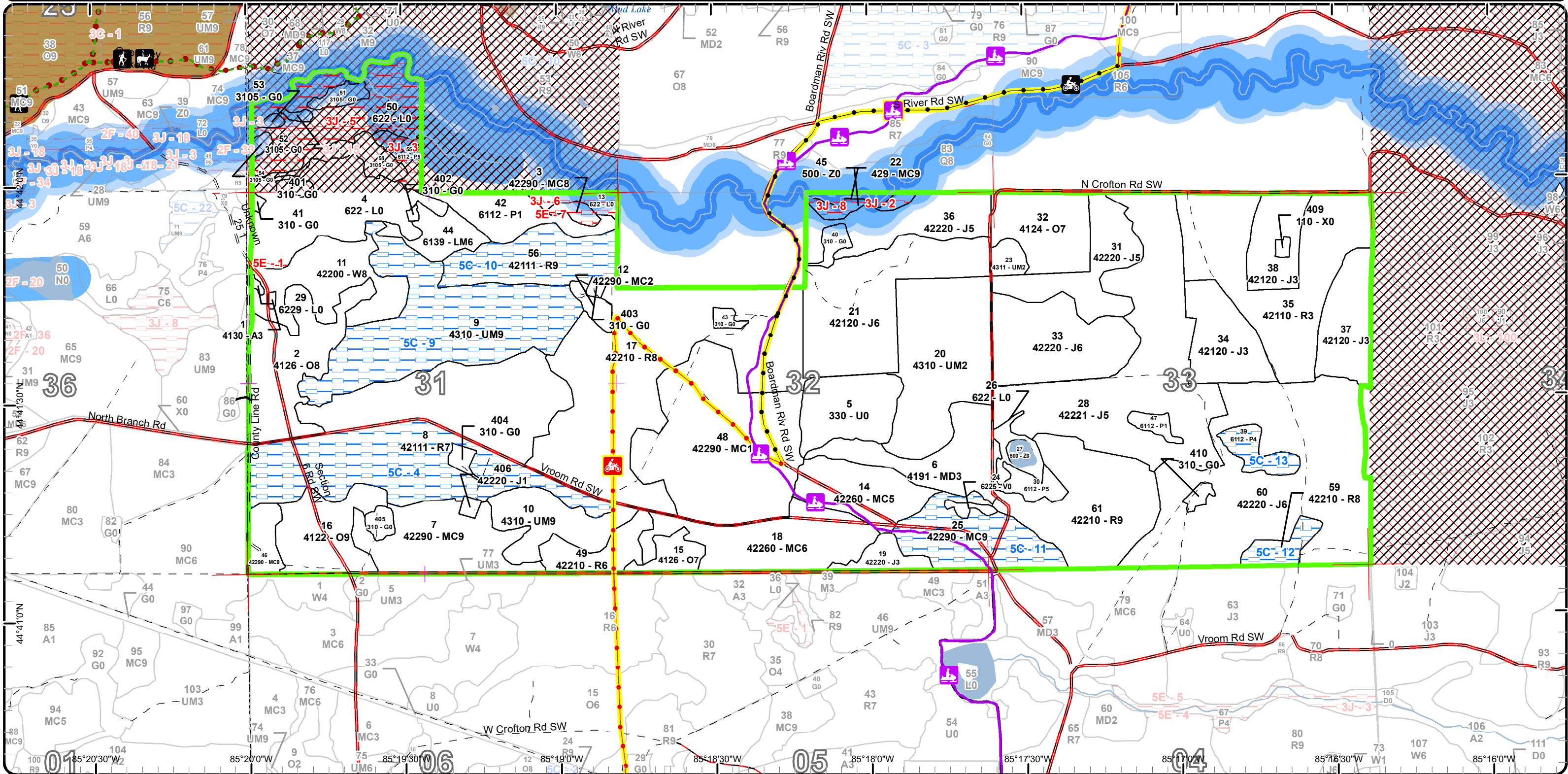


Special Conservation Areas & Site Conditions Map

Compartment: 158
 T27N R08W Sec. 31-33
 County: Kalkaska
 Unit: Traverse City
 Mgmt Area: Boardman Plains
 YOE: 2019
 Acres: 1899.8 GIS Calculated
 Examiner: Thomas Peterson III
 Map Revised: 8/7/2017
 Map Phase: Post-Review



- Miris Corners
- + Remonumented Section Corners
- Field Grade GPS Corners
- Counties
- Culvert
- 🏍️ Motorcycle Trails (SOS License)
- 🚶 Hiking Trails
- 🐎 Horse Trails
- 🚲 MCCCT Trails
- 🚲 Snowmobile Trails
- Designated Hiking Trails
- - - Designated Bicycle Trails
- Designated Equestrian Trails
- Designated Ski Trails
- ORV License
- ORV License & Trail Permit
- Designated Snowmobile Trails
- Michigan Cross Country Cycle Trail (MCCCT)
- Paved Roads
- County Gravel Roads
- Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- - - Closed
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Forest Habitat Core Interior
- Dedicated Management Areas
- Cold Water Lakes
- High Priority Trout Stream Buffer



Report 1 – Total Acres by Cover Type and Age Class

Traverse City Mgt. Unit

Compartment 158 Year of Entry 2019

Thomas Peterson III : Examiner



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Bog	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Herbaceous Openland	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Jack Pine	0	0	0	87	32	393	0	0	0	0	0	0	0	0	0	0	0	0	512
Low-Density Trees	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Lowland Aspen/Balsam Poplar	0	21	0	4	8	10	9	0	0	0	0	0	0	0	0	0	0	0	51
Lowland Mixed Forest	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13
Lowland Shrub	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110
Mixed Upland Deciduous	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Natural Mixed Pines	0	97	0	4	0	0	0	0	166	3	0	0	0	0	0	0	0	0	270
Oak	0	0	0	0	0	0	0	0	0	115	0	0	0	0	0	0	0	0	115
Red Pine	0	0	0	80	0	0	0	140	74	195	0	0	0	0	0	0	0	0	489
Upland Conifers	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5
Upland Mixed Forest	0	0	72	0	0	0	0	0	27	92	0	0	0	0	0	0	0	0	190
Urban	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Water	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
White Pine	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0	0	38
Total	183	118	104	176	40	416	9	140	272	443	0	0	0	0	0	0	0	0	1897



Report 2 – Treatment Summary

Traverse City Mgt. Unit
Year of Entry: 2019

Acres of Harvest

Compartment 158
Total Compartment Acres: 1,900

Commercial Harvest - 351
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
Jack Pine	51	0	0	0	0	0	0	0	0	51
Natural Mixed Pines	69	7	0	0	0	39	0	0	0	115
Oak	0	0	0	0	0	116	0	0	0	116
Red Pine	70	0	0	0	0	0	0	0	0	70
Total	190	7	0	0	0	155	0	0	0	351

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	351	0	0	29	0	49	0	18	0	446
Next Step	0	140	70	0	70	421	0	29	0	729
Total	351	140	70	29	70	470	0	46	0	1175



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
2 61158002-Cut	44.2	4126 - White, Black, N. Pin Oak	Sawtimber Medium	87	81-110	Harvest	Overstory Removal	42201 - Natural White Pine, Mixed Deciduous	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Leave Scattered Mature White oaks as a seed source. Protect advanced regeneration in stand.

Specs:

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Regen: Moderately to fully stocked stand, with any pine, oak, aspen, and /or red maple component. If stand fails roller chop, spray, trench and plant to red pine.

Other

Comment:

Proposed Start Date: 10/01/2018

4 61158004-Monitor	49.3	622 - Lowland Shrub Nonstocked				Monitoring	Natural Regen (Re-Inventory)	6112 - Lowland Aspen	Even-Aged	Draft Field Boundary
--------------------	------	--------------------------------	--	--	--	------------	------------------------------	----------------------	-----------	----------------------

Habitat Cut: No

Site Condition:

Prescription Stand is considered none forested at this time due to the trees be less then 3 feet at this time.

Specs:

Next Step

Treatments:

Acceptable Regen: Aspen and white pine.

Other

Comment: Stand is considered none forested at this time due to the trees be less then 3 feet at this time. One more growing season the stand should be an A2 to A3. Trees are about 2 feet tall at the current time.

Proposed Start Date: 10/01/2016



S
t
a
n
d

Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
5 61158005-Burn	28.5	330 - Low-Density Trees	Nonstocked		Unspecified	Burn	Opening	3205 - Mixed Upland Shrub		Draft Field Boundary

Habitat Cut: No

Site Condition:

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

Next Step Treatments: NonForestMgt, Other - Specify

Acceptable Regen:

Other Comment: This compartment is located on a dry and sandy outwash plain that historically burned frequently resulting in a mosaic of fire dependent communities including grasslands.

Proposed Start Date: 10/01/2018

8 61158008-Cut	69.9	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Poor	83	1-50	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
----------------	------	---	----------------	----	------	---------	-------------------------	-------------------------	-----------	----------------------

Habitat Cut: No

Site Condition:

Prescription Clearcut with standard area retention. Put standard area retention on edge of stand near Vroom Road, to facilitate future planting operations.

Specs: Clearcut all trees 2 inches or greater at DBH.

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

Acceptable Regen: Fully stocked planted red pine stand.

Other Comment: North half of stand is being treated this YOE of entry consider same prescription for south half of stand the next YOE.

Proposed Start Date: 02/15/2017



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
14	61158014-Cut	22.5	42260 - Natural Pine, Mixed Deciduous	Poletimber Medium	77	51-80	Harvest	Clearcut with Retention	42221 - Natural Jack Pine, Mixed Deciduous	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Clearcut with retention. Leave minimum standard area retention on edge of stand near Boardman Road. Cut during snow off condition to promote scarification. Use whole tree skidding spec. Protect snowmobile trail.
Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Moderately to fully stocked jack pine, with any component of aspen, red maple, red pine, white pine, and or oak.
Regen:

Other Clearcutting on only one side of trail at this time. Thin the strip between Boardman Road and Snowmobile trail to help with visual impacts of trail. The
Comment: thinning will be the removal of all aspen and jack pine.

Proposed Start Date: 10/01/2018

14	61158014-Cutx	6.5	42260 - Natural Pine, Mixed Deciduous	Poletimber Medium	77	51-80	Harvest	Single Tree Selection	42221 - Natural Jack Pine, Mixed Deciduous	Two-Aged	Draft Field Boundary
----	---------------	-----	---------------------------------------	-------------------	----	-------	---------	-----------------------	--	----------	----------------------

Habitat Cut: No

Site Condition:

Prescription Cut all aspen red maple, and jack pine. Use snowmobile trail spec to protect trail.. Do not allowing cutting during snowmobile season. Cut during
Specs: snow off conditions to promote scarification and allow natural regeneration to occur.

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Moderately to fully stocked jack pine, with any component of aspen, red maple, oak and other pine species.
Regen:

Other
Comment:

Proposed Start Date: 02/16/2017

15	61158015-Cut	9.0	4126 - White, Black, N. Pin Oak	Sawtimber Poor	86	1-50	Harvest	Overstory Removal	42260 - Natural Pine, Mixed Deciduous	Even-Aged	Draft Field Boundary
----	--------------	-----	---------------------------------	----------------	----	------	---------	-------------------	---------------------------------------	-----------	----------------------

Habitat Cut: No

Site Condition:

Prescription Overstory removal. Cut all trees that are greater then 4 inches at DBH in the stand. Protect advanced pine regeneration. Cut to length no whole tree
Specs: skidding no chipping of tops in this stand. Cut during snow of conditions to promote more natural regeneration.

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Moderately to Fully stocked Jack pine stand with any component of oak, maple, cherry, and or red pine.
Regen:

Other No Retention pocket due to small size of stand. Cut with stand number 18.
Comment:

Proposed Start Date: 10/01/2018

16	61158016-Cut	31.4	4122 - Oak, Pine	Sawtimber Well	86	81-110	Harvest	Overstory Removal	42201 - Natural White Pine, Mixed Deciduous	Even-Aged	Draft Field Boundary
----	--------------	------	------------------	----------------	----	--------	---------	-------------------	---	-----------	----------------------

Habitat Cut: No

Site Condition:

Prescription Leave scattered mature white oaks as a seed source. Protect advanced natural regeneration.
Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Moderate to fully stocked stand with any component of: oak, pine, aspen, and/ or red maple. If stand fails roller chop, spray, trench and plant to red
Regen: pine.

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
18	61158018-Cut	46.5	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	71	51-80	Harvest	Clearcut with Retention	42221 - Natural Jack Pine, Mixed Deciduous	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Clearcut with retention. Leave standard retention island along Vroom Road. Clearcut all trees 2 inch or greater at DBH. Cut during snow off conditions and require whole tree skidding to scarify the soil to maximize natural reproduction.
Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Any fully to moderately stocked stand of natural Jack Pine, red maple, aspen, or oak. If regen fails roller chop, and plant to jack pine.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

28	61158028-Cut	50.7	42221 - Natural Jack Pine, Mixed Deciduous	Poletimber Medium	47	51-80	Harvest	Clearcut with Retention	42221 - Natural Jack Pine, Mixed Deciduous	Even-Aged	Draft Field Boundary
----	--------------	------	--	-------------------	----	-------	---------	-------------------------	--	-----------	----------------------

Habitat Cut: No

Site Condition:

Prescription Clearcut with retention. Leave standard area retention pocket in stand. Clearcut all trees 2 inches or greater at DBH. Cut during snow off conditions to promote scarification throughout the stand.
Specs:

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

Acceptable Fully to moderately stocked jack pine stand with any component of oak, aspen or any other upland mix. if Stand fails trench and replant to jack pine.
Regen:

Other Only a section of this stand is being cut if more acres are needed the rest of the stand can be cut.
Comment:

Proposed Start Date: 02/21/2017

32	61158032-Cut	30.9	4124 - Red with White Oak	Sawtimber Poor	86	1-50	Harvest	Overstory Removal	42221 - Natural Jack Pine, Mixed Deciduous	Even-Aged	Draft Field Boundary
----	--------------	------	---------------------------	----------------	----	------	---------	-------------------	--	-----------	----------------------

Habitat Cut: No

Site Condition:

Prescription Over story removal. Cut all trees greater than 4 inches at DBH. Use protect regen spec and cut to length system to protect already established advanced regen. No full tree skidding to landing.
Specs:

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

Acceptable Fully to moderately stocked jack pine with any aspen, oak or other mixed upland species will be acceptable.
Regen:

Other Cut out of year of entry to protect established saplings throughout stand. Add cut to length spec, no whole tree skidding will be permitted.
Comment:

Proposed Start Date: 10/01/2018

48	61158048-Cut	39.2	42290 - Natural Mixed Pine	Sapling Poor	6	Immature	Harvest	Overstory Removal	42221 - Natural Jack Pine, Mixed Deciduous	Even-Aged	Draft Field Boundary
----	--------------	------	----------------------------	--------------	---	----------	---------	-------------------	--	-----------	----------------------

Habitat Cut: No

Site Condition:

Prescription Overstory removal. Remove the overstory to promote established jack pine seedlings. Use cut to length system with no whole tree skidding. Use rec spec for snowmobile trail. Leave retention island near snowmobile trail for visual impact.
Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Moderately to Fully stocked jack pine stand, with any combination of oak, cherry, red pine, or any other mixed upland species. If sections of stand were natural regeneration fails, roller chop, spray, trench and replant to red pine.
Regen:

Other Only cutting a portion of the stand. The rest of the stand does not have enough volume to go after. Can consider removing overstory from entire stand and see how stand will regenerate.
Comment:

Proposed Start Date: 02/21/2017



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
58 61158058-NF	17.6	3105 - Mixed Upland Herbaceous	Nonstocked			NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		Draft Field Boundary

Habitat Cut: No

Site Condition:

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

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

**Total Treatment
Acreage Proposed: 446.2**

Report 4 – Site Conditions

Traverse City Mgt. Unit
Thomas Peterson III : Examiner

Compartment: 158
Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions		
		With Condition	Not Available		5C	3J	5E
1	1	0	0	Aspen			
2	2	0	0	Bog			
35	35	0	0	Herbaceous Openland			
511	511	0	0	Jack Pine			
28	28	0	0	Low-Density Trees			
52	32	9	10	Lowland Aspen/Balsam Poplar	9	10	
13	13	0	0	Lowland Mixed Forest			
110	57	0	53	Lowland Shrub		52	0
32	32	0	0	Mixed Upland Deciduous			
271	229	38	3	Natural Mixed Pines	38		3
115	115	0	0	Oak			
489	364	125	0	Red Pine	125		
5	0	0	5	Upland Conifers		5	
191	99	92	0	Upland Mixed Forest	92		
1	1	0	0	Urban			
6	2	0	4	Water		4	
38	38	0	0	White Pine			
1,900	1,560	264	75	Total Forested Acres	264	72	4
	82%	14%	4%	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	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Retention from Popple Topple, 61-028-14-01.							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	4	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Traverse City Mgt. Unit
Thomas Peterson III : Examiner

Compartment: 158
Year of Entry: 2019

3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	81	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Half of stand will be treated at this time. Consider treating this portion of stand next year of entry.							
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	46	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Traverse City Mgt. Unit
 Thomas Peterson III : Examiner

Compartment: 158
 Year of Entry: 2019

9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	92	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	35	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	38	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	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 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	Dedicated Management Areas	Such areas are dedicated by the DNR Director for specific management uses through the promulgation of rules, as governed by Part 5, Department of Natural Resources, of the NREPA (MCL 324.502(2) and 324.504). Section 38 of the Administrative Procedures Act (MCL 24.238) provides for public requests for the promulgation of rules. This is an active program, with one proposed site currently under review by the DNR.
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	4130 - Aspen	Sapling Well	0.6	22	Immature	
2	4126 - White, Black, N. Pin Oak	Sawtimber Medium	44.2	87	81-110	Stand has die back in northwest corner. Stand is showing some decline in the oak. Stand has a high amount of white pine in understory.
3	42290 - Natural Mixed Pine	Sawtimber Medium	3.3	88	51-80	Leave stand as uncut island / near Boardman River
6	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	32.1	15	Immature	Good regen under oak shelter wood / seed tree. Regen is well established. Not enough volume in oak to go in and go back after it. More oak left on east side of stand then west side of stand.
7	42290 - Natural Mixed Pine	Sawtimber Well	42.4	77	81-110	
8	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Poor	150.6	83	1-50	Stand has very little understory in most areas. Stand does have dense pockets of jack pine understory in more open areas. The portion of the stand north of Vroom road will be treated this YOY, but if more acres are needed the south half of stand can also be treated. Stand has planting records that indicate stand was planted in 1934. 6/22/11 Stand was shelterwood cut. All red pine was saved as well as oak larger than 12".
9	4310 - Pine, Oak Mix	Sawtimber Well	92.0	82	111-140	Stand has a good amount of oak and large red pine in it. Stand has good white pine regeneration in it scattered throughout most of the sale.
10	4310 - Pine, Oak Mix	Sawtimber Well	27.1	75	81-110	
11	42200 - Natural White Pine	Sawtimber Medium	37.6	83	81-110	Stand appears to be natural white pine.
12	42290 - Natural Mixed Pine	Sapling Medium	4.4	28	Immature	
14	42260 - Natural Pine, Mixed Deciduous	Poletimber Medium	29.1	77	51-80	Jack Pine is fallen out of stand. North side of Boardman road has a lot more jack pine then the south side of the road. South side has snowmobile trail in it.
15	4126 - White, Black, N. Pin Oak	Sawtimber Poor	9.0	86	1-50	There is a sold BA of oak throughout the stand ranging from pole to log size oaks. Under the oak there are scattered jack and red pine trees that are in the sapling range class.
16	4122 - Oak, Pine	Sawtimber Well	31.4	86	81-110	Stand has some signs of die back in the oak. Not sure if it will hold for another 10 years.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	42210 - Natural Red Pine	Sawtimber Medium	139.7	65	51-80	Stand has several open areas in in from past harvest. In these open areas there is a high amount of jack pine seedlings in it. The stand is very variable throughout it. It ranges from R9 in some spots to R7 in others. Stand has several age classes. 1/11/2011 Stand harvested. Harvest look liked Jack Pine, and aspen were targeted.
18	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	46.5	71	51-80	Stand has several aspen clones and red pine pockets mixed in with jack pine. There is some decline in the jack pine at this time. Stand also has some topography in it.
19	42220 - Natural Jack Pine	Sapling Well	8.8	26	Immature	Stand harvested in 1991. Residual oak was left. Good amount of regen coming in under it.
20	4310 - Pine, Oak Mix	Sapling Medium	66.5	15	Immature	
21	42120 - Planted Jack Pine	Poletimber Well	66.4	41	51-80	Stand appears to be planted. Majority of trees in stand are reaching merchantability, with trees that are not merchantable yet.
22	429 - Mixed Upland Conifers	Sawtimber Well	5.4	77	81-110	Stand on steep slope going towards river. Leave as buffer for river to step to cut.
23	4311 - Pine, Aspen Mix	Sapling Medium	5.1	15	1-50	Cut as part of Lake James Jack Pine, 61-056-99-01, in summer 2002. Stand has a kettle hole in the middle of it. The kettle hole is seeded in with jack pine saplings.
25	42290 - Natural Mixed Pine	Sawtimber Well	38.2	77	111-140	
28	42221 - Natural Jack Pine, Mixed Deciduous	Poletimber Medium	113.4	47	51-80	Stand has some open areas in. Stand has Large oak scattered throughout it. Stand also has pockets of decent red pine in it.
30	6112 - Lowland Aspen	Poletimber Medium	7.8	30	1-50	Stand is a wetland that is mostly aspen at this time. Stand is in the stage from being merchantable and sapling. With a higher percentage being in that merchantable side.
31	42220 - Natural Jack Pine	Poletimber Medium	31.5	38	51-80	Stand is a healthy jack pine stand, with oak scattered throughout it. Stand also has a few super canopy red pine scattered throughout it.
32	4124 - Red with White Oak	Sawtimber Poor	30.9	86	1-50	Cut appears to be an old shelter wood. It was cut as part of Lake James Jack Pine, 61-056-99-01, in summer 2002. Stand has a high amount of deer browse on oak seedlings, causing a high amount of mortality in the oak seedlings do to repetitive deer browse.
33	42220 - Natural Jack Pine	Poletimber Well	47.0	42	51-80	Stand is healthy and will stocked. Stand has a super canopy of Red Pine Scattered throughout it.. Stand is different the adjacent stand in the sense if does not share the same oak component as the other stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
34	42120 - Planted Jack Pine	Sapling Well	28.6	27	Immature	Stand planting records show that the jack pine was planted in 1990.
35	42110 - Planted Red Pine	Sapling Well	80.0	27	Immature	Stand is in the stage between sapling and pole with the majority of the stand still being in the sapling stage. Stand planting records show stand was planted in 1990.
36	42220 - Natural Jack Pine	Poletimber Medium	32.5	41	51-80	Stand has a few open areas in it. Stand is starting to reach majority at this point with most the trees reaching the merchantability size class.
37	42120 - Planted Jack Pine	Sapling Well	26.6	27	Immature	Stand planting records indicate stand was planted in 1990.
38	42120 - Planted Jack Pine	Sapling Well	20.7	27	Immature	Stand planting records indicate stand was planted in 1990.
39	6112 - Lowland Aspen	Poletimber Poor	9.4	55	1-50	Stand is a lowland. Hard to get age of stand trees are pore quality and could not get a good core. Stand is 50+ but also has aspen saplings present were some of the aspen has fallen. out. Stand has tag alder present also. Stand is mostly likely wet. Consider cutting when adjacent stands are cut.
42	6112 - Lowland Aspen	Sapling Poor	20.5	5	Immature	Stand was cut under timber sale contract Flats Aspen Sale' 61-078-09-01' close 2/13/2012 sc.
44	6139 - Mixed Lowland Forest	Poletimber Well	13.3	49	81-110	
46	42290 - Natural Mixed Pine	Sawtimber Well	9.7	70	81-110	
47	6112 - Lowland Aspen	Sapling Poor	3.8	25	Immature	Stand is lowland that is slowly being filled in with aspen and some pine. Stand has some tag alder in it and other indicators that it could be wet.
48	42290 - Natural Mixed Pine	Sapling Poor	97.1	6	Immature	1/11/2011 Stand was harvested. There was Scattered RP and oak left throughout stand. Areas of dense pockets of jack pine seedlings in spots.
49	42210 - Natural Red Pine	Poletimber Well	16.0	71	81-110	Stand has several aspen clones and red pine pockets mixed in with jack pine. There is some decline in the jack pine at this time.
55	6112 - Lowland Aspen	Poletimber Medium	10.4	49	1-50	Some scattered white pine throughout stand. This was the part of the adjacent stand that was too wet and minimally stocked to cut.
56	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	35.3	83	81-110	Planting records indicate stand was planted in 1934. 12/14/2010 Stand was thinned as a part of '158 Pine.' All aspen was removed mostly oak, RP and WP Logs were removed (Crigier).
59	42210 - Natural Red Pine	Sawtimber Medium	8.8	85	111-140	

S
t
a
n
d

Traverse City Mgt. Unit

Report 7 – Forested Stands

Compartment: 158
Year of Entry: 2019



Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42220 - Natural Jack Pine	Poletimber Well	134.0	47	51-80	Stand is different from stand 28. Even though jack pine seems to be the same age. Stand has a higher percentage of jack pine and canopy closer.
42210 - Natural Red Pine	Sawtimber Well	58.3	75	111-140	Stand appears to be natural red pine. There are spots were rows seem to be present, but no planting records were found. Stand has several age class of red pine. The canopy ranges from super canopy red pine to pole sized red pine. There is a narrow ravine in stand that has aspen in the bottom of it.
42220 - Natural Jack Pine	Sapling Poor	1.5	20	Immature	Old well site, is starting to seed in with Jack Pine.



Stand	Cover Type	Acres	Managed Site	General Comments:
4	622 - Lowland Shrub	51.1		Stand is not considered forest at this time. The rule pertaining to trees having to be greater than 3 feet to be considered forested. There are a lot of aspen seedlings present at this time, but are not at the 3 foot minimum height requirement. The stand should be an A3 by next inventory cycle. Cut December 2014 - January 2015. Mostly lowland with some upland areas in northwest corner and along southern edge.
5	330 - Low-Density Trees	28.5	No	Stand was burned under FTP # W-62-795 in April 25, 2011. The objective of the burn is to convert Jack pine stand to a grassland. Stand has a few scattered oak throughout it. Stand also has a few dense pockets of jack pine seedlings scattered throughout it. With time stand might seed in and become forested. As of now stand does not meet the 25% canopy closer to be considered a forested stand.
13	622 - Lowland Shrub	6.0	No	Stand is mostly tag alder with a few snags in it at this time. Stand is just south of Boardman river.
24	6225 - Bog	2.1	No	Stand is a marsh / bog. Stand appears to have some open water in middle of the stand at least during the winter months.
26	622 - Lowland Shrub	6.0	No	
27	500 - Water	2.5	No	James Lake
29	6229 - Mixed lowland shrub	0.5	No	Flooded area.
40	310 - Herbaceous Openland	3.8	Yes	Old well site. Stand had sign saying it was a "reforestation study in progress", between the Michigan DNR and Au Sable institute of Environmental Studies.
41	310 - Herbaceous Openland	0.8	No	Stand is open area with a few scattered trees in it at this time.
43	310 - Herbaceous Openland	2.2	No	Old well site.
45	500 - Water	3.6	No	North Branch of Boardman River runs through the section of land. non- forested wetland runs on both sides of the river.
50	622 - Lowland Shrub	46.3	No	lowland stand w/ some trees scattered around on hummocks and higher areas. stand contains boardman river corridor which may have some higher/upland banks included.
51	3105 - Mixed Upland Herbaceous	4.4	No	Grass opening, south side of boardman river.
52	3105 - Mixed Upland Herbaceous	1.3	No	Small grass opening on south side of Boardman river.
53	3105 - Mixed Upland Herbaceous	1.2	No	Small opening, some lowland aspen at north edge of stand.



Stand	Cover Type	Acres	Managed Site	General Comments:
54	3105 - Mixed Upland Herbaceous	1.7	No	Grassy opening at compartment edge, some scattered saps.
58	3105 - Mixed Upland Herbaceous	6.6	No	Larger opening in this area, scattered saplings throughout stand.
401	310 - Herbaceous Openland	2.5	No	Natural opening with a few scattered trees across it.
402	310 - Herbaceous Openland	0.6	No	Old well site
403	310 - Herbaceous Openland	1.5	Yes	Old well site.
404	310 - Herbaceous Openland	2.5	No	Old well site - scattered jack pine starting to seed in.
405	310 - Herbaceous Openland	3.4	No	Old well site
409	110 - Low Intensity Urban	1.1	No	Old well site
410	310 - Herbaceous Openland	2.2	Yes	Looks like old well site.