



Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61122

Entry Year 2020

Acreage: 1,694

County Kalkaska

Management Area: Grayling Outwash

Revision Date: 2018-04-16

Stand Examiner: Kelly Standerfer

Legal Description:

T26N R5W Sections 8, 17, and 20

Identified Planning Goals:

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

Historically fires were very frequent in this management area and were important in determining species composition. Jack pine and northern pin oak dominated the outwash, while vegetation varied on the ridges – some dominated by northern hardwoods and others dominated by red oak, hemlock and white pine. Currently areas of aspen, red pine and upland hardwoods with isolated pockets of lowland types cover the majority of the state forest land. In the past, a number of harvests and plantings were done in a checkerboard pattern, now there is interest in consolidating types and reducing cover type fragmentation.

Soil and topography:

Much of the topography in this management area was sculpted by melting glaciers that dissected some of the ice contact ridges into steep ridges with flat sandy outwash plains between. Topography ranges from flood plain lowlands to rolling hills.

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

This compartment is a large block of state ownership with 40 acres of private land in Section 20. The Black River Conservation Association (a large block of private ownership which is managed for similar uses) borders the compartment to the north.

Unique Natural Features:

A large cedar swamp known as the Black Creek deer yard comprises much of Section 20.

Archeological, Historical, and Cultural Features:

Several old railroad grades can be found in Section 8.

Special Management Designations or Considerations:

All state lands in Sections 8 and 17 are leased to Camp Grayling for military training.

Watershed and Fisheries Considerations:

Black Creek is a tributary to the Manistee River and a Designated Trout Stream. It is protected by the Manistee River Natural Rivers Act. Black Creek has been severely degraded by beavers in recent years, to the detriment of the brook trout populations that used to inhabit the stream. Aspen cuts along the creek should maintain a larger buffer to discourage aspen regeneration and beaver colonization along the stream. Hopefully it will recover over time.

Wildlife Habitat Considerations:

This compartment lies within the Grayling Outwash Management Area (MA) of State Forest land and includes three types of glacial formations. Featured species associated with the communities in this MA include Eastern massasauga rattlesnake, pileated woodpecker, ruffed grouse, snowshoe hare, turkey, and deer. A large area of outwash plain consisting of poorly drained organic soils can be found along Black Creek and most of section 20 at the southern end of the compartment. These wet soils support lowland conifers (Black Creek Deer Yard) and lowland shrub communities.

The center section of the compartment is mostly an outwash plain, consisting of excessively drained sands, which currently supports aspen and upland brush communities. Fire was a major disturbance on these dry soils and should be considered a valuable treatment tool in perpetuating these fire dependent ecosystems. These upland brush stands have been prescribed for burning to set back woody encroachment and stimulate native herbaceous vegetation. These stands have been part of a larger burn complex for decades and should continue to be burned on a rotational basis. The burn units in this compartment have not been burned in a while and should have a commercial timber harvest designed to promote savanna type community. Burning would then recommence post-harvest. The large burn unit to the east is mainly grasses, forbs, and shrubs, with very few trees. It would be advantageous to manage stands 43, 64, and 38 to more mature trees, and a mixture open grass/shrublands and closed canopy forest. Barrens/grasslands naturally existed on a gradient between closed canopy forest and treeless grasslands, depending on climate and natural disturbances. Retaining mature deciduous and coniferous trees in these stands in compartment 122 will provide a greater diversity of habitat components that will more closely resemble the natural disturbance patterns of this landscape. Based on the natural disturbance history of the land type associations within the Benzie Outwash MA, the MA plan calls for managing the amount of open/semi-open lands at or above the current level to provide habitat for species which use openings.

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. Harvest operations should be utilized to create some (approximately 1-2 trees per acre) coarse woody debris (CWD), preferably via timber sale specs. This provides essential habitat for various wildlife species. CWD trees should be log sized or bigger, the more decay resistant the tree species should be utilized and cut approximately at breast height (4.5 feet). The log should be left within 3 feet of the stump. Standing dead timber should be left during harvest operations unless deemed a safety hazard.

The hilly region in the north of this compartment is underlain by steep, broken ice contact ridges. The sandy soils found on these ridges have moderately low fertility and low available moisture. Aspen and oak communities dominate here and support a variety of wildlife. Treatments should be designed to retain oak as a component on the landscape.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 200 and 400 feet. Beneath the glacial drift are the Mississippian Marshall Sandstone and Coldwater Shale. The Marshall was previously used as a building stone. Gravel pits are not located in the area, but there is potential in Section 8. This area is located six miles southeast of the Niagaran reef trend. There are currently no leases in the compartment. Sand/gravel pits are not located in the area. Most of the compartment is covered by wetlands, but there may be some sand & gravel potential in the east half of Section 8. There is no known oil & gas potential here. There have been a number of dry wells drilled in the area, all testing Devonian formations. There has been recent mineral leasing activity in this area by Marathon, who was prospecting the northern Lower Peninsula for the Richfield Zone of the Lucas Formation. Marathon did not drill any wells in this area. Although they do have some remaining active leases in the area, Marathon have been in the process of releasing their existing leases. There is no known metallic mineral potential in this part of the state.

Vehicle Access:

There is sufficient vehicular access to the compartment.

Survey Needs:

No survey needs, at this time.

Recreational Facilities and Opportunities:

Popular recreation activities within the compartment are hunting, fishing, trapping, snowmobiling and ORV riding. The Designated Kalkaska ORV Route and Trail cut through the center of the compartment near Riverview Road to navigate over Black Creek, a designated trout stream. The stream has been degraded by beavers increasing trapping interests. The large cedar swamp complex in the southern half of the compartment attracts deer and hunters.

Fire Protection:

DNR fire protection would be provided by the Kalkaska Field Office with VFD response from the Bear Lake Fire Department. Section 20 is part of Zone 5, with additional response from Grayling, Houghton Lake and Manton, but most of this section is swamp so covertypes would not typically lead to catastrophic fires.

Additional Compartment Information:

The following reports from the Inventory are attached:

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

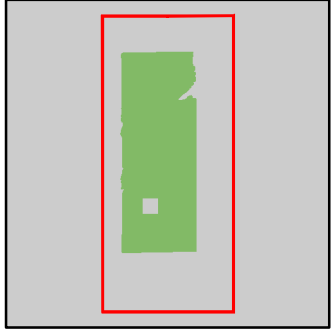
The following information is displayed, where pertinent, on the attached compartment maps:

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

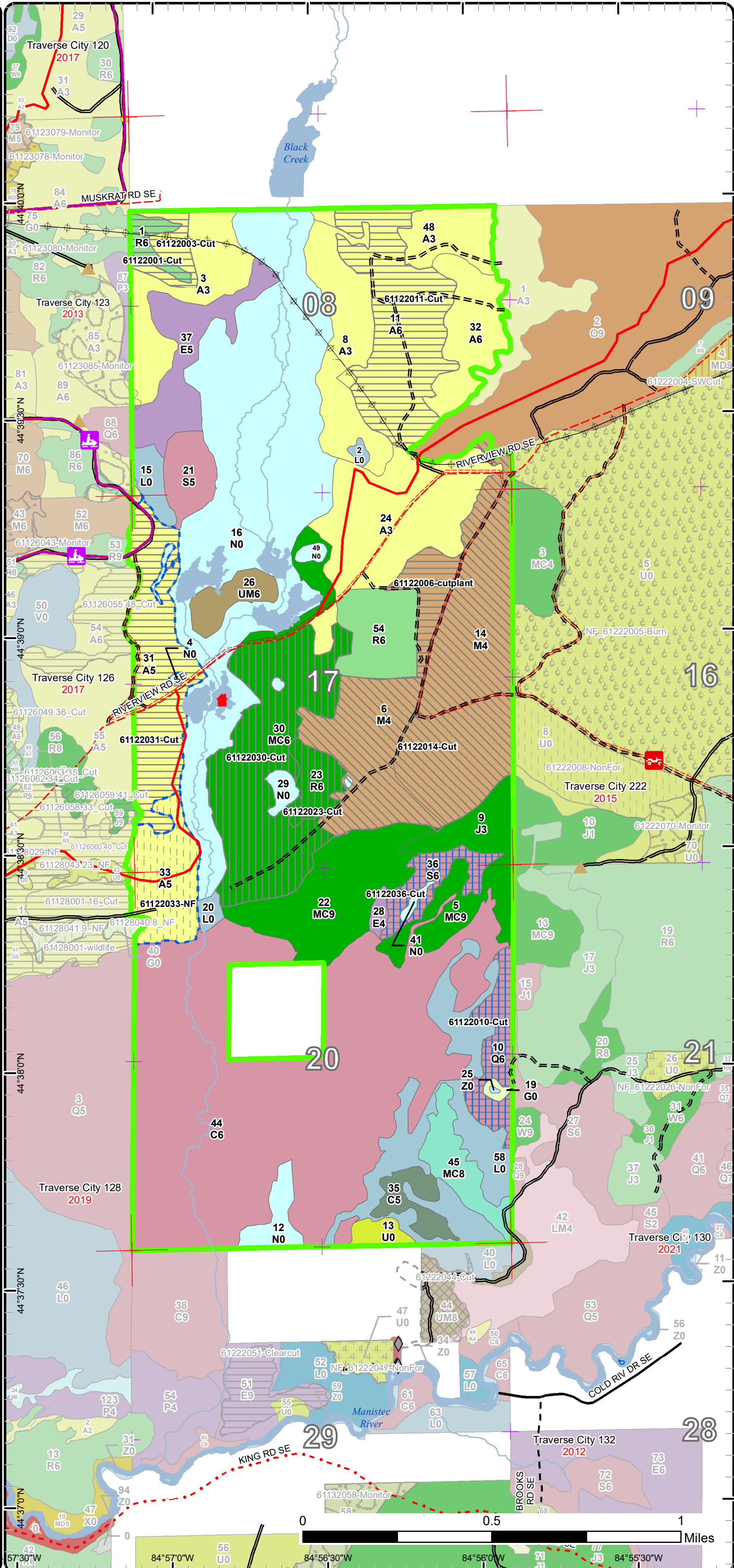
Cover Type & Treatments Map

Compartment: 122

County: Kalkaska
 Unit: Traverse City
 Mgmt Area: Grayling Outwash
 YOE: 2020
 Acres: 1,694 GIS Calculated
 Examiner: Kelly Standerfer
 Map Revised: 10/11/2018
 Map Phase: Post - Maps



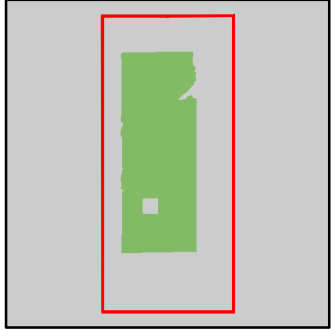
- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- DNR - Forest Access Route
- ORV Routes
- Snowmobile Trails
- Designated ATV
- Designated ORV Route
- Designated Snowmobile Trails
- Intermittent Stream
- Island in Lake or River
- Lock/Levee
- Perennial River
- Lakes and Rivers All
- ▲ Berms
- Structures
- Powerline
- Compartment Boundary
- Treatments with Site Conditions
- Other Harvest - See Comments
- Clearcut (w/Reserves)
- Seed Tree (w/Reserves)
- Shelter Wood (w/Reserves)
- Opening Maintenance
- 411 - Northern Hardwood
- 413 - Aspen
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- Lakes



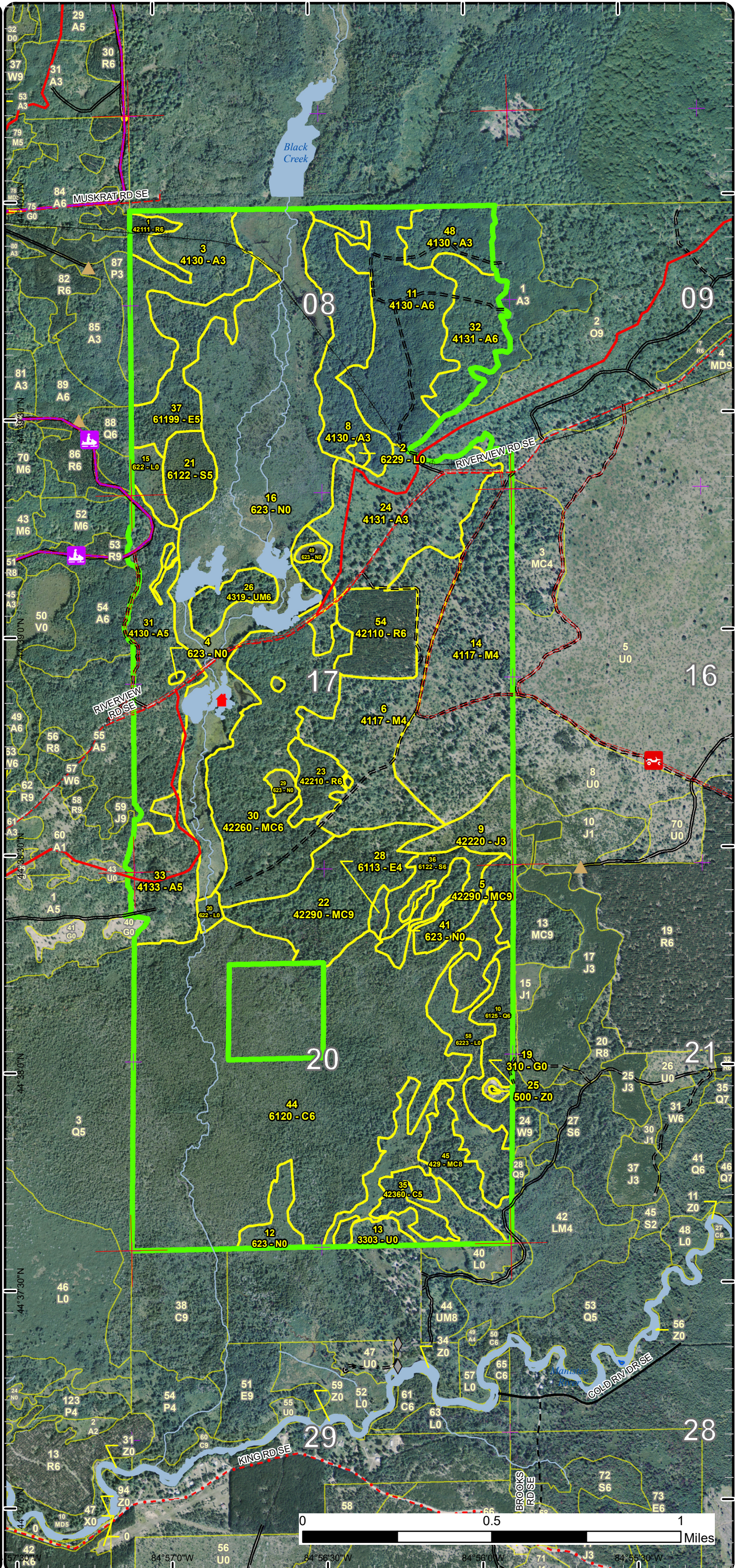
Stand Boundary Map

Compartment: 122

County: Kalkaska
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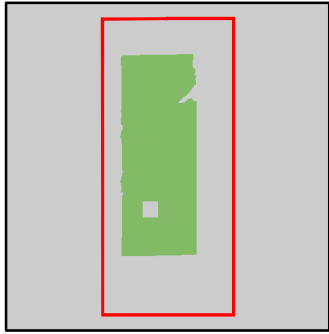
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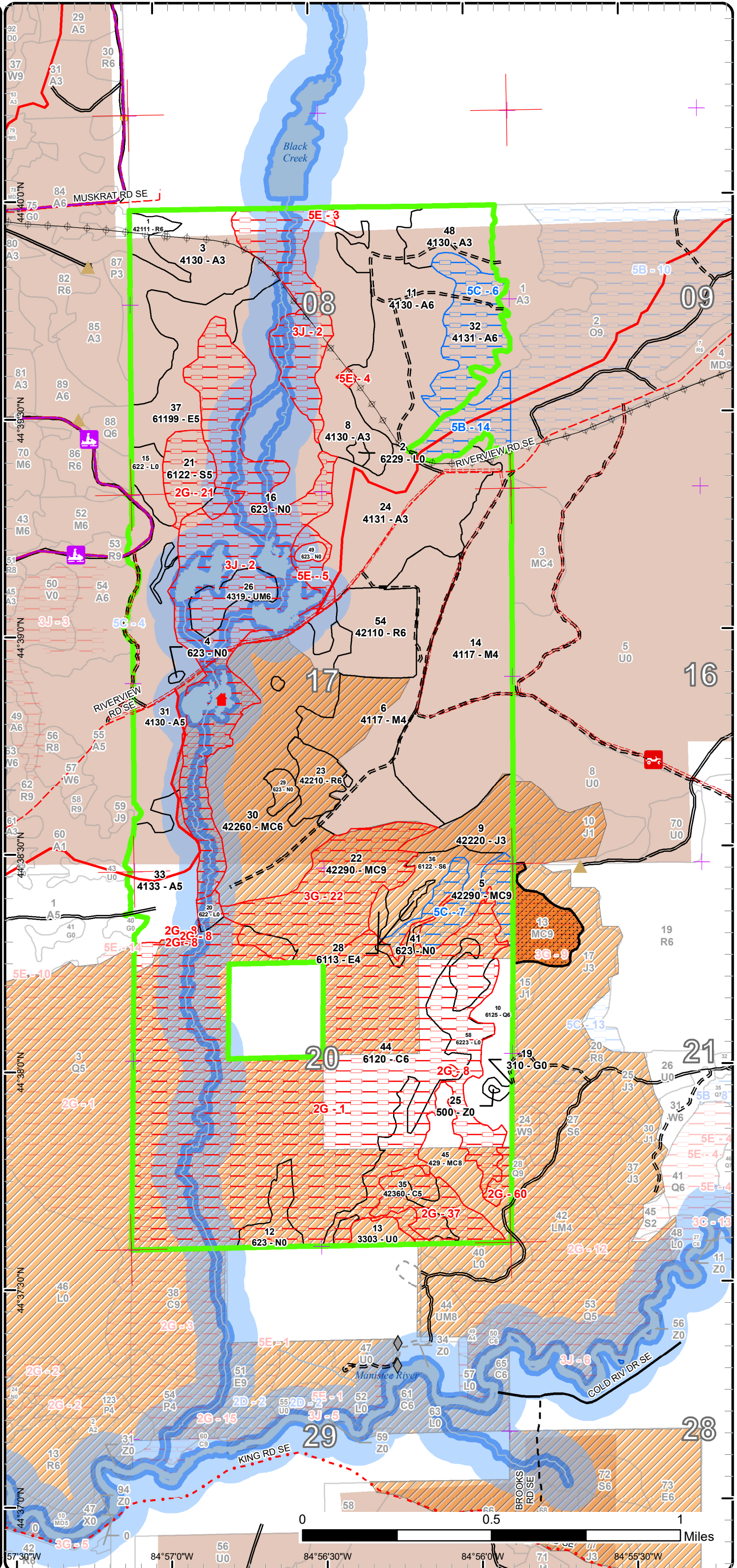
Special Conservation Areas & Site Conditions Map

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- ▲ Berms
- Structures
- ⊕ Powerline
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 3G: Other Influence zones - See comments
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- SCA
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Eastern Massasauga Managed Land
- Cold Water Streams
- Cold Water Lakes
- Research, Development, and Military Lands
- Other Habitat Area



Report 1 – Total Acres by Cover Type and Age Class

Traverse City Mgt. Unit
 Kelly Standerfer : Examiner

Compartment 122 Year of Entry 2020



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	79	0	47	73	113	101	0	0	0	0	0	0	0	0	0	0	0	412
Cedar	0	0	0	0	0	0	0	0	0	0	13	340	0	0	0	0	0	0	353
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Jack Pine	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Low-Density Trees	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Lowland Conifers	0	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	23
Lowland Deciduous	0	0	0	0	3	0	0	0	37	0	0	0	0	0	0	0	0	0	40
Lowland Shrub	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	33	0	0	0	0	0	0	0	33
Marsh	257	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	256
Natural Mixed Pines	0	0	0	0	0	0	0	110	0	0	0	86	0	0	0	0	0	0	196
Northern Hardwood	0	0	0	0	0	190	0	0	0	0	0	0	0	0	0	0	0	0	190
Red Pine	0	0	0	0	0	0	37	0	0	13	0	0	0	0	0	0	0	0	50
Upland Conifers	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	21
Upland Mixed Forest	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	13
Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	344	79	0	66	76	303	138	123	60	34	46	426	0	0	0	0	0	0	1693



Report 2 – Treatment Summary

Traverse City Mgt. Unit
Year of Entry: 2020

Acres of Harvest

Compartment 122
Total Compartment Acres: 1,694

Commercial Harvest - 436
Harvests with Site Condition - 64
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	152	0	0	0	0	0	0	0	0	152
Lowland Conifers	0	0	0	23	0	0	0	0	0	23
Lowland Spruce/Fir	0	0	0	16	0	0	0	0	0	16
Natural Mixed Pines	0	0	0	0	99	0	0	0	0	99
Northern Hardwood	17	0	0	0	0	0	0	0	173	190
Red Pine	8	0	0	0	13	0	0	0	0	21
Total	177	0	0	39	113	0	0	0	173	501

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	501	0	0	0	0	0	0	36	0	537
Next Step	0	34	17	0	173	17	345	0	0	586
Total	501	34	17	0	173	17	345	0	36	1123



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
1	61122001-Cut	7.8	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	52	141-170	Harvest	Clearcut	4139 - Aspen, Mixed Deciduous	Even-Aged	Approved Proposal

Habitat Cut: No

Site Condition:

Prescription final harvest, lots of porcupine damage. converting this stand to aspen, mixed deciduous mixed conifer as the stem quality if very poor in much of
Specs: it. maybe save fir under 4" or 6" dbh and make some brush piles for snowshoe and grouse..

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

Acceptable mixed aspen, deciduous and conifer... most should push to aspen but some will be maple, oak and conifer as well.
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

3	61122003-Cut	11.1	4130 - Aspen	Sapling Well	30	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	Approved Proposal
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Habitat Cut: No

Site Condition:

Prescription smaller diamter stuff. cutting a portion of this stand to push the aspen into the adjacent pine area. should regenerate nicely.
Specs:

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

Acceptable aspen, mixed deciduous and mixed conifer.
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

6	61122006-cutplant	16.9	4117 - Mixed N. Hardwood - Pine	Poletimber Poor	45	1-50	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Approved Proposal
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Habitat Cut: No

Site Condition:

Prescription site will need to be chip harvested, retention is in the stand to the east as this stand was just an arbitrary line to divide the red pine mgmt goal
Specs: and moxed wildlife openings to the east. will likely need to herbiced site to control competition, trench and plant red pine. if site is not clean enough during timber sale roller chopping is also an option if needed.

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

Acceptable red pine with some mixed deciduous and mixed conifer but a free to grow red pine stand is the goal here.
Regen:

Other dropped bulk of this treatment as requested by wildlife as they would like to maintain large open grassy stands in this landscape.
Comment:

Proposed Start Date: 10/1 /2018

10	61122010-Cut	23.2	6125 - Lowland Black Spruce, Jack Pine	Poletimber Well	74	81-110	Harvest	Seed Tree with Retention	612 - Lowland Coniferous Forest	Even-Aged	Approved Proposal
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Habitat Cut: No

Site Condition:

Prescription seed tree stand, leave slivers along edge for seed and retention and leave some pockets of trees for seed and retention, avoid scattered trees as
Specs: they will likely blow over as area has high water table.

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

Acceptable mixed Q type and mixed lowland deciduous, expect jack pine, spruce and maple for most part but any mix of current species is OK post harvest.
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019



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
11	61122011-Cut	76.3	4130 - Aspen	Poletimber Well	48	141-170	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Approved Proposal

Habitat Cut: No

Site Condition:

Prescription final harvest, two retention islands on west edge. phenominal aspen so going for thick stem density and high species diversity in regen so final
Specs: harvest should be our best ticket here.

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

Acceptable aspen, mixed deciduous, and mixed conifer.. thiswill mainly be aspen.
Regen:

Other AT&T fiber optil line threw southwest end of stand, will need to get a game plan for crossing it, will likely need crane mats if trucking across.
Comment:

Proposed Start Date: 10/1 /2019

14	61122014-Cut	173.0	4117 - Mixed N. Hardwood - Pine	Poletimber Poor	45	1-50	Harvest	Other - Specify	330 - Low-Density Trees		Approved Proposal
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Habitat Cut: No

Site Condition:

Prescription site is filling in pretty thick.. especially west edge of stand 6. Cut all trees under ~8" DBH to reclaim the open type... ok to mark to leave some
Specs: smaller diameter trees as well or paint out islands for variable density, also OK to mark some larger stuff to take out as there are some pretty thick areas... will likely burn some time in the future... portions burned in the past.

Next Step Burn, Opening
Treatments:

Acceptable stand will be managed for oak pine barrens. will be some thick areas but most will be open.
Regen:

Other should be able to open this site up with stand 6... 2" spec stand 6... should be able to do a commercial sale here for sure... may to sale by
Comment:

Proposed Start Date: 10/1 /2019

23	61122023-Cut	13.4	42210 - Natural Red Pine	Poletimber Well	86	141-170	Harvest	Shelterwood	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
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Habitat Cut: No

Site Condition:

Prescription green tree stand, leave enough to come back for in say 10-20 years. will likely push to mixed white pine, oak and deciduous. try to scarify via
Specs: harvest if possible or have producer pinch some areas with clam especially in open areas to expose mineral soil for germination.

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

Acceptable miced pine, oak and mixed deciduous.
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

30	61122030-Cut	99.1	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	65	111-140	Harvest	Shelterwood	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
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Habitat Cut: No

Site Condition:

Prescription aspen areas will be more final harvest, pine and oak will be more shelterwood leaving enough residual BA to come back for in 10-20 years and
Specs: enough to shelter along pine and oak regen. (residual BA will be variable between ~0 and 60) Likely green tree mark is best try some areas of leaving pockets of trees and clearcutting between the residual pockets.

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

Acceptable mixed aspen, oak, deciduous and conifer. aspen areas will push to aspen and pine and oak should push to deciduous pine and oak regen.
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019



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
31	61122031-Cut	64.5	4130 - Aspen	Poletimber Medium	55	81-110	Harvest	Clearcut with Retention	4131 - Aspen, Oak	Even-Aged	Approved Proposal

Habitat Cut: No **Site Condition: Age-Class or Site Quality**

Prescription final harvest but green tree some pine and oak to save. save all oak and pine under 6" or 8" dbh save some of the larger oak along east edge
Specs: drain area for acorn production and stand diversity. likely wont need to paint the drain area out of the sale but protect with cutting specs not allowing equipment to cross it during wet periods.

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

Acceptable Regen: aspen, oak, mixed deciduous and mixed pine. some will likely push mostly to aspen but some will be a good mix of all the above.

Other Comment:

Proposed Start Date: 10/1 /2019

33	61122033-NF	36.3	4133 - Aspen, Mixed Pine	Poletimber Medium	55	51-80	NonForestMgt	Brush Cutting	320 - Upland Shrub		Approved Proposal
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Habitat Cut: No **Site Condition: BMPs**

Prescription Selectively remove woody vegetation to barrens equivalent. Important trees to retain would be mature "wolf" trees of oak, pine or cherry, fruiting shrubs, and a scattering of other trees and shrubs. Should eventually burn to stimulate any existing seed bank and encourage existing native vegetation. Augment with additional native seeds/seedling as needed to diversify site for wildlife forage and cover. Eventually burn rotationally to maintain barrens dynamic. Remove invasive species mechanically or with herbicide treatment.

Next Step
Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

36	61122036-Cut	15.7	6122 - Black Spruce	Poletimber Well	95	81-110	Harvest	Seed Tree	612 - Lowland Coniferous Forest	Even-Aged	Approved Proposal
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Habitat Cut: No **Site Condition:**

Prescription seed tree/final harvest stand... mark some pockets of trees to save where needed however due to long and narrow nature of the stand less than normal seed trees should be needed. OK to save some of the old red n white white pine but dont save all as it will likely blow down. ok to scarify site via timber sale but dont expect regeneration to be an issue here.

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

Acceptable Regen: mixed lowland conifer and miced lowland deciduous.

Other Comment:

Proposed Start Date: 10/1 /2019

Total Treatment Acreage Proposed: 537.3

Report 4 – Site Conditions

Traverse City Mgt. Unit
Kelly Standerfer : Examiner

Compartment: 122
Year of Entry: 2020

Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available		Dominant Site Conditions				
		With Condition				5C	2G	3G	3J	5E
413	276	100		38	Aspen	100	0		35	2
352	0	0		352	Cedar		348	5		
2	2	0		0	Herbaceous Openland					
19	19	0		0	Jack Pine					
6	6	0		0	Low-Density Trees					
23	23	0		0	Lowland Conifers		0			
40	40	0		0	Lowland Deciduous					
79	11	0		68	Lowland Shrub		68			
33	16	0		17	Lowland Spruce/Fir		17	0		
256	8	2		246	Marsh	2	14		231	
196	99	24		72	Natural Mixed Pines	24	2	59		11
189	189	0		0	Northern Hardwood					
51	51	0		0	Red Pine					
21	21	0		0	Upland Conifers					
13	0	0		13	Upland Mixed Forest				13	
0	0	0		0	Water					
1,694	761	126		807	Total Forested Acres	126	450	64	280	13
	45%	7%		48%	Relative Percent					

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

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	401	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	200	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

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 Kelly Standerfer : Examiner

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3	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	5E: Long-Term Retention	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	34	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	24	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

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Kelly Standerfer : Examiner

Compartment: 122
Year of Entry: 2020

14	Available	5B: Maintain for regeneration purposes	19	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
21	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Unavailable	3G: Other Influence zones - See comments	64	Unspecified	Unspecified	Unspecified	Unspecified
Comments: OPIC - FMD: Hagan (1991) notes: Beautiful stand, cabin logs, moist site, POTENTIAL OLD GROWTH Notes 2000: Could harvest some logs in here however wildlife considerations need to be weighted. This site is in the transition between upland and wetland and acts as a buffer for the cedar swamp to the south and west.. The stand currently supports heavy concentrations of deer in the winter due to the heavy spruce understory which helps provide thermal cover and escape cover. The spruce dbh runs around 6", the sawlog White Pine is running up to 26" with 5 to 6 eight foot logs per tree. Some hard maple, cherry and oak component.							
37	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	24	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	4A: No Markets Available for these Forest Products	Unspecified	Unspecified
Comments:							
60	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	4A: No Markets Available for these Forest Products	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	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.
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.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	7.8	52	141-170	some solid red pine but quite a bit is intermixed with fir, maple and aspen. and almost a failed plantation. areas that are more red pine have seen extensive porcupine damage, very few good stems. most of the fir is on west end and on south edge.
3	4130 - Aspen	Sapling Well	51.1	30	51-80	mostly A5/A6... still young yet. cut some of stand that surrounds red pine stand to encourage good stem density in the clearcut red pine stand. maybe cut up to 1/5 of the stand now and rest in 10 -20 years... should be excellent grouse and snowshoe habitat. create brush piles and some higher maple stumps for drumming logs via timber sale spec. some of stand is P type but bulk appears to be upland. some scattered larger oak and sugar maple too and some paper birch areas but looks to be under 5%OPIC - FMD: Stand was cut mostly during winter months of 1987 and 1988. Some swampy areas were left uncut due to the inoperable conditions. 2008 comments- Stand has some aspen poles now will be nearing A6 in ten years
5	42290 - Natural Mixed Pine	Sawtimber Well	26.8	106	111-140	<p>some younger maple areas and some spruce pockets but the bulk of the stand is larger white pine and red pine of variable densities, some thicker and some not so thick. should hold good 10 years</p> <p>OPIC - FMD: Hagan (1991) notes: Beautiful stand, cabin logs, moist site, POTENTIAL OLD GROWTH Notes 2000: Could harvest some logs in here however wildlife considerations need to be weighted. This site is in the transition between upland and wetland and acts as a buffer for the cedar swamp to the south and west.. The stand currently supports heavy concentrations of deer in the winter due to the heavy spruce understory which helps provide thermal cover and escape cover. The spruce dbh runs around 6", the sawlog White Pine is running up to 26" with 5 to 6 eight foot logs per tree. Some hard maple, cherry and oak component.</p>
6	4117 - Mixed N. Hardwood - Pine	Poletimber Poor	73.5	45	1-50	<p>pulled this area out of stand to the east to try to restart some red pine in the heart of pine country. this area is the thicker portion of the stand. will need to chip harvest this stand and herbicide will likely be needed to set back woody competition. trench n plant to red pine. Some resembles U type but the bulk has filled in with trees with lack of burning. Lets find some acres here to establish some red pine. great red pine ground and area to the east has is a huge wildlife burn. red pine will add to diversity of the area and will likely shelter along some oak regeneration over time. North end has almost a M3 with mixed oak, mid area more large scattered oak and pine over cherry brush, south end more large oak and pine that is thicker with some maple mixed in as well.</p> <p>OPIC - FMD: Separated from larger stand for purposes of managing for wildlife burns etc. Periodic burns have been carried out on this stand. There are some scattered oak trees on this stand. Other nearby U types do not have much oak component. Should continue burning to maintain the opening.</p>
8	4130 - Aspen	Sapling Well	47.2	24	Immature	nice looking stand... in the self thinning stage.. should be great grouse and rabbitat. try some brush piles in stand to east to encourage snowshoe... saw quite a few tracks in this area!OPIC - FMD: Stand was clear-cut in 1993 (Red Line Aspen #016-93-01). The site contains very good aspen regeneration.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
9	42220 - Natural Jack Pine	Sapling Well	18.8	22	Immature	filling in pretty decent now. some wet footed jack pine and some high n dry. south end more leatherleafy and north humicky with bracken. OPIC - FMD: This stand was clearcut in 1996. There is little sign of regeneration. A trace of Jack Pine was found, but site needs to be visited in the summer to see how much natural regeneration has occurred. Wildlife - this is your call. Should we plant here or let it go? 2008 comments: slowly filling in with white pine and red maple, some jp.
10	6125 - Lowland Black Spruce, Jack Pine	Poletimber Well	23.2	74	81-110	Some low spots with sphagnum and royal fern, some high n dry with thicker jack pine. some lower spruce and some upland spruce. Hummocky terrain. Some cedar at edge. Cut stumps present.
11	4130 - Aspen	Poletimber Well	78.7	48	141-170	pretty phenomenal aspen in areas. north end has some more white pine mixed in. Cut some or all of stand as needed for age class diversity in the MA plan. retention in big pocket at north end along flooding west of trail
14	4117 - Mixed N. Hardwood - Pine	Poletimber Poor	116.0	45	1-50	Some resembles U type but the bulk has filled in with trees with lack of burning. Lets find some acres here to establish some red pine. great red pin ground and area to the east has is a huge wildlife burn. red pine will add to deviersity of the area and will likely shelter along some oak regeneration over time. North end has almost a M3 with mixed oak, mid area more large scattered oak and pine over cherry brush, south end more large oak and pine that is thicker with some maple mixed in as well. OPIC - FMD: Separated from larger stand for purposes of managing for wildlife burns etc. Periodic burns have been carried out on this stand. There are some scattered oak trees on this stand. Other nearby U types do not have much oak component. Should continue burning to maintain the opening.
21	6122 - Black Spruce	Poletimber Medium	16.9	92	81-110	OPIC - FMD: Deer yard. BS, WC, T, BF mix. S/F regen. R.O. dogwood, sphagnum, sedge. OI Stand Year Origin was 1926
22	42290 - Natural Mixed Pine	Sawtimber Well	59.1	106	111-140	some younger maple areas and some spruce pockets but the bulk of the stand is larger white pine and red pine of variable densities, some thicker and some not so thick. should hold good 10 years OPIC - FMD: Hagan (1991) notes: Beautiful stand, cabin logs, moist site, POTENTIAL OLD GROWTH Notes 2000: Could harvest some logs in here however wildlife considerations need to be weighted. This site is in the transition between upland and wetland and acts as a buffer for the cedar swamp to the south and west.. The stand currently supports heavy concentrations of deer in the winter due to the heavy spruce understory which helps provide thermal cover and escape cover. The spruce dbh runs around 6", the sawlog White Pine is running up to 26" with 5 to 6 eight foot logs per tree. Some hard maple, cherry and oak component.
23	42210 - Natural Red Pine	Poletimber Well	13.4	86	141-170	OPIC - FMD: A pair of vernal ponds are located at the East edge of the stand and a large leatherleaf bog is located at the west edge of the stand. Not much Jack Pine but there is a significant amount of White Pine and Red Pine. There is a good mixture of logs/poles/saplings and some oak seedling/sapling component in the stand. Stand is not in need of treatment.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4131 - Aspen, Oak	Sapling Well	78.5	6	Immature	<p>short lived species cut out last YOE. Some areas of thicker oak that resemble oak barrons...</p> <p>OPIC - FMD: (A407) Aspen, Oak and White Pine make up the majority of the stand. Some Oak sawlogs but they are not real good quality. There is a fair amount of White Pine along the edges of the stand and then scattered throughout. Once the aspen reaches maturity (about 10 years), a cut should be prescribed. 2008 comments, treatment should take place in winter months to promote good sprouting. Dkj retention area around stand # 49, stand is already more than 300 feet back from Black Creek for beaver concerns. Dkj (KJS) 1/30/2013 Stand final harvested winter 2012, turned out great. Oak and red pine left. Smaller single stem white pine left. Stand should regenerate very nicely</p>
26	4319 - Mixed Upland Forest	Poletimber Well	13.3	61	51-80	<p>edge call... stand surrounded by H20. as done mentioned aspen taken out by beaver... red maple, white pine, birch and balsam mix</p> <p>OPIC - FMD: Stand is surrounded by wet areas. It appears that the aspen component that existed in the stand previously was annihilated by beaver. Not much chance of a commercial harvest due such wet access. Not able to examine the northeast part of the stand. It appears that some hardwood component may exist there. All data is estimated (2000 examination).</p>
28	6113 - Lowland Maple	Poletimber Poor	3.0	38	1-50	<p>mostly red maple on sensitive fern and leatherleaf ground. some looks like it may fill in nicely over time. 4" red maple stems for the most part.</p>
30	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	109.7	65	111-140	<p>mostly mixed pine with some areas of heavier aspen and maple and oak. pine looks to grow best here. some areas with big old oak and some nicer pole areas... maybe try two different treatments here? one more intense where aspen is and one more shelterwood/seed tree where more pine and oak?</p> <p>OPIC - FMD: SOME AREAS MIXED WITH WHITE PINE. (2000 notes): Stand is just reaching polesize. A significant amount of beaver activity adjacent to the creekbed area. Timber is primarily Quaking Aspen with areas of Big Tooth mixed in. Lots of small White Pine in the understory and some areas of White Pine poles. Heavy wp component in the NW corner but still has good aspen ba. Any harvest should keep some wp component.</p>
31	4130 - Aspen	Poletimber Medium	65.1	55	81-110	<p>Some pretty nice and some not so nice. probably a good area to push to mixed pine in the future but growing OK aspen in the mean time. lots of snowshow hair sign north of road!</p> <p>OPIC - FMD: ORV Route trail is located along the West edge of the stand. The Cranberry Lake Snowmobile Trail loops through the North part of the stand. Lots of beaver damage to the aspen along the creek corridor. A small amount of W Pine and Oak saplings are in the stand. Some residual aspen probably from past cutting has matured prior to majority of the stand.</p>
32	4131 - Aspen, Oak	Poletimber Well	34.3	48	111-140	<p>same stand as stand to west (11) however this area had more oak when cut and it looks like the bulk of it was save, some areas more A5 that got shaded out by oak overstory. stand should hold good 10years</p>



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
33	4133 - Aspen, Mixed Pine	Poletimber Medium	36.3	55	51-80	Wildlife maintaining openings on west. aspen is in rough shape... cut all but oak and red n white pine. cut all else and hopefully push to a more natural mixed pine and oak. Not good aspen ground but grows good pine. OK to cut some of the gnarly pine. OPIC - FMD: POOR QUALITY Q ASPEN & SMALL AMOUNTS OF BT ASPEN. A FEW SMALL PATCHES OF R. PINE. Still looks like A2/U. (Notes 2000 examination): Areas of A3, and some just reaching polesize. Some beaver damage in the stand alongside the creek corridor. 2008 Comments: reaching pole size - low quality scattered pockets with open grass and bracken fern.
35	42360 - Upland Cedar	Poletimber Medium	12.8	94	81-110	most has tag understory, some areas a bit thicker but overall C4/C5ish. doesnt appear to be maneageable.
36	6122 - Black Spruce	Poletimber Well	15.7	95	81-110	nicer spruce in areas and some not as thick and nice. spruce in pretty good health but may be a good time to do some cutting in here to start to regenerate some nicer deer cover.
37	61199 - Lowland Hardwood (OI)	Poletimber Medium	36.8	73	1-50	
44	6120 - Lowland Cedar	Poletimber Well	339.7	105	81-110	some thick some not so thick. mostly cedar... black creek runs through stand... doesnt look like much for maneagable ground. possible winter cuts for browse potential?OPIC - FMD: (1991 Comments) WILDLIFE MAY CUT PORTION OF STAND DURING A WINTER DEER EMERGENCY. (2000 comments) Nice cedar stand with heavy deeryard use. This is a wildlife call. Black Creek runs through this stand
45	429 - Mixed Upland Conifers	Sawtimber Medium	20.9	80	81-110	mostly red and white pine with mixed fir on higher areas, transition ground goes to fire, spruce and maple. not a super thick stand, should hold 10 years good and then maybe seed tree ot shelterwood.
48	4130 - Aspen	Sapling Well	22.1	33	51-80	Stand just coming into merchantable size, in self thinning stage... NW end more Maple and open area and south and east end pretty thick... looks good OPIC - FMD: PART OF STAND IS A3 OTHER PART M2- scattered aspen poles

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Traverse City Mgt. Unit

Report 7 – Forested Stands

Compartment: 122
Year of Entry: 2020



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
54	42110 - Planted Red Pine	Poletimber Well	29.6	56	141-170	<p>some areas ready for a thin now and some could hold 10 easy. thin now taking out poor form n suppressed and mark for good tree spacing... some scattered oak and maple throughout. ok to mark some for operability but save the bulk of it to limit sprouting.. unless wildlife wants it cut for the increased browse potential.</p> <p>OPIC - FMD: 2006 timber sale update - kgr: Riverview Red Pine, sale #022-04-01. Every third row was removed in spring of 2006. Sale consisted of 26 acres. 2002 kgr stand exam comments: Row thinning is scheduled for YOE 2002. This stand is being used heavily by deer during the winter. Is this thermal protection value greater than the timber value? The stand is growing and appears to be approaching the stage where it may be less protection for deer as cover. However, it may still offer the thermal protection. Lots of oak and cherry seedlings are trying to get past the deer browse line. Some stems are making it and have reached the height of 8-10 feet.</p>



Stand	Cover Type	Acres	Managed Site	General Comments:
2	6229 - Mixed lowland shrub	1.7	No	LO/VO
4	623 - Emergent Wetland	0.6	No	Some pretty nice and some not so nice. probably a good area to push to mixed pine in the future but growing OK aspen in the mean time. lots of snowshow hair sign north of road! OPIC - FMD: ORV Route trail is located along the West edge of the stand. The Cranberry Lake Snowmobile Trail loops through the North part of the stand. Lots of beaver damage to the aspen along the creek corridor. A small amount of W Pine and Oak saplings are in the stand. Some residual aspen probably from past cutting has matured prior to majority of the stand.
12	623 - Emergent Wetland	11.3	No	LO/VO and some low density trees, not manageable ground
13	3303 - Mixed Low Density Trees	6.3	No	Some Vo, Some LO and some low density trees. OPIC - FMD: OI Stand Year Origin was 1965
15	622 - Lowland Shrub	9.1	No	Mixed LO with some trees OPIC - FMD: OI Stand Year Origin was
16	623 - Emergent Wetland	236.1	No	Some LO, Some VO and some low density trees. OPIC - FMD: Black Creek runs through stand- beaver flooded or backup areas throughout this stand.
19	310 - Herbaceous Openland	1.6	No	Cabin was demolished shortly before the State acquired the property. It still contains scattered debris. It is mostly open with scattered spruce, cherry and bracken fern.
20	622 - Lowland Shrub	3.3	No	OPIC - FMD: Black Creek runs through stand
25	500 - Water	0.2	No	
29	623 - Emergent Wetland	4.6	No	OPIC - FMD: Leatherleaf bog with some spruce and red pine growing along the edges. Treatments on adjacent stands should honor a 1/2 chain buffer around this bog.
41	623 - Emergent Wetland	1.7	No	
49	623 - Emergent Wetland	2.2	No	OPIC - FMD: Beaver Flooding along Black Creek.
58	6223 - Inundated Shrub Swamp	65.1	No	Some areas of low density trees, none really looks to be maneagable. OPIC - FMD: Mostly lowland brush (tag alder). Some standing dead timber especially south of the trail road. North of the trail is wet with some commercial species. Mostly fir, spruce, ash, and other wet site species.