

Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61130 Entry Year 2021 Acreage: 1,945

County Kalkaska

Management Area: Camp Grayling

Revision Date: 2019-06-11

Stand Examiner: Katie Armstrong

Legal Description:

T26N R5W Sections 21, 22, 23, and 24

Identified Planning Goals:

The Camp Grayling management area management area (MA) is the Michigan National Guard training grounds used primarily for military exercises while allowing varying degrees of Department of Natural Resources (DNR) management on certain portions depending on classification of ownership. The DNR will coordinate all prescribed activities with the National Guard to ensure they are compatible with military training needs. On these lands military training has precedence over resource management activities. Management in the Camp Grayling MA will emphasize continued balancing the age-class of aspen on suitable sites and regenerating the aging oak resource. Management will strive to sustainably produce various forest products, enhance game and non-game wildlife habitat and protect areas of unique character while accommodating military training. Management activities will be constrained or modified based on military training needs. Expected trends within this 10-year planning period are introduced pests and diseases and the difficulty in regenerating oak.

Most of this compartment is on Military Board Land and is used for military training throughout the year.

Soil and topography:

The compartment contains a variety of soils including well-drained to poorly drained: Au Gres sand, Rubicon sand, Grayling sand, Leafriver muck, Tawas-Lupton muck, and Kinross muck. Topography is mostly flat.

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

All of the land in Sections 23 and 24 and most of the land in 22 is administered by the Michigan Department of Military and Veterans Affairs, which has a timber management agreement with the Forest Resources Division. This arrangement is referred to as Military Board Land. Other Military Board Land surrounds this compartment to the north, east and south. Section 24 includes Ranges 8, 9, 10 and 11. There is a private inholding in Section 22 and private land along the Manistee River.

Unique Natural Features:

There are multiple Element Occurrences for rare plant and animal species in this compartment.

Archeological, Historical, and Cultural Features:

There is a record in Section 22.

Special Management Designations or Considerations:

Much of the compartment is part of the Eastern Massasauga Rattlesnake Managed Land (High Conservation Value Area), identified in the Candidate Conservation Agreement. The Manistee River, Portage Creek and tributaries are protected by the Upper Manistee River Natural Rivers Plan.

Watershed and Fisheries Considerations:

The Manistee River and Portage Creek flow through Compartment 130. Portage Creek is a tributary of the Manistee River, and both are Designated Trout Streams. Both are also protected by the Manistee River Natural Rivers Designation. Both the Manistee River and Portage Creek host naturally reproducing populations of brook trout and brown trout. For other timber operations near the Manistee River and Portage Creek, Natural Rivers buffers should be adhered to.

Wildlife Habitat Considerations:

Maintain conifer cover in various age classes and types. Maintain a component of browse in and near deer winter cover. Maintain oak/aspen types along Portage Creek valley. Oak shelter-wood harvest should consider long-term need for residuals even after final over-story removal phase, especially within 200-300 feet of creek, for mast production and nesting cover for wood ducks and other riparian associates.

Species associated with low, flat mixed conifer plains, swamps, and intervening creeks and draws should be wildlife priorities. Examples include magnolia warbler, winter wren, snowshoe hare, bobcat, and white-tailed deer in winter.

Aspen/oak forests along Portage Creek should be important cover for species such as wood ducks, woodcock, squirrels, and golden-winged warbler.

Compartment 130 is part of the Camp Grayling Management Area of the Regional State Forest Management Plan. Featured wildlife species for this MA include woodcock, eastern massasauga rattlesnake, piliated woodpecker, redheaded woodpecker, ruffed grouse, snowshoe hare, turkey, and deer.

Mineral Resource and Development Concerns and/or Restrictions

No active sand/gravel production is occurring in this area. There appears to be some sand and gravel potential within the compartment, but the water table is shallower here on the outwash plain, which could limit development. The compartment is located south of the Guelph (Niagaran) reef trend and Antrim Shale gas play and north of the Central Basin production. There has been some minor Collingwood gas production in the area associated with the Bear Lake project, but there is currently little interest in further Collingwood development in the state. There is no active mineral leasing within the compartment. Oil and gas potential is considered low at this time. There is no known metallic mineral potential in this part of the state. The state does not own all the mineral rights within the compartment. Much of the compartment is owned by the DMVA (Camp Grayling). Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights.

Vehicle Access:

There is sufficient vehicular access throughout the compartment.

Survey Needs:

There are no survey needs at this time. Some corners were established and a trespass was resolved since the last inventory.

Recreational Facilities and Opportunities:

There are no designated recreational facilities in the compartment because it is mostly military board land.

Fire Protection:

The compartment is protected by the Kalkaska DNR office and Camp Grayling fire department. This is within the Zone 5 dispatch area which means that additional units would respond from Grayling, Houghton Lake, and Manton on very high fire danger days. The nearest volunteer fire department is Bear Lake.

Additional Compartment Information:

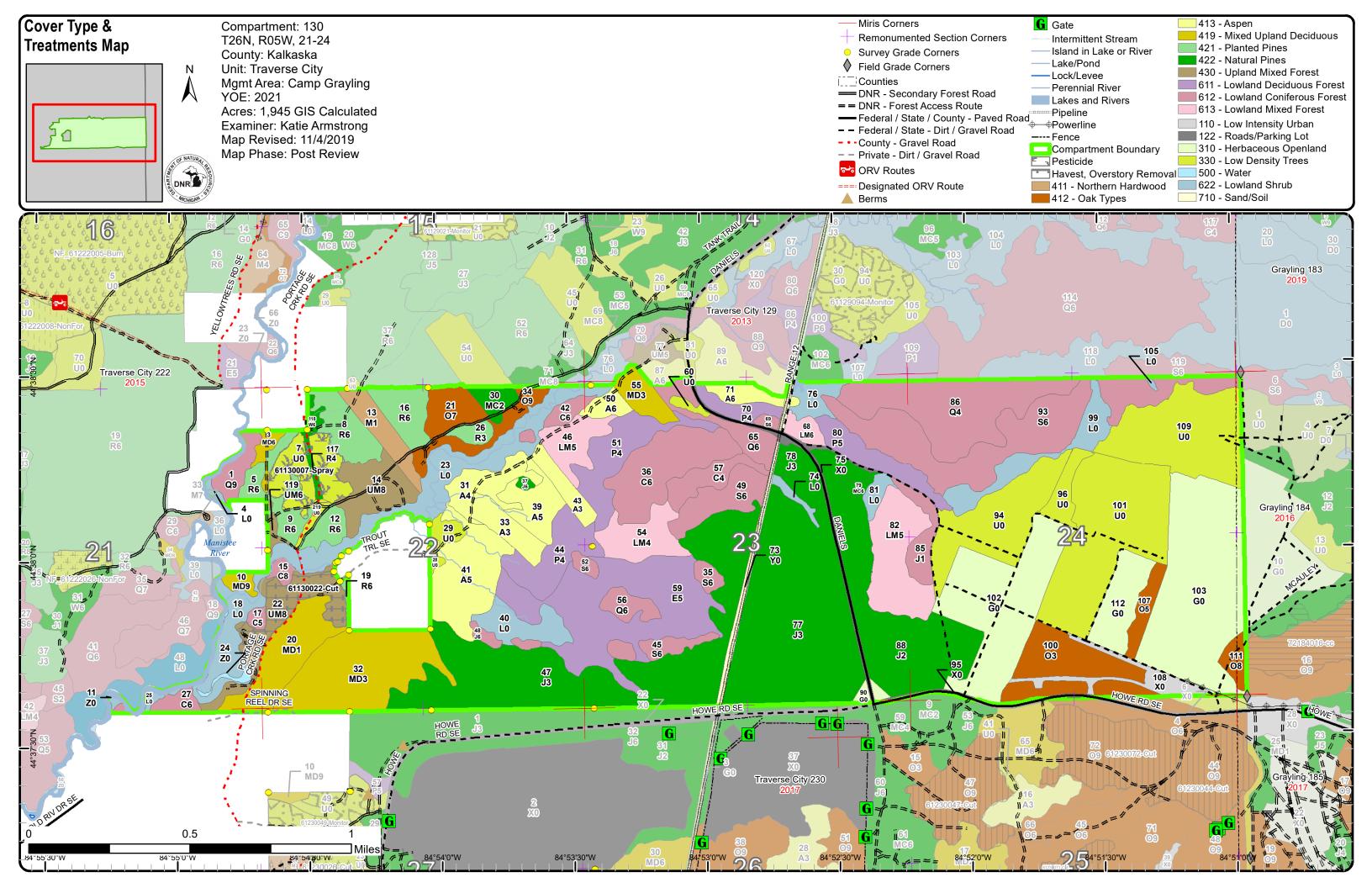
The following reports from the Inventory are attached:

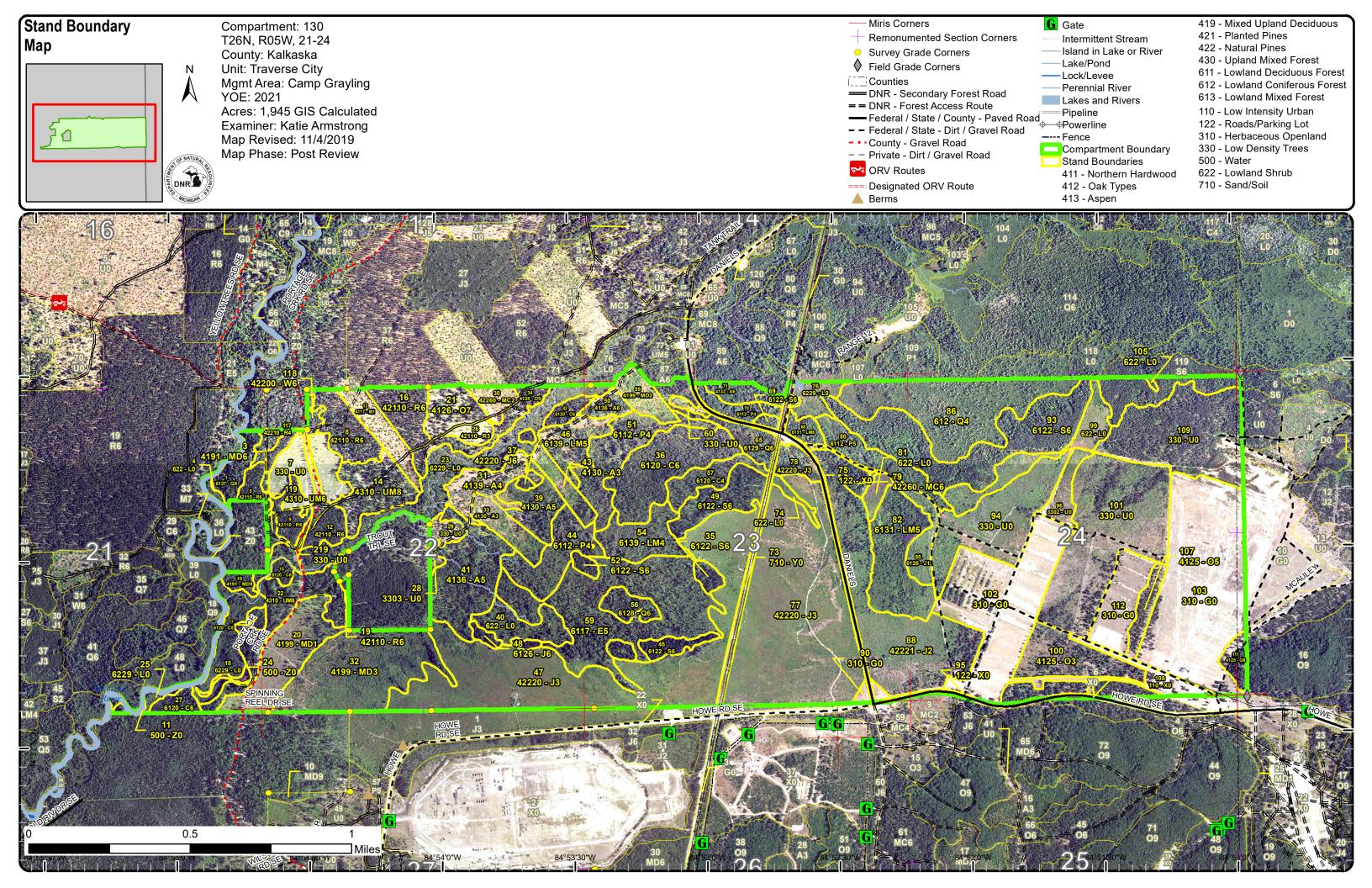
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

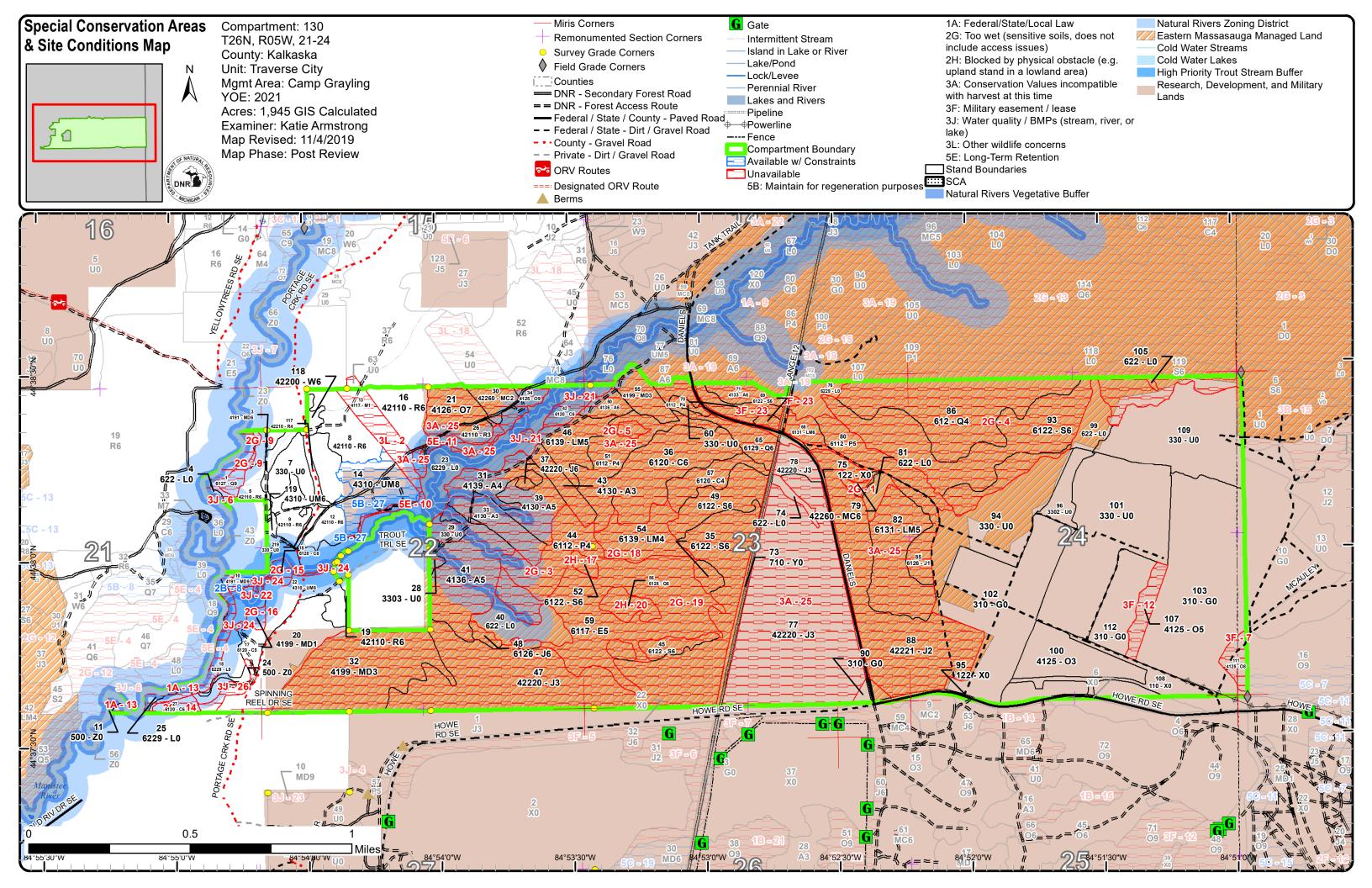
The following information is displayed, where pertinent, on the attached compartment maps:

Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries

Details on the road access system







Traverse City Mgt. Unit

Katie Armstrong : Examiner

Compartment 130 Year of Entry 2021



Age Class

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	/	/ * /	/ /	/ /	/	_ /	_ /	/	/ /	/ /	/ /	/	_ /	_ /	_ /	/	/	/ /	
	A Stork	80°/ C			\$ \ \&			³ /s		\$ ⁸ /\$	8 8		S Z		\$ /s	23 / N	,	\$ Jun	Kan Yan
Aonan	0	<u> </u>	22	0	0	77	8	<u> </u>	0		0		0	0	0	0	0	0	107
Aspen Cedar	0	Ľ.	0	0			0		_	18	42	3		Ŭ			0		69
	202	0	0	0	0	0	0	0	0	0	0	0	0	6 0	0	0	0	0	
Herbaceous Openland		0	0		,	7	1	0	_	0	0	·	0	0	0	0	0	0	202
Jack Pine	0	360	_	0	0		-	-	4	-		0		_			-	0	372
Low-Density Trees	236	0	0	0	0	0	0 28	0	0	0	0	0	0	0	0	0	0	0	236
Lowland Aspen/Balsam Poplar	0	0	0	0	0	50	15	0	0	0	0	9	0	0	0	0	0	0	78
Lowland Conifers		0	0	0	0	0	_	61	0	8	0	·	0	0	0	0	-	0	93
Lowland Deciduous	0	0	0	0	0	0	0	0	83	0	0	0	0	0	0	0	0	0	83
Lowland Mixed Forest	0	0	0	0	0	72	5	0	0	0	0	0	0	0	0	0	0	0	77
Lowland Shrub	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	125
Lowland Spruce/Fir	0	0	0	0	0	0	2	0	85	13	19	0	0	0	0	0	0	0	119
Mixed Upland Deciduous	0	33	71	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	112
Natural Mixed Pines	0	0	7	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	9
Northern Hardwood	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Oak	0	39	0	0	0	0	0	9	6	0	0	0	0	28	0	0	0	0	82
Red Pine	0	5	0	0	0	24	34	2	0	0	0	0	0	0	0	0	0	0	65
Sand, Soil	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Upland Mixed Forest	0	0	0	0	0	0	3	0	0	29	0	0	0	23	0	0	0	0	55
Urban	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Water	6	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	3	0	0	0	0	0	0	0	0	0	0	3
Total	608	437	114	0	0	233	96	79	178	68	61	12	0	61	0	0	0	0	1946



Report 2 – Treatment Summary

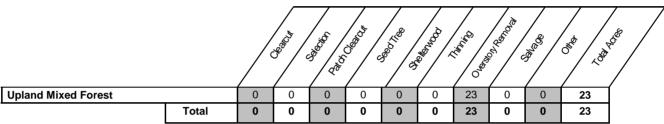
Traverse City Mgt. Unit Year of Entry: 2021

Acres of Harvest

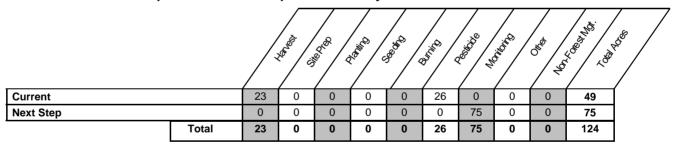
Compartment 130
Total Compartment Acres: 1,945

Commercial Harvest - 23 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method





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Treatment Name Acres

Stand CoverType

Size Density

Stand Age R

BA Range Treatment Type Treatment Method

Cover Type Objective Age Structure Habitat Cut

Approved Treatments:

7 61130007- 26.1 330 - Low-Density Nonstocked 0 Unspec Pesticide ERROR 4211 - Planted Even-Aged No Spray Trees ified Red Pine

Prescription Competition control per TMS specs/methods.

Specs:

Next Step Monitoring, Artificial Regen(3yr); Monitoring, Artificial Regen(1yr)

Treatments:

Acceptable Planted red pine with scattered oak, white pine.

Regen:

Other Percent to Treat = 100%

Comment:

Site Condition

Proposed Start Date: 10/1 /2018

22 61130022-Cut 22.8 4310 - Pine, Oak Sawtimber 83 51-80 Harvest Overstory 4319 - Mixed Even-Aged No Mix Medium Removal Upland Forest

Prescription Remove most of dead and dying oak overstory and mark other species to leave. Residual BA will be variable (0-30 sf/acre). Protect streams

Specs: with appropriate buffers.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, white pine, oak, red pine, cherry, jack pine.

Regen: Other

Comment:

Site Condition
Proposed Start Date: 10/1 /2020

Total Treatment 48.9

Compartment: 130

Traverse City Mgt. Unit

Katie Armstrong : Examiner Year of Entry: 2021

Availa	ability for	Managemer	nt											
Total	Acres	Acres Avail	Acres	D	omina	nt Site	e Con	dition	s					
Acres	Available	With Condition	Not Available		2B	5B	1A	2G	2H	3A	3F	3J	3L	5E
106	0	0	106	Aspen						98	8			
70	0	0	69	Cedar			2	9		52		6		
201	201	0	0	Herbaceous Openland										
372	0	0	372	Jack Pine				0		372				
236	228	0	8	Low-Density Trees						8				
78	0	0	78	Lowland Aspen/Balsam Poplar				26		43	8			
94	0	0	94	Lowland Conifers				65	8	15		6		
83	0	0	83	Lowland Deciduous				83						
77	0	0	77	Lowland Mixed Forest				20		57				
125	101	0	24	Lowland Shrub			9	12				1		2
119	0	0	119	Lowland Spruce/Fir				82	3	32	2			
111	37	2	73	Mixed Upland Deciduous	2		1			71		1		
9	1	0	9	Natural Mixed Pines				2		7				0
14	0	0	14	Northern Hardwood									14	
81	39	0	42	Oak			0			23	15			5
65	61	0	5	Red Pine						5				0
11	11	0	0	Sand, Soil										
55	26	22	7	Upland Mixed Forest		22						6		1
27	27	0	0	Urban										
6	6	0	1	Water			1							
3	3	0	0	White Pine										
1,945	741	24	1,180	Total Forested Acres	2	22	13	300	11	783	32	20	14	7
	38%	1%	61%	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.

	2G: Too wet (sensitive	2	3F: Military easement /			
_	soils, does not include access issues)		lease	Unspecified	Unspecified	Unspecified
Comments: Too wet to manage and	d Military Dagrad Land					

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2	Unavailable	3L: Other wildlife concerns	15	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: EMR research proje	ect.					
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	24	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	156	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	1A: Federal/State/Local Law	Unspecified	Unspecified	Unspecified
	Comments: Manistee River natu	ural rivers buffer.					
7	Unavailable	3F: Military easement / lease	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Too close to ranges						

Traverse City Mgt. Unit
Katie Armstrong: Examiner

8	Available	2B: Unknown if access through adjacent landowner(s) is possible	2	Unspecified	Unspecified	Unspecified	Unspecified	
	Comments:							
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	3A: Conservation Values incompatible with harvest at this time	Unspecified	Unspecified	Unspecified	
	Comments:							
10	Unavailable	5E: Long-Term Retention	2	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified	
	Comments:							
11	Unavailable	5E: Long-Term Retention	5	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified	
	Comments:							
12	Unavailable	3F: Military easement / lease	9	Unspecified	Unspecified	Unspecified	Unspecified	
	Comments:							
13	Unavailable	1A: Federal/State/Local Law	13	Unspecified	Unspecified	Unspecified	Unspecified	
	Comments: Manistee River Nat	tural Buffer						

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14	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
16	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
C	Comments:						
17	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	3	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
18	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	20	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						

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19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	83	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
20	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	8	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
21	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	3A: Conservation Values incompatible with harvest at this time	Unspecified	Unspecified	Unspecified
C	Comments:						
22	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	1	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
23	Unavailable	3F: Military easement / lease	18	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: EMR habitat						
24	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

Compartment: 130

Traverse City Mgt. Unit

Katie Armstrong : Examiner Year of Entry: 2021

25	Unavailable	3A: Conservation Values incompatible with harvest at this time	783	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: EMR habitat.						
26	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	4	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
27	Available	5B: Maintain for regeneration purposes	22	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						

11/6/2019 8:28:38 AM - Page 6 of 6

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				

Traverse City Mgt. Unit Compartment: 130



ERA = Ecological Reference Area



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.

on Type	Description	HCVA = High Conservation Value Area SCA = Special Conservation Area
Cold Water Lake	A coldwater lake has temperature and dissolved oxygen condition stocked trout populations and those of other coldwater fish speci conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable ey are relatively deep, have substantial the state. Such lakes are established by
Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	es (e.g., slimy sculpin) to persist from se conditions due to substantial
Research and Military Areas	These areas provide facilities and lands specifically dedicated for include the 5,847 acre Forest Fire Experiment Station, the 12,000 Area, the Beaver Islands Archipelago Wildlife Research Area (the High and Hog Islands, all state owned land on Beaver, South Fow Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Resources, and over 144,000 acres of Military Lands.	0 acre Houghton Lake Wildlife Research at includes most of Garden Island, all of x and North Fox Islands), the Cusino
Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high docommunities are ecologically and socially significant in their effect as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well
Natural Rivers	There are two Natural Rivers datasets which are derived from sp approved distance from the river centerlines. The Natural Rivers most Natural Rivers. The Vegetative Buffer ranges from 25 to 10 and Vegetative Buffers for each Natural River see the table locat folder.	Zoning District is a 400 foot buffer for 00 feet. To view specific Zoning Districts
	Cold Water Lake Cold Water Stream Research and Military Areas Riparian Area	Cold Water Lake A coldwater lake has temperature and dissolved oxygen condition stocked trout populations and those of other coldwater fish speciconditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries Cold Water Stream A coldwater stream has temperature and dissolved oxygen conditions and those of other coldwater fish specicy are to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210. Research and Military Areas These areas provide facilities and lands specifically dedicated for include the 5,847 acre Forest Fire Experiment Station, the 12,00 Area, the Beaver Islands Archipelago Wildlife Research Area (the High and Hog Islands, all state owned land on Beaver, South Fow Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Renursery, and over 144,000 acres of Military Lands. Riparian Area A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high communities are ecologically and socially significant in their effective as aesthetics, habitat, bank stability, timber production, and their There are two Natural Rivers datasets which are derived from spaproved distance from the river centerlines. The Natural Rivers most Natural Rivers. The Vegetative Buffer ranges from 25 to 10 and Vegetative Buffers for each Natural River see the table located for the streams and vegetative Buffers for each Natural River see the table located for the streams and vegetative Buffers for each Natural River see the table located for the stream and vegetative Buffers for each Natural River see the table located for the stream and the stream and those of other coldwater fish species for the stream and the second file of the stream and

Report 7 - Stands Traverse City Mgt. Unit



Stand	Level 4 Co	ver Type		Size Der	sity	Acres	Stand Age E	BA Range	Managed S	Site	General Comments
1	6127 - Lov	wland Pine	, 5	Sawtimbe	r Well	9.3	100	111-140	N/A		2 areas of Q type separated by a vein of tag alder. Below the main bluff
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	along the Manistee River. Has a ridge leading to the river. Rollaway? Heavily used by deer.
No	rthern White Cedar	15	Pole/Log	8		Та	g Alder	Medium	5 - 10 feet	Tall Shrub	
	White Pine	77	XLog/Log	20	100	Wh	ite Pine	Medium	>20 feet	Pole	
3	4191 - Mixed Uplar Cor	nd Decidu	ous with F	oletimbe	er Well	4.2	60	81-110	N/A		Split by overhead powerline.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	White Pine	40	Pole/Sap/Log	8	60	Wh	nite Pine	Low	10 - 20 feet	Sapling	
Bla	ck/Red (Hybrid) Oak	30	Log/XLog	16		Wh	nite Pine	Medium	>20 feet	Pole	
	Bigtooth Aspen	25	Pole/Log	9				<u> </u>			
4	622 - Lowl	and Shrub)	Nonsto	cked	1.3	0		No		
5	42110 - Plan			Poletimbe		7.6	46	111-140	N/A		Planted red pine that was 3rd row thinned as part of Red Wing Red Pine in 2012, 61-043-11-01. Oak is dead or dying. Pocket of popple near blue
	Canopy Species	% Cover	Size Class	DBH			nopy Species		Avg. Height	Size	line.
	Red Pine	87	Pole/Sap/Log	9	46	Black/Re	d (Hybrid) Oak	Low	>20 feet	Pole	
7	330 - Low-D	ensity Tre	es	Nonsto	cked	22.4		Inspecified	4211 - Planted		Cut 2015-16 as Pemberthy Crossing Mix, 61-648-11-01. Planted spring 2016. FTP C62-873. Left scattered overstory oak, red pine, white pine.
							nopy Species		Avg. Height	Size	Oak was in very bad shape from oak decline. regen survey 10/24/2018:
							ed Pine	High	< 5 feet	Sapling	20% mortality. 44% FTG. Recommend release. Primary target would be
						Black/Re	d (Hybrid) Oak	Trace	>20 feet	Log	aspen competition with lesser amounts of RM, BC and oak. Aspen is thick in places, especially the SW corner and edges, 5-10' tall and RM 4-
						WI	nite Oak	Trace	>20 feet	Log	5' tall and oak seedlings. Some shallow trenches and skips around stumps. Hard to tell if trees died or were never planted.
_	40440 Plan	(- d D - d D			147 11	47.0		444.440			<u> </u>
8	42110 - Plan			Poletimbe		17.8	53	111-140	N/A		Row thinned in Red Wing RP, 61-043-11-01, cut summer 2012. Rows were a bit squirrelly but producer managed to find them. Diameters are
			Size Class	DBH			nopy Species		Avg. Height	Size	still a bit small for thinning. Generally little to no understory. Oak in
	Red Pine	93	Pole/Log/Sap	8	53		d (Hybrid) Oak		10 - 20 feet	Sapling	canopy is mostly dead due to oak decline.
						Blac	ck Cherry	Low	10 - 20 feet	Pole	
9	42110 - Plan	ted Red P	ine F	Poletimbe	er Well	8.7	48	111-140	N/A		Row thinned in Red Wing Red Pine, 61-043-11-01, cut summer 2012.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Rows were a bit squirrely but producer managed to find them. Little to no understory.
	Red Pine	95	Pole/Sap/Log	8	48	Blac	k Cherry	Low	>20 feet	Pole	
10	4191 - Mixed Uplar Cor	nd Decidu	ous with §	Sawtimbe	r Well	3.5	120	81-110	N/A		Access is through private property. Adjacent to Manistee River and Portage Creek.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
Bla	ck/Red (Hybrid) Oak	50	Log	18	120	Wh	nite Pine	Medium	Variable	Pole	
	White Pine	30	Pole/Log	8		Re	ed Pine	Trace	10 - 20 feet	Sapling	
11	500 -	Water		Nonstoo	cked	4.7	0		No		Manistee River.



Stand	Level 4 Co	ver Type	s	ize De	nsity	Acres	Stand Age E	BA Range	Managed S	Site	General Comments		
12	42110 - Plar	ited Red P	rine Po	oletimb	er Well	7.8	48	111-140	N/A		Row thinned in Red Wing RP, 61-043-11-01, cut summer 2012. Rows were a bit squirrelly but producer managed to find them. Red pine		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	diameters are still a little small for thinning. Generally little to no		
	Red Pine	95	Pole/Sap/Log	8	48	Re	d Pine	Low	10 - 20 feet	Sapling	understory. Oak in canopy is mostly dead due to oak decline. BAs = 130,		
						Black	k Cherry	Low	10 - 20 feet	Sapling	140.		
						Re	d Oak	Trace	5 - 10 feet	Sapling			
13	4117 - Mixed N.	Hardwood	I - Pine S	Sapling	Poor	14.1	13	Immature	N/A		Rattlesnake experimental cut. Sale #023-06.		
	Canopy Species	% Cover	Size Class	DBH	Age								
	Black Cherry	65	Sapling	1	13								
	Red Pine	20	Sapling	1									
Blad	ck/Red (Hybrid) Oak	10	Sapling	1									
14	4310 - Pin	e, Oak Mix	x Saw	/timber	Medium	n 22.8	120	1-50	N/A		Cut 2015-16 as Pemberthy Crossing Mix, 61-648-11-01. Planted red pine spring 2016. FTP C62-873. Good seedling survival. Too much overstory		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	to spray but it looks pretty good. Small camping area along Portage		
Blac	ck/Red (Hybrid) Oak	30	Log	14	120	Re	d Pine	High	< 5 feet	Sapling	Creek.		
	White Pine	25	Log	14							Area of concern noted 2019.		
	Red Pine	20	Log/Pole/XLog	12									
	White Oak	20	Log	12									
15	6120 - Low	land Ceda	ar Saw	/timber	Medium	n 3.0	103	51-80	N/A		Quite a bit of blow down making stocking patchy. Lots of deer activity.		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size			
No	rthern White Cedar	85	Log/Pole	10	103	Tag	g Alder	Medium	5 - 10 feet	Tall Shrub			
16	42110 - Plar	ited Red P	ine Po	oletimb	er Well	15.3	55	81-110	N/A		Row thinned in Red Wing RP, 61-043-11-01, cut summer 2012. Rows		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	were a bit squirrely but producer managed to find them.		
	Red Pine	93	Pole/Log	8	55	Black/Red	(Hybrid) Oak	Low	10 - 20 feet	Pole			
				'		Black	k Cherry	Low	10 - 20 feet	Sapling			
17	6120 - Low	vland Ceda	ar Pole	etimber	Medium	n 2.2	93	51-80	N/A		Variable stocking, heavy deer use. There is a drainage running through the stand.		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	the statio.		
No	rthern White Cedar	85	Pole	7	93	Та	g Alder	High	5 - 10 feet	Tall Shrub			
18	6229 - Mixed	lowland sh	nrub	Nonsto	cked	23.2	0		No		Portage Creek corridor.		
19	42110 - Plar		rine Po		er Well	1.2	53	141-170	N/A		Planted red pine sliver that must have been planted along with the private ownership. Trees are 3-4 sticks tall.		
	Red Pine White Pine	80 10	Pole Pole	8	53								



Stand	l Level 4 Co	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
20	4199 - Other Mixed Canopy Species Bigtooth Aspen Northern Pin Oak Black Cherry		Size Class Sapling Sapling Sapling	Sapling DBH 1 1 1	Poor Age 6	32.6	6	Immature	N/A		Scattered pole sized pine and oak scattered and was left for seed after the salvage harvests (Portage Creek Burn 61-653-10-01 and Portage Creek Oak Salvage 61-645-14-01). Site is in rough shape, lots of slash and high stumps. Deer are doing quite a bit of damage on the regen. Stocking is patchy.
21	4126 - White, B	Black, N. Pi	n Oak	Sawtimb	er Poor	13.7	120	1-50	N/A		Cut 2015-16 as Pemberthy Crossing Mix, 61-648-11-01. Planted red pine
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Specie	es Density	Avg. Height	Size	around oak in 2016. FTPC62-873. Planned to spray fall 2018 but this stand is in EMR dedicated habitat area and broadcast spraying is not
Blad	ck/Red (Hybrid) Oak	35	Log	14	120		ed Pine	High	< 5 feet	Sapling	allowed under CCAA. Will have to accept mixed stand. Residual oak is
	White Pine	10	Pole	8		Jac	ck Pine	Low	5 - 10 feet	Sapling	dying. Patchy canopy.
	Red Pine	10	Log	12							
	White Oak	30	Log	12	120						
	Red Maple	10	Pole/Log	8							
22		ne, Oak Mix		awtimber			83	51-80	N/A		Stand is a oak/pine mix. Oak is poor quality and some is dead or dying. Stocking is variable. Looks like the north part of the stand had the aspen
	Canopy Species	% Cover			Age		nopy Specie		Avg. Height	Size	removed out of it when st 20 was cut. There is still some pine and oak
	White Pine	28	Log/Pole	12			ite Pine	Trace	Variable	Sapling	over story in this area.
	Red Pine	25	Log/Pole	10		Bigto	oth Aspen	Low	5 - 10 feet	Sapling	
ľ	Northern Pin Oak Jack Pine	34 6	Log/Pole Pole	12	83						
23	6229 - Mixed			Nonsto	ocked	44.5	0		No		Portage Creek corridor. Mostly tag alder with some trees along the edge.
24	500 -	Water		Nonsto	ocked	1.7	0		No		
25	6229 - Mixed	lowland sh	nrub	Nonsto	ocked	2.5	0	Unspecified	No		Tag alder along the Manistee River.
26	42110 - Plar	nted Red P	ine	Sapling	y Well	4.7	5	1-50	N/A		Cut 2015-16 as Pemberthy Crossing Mix, 61-648-11-01. Red pine
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Specie	es Density	Avg. Height	Size	2018 but this stand is in EMR dedicated habitat area and broadcast
Blac	ck/Red (Hybrid) Oak	10	Log	14	120	Red	d Maple	Medium	< 5 feet	Sapling	spraying is not allowed under CCAA. Will have to accept mixed stand.
	White Pine	6	Pole	8							
	White Oak	7	Log	12							
	Red Pine	75	Sapling	1	5						
27	6120 - Lov	vland Ceda	ır	Poletimb		6.4	120	111-140	N/A		Scattered super sized white pine over dense cedar stand. Heavy deer
											¬ USE.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Specie	es Density	Avg. Height	Size	
No	Canopy Species orthern White Cedar	% Cover 73	Size Class Pole/Log/Sa		120		n opy Speci e g Alder	Low	Avg. Height 5 - 10 feet	Size Tall Shrub	



Stand	Level 4 Co	ver Type		Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
28	3303 - Mixed Lo	w Density	Trees	Nonst	ocked	1.5	0		No		
29	330 - Low-D	ensity Tre	ees	Nonst	ocked	4.6			No		
						Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
						Ja	ck Pine	Low	>20 feet	Pole	
						Blac	ck Cherry	Medium	10 - 20 feet	Sapling	
						Black/Re	d (Hybrid) Oa	ak Trace	5 - 10 feet	Pole	
30	42260 - Natural Pin	e, Mixed [Deciduous	Sapling I	Medium	n 7.0	13	Immature	N/A		Rattlesnake Project Sale, #023-06-02.
	Canopy Species	% Cover	Size Class	DBH	I Age						
	Jack Pine	50	Sapling	1	13						
	Red Pine	10	Sapling	1							
	Black Cherry	20	Sapling	1							
	Red Maple	15	Sapling	1							
31	4139 - Aspen, N	lixed Deci	iduous	Poletimb	er Poo	r 16.6	45	1-50	N/A		Low density. Poor quality.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	Area of concern noted 2019.
	Quaking Aspen	50	Pole/Saplin	ng 5	45	Quak	ring Aspen	Low		Sapling	
	Black Cherry	30	Sapling/Po	le 3		Black/Re	d (Hybrid) Oa	ak Trace		Pole	
	White Pine	10	Pole/Saplin	ng 4							-
32	4199 - Other Mixed	I Upland D	eciduous	Saplin	g Well	60.0	19	Immature	N/A		Stand cut in 2000 'Pemberthy Crossing' 61-165-98-01. West side seems to be more of a cherry and oak mix, east side turns more to aspen with a
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	bit of jack pine. I think part of the Range 9 fire impacted this stand in
	Quaking Aspen	35	Sapling	1	19	Ja	ick Pine	Trace	< 5 feet	Sapling	2010. Trees are about 10' tall
	Black Cherry	35	Sapling	1	19						
	Northern Pin Oak	25	Sapling	1							
33	4130 -	Aspen		Saplin	•	12.5	13	Immature	N/A		Rattlesnake Project sale #023-06. Trees are about 10-15' tall. West end has patchy stocking.
	Canopy Species	% Cover	Size Class	DBH	I Age						nas patery stocking.
	Quaking Aspen	75	Sapling	1	13						
	Black Cherry	15	Sapling	1							
	Jack Pine	10	Sapling	1							
34	4125 - Black	k, N. Pin C)ak	Sawtimb	er Well	l 13.5	120	81-110	N/A		Along Portage Creek.
	Canopy Species		Size Class		I Age		nopy Specie	es Density	Avg. Height	Size	
Blac	k/Red (Hybrid) Oak	83	Log/Pole	14	120		d Maple	Low	Variable	Sapling	
							oth Aspen	Low	Variable	Sapling	
							d (Hybrid) Oa		Variable	Sapling	
						Bla	ck Cherry	Low	5 - 10 feet	Sapling	



Stanc	d Level 4 C	over Type		Size De	nsity	y Acres Stand Age BA Range Managed Site		Site	General Comments		
35	6122 - Bl	ack Spruce	e F	Poletimb	er Well	4.0	83	51-80	N/A		Nice pocket of spruce, 4-5 sticks tall. West 1/2 of the stand turns pretty wet and timber is a bit more sparse.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	wet and timber is a bit more sparse.
	Black Spruce	85	Pole	8	83	Re	ed Maple	Trace	Variable	Sapling	
	Red Maple	10	Pole	8		Ta	ag Alder	High	5 - 10 feet	Tall Shrub	
36	6120 - Lo	wland Ceda	ar F	Poletimb	er Well	39.7	90	111-140	N/A		Mostly cedar but shorter and sparser than stands closer to river. Does
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	not appear to be used by deer. Some small canopy gaps.
	Black Spruce	40	Pole/Sap/Log	8		Ta	ag Alder	Medium	5 - 10 feet	Tall Shrub	
	Tamarack	7	Pole	8		Ва	llsam Fir	Low	5 - 10 feet	Sapling	
No	orthern White Cedar	50	Pole/Log/Sap	8	90	Northern	n White Cedar	Medium	>20 feet	Pole	
37	42220 - Nat	ural Jack P	ine F	oletimb	er Well	1.1	58	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Jack Pine	95	Pole/Sapling	8	58	Bla	ck Cherry	Trace	10 - 20 feet	Sapling	
39	4130	- Aspen	Ро			n 15.9	43	51-80	N/A		A mix of upland and lowland (east end). Mostly short aspen, some taller clones in the east end, medium-poor quality. Ground looks operable.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	ciones in the east end, medium-poor quality. Ground looks operable.
	Quaking Aspen	75	Pole/Sapling		43	Ta	ag Alder	Medium	5 - 10 feet	Tall Shrub	
	Black Spruce	15	Pole	8		Bla	ck Cherry	Low	10 - 20 feet	Sapling	
	Red Maple	10	Pole	8		Ja	ack Pine	Trace	Variable	Sapling	
						WI	hite Pine	Trace	Variable	Sapling	
						Qual	king Aspen	Low	Variable	Sapling	
40	622 - Lov	vland Shrub)	Nonsto	cked	15.7	0		No		Tag alder, some patches of red maple and aspen.
41	4136 - Asper	n, Mixed Co	nifer Po	letimber		n 38.5	45	51-80	N/A		Stand is a mix of upland (north end) and lowland (south end). Mostly 4 stick aspen, medium-poor quality. There is a couple of tag alder drains
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	that feed into portage creek that run through the stand.
	Quaking Aspen	80	Pole	8	45	Re	ed Maple	Low	10 - 20 feet	Sapling	
	Black Spruce	10	Pole	7		Ta	ag Alder	Low	5 - 10 feet	Tall Shrub	
	Jack Pine	8	Pole/Sapling	6		Bla	ck Cherry	Medium	5 - 10 feet	Sapling	
						Qual	king Aspen	Low	Variable	Sapling	
						Blad	ck Spruce	Trace	< 5 feet	Sapling	
						WI	hite Pine	Trace	Variable	Sapling	
42	6120 - Lo	wland Ceda	ar F	Poletimb	er Well	6.0	80	81-110	N/A		Portage Creek corridor. Down a short bluff from adjacent upland.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Appears to have a few ephemeral drainages leading into the creek. Deel use for thermal cover.
	Black Spruce	20	Pole	8		Ta	ag Alder	High	5 - 10 feet	Tall Shrub	
	Tamarack	10	Pole/Log	8							
No	orthern White Cedar	50	Pole/Log	8	80						
	Quaking Aspen	12	Pole	8							

Compartment: 130 Year of Entry: 2021



Stand	Level 4 C	over Type	5	Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
43	4130	- Aspen		Saplin	g Well	9.3	13	Immature	N/A		Rattlesnake Project Sale, #23-06-02.
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Quaking Aspen	80	Sapling	1	13						
44	6112 - Lo	wland Aspe	n P	oletimb	er Poor	23.8 43		1-50	N/A		Darn near L0. Scattered pockets of aspen and BAM. Heavy tag alder
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	understory.
	Quaking Aspen	50	Pole/Sapling	6	43	Ta	ag Alder	High	5 - 10 feet	Tall Shrub	
	Balsam Poplar	20	Pole/Sapling	6						1	
	Balsam Fir	10	Pole/Sapling	6							
	Red Maple	20	Pole/Sapling	6							
45	6122 - BI	lack Spruce	P P		er Well	9.1	80	Unspecified	N/A		4-5 stick spruce. JP falling out of stand. Nice quality. Looks operable. Two pockets separated by a drain.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	Two pockets separated by a drain.
	Black Spruce	90	Pole	8	80	Re	ed Maple	Low	Variable	Sapling	
	Red Maple	10	Pole	8		Bla	ck Spruce	Low	Variable	Sapling	
46	6 6139 - Mixed Lowland Forest Poletimber Medium		m 16.0	45	51-80	N/A		Extremely variable. Poor quality. Must have some lowland but it's hard to tell with snow.			
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	ten with Show.
	Quaking Aspen	45	Pole/Sap/Log	6	45	Bla	ck Cherry	Medium	10 - 20 feet	Sapling	
	Black Spruce	25	Pole	8		Ta	ag Alder	Medium	5 - 10 feet	Tall Shrub	
	Tamarack	15	Pole	8		W	hite Pine	Low	10 - 20 feet	Sapling	
	Jack Pine	10	Pole/Sapling	6		Ja	ack Pine	Trace	< 5 feet	Sapling	
47	42220 - Nat	tural Jack P	ine	Saplin	g Well	136.4	136.4 8 Immature		N/A		Range 9 fire salvage. Dense stocking. Trees are 5-8' tall. Looks upland
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	but has leatherleaf.
	Jack Pine	90	Sapling	1	8	Le	atherleaf	Medium	5 - 10 feet	Tall Shrub	
48	6126 - Lowl	and Jack P	ine P		er Well	3.9	73	81-110	N/A		A mix of lowland jack pine and black spruce. Looks like it was left as retention from the Range 9 fire Salvage.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	Teterition from the Kange 9 life Salvage.
	Black Spruce	40	Pole/Sapling	7	73	Bla	ck Spruce	Trace	Variable	Sapling	
	Jack Pine	60	Pole	8	73						
49	6122 - BI	lack Spruce	P P	oletimb	er Well	19.2	90	81-110	N/A		Nice spruce with clumps of white pine. Dozer line from Range 9 fire bisects this stand so south half is charred. Understory is a little more
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	sparse but canopy looks relatively unaffected by fire.
	Black Spruce	65	Pole/Sap/Log	7	90	Ta	ag Alder	Low	5 - 10 feet	Tall Shrub	
	White Pine	15	Log/XLog	16		Le	atherleaf	High	< 5 feet	Tall Shrub	
	Red Maple	15	Pole/Sapling	4		Re	ed Maple	Low	>20 feet	Sapling	
						Bla	ck Spruce	Medium	>20 feet	Pole	

Traverse City Mgt. Unit



. Heavy browse on dogwood.
Heavy browse on dogwood.
. Heavy browse on dogwood.
. Heavy browse on dogwood.
is well stocked.
me areas are L0/tag alder.
Fire.
liocre timber. Canopy closure at
end. Scattered large WP. N part



	d Level 4 C	over Type	s	ize De	ensity	Acres Sta	and Age B	A Range	Managed Site		General Comments
57	6120 - Lov	wland Ceda	ar Po	oletimb	er Poor	12.4	80	1-50	N/A		Wet ground and sparsely forested.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canop	y Species	Density	Avg. Height	Size	
No	orthern White Cedar	60	Pole/Sap/Log	8	80	Tag A	lder	Full	5 - 10 feet	Tall Shrub	
	Red Maple	15	Log/Pole	12		Balsam I	Poplar	Low	>20 feet	Sapling	
	Black Spruce	15	Pole	8							
	Balsam Poplar	10	Pole/Sapling	6							
59	6117 - Lowland Con	Deciduous iferous	, Mixed Pole	etimbe	r Mediun	n 83.4	73	1-50	N/A		Numerous drainages. Timber is very patchy several spots of L0/tag alder. Wet ground.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canop	y Species	Density	Avg. Height	Size	
	Black Spruce	10	Pole/Sapling	7		Tag A	lder	High	5 - 10 feet	Tall Shrub	
	Tamarack	10	Pole	8							•
	Red Maple	55	Pole/Sapling	7	73						
	Paper Birch	10	Pole	7							
	Balsam Poplar	15	Pole/Sapling	5							
65		oniferous Lo	owland Po	oletimb	er Well	14.9	50	81-110	N/A		Variable stand with hydrology affected by road and pipeline. Vein of tag
											alder runs through middle.
	Canopy Species	% Cover			l Age	Sub-Canop		Density	Avg. Height	Size	alder runs through middle.
	White Pine	40	Pole/Sap/Log	6	Age 50	Tag A	lder	Medium	5 - 10 feet	Tall Shrub	alder runs through middle.
	White Pine Black Spruce	40 25	Pole/Sap/Log Pole/Sapling	6 4			lder				alder runs through middle.
	White Pine Black Spruce Red Maple	40 25 15	Pole/Sap/Log Pole/Sapling Sapling/Pole	6 4 3		Tag A	lder	Medium	5 - 10 feet	Tall Shrub	alder runs through middle.
No	White Pine Black Spruce	40 25	Pole/Sap/Log Pole/Sapling	6 4		Tag A	lder	Medium	5 - 10 feet	Tall Shrub	alder runs through middle.
No.	White Pine Black Spruce Red Maple orthern White Cedar 6131 - Hemlock,	40 25 15 20	Pole/Sap/Log Pole/Sapling Sapling/Pole Log/Pole	6 4 3 10		Tag A	lder	Medium	5 - 10 feet	Tall Shrub	alder runs through middle.
	White Pine Black Spruce Red Maple orthern White Cedar 6131 - Hemlock,	40 25 15 20 White Pine	Pole/Sap/Log Pole/Sapling Sapling/Pole Log/Pole	6 4 3 10	50	Tag A Black C	lder cherry	Medium Low	5 - 10 feet 10 - 20 feet	Tall Shrub Sapling	Variable stand but generally wet ground with more maple in southeast
	White Pine Black Spruce Red Maple orthern White Cedar 6131 - Hemlock,	40 25 15 20 White Pine	Pole/Sap/Log Pole/Sapling Sapling/Pole Log/Pole , Maple, Po	6 4 3 10 Dletimb	50 per Well	Tag A Black C	Ider Sherry 50 y Species	Medium Low 81-110	5 - 10 feet 10 - 20 feet N/A	Tall Shrub Sapling Size Sapling	Variable stand but generally wet ground with more maple in southeast
	White Pine Black Spruce Red Maple orthern White Cedar 6131 - Hemlock, B Canopy Species Red Maple Jack Pine	40 25 15 20 White Pine sirch % Cover 50 20	Pole/Sap/Log Pole/Sapling Sapling/Pole Log/Pole , Maple, Po	6 4 3 10 Dletimb	50 per Well	Tag A Black C	50 y Species Pine	Medium Low 81-110 Density	5 - 10 feet 10 - 20 feet N/A Avg. Height	Tall Shrub Sapling	Variable stand but generally wet ground with more maple in southeast
	White Pine Black Spruce Red Maple orthern White Cedar 6131 - Hemlock, B Canopy Species Red Maple	40 25 15 20 White Pine sirch % Cover 50	Pole/Sap/Log Pole/Sapling Sapling/Pole Log/Pole , Maple, Pole Size Class Pole/Log	6 4 3 10 Dletimb	50 per Well	Tag A Black C	50 y Species Pine	Medium Low 81-110 Density Low	5 - 10 feet 10 - 20 feet N/A Avg. Height Variable	Tall Shrub Sapling Size Sapling	Variable stand but generally wet ground with more maple in southeast part and more conifer northwest.
	White Pine Black Spruce Red Maple orthern White Cedar 6131 - Hemlock, B Canopy Species Red Maple Jack Pine	40 25 15 20 White Pine sirch % Cover 50 20	Pole/Sap/Log Pole/Sapling Sapling/Pole Log/Pole , Maple, Pole Size Class Pole/Log Pole/Log	6 4 3 10 Deletimb	50 per Well	Tag A Black C	50 y Species Pine	Medium Low 81-110 Density Low Low	5 - 10 feet 10 - 20 feet N/A Avg. Height Variable 5 - 10 feet	Size Sapling Sapling	Variable stand but generally wet ground with more maple in southeast part and more conifer northwest.
68	White Pine Black Spruce Red Maple orthern White Cedar 6131 - Hemlock, B Canopy Species Red Maple Jack Pine White Pine Black Spruce	40 25 15 20 White Pine birch 50 20 15	Pole/Sap/Log Pole/Sapling Sapling/Pole Log/Pole , Maple, Pole Size Class Pole/Log Pole/Log Log/Pole Pole/Log	6	50 per Well	Tag A Black C	50 y Species Pine Pine	Medium Low 81-110 Density Low Low	5 - 10 feet 10 - 20 feet N/A Avg. Height Variable 5 - 10 feet	Size Sapling Sapling	Variable stand but generally wet ground with more maple in southeast part and more conifer northwest. Hummocky ground with standing water. Mostly spruce and white pine
	White Pine Black Spruce Red Maple orthern White Cedar 6131 - Hemlock, B Canopy Species Red Maple Jack Pine White Pine Black Spruce	40 25 15 20 White Pine sirch 50 20 15 10 ack Spruce	Pole/Sap/Log Pole/Sapling Sapling/Pole Log/Pole , Maple, Pole Size Class Pole/Log Pole/Log Log/Pole Pole/Log	6	per Well Age 50	Tag A Black C 5.3 Sub-Canop White Jack F Tag A	50 y Species Pine Pine Ider	81-110 Density Low Low Medium	5 - 10 feet 10 - 20 feet N/A Avg. Height Variable 5 - 10 feet 5 - 10 feet	Size Sapling Sapling	Variable stand but generally wet ground with more maple in southeast part and more conifer northwest.
68	White Pine Black Spruce Red Maple orthern White Cedar 6131 - Hemlock, B Canopy Species Red Maple Jack Pine White Pine Black Spruce	40 25 15 20 White Pine sirch 50 20 15 10 ack Spruce	Pole/Sap/Log Pole/Sapling Sapling/Pole Log/Pole , Maple, Pole/Log Pole/Log Log/Pole Pole/Log Pole/Log	6	er Well Age 50 ber Well ber Well	Tag A Black C 5.3 Sub-Canop White Jack F Tag A	50 y Species Pine lder 50 y Species	Medium Low 81-110 Density Low Low Medium 81-110	5 - 10 feet 10 - 20 feet N/A Avg. Height Variable 5 - 10 feet 5 - 10 feet	Size Sapling Sapling Sapling Sapling Sapling Tall Shrub	Variable stand but generally wet ground with more maple in southeast part and more conifer northwest. Hummocky ground with standing water. Mostly spruce and white pine
68	White Pine Black Spruce Red Maple orthern White Cedar 6131 - Hemlock, B Canopy Species Red Maple Jack Pine White Pine Black Spruce 6122 - Bl Canopy Species	40 25 15 20 White Pine sirch **Cover 50 20 15 10 ack Spruce **Cover	Pole/Sap/Log Pole/Sapling Sapling/Pole Log/Pole , Maple, Pole Size Class Pole/Log Pole/Log Log/Pole Pole/Log	6	er Well Age 50 ber Well ber Well	Tag A Black C 5.3 Sub-Canop White Jack F Tag A 1.7 Sub-Canop	50 y Species Pine Pine lder 50 y Species aple	81-110 Density Low Low Medium 81-110 Density	5 - 10 feet 10 - 20 feet N/A Avg. Height Variable 5 - 10 feet 5 - 10 feet N/A Avg. Height	Size Sapling Sapling Sapling Sapling Sapling Tall Shrub	Variable stand but generally wet ground with more maple in southeast part and more conifer northwest. Hummocky ground with standing water. Mostly spruce and white pine with understory of red maple.



Stand	d Level 4 Co	el 4 Cover Type Size Density Acres Stand Age BA Range Managed Site		Site	General Comments						
70	6112 - Lov	vland Aspe	en F	Poletimb		7.9	40	1-50	N/A		Mostly tag alder with scattered canopy aspen
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	70	Pole/Sapling	6	40	Ta	g Alder	High	5 - 10 feet	Tall Shrub	
	Red Maple	15	Pole	6		Red	d Maple	Low	10 - 20 feet	Sapling	
	White Pine	10	XLog/Log	20		Wh	ite Pine	Trace	5 - 10 feet	Sapling	
						Blac	k Spruce	Trace	5 - 10 feet	Sapling	
71	4133 - Aspe	n, Mixed P	ine F	Poletimb	er Well	7.9	50	81-110	N/A		Variable. Slight ridge compared to adjacent stands but still has some wet
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	Density	Avg. Height	Size	areas. Parts have fairly dense understory of tall red maple saplings.
	White Pine	15	XLog/Log	18	90	Lea	therleaf	Medium	5 - 10 feet	Tall Shrub	
	Quaking Aspen	40	Pole	6	50	Red	d Maple	Medium	>20 feet	Sapling	
	Red Maple	22	Pole	6		Wh	ite Pine	Low	Variable	Sapling	
73	710 - S	and, Soil		Nonsto	cked	10.6			No		Pipeline
74	622 - Low	land Shrub)	Nonsto	cked	2.7			No		
75	122 - Road	l/Parking L	ot	Nonsto	cked	9.5			No		Daniels Road.
76	6229 - Mixed	lowland sh	nrub	Nonsto	cked	8.6			No		Mainly tag alder. Open water in areas. standing dead trees.
77	42220 - Nati	ural Jack P	ine	Sapling	ı Well	133.7	8 I	mmature	N/A		Regeneration from the Range 9 Fire, May 19, 2010. Sale #61-663-10-01.
	Canopy Species	% Cover	Size Class	DBH	Age						Jack pine is about 3-4 feet tall.
	Jack Pine	85	Sapling	1	8						
	Red Maple	15	Sapling	1							
78	42220 - Nati	ural Jack P	ine	Sapling	Well	7.1	41	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Jack Pine	75	Sapling/Pole		41						
	Black Spruce	10	Pole/Sapling								
	White Pine	10	Pole/Sapling	6							
79	42260 - Natural Pir			Poletimb		2.5	41	51-80	N/A		Part of 62 that was not cut. Slight upland.
	Canopy Species		Size Class		Age		nopy Species	Density	Avg. Height	Size	
	Jack Pine	50	Log/Pole	10	41	Blac	k Cherry	Low	10 - 20 feet	Sapling	
	White Pine	10	Log/Pole	12							
	Quaking Aspen	20	Log/Pole	10							
	Red Maple	20	Pole/Log	8							



Stand	d Level 4 C	over Type		Size Density	Acres	Stand Age I	BA Range	Managed S	Site	General Comments
80	6112 - Lo	wland Aspe	n Po	oletimber Medium	17.7	40 l	Jnspecified	N/A		Mostly wet. Small patch of spruce and jack pine along road in south end.
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	90	Pole	8 40	Blac	ck Spruce	Low	Variable	Sapling	
					Ta	ag Alder	Medium	Variable	Tall Shrub	
81	622 - Lov	wland Shrub)	Nonstocked	4.5			No		
82	6131 - Hemlock, E	White Pine	, Maple, Po	oletimber Medium	36.1	40	81-110	N/A		Spruce pocket in NE corner. Sizeable open areas with tag alder. Part wa cut in 1989, Range 11 Sale, 61-016-88-01.
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	50	Pole/Sap/Log	g 8 40	Re	ed Maple	Low	Variable	Sapling	
	Black Spruce	35	Pole	8	Ta	ag Alder	High	5 - 10 feet	Tall Shrub	
	White Pine	10	Log/Pole	12						
85	6126 - Low			Sapling Poor	11.5	7	Immature	N/A		Burned in Range 9 or 10 fire (2010 or 2012) but not salvaged. Mostly young jack pine and spruce with lots of standing dead timber.
	Canopy Species		Size Class	DBH Age						
	Jack Pine	50	Sapling	1 7						
	Black Spruce	40	Sapling	1						
	Red Maple	10	Sapling	1						
86	612 - Lowland	Coniferous	Forest F	Poletimber Poor	61.4	60 l	Jnspecified	N/A		Mostly dense tag alder with some scattered trees such as cedar, tamarack, and black spruce. Barely 25% canopy.
88	42221 - Natural Dec	Jack Pine, ciduous	Mixed S	Sapling Medium	78.1	8	Immature	N/A		Cut 2016. Range 9 Fire Salvage Redo, 61-610-16-01. More-than-usual amount of standing dead trees. Seems upland but there is leatherleaf.
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Jack Pine	60	Sapling	1 8		atherleaf	High	5 - 10 feet	Tall Shrub	
	Red Maple	25	Sapling	1						
	Black Cherry	10	Sapling	1						
90	310 - Herbac	ceous Open	land	Nonstocked	2.7	0		No		Camp Grayling maintains this as opening for visibility at road intersection
					Sub-Ca	nopy Species	Density	Avg. Height	Size	
						ack Pine	Medium	5 - 10 feet	Seeding	
93	6122 - B	lack Spruce	. [Poletimber Well	82.2	74 l	Jnspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Black Spruce	90	Pole/Log	8 74		ed Maple	Low	5 - 10 feet	Sapling	
	-				Blac	ck Spruce	Medium	Variable	Sapling	
94	330 - Low-	Density Tre	es	Nonstocked	46.9	0 ι	Jnspecified	4222 - Natural	Jack Pine	Cut and chipped 2016. Range 9 Fire Salvage, 61-610-16-01. Military may choose to maintain as open due to proximity to ranges.



Stanc	Level 4 Cover Type	Size Density	Acres	Stand Age	e BA Range	Managed Site	General Comments
95	122 - Road/Parking Lot	Nonstocked	4.7	0	Unspecified	No	Howe Road.
96	3302 - Low Density Conifer Trees	Nonstocked	9.3		Unspecified	No	Cut and chipped 2016. Range 9 Fire Salvage, 61-610-16-01. Military may choose to maintain as open due to proximity to ranges. This area is downrange from Range 10.
99	622 - Lowland Shrub	Nonstocked	21.3		Unspecified	No	
100	4125 - Black, N. Pin Oak Canopy Species % Cover Size Class White Oak 15 Log	12		7 nopy Specie ack Pine	1-50 es Density Low	J - J -	Howe 9 & 10 Jack, 61-654-10-01, cut & chipped Dec 2011-Jan 2012. Previous stand was a lot of jack pine but there is good oak regeneration here. Most of this is behind a fence.
101	ck/Red (Hybrid) Oak 80 Sapling 330 - Low-Density Trees	1 7 Nonstocked	85.0	0	Unspecified	4222 - Natural Jack	Pine Cut and chipped 2016. Range 9 Fire Salvage, 61-610-16-01. Military may choose to maintain as open due to proximity to ranges.
102	310 - Herbaceous Openland	Nonstocked	73.7			No	Ranges 10 and 11.
103	310 - Herbaceous Openland	Nonstocked	103.1			No	Range 8.
105	622 - Lowland Shrub	Nonstocked	0.5			No	
107	4125 - Black, N. Pin Oak Canopy Species % Cover Size Class Northern Pin Oak 95 Pole/Saplin	-	Sub-Ca	60 nopy Specie ack Pine d (Hybrid) Oa	Trace	< 5 feet Sa	Strip of oak between 2 ranges. Stand is behind a fence. Size apling apling
108	110 - Low Intensity Urban	Nonstocked	13.1			No	Roads and maintenance buildings south of ranges 8 & 9.
109	330 - Low-Density Trees	Nonstocked	60.8	0	Unspecified	4222 - Natural Jack	Pine Cut and chipped 2016. Range 9 Fire Salvage, 61-610-16-01. Military may choose to maintain as open due to proximity to ranges.
111	4125 - Black, N. Pin Oak	Sawtimber Mediun	n 6.4	70	51-80	N/A	Behind a fence adjacent to range.
112	310 - Herbaceous Openland	Nonstocked	21.9		Unspecified	No	Range 9.

1 DNR

Stand	Level 4 Co	over Type	Si	ize De	nsity	Acres	Stand Age B	A Range	Managed S	ite	General Comments
117	42210 - Nati	ural Red P	ine Po	letimb	er Poo	r 2.4	60	1-50	N/A		This was originally retention from clearcut on stand 7. Left scattered
С	anopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	Sub-Canopy Species		Avg. Height	Size	overstory oak, red pine, white pine. Oak was in very bad shape from oak decline. Looks like some pine may have gotten planted within this road
	Red Pine	75	Pole/Log	8	60	Red Pine		High < 5 feet	< 5 feet	Sapling	corridor.
,	White Pine	15	Pole/Sap/Log	8		Black/Re	d (Hybrid) Oak	Low	>20 feet	Log	
	Red Maple	10	Pole	6		WI	hite Oak	Trace	>20 feet	Log	
						Bigto	oth Aspen	Low	< 5 feet	Sapling	
						Re	ed Maple	Low	5 - 10 feet	Sapling	
118	42200 - Natu	ral White F	Pine Po	letimb	er Wel	l 2.9	60	81-110	N/A		Part of Stand 7 that did not get treated. Some fingers of planted red pine
С	anopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	from stand 8.
Black/	Red (Hybrid) Oak	10	Log/XLog/Pole	16		Re	d Maple	Low	Variable	Sapling	
	White Pine	80	Pole/Sap/Log	8	60	Black/Re	d (Hybrid) Oak	Low	Variable	Sapling	
	Red Pine	10	Pole/Log	8		Wh	nite Pine	Medium	>20 feet	Sapling	
						Blad	ck Cherry	Trace	10 - 20 feet	Sapling	
										o apg	
119	4310 - Pir	ne, Oak Mix	· Po	letimb	er Wel		50	51-80	N/A	- Cupiii.ig	scrappy timber
	4310 - Pir anopy Species	ne, Oak Mix			er Wel	I 3.0	50 nopy Species	51-80 Density	N/A Avg. Height	Size	scrappy timber
С		*				3.0 Sub-Ca					scrappy timber
С	anopy Species	% Cover	Size Class	DBF	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	scrappy timber
Black/	anopy Species White Pine	% Cover 50	Size Class Log/Pole	DB I	Age	Sub-Ca	nopy Species	Density Low	Avg. Height 10 - 20 feet	Size Sapling	scrappy timber