Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61230 Entry Year: 2027 Acreage: 1,910 County: Kalkaska

Management Area: Camp Grayling

Stand Examiner: Steve Crigier

Legal Description:

T26N R5W Sections 25, 26, and 27

Identified Planning Goals:

This compartment is heavily used by Camp Grayling for training. There is several training areas and various infrastructure through out the compartment. Much of the other area is heavily used for in-woods training so some level of canopy cover is desired. As such, managing even-age cover types by a typical clearcut with 2" spec is not always desirable. Much of the oak resource in this compartment is, however, reaching maturity and showing signs of decline and/or mortality. In addition, deer populations seem unusually high which will cause additional challenges to regenerating oak. Many cuts completed since the last inventory have started to help balance the oak age classes and might shift cover types from a pure oak stands to upland mixed deciduous stands. Treatments in this year of entry should further attempt to balance age classes and develop oak regeneration while accommodating military training needs.

Soil and topography:

Most of the compartment is Grayling sand with lesser amounts of Croswell sand and Au Gres sand in the northwestern corner. The seeps and springs in Section 27 are on Au Sable-Bowstring mucks. The terrain in this compartment is generally flat in the northwestern part and hillier farther south and east. Some of the hills are large enough to be named: Smith Hill, Esler Hill, Grube Hill, Lamb Hill and Baker Hill.

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

These three sections are all State-owned land with the exception of one 40-acre parcel: the NWNW of Section 27. This land 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. West of the compartment, there are numerous year-round and seasonal dwellings along Portage Creek and King Roads and the Manistee River corridor. Several large underground pipelines run through a single north-south corridor in Section 26.

Unique Natural Features:

Stand 33 near the junction of Portage Creek and King Roads in Section 27 contains a large area of springs and seeps that converge to form Spring Creek, a small tributary of the Manistee River. There are a couple of small kettle depressions in Section 26, one of which holds water and is known as Kings Pond. There are no records of threatened or endangered species within the compartment although there is potential for Massasauga rattlesnake.

Archeological, Historical, and Cultural Features:

There is a record of an archaeological site(s) in Section 26.

Special Management Designations or Considerations:

The entire compartment is Military Board Land. As a tributary of the Manistee River, Spring Creek is protected by Natural Rivers designation.

Watershed and Fisheries Considerations:

The headwaters of Spring Creek originate in the southwest corner of Section 27. Spring Creek is a small tributary of the Manistee River, with naturally reproducing populations of brown and brook trout.

Wildlife Habitat Considerations:

Featured wildlife species for this management area include: American woodcock, Eastern massasauga rattlesnake, pileated woodpecker, red-headed woodpecker, ruffed grouse, snowshoe hare, wild turkey and white-tailed deer. Some of the most significant wildlife management issues will be maintenance of young forest and large open grassland complexes, the retention of large, over-mature trees and snags and the maintenance and expansion of hard mast and mesic conifer components. [To be edited by WLD.]

Mineral Resource and Development Concerns and/or Restrictions

In this compartment, the State only has surface rights in Section 26 and the NE¼ of Section 27. Surface sediments consist

of ice-contact and glacial outwash sand and gravel and postglacial alluvium and dune sand. The glacial drift thickness varies between 200 and 600 feet. Beneath the glacial drift are the Mississippian Marshall Sandstone and Coldwater Shale. The Marshall was previously used as a building stone. No gravel pits are located in the area, but there should be potential on the uplands. The compartment is located 2-3 miles north of the Garfield 8 and Beaver Creek fields, which both produce oil from multiple zones within the Devonian Detroit River Group and gas from the Ordovician PdC. There are currently pending leases in Section 27.

Vehicle Access:

There is a rather well-developed road network throughout the compartment although access to some areas is restricted by the military. Howe Road (open year-round) runs along the northern edge of the compartment. A "tank trail" for military training runs more-or-less parallel to Howe Road through Section 27, but the military does not train much with tracked vehicles anymore.

Survey Needs:

There are no survey needs at this time. Corners on the private property boundary were established since the last inventory.

Recreational Facilities and Opportunities:

There are no designated recreational facilities within this compartment. It is common to find deer hunting camps in the fall of the year. Snowmobilers use the pipeline corridor during the winter. The mushroom hunters and berry pickers use the compartment seasonally. Since the military uses the area for training during the summer, the recreational camping opportunities are limited. (T.M.N. 12/10/14)

Fire Protection:

There is significant wildfire potential in the jack pine stands in the western part of this compartment. A large portion of the compartment burned in May 2009 as part of the Range 9 fire. Wildfire potential will increase as this jack pine matures. The military has purchased a Fecon mulching machine to put in firebreaks adjacent to the ranges to help stop the spread of fire.

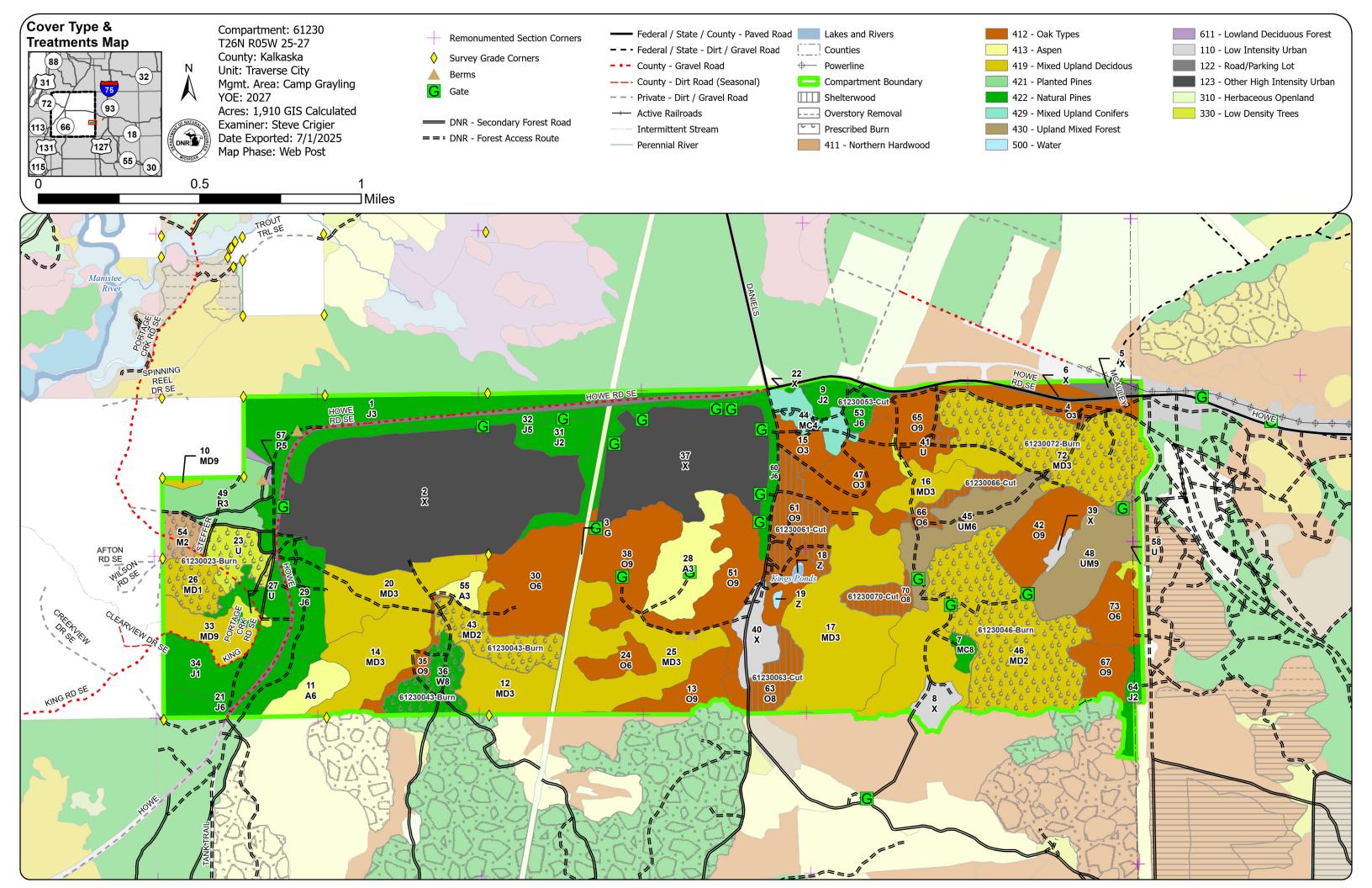
Additional Compartment Information:

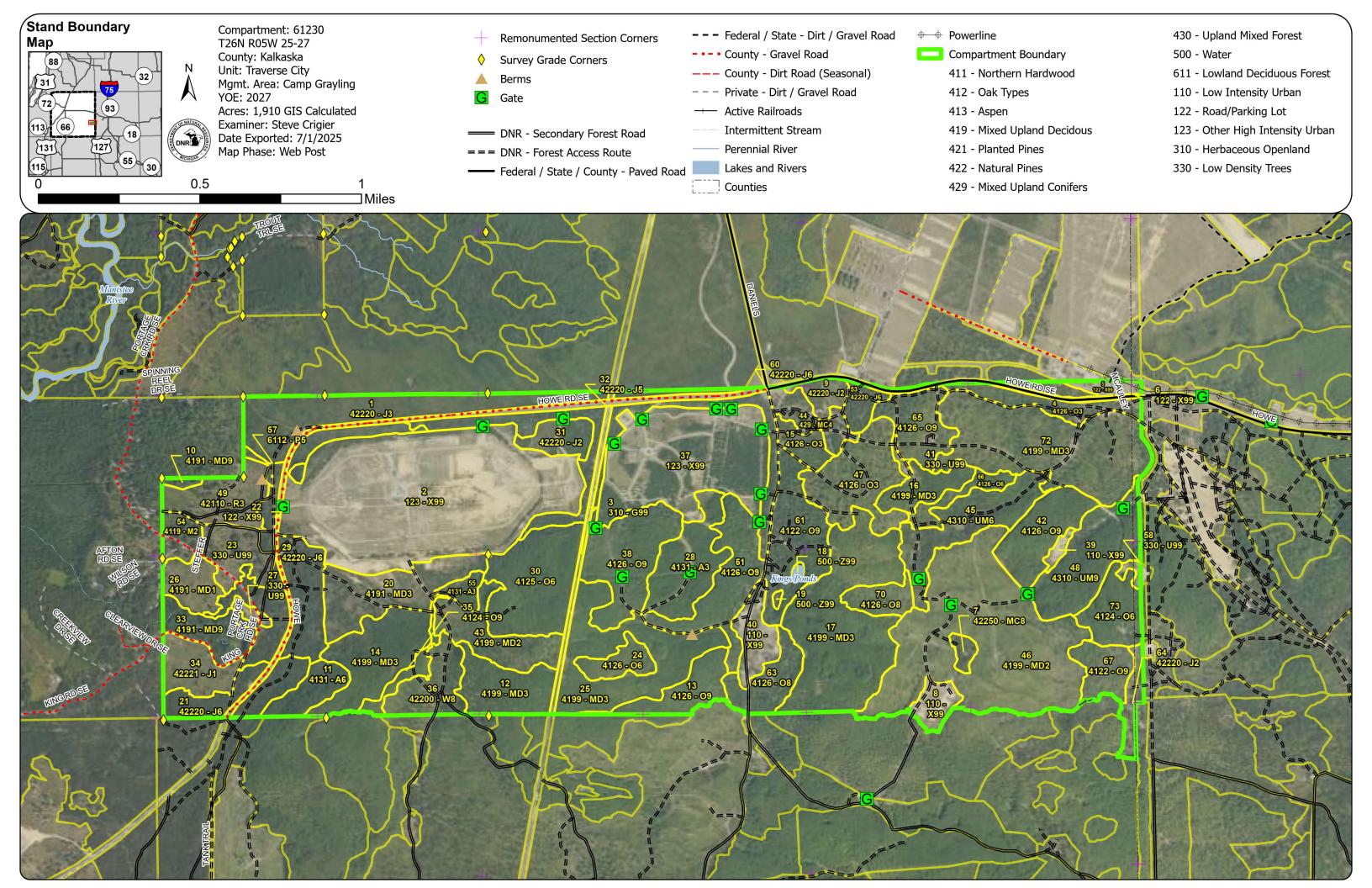
The following reports from the Inventory are attached:

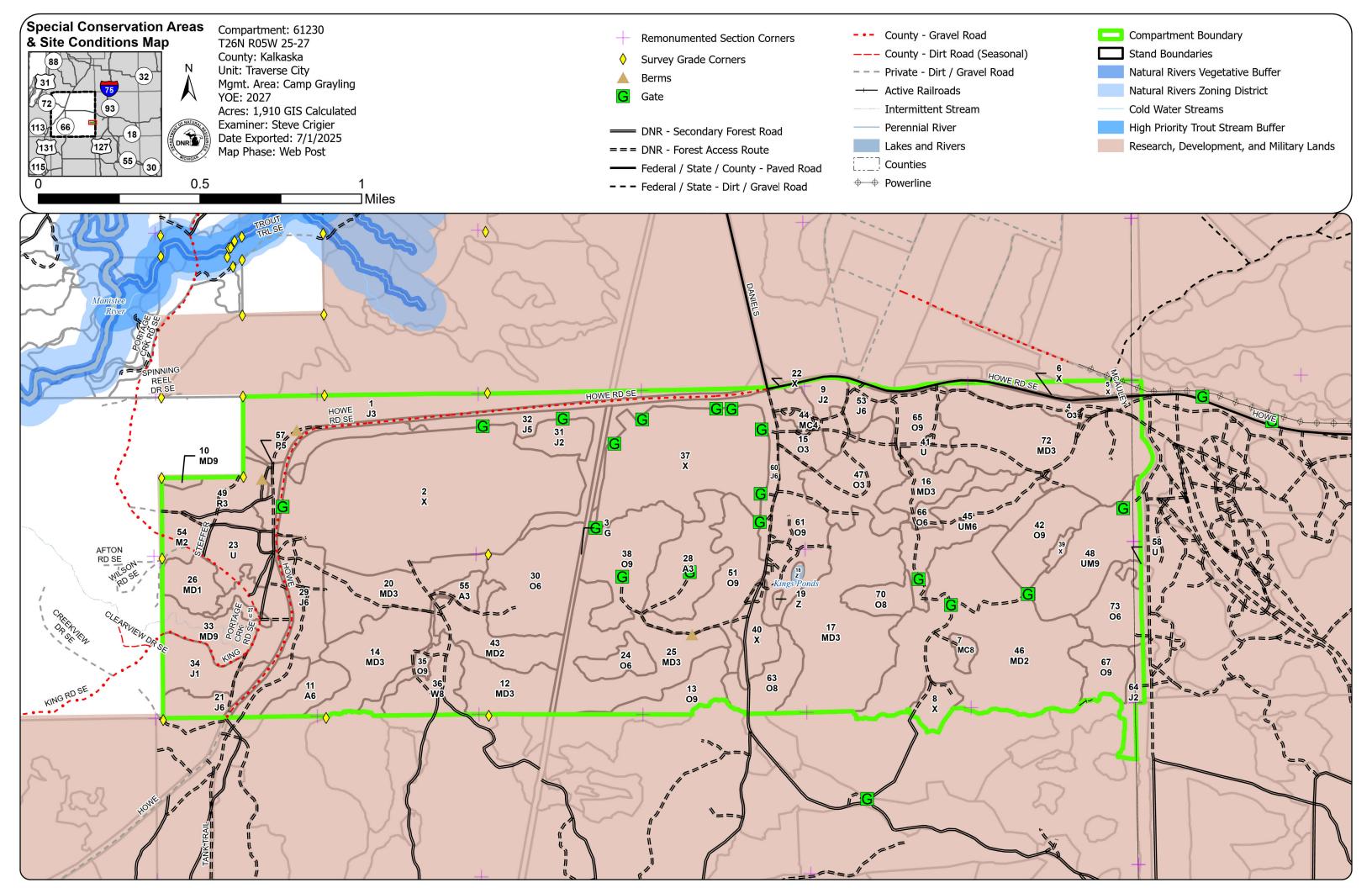
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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
Steve Crigier: Examiner

Age Class

	No.	Kor C	3 / 2	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	P K	3 /) } /&					"a",					A Real	No. of the second
Aspen	0	0	43	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	58
Herbaceous Openland	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Jack Pine	0	21	82	23	0	0	119	23	0	0	0	0	0	0	0	0	0	0	268
Low-Density Trees	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Mixed Upland Deciduous	0	281	242	42	0	0	0	0	0	2	0	20	0	0	0	0	0	0	587
Natural Mixed Pines	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
Northern Hardwood	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Oak	0	42	32	0	0	52	22	0	0	20	73	158	12	0	0	0	0	21	431
Red Pine	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	84
Urban	359	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	359
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
White Pine	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	24
Total	397	372	399	76	15	52	141	49	4	22	73	178	12	0	0	0	0	120	1909

Report 2 – Treatment Summary

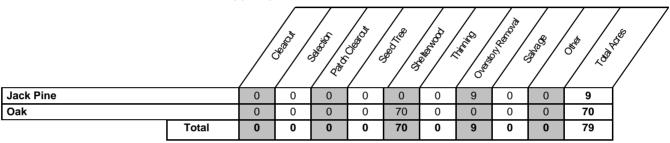
Traverse City Mgt. Unit Year of Entry: 2027

Acres of Harvest

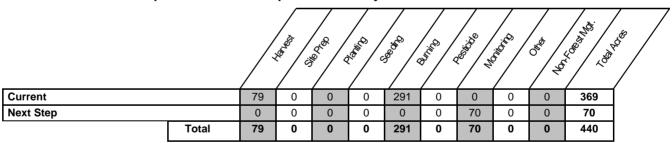
Compartment 230 Total Compartment Acres: 1,910

Commercial Harvest - 148 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



S t	Trav	erse City	Mgt. Unit		Repoi	rt 3 ·	Treatments		Compartment Year of Entry:		
а	reatment /	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habit Cut
	Treatments 61230072- Burn	87.5 41	199 - Other Mixed	3	5	1-50	Burn	Prescribed Burn	4122 - Oak, Pine	Cutting Record	No
Prescrip Specs:	tion Moderate	e to high ir	· ntensity burn in late						d red maple compe out the deer brows	tition and re	duce its
Next Ste Treatme											
Regen:	ble oak, pine										
Other Comme	nt:	ain on Mili	tary land. Will nee	d to coord	linate wi	th CG En	vironmental and	l Range Control.			
Site Cor	d Start Date:	10/01/203	26								
	230070-Cut		26 - White, Black, N. Pin Oak	8	115	51-80	Harvest	Shelterwood	4122 - Oak, Pine	Cutting Record	No
Prescrip Specs:	white oal	rotect	advanced regen.						mark 10-20sq ft of uting. Don't cut oa	oak to leave,	
Next Ste	<u>ep</u> Monitorir		t 1 snag per acre. I Regen (Re-Inven	tory)							
Accepta Regen:	<u>ble</u> oak, pine	, aspen									
Other Comme		litary train	ing timing restriction	n, oak wil	t, chippii	ng and lo	w stump specific	cations.			
Site Cor	ndition:										
Propose	d Start Date:	10/01/202	26								
66 61	230066-Cut	10.5 41	26 - White, Black, N. Pin Oak	6	90	111- 140	Harvest	Shelterwood	4122 - Oak, Pine	Cutting Record	No
Prescrip Specs:	white oal	rotect							mark 10-20sq ft of uting. Don't cut oa		
Next Ste		ng, Natura	l Regen (Re-Inven	tory)							
Treatme	ble oak, pine	& aspen									
Treatme	<u> </u>										
<u>Treatme</u>	Apply mi							cations. A post hat striction may apply	rvest burn may be a	idvantageou	s to
Accepta Regen: Other Comme	Apply mi nt: encouraç	ge oak reg	eneration and red							advantageou	s to

Treatments:

Acceptable oak, pine

Regen:

Hilly terrain on Military land. Will need to coordinate with CG Environmental and Range Control. Other

Comment:

Site Condition:

Proposed Start Date: 10/01/2026

s	Tra	averse Cit	y Mgt. Unit		Repoi	rt 3	Treatments		Compartmen Year of Entry		
t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
43	61230043- Burn		4199 - Other Mixed Upland Deciduous	2	6	1-50	Burn	Prescribed Burn	4122 - Oak, Pine	Cutting Record	No
Next S Treatr Accep Reger Other Comm	compo Step nents: stable oak, pi Coordii	sition in th ne, cool se nate with (ent to the s	intensity burn in late e stand by 20%. Re eason grasses. Camp Grayling Envir south in stand 24 of 6	etain 90%	of the ov	verstory p	oiné and oak.			ŭ	
23	61230023- Burn	47.7	330 - Low-Density Trees	99			Burn	Prescribed Burn	310 - Herbaceous Openland	Previous Inventory	No
Presc Specs		ate to high	intensity burn to stir	nulate nat	tive gras	ses and	to set back woo	dy encroachment.	·		
Next S Treatr											
Accep Reger											
Other Comm		property t	to the west. Also, ch	eck on El	MR restr	ictions fo	r this area as it	may impact the timi	ng of the burn.		
Site C	ondition:										

Total Treatment Acreage Proposed: 369.3

Proposed Start Date: 10/01/2026

Report 4 – Site Conditions

Traverse City Mgt. Unit

Steve Crigier: Examiner Year of Entry: 2027



Compartment: 230

Availa	ability for	Managemer	nt					
Total	Acres	Acres Avail	Acres	Γ	omina	nt Site	e Con	ditions
Acres	Available	With Condition	Not Available		1B	3F	3J	5E
58	58	0	0	Aspen				
9	9	0	0	Herbaceous Openland				
206	133	0	73	Jack Pine		73		
27	27	0	0	Low-Density Trees				
2	0	0	2	Lowland Aspen/Balsam Poplar			2	
499	471	0	28	Mixed Upland Deciduous			20	8
4	0	0	4	Natural Mixed Pines				4
11	11	0	0	Northern Hardwood				
338	246	0	93	Oak	47	30	10	5
28	28	0	0	Red Pine				
15	15	0	0	Upland Conifers				
74	40	0	35	Upland Mixed Forest		35		
350	346	0	4	Urban		3		1
2	2	0	0	Water				
24	24	0	0	White Pine				
1,647	1,409		238	Total Forested Acres	47	141	32	18
	86%		14%	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	Dominant Site				•	<u> </u>	
	Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
ļ	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	20	1A: Federal/State/Local Law	Unspecified	Unspecified	Unspecified
-	Comments: Natural Rivers buffe Unavailable	r for unnamed tributary of Mai	nistee R 6	iver. Unspecified	Unspecified	Unspecified	Unspecified
	Comments:	•					
F	Reserve islands fror	m Lamb Hill Oak, 61-68-07-01					

Report 4 – Site Conditions

Traverse City Mgt. Unit
Steve Crigier: Examiner



3	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified				
	Comments: Retention from Esle	er Hill Aspen/Oak, 61-603-07-01	l.								
4	Unavailable	1B: Non-DNR agency concerns (e.g. USFS)	15	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified				
	Comments: Behind military training area fence. They don't want any timber harvests in this training area.										
5	Unavailable	3F: Military easement/lease	50	Unspecified	Unspecified	Unspecified	Unspecified				
	Comments: Buffer strip for FOB	3.									
7	Unavailable	3F: Military easement/lease	23	Unspecified	Unspecified	Unspecified	Unspecified				
	Comments: Buffer for training a	rea.									
8	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified				
	Comments:										
10	Unavailable	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified				
	Comments: St63 LTR										
11	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	10	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified				
	Comments:										
	•		•								

Report 4 – Site Conditions

Traverse City Mgt. Unit

Steve Crigier: Examiner



12	Unavailable	3F: Military easement/lease	68	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Buffer zone around	range. Trees might have ammu	unition	in them.			
13	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Left buffer along tra	nining area per military request.					
21	Unavailable	1B: Non-DNR agency concerns (e.g. USFS)	32	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified
	Comments: Behind military train	ning area fence. They don't war	nt any t	imber harvests in this training	area.		
23	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
24	Unavailable	5E: Long-Term Retention	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Mgt. Unit Compartment: #Type!
Year of Entry:

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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

											ŕ
Stand	Level 4 Co	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed Si	te	General Comments
1	42220 - Nati	ural Jack P	Pine	Sapling	Well	73.1	13	Immature	N/A		2015- Burned in Range 9 fire, May 2010. Salvage timber sale, Range
Ca	anopy Species	% Cover	Size Class	DBH	Age						9 Fire Salvage, 61-633-10-01, cut winter 2011. Dense jack pine regeneration, less than 3 feet tall. Some veins of aspen from wet
F	Red Maple	10	Log	1	13						stand to the north.
Black/F	Red (Hybrid) Oak	5	Log	1	13						
	Jack Pine	75	Log	2	13						
В	lack Cherry	10	Log	2	13						
2	123 - Other Hig	h Intensity	Urban	Unspec	cifed	199.3			No		Fenced in military training facility .FOB 29
3	310 - Herbaco	eous Open	ıland	Unspec	cifed	8.9			No		Corridor for multiple underground pipelines.
4	4126 - White, E	Black, N. Pi	in Oak			22.1	15	1-50	N/A		2025- areas of pole timber and some spots with a more dense
Ca	anopy Species	% Cover	Size Class	DBH	Age						Canopy of Log sized trees2015- Cut October 2010 as part of Baker Hill Jack, 61-645-07-01, Lutke, removed jack pine, aspen and red
	Red (Hybrid) Oak	55	Pole	3	15						maple. Poor quality stand. Opening at east end maintained by Camp
Black/F	Red (Hybrid) Oak	5		12	90						Grayling.
	Jack Pine	10	Log	2	15						
	Red Pine	5	Pole	4							
١	White Oak	10	Log	2	15						
\	White Oak	10		12	90						
F	Red Maple	5	Log	2	15						
5	122 - Road	/Parking L	ot	Unspec	cifed	5.6			No		Entrance to Ranges 8 and 9. Includes some small outbuildings. Mowed and maintained open by Camp Grayling.
6	122 - Road	/Parking L	ot	Unspec	cifed	6.0			No		Howe Road.
7	42250 -	Pine, Oak				4.2	70	51-80	N/A		2025 Small patch of red pine in a small bowl-shaped depression with
Ca	anopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Specie	s Density	Avg. Height	Size	an opening in the middle. Trees are open-grown. Military training infrastructure present.
Black/F	Red (Hybrid) Oak	20		12		Whi	te Oak	Medium	5 - 10 feet	5 - 10 feet	a made de d
	Red Pine	70		10	70				,		-
١	White Oak	10		10							
8	110 - Low In	tensity Urb	oan .			10.0			No		Range 21. Camp Grayling has been doing some work with Fecon in this area to open up roads and clear edges of this opening. Continue in Compartment 131 to the south.
9	42220 - Nati	ıral Jack P	Pine			8.9	15	Immature	N/A		2025- Stand is filling in, east side is still sparsely stocked.2015-Cut
		0/ 0	Size Class	DRH	Age						October 2010 as part of Range 9 and Howe Road Fire Salvage, 61-678-10-02, Lutke, clearcut with 2" spec except oak and cherry. Good
Ca	anopy Species	% Cover	OILC OIGSS		90						070-10-02, Luike, Clearcul Will 2 Spec except oak and Cherry. Good
	anopy Species Red (Hybrid) Oak	% Cover	Log	2	15						jack pine regeneration and oaks are starting to get above the browse line. A few pole-sized oaks left in the overstory.

Stand **Level 4 Cover Type** Size Density Acres Stand Age BA Range **Managed Site General Comments** 4191 - Mixed Upland Deciduous with 2.1 80 81-110 N/A 2015 -Small stand with challenging topography, sandwiched between 10 Conifer two small ridges. Burned in Range 9 fire. May 2010. Relatively high mortality and CWD. % Cover Size Class **DBH Age** Size **Canopy Species Sub-Canopy Species** Density Avg. Height Red Pine 5 14 Red Maple Medium >20 feet >20 feet White Pine 30 18 80 30 8 Red Maple 15 Red Oak 16 20 Quaking Aspen 12 4131 - Aspen, Oak 37 11 15.1 51-80 N/A 2025- Scattered mature oak and red pine overtop the aspen. Pole sized oak present, regenerated with the aspen. Pine and oak **Canopy Species** % Cover Size Class **DBH Age Sub-Canopy Species** Density Avg. Height Size establishing in the understory. 2015 -Most of stand is on slope of Red Pine 5 14 90 Red Pine 5 - 10 feet Low 5 - 10 feet steep ridge with northwest aspect. Hill might be an operational challenge, Well-stocked, good quality aspen (4-8" dbh). White Oak 3 12 90 White Oak Variable Trace Variable 5 6 White Oak Sapling 37 Black/Red (Hvbrid) Oak Low Variable Variable 4 37 Red Maple 10 Pole Bigtooth Aspen 42 Sapling 6 37 Black/Red (Hvbrid) Oak 15 14 90 20 7 37 Black/Red (Hybrid) Oak Sapling 4199 - Other Mixed Upland Deciduous 28.7 17 N/A 2025- Moderate terrain. High stem density of regen. 2015-Cut 12 **Immature** October 2008 as part of Smith Hill Oak, 61-602-07-01, Mid-Michigan **DBH Age Canopy Species** % Cover Size Class Logging, clearcut with 2" spec. There were problems with bullets in White Oak 5 1 17 Log the trees that were not picked up by metal detectors. Sale notes state that this 2007 sale was set up before retention guidelines went into Black/Red (Hybrid) Oak 30 Log 2 17 effect. Heavy browse. White Pine 5 2 17 Log 2 Red Maple 35 Log 17 Bigtooth Aspen 20 Log 2 17 5 2 Red Pine 17 Log 4126 - White, Black, N. Pin Oak 21.1 96 N/A 81-110 2025- Some individual mortality. White pine and some oak 13 developing in the understory in areas. 2015- Rolling hills with mostly Size **Canopy Species** % Cover Size Class **DBH Age Sub-Canopy Species** Density Avg. Height southern or eastern aspect. More white pine in understory than other 2 Red Pine 12 Black/Red (Hybrid) Oak Trace < 5 feet < 5 feet oak stands in this compartment. Red maple in understory is starting to reach pole size. Heavy browse. Some oak mortality. Oak quality White Oak 35 9 96 White Pine Medium Variable Variable improves with higher elevations. 40 11 96 >20 feet Black/Red (Hybrid) Oak Red Maple Low >20 feet

Low

5 - 10 feet

5 - 10 feet

White Pine

Red Maple

Bigtooth Aspen

3

10

10

Seedling

8

6

11 96

Witch Hazel

Compartment: 230

Year of Entry: 2027

	and Level 4 Cover Type			Size Den	sity	Acres \$	Stand Age B	BA Range	Managed Si	te	General Comments
14	4199 - Other Mixed	Upland De	eciduous			42.0	17 I	Immature	N/A		2025- The ridge seems to have a heavier component of oak. The
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	flats or west end more of an aspen and red maple mix. clone of big tooth in the far north east corner. 2015- Cut October 2008 as part
	Red Maple	20	Log	2	17	Witcl	n Hazel	Low	5 - 10 feet	5 - 10 feet	of Smith Hill Oak, 61-602-07-01, Mid-Michigan Logging, clearcut with
	Bigtooth Aspen	15	Log	2	17						2" spec. 54 scattered oaks and a few white and red pine were left.
Blac	ck/Red (Hybrid) Oak	2		12	127						There were problems with bullets in the trees that were not picked up by metal detectors. Sale notes state that this 2007 sale was set up
Blac	ck/Red (Hybrid) Oak	43	Log	2	17						before retention guidelines went into effect. Disappointing amount of
	Jack Pine	5	Log	2							aspen in regeneration mix. Heavy browse on the oaks. Rather steep
	Black Cherry	15	Log	2	17						ridge.
15	4126 - White, B	lack, N. Pir	n Oak			10.1	15 I	Immature	N/A		2025- Good stem density. Trees are 20-30' tall. 2015- Cut October
	Canopy Species	% Cover	Size Class	DBH	Age						2010 as part of Baker Hill Jack, 61-645-07-01, Lutke, clearcut except for a handful of oak and red pine trees left for wildlife. Good oak
Blac	ck/Red (Hybrid) Oak	45	Log	2	15						regeneration. Some is getting above browse line but not the red maple
	Jack Pine	25	Log	2	15						
	White Oak	20	Log	2	15						
	Red Maple	10	Log	2	15						
16	4199 - Other Mixed	Upland De	eciduous			16.4	17 I	Immature	N/A		2025- Oak is starting to develope especially on hill top. Thick stem
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	density. 2015-Cut December 2008 as part of Lamb Hill Oak, 61-618-07-01, Muma, clearcut with 2" spec. Oaks are mostly suppressed by
Blad	ck/Red (Hybrid) Oak	25	Log	2	17	Black/Red	(Hybrid) Oak	Medium	< 5 feet	< 5 feet	red maple and aspen. Heavy browse.
	White Oak	15	Log	1	17						
	Red Maple	30	Log	2	17						
	Bigtooth Aspen	30	Log	2	17						
17	4199 - Other Mixed	Upland De	eciduous			94.2	17 I	Immature	N/A		2025- Stand has filled in well. Good oak component. Some pine
			<u> </u>	DBU	A						seeding in as well. 2015-Cut December 2008 as part of Lamb Hill
	Canopy Species	% Cover	Size Class	DBH	Age						Oak 61-618-07-01 Muma clearcut with 2" spec Left 4 reserve areas
	Canopy Species White Oak	% Cover 15	Log	1	17						
Blac											
Blac	White Oak	15	Log	1	17						of mature timber (1-2 acres each). Regeneration less thick than some
Blac	White Oak ck/Red (Hybrid) Oak	15 30	Log Log	1 2	17 17						of mature timber (1-2 acres each). Regeneration less thick than some
	White Oak ck/Red (Hybrid) Oak White Pine	15 30 5	Log Log Log	1 2 2	17 17 17						Oak, 61-618-07-01, Muma, clearcut with 2" spec. Left 4 reserve areas of mature timber (1-2 acres each). Regeneration less thick than some other stands of this age. Rolling hills.
	White Oak ck/Red (Hybrid) Oak White Pine Red Maple Bigtooth Aspen	15 30 5 25	Log Log Log Log	1 2 2 2	17 17 17 17	1.1			No		of mature timber (1-2 acres each). Regeneration less thick than some
18	White Oak ck/Red (Hybrid) Oak White Pine Red Maple Bigtooth Aspen	15 30 5 25 25	Log Log Log Log	1 2 2 2	17 17 17 17	1.1			No No		of mature timber (1-2 acres each). Regeneration less thick than some other stands of this age. Rolling hills.
	White Oak ck/Red (Hybrid) Oak White Pine Red Maple Bigtooth Aspen 500 -	15 30 5 25 25 25 Water	Log Log Log Log	1 2 2 2	17 17 17 17		25	Immature			of mature timber (1-2 acres each). Regeneration less thick than some other stands of this age. Rolling hills. Small kettle lake with relatively steep banks. Small kettle depression with relatively steep sides. 2025- Jack pine filling in at the far northend of the stand. Northeast part of the stand was not apart of the timber sale but is roughly the
18 19	White Oak ck/Red (Hybrid) Oak White Pine Red Maple Bigtooth Aspen 500 -	15 30 5 25 25 25 Water Water	Log Log Log Log	1 2 2 2	17 17 17 17 17 17	0.8	25	Immature	No		of mature timber (1-2 acres each). Regeneration less thick than some other stands of this age. Rolling hills. Small kettle lake with relatively steep banks. Small kettle depression with relatively steep sides. 2025- Jack pine filling in at the far northend of the stand. Northeast part of the stand was not apart of the timber sale but is roughly the same age and species composition. 2015- Cut winter 1998-1999 as
18 19	White Oak ck/Red (Hybrid) Oak White Pine Red Maple Bigtooth Aspen 500 - 4191 - Mixed Upla	15 30 5 25 25 25 Water Water	Log Log Log Log Log ous with	1 2 2 2 2 2 2 2	17 17 17 17 17 17	0.8	25	Immature	No		of mature timber (1-2 acres each). Regeneration less thick than some other stands of this age. Rolling hills. Small kettle lake with relatively steep banks. Small kettle depression with relatively steep sides. 2025- Jack pine filling in at the far northend of the stand. Northeast part of the stand was not apart of the timber sale but is roughly the same age and species composition. 2015- Cut winter 1998-1999 as part of Smith Hill, 61-126-98-01. Rolling hills. Left a clump of trees on
18 19 20	White Oak ck/Red (Hybrid) Oak White Pine Red Maple Bigtooth Aspen 500 - 4191 - Mixed Upla Cor Canopy Species	15 30 5 25 25 25 Water Water	Log Log Log Log Log Size Class	1 2 2 2 2 2 2 2 DBH	17 17 17 17 17 17	0.8	25	Immature	No		of mature timber (1-2 acres each). Regeneration less thick than some other stands of this age. Rolling hills. Small kettle lake with relatively steep banks. Small kettle depression with relatively steep sides. 2025- Jack pine filling in at the far northend of the stand. Northeast part of the stand was not apart of the timber sale but is roughly the

Report 7 - Stands Compartment: 230 **Traverse City Mgt. Unit** Year of Entry: 2027 Stand **Level 4 Cover Type** Size Density Acres Stand Age BA Range **Managed Site General Comments** 42220 - Natural Jack Pine 27.1 53 51-80 N/A 2025- oak continuing to develope in the understory. Some remeant 21 red pine scattered in the overstory.2015-Regenerated after a fire. **DBH Age** Size **Canopy Species** % Cover Size Class **Sub-Canopy Species** Density Ava. Heiaht Very dense jack pine just reaching pole size. A few scattered oaks in Black/Red (Hybrid) Oak 14 Red Pine 5 - 10 feet 5 - 10 feet Trace the overstory mostly along the eastern edge where stand transitions into oak type. Very few scattered oak saplings under jack pine. 92 6 53 5 - 10 feet Jack Pine Sapling White Oak Trace 5 - 10 feet Red Pine 3 12 Black/Red (Hybrid) Oak Low 5 - 10 feet 5 - 10 feet 122 - Road/Parking Lot Unspecifed 21.4 No Howe Road. 22 330 - Low-Density Trees 20.6 Yes Opening that is filling in with shrubby cherry and jack pine. Contains 23 scattered pockets of merchantable jack pine and aspen that, **Sub-Canopy Species** Density Avg. Height Size combined with nearby stands, may help make an opening >20 feet Jack Pine Low >20 feet maintenance prescription a commercial treatment. Black Cherry High 5 - 10 feet 5 - 10 feet Quaking Aspen Low >20 feet >20 feet 4126 - White, Black, N. Pin Oak 84 N/A 2025- A couple pockets of mortality2015-Rolling hills. Mostly poles 24 11.8 81-110 on the verge of a log stand. Hold until surrounding stands are older. **Canopy Species** % Cover Size Class **DBH Age Sub-Canopy Species** Density Avg. Height Size White Oak 35 8 84 Black/Red (Hybrid) Oak 5 - 10 feet 5 - 10 feet Trace 60 9 84 White Pine Black/Red (Hybrid) Oak Trace Variable Variable White Pine 5 Seedling 8 4199 - Other Mixed Upland Deciduous 60.5 17 N/A 25 **Immature** 2025- Rolling terrain. High stem density. 2015-Part of Esler Hill Aspen/Oak, 61-603-07-01, Cannot file sale notes, Includes 2 retention **Canopy Species** % Cover Size Class **DBH Age** islands. Red maple appears to be doing the best of the species within Red Pine Log 2 17 the regeneration mix. 40 2 17 Red Maple Log Bigtooth Aspen 35 Log 2 17 Black/Red (Hybrid) Oak 21 2 17 Log White Pine 2 8 4191 - Mixed Upland Deciduous with 16.3 5 N/A 2025- Regen is struggling to establish but seeing some oak and jack 26 **Immature** Conifer pine. 2020: 40 Laps Mix. 61-653-17. Cut fall 2019. Cut all trees >2" except white oak and white pine.2015: Variable stand. Not typed out separately in OI. Generally poor quality and variable stocking. Very heavy browse on red maple and oaks in understory.

Canopy Species	% Cove	r Size Class	DBH	Age
Red Maple	10	Log	1	5
Black/Red (Hybrid) Oak	5	Log	1	5
White Pine	5	Log	1	5
Jack Pine	20	Log	1	5
Black Cherry	40	Log	1	5

27	330 - Low-Density Trees

2.9

Unspecifed

2015-Opening that is filling in with shrubby cherry and jack pine.

Sub-Canopy Species	Density	Avg. Height	Size
Jack Pine	Low	5 - 10 feet	5 - 10 feet
Black Cherry	High	5 - 10 feet	5 - 10 feet
Red Maple	Low	10 - 20 feet	10 - 20 feet

No

											real of Entry. 2021
Stand	Level 4 Co	over Type		Size De	nsity	Acres	Stand Age B	BA Range	Managed Si	ite	General Comments
28	4131 - A	spen, Oak				36.6	17	Immature	N/A		High stem density. Oak growing under the aspen and maple. 2015-
С	anopy Species	% Cover	Size Class	DBH	Age						Part of Esler Hill Aspen/Oak, 61-603-07-01. Cannot find sale notes. Aspen is doing well. Aspen and red maple are both taller than oaks.
	White Oak	10	Log	1	17						Rolling hills. Part of stand is fenced.
Black/	Red (Hybrid) Oak	20	Log	1	17						
	Red Maple	30	Log	2	17						
Bi	gtooth Aspen	40	Log	2	17						
29	42220 - Natu	ural Jack F	Pine			57.8	57 U	Inspecified	N/A		2025- Oak established in understory. Jack pine also establishing in
С	anopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	the canopy gaps. 2015-Patchy stand with scattered small openings. Moderate amount of jack pine mortality. Some advanced oak
	Red Pine	2		10		WI	hite Oak	Trace	10 - 20 feet	10 - 20 feet	regeneration but heavy browse on shorter stems. Lots of roads and
Black/	Red (Hybrid) Oak	10		10	57	Black/Re	d (Hybrid) Oak	Low	10 - 20 feet	10 - 20 feet	tank trail.
,	White Pine	2		10	57	Ja	ick Pine	Low	Variable	Variable	
	Jack Pine	86		8	57						_
30	4125 - Black	k, N. Pin C)ak			52.1	49	81-110	N/A		2025- Stand has developed into a nice stand of primarily Oak. clones
C	anopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	of aspen. 2015- Clearcut in 1976. Still mostly saplings but starting to become a pole stand. Some good quality oak poles. There are
	White Oak	15	Sapling	5	49	Wit	ch Hazel	Low	5 - 10 feet	5 - 10 feet	scattered residual oak log trees. More white pine in the understory
	Red Pine	7	Seedling	8		Black/Re	d (Hybrid) Oak	Low	5 - 10 feet	5 - 10 feet	along the northern edge/slope. Some oak mortality. Seems like high
Black/	Red (Hybrid) Oak	45	Sapling	7	49	Wh	nite Pine	Trace	10 - 20 feet	10 - 20 feet	deer presence. Rolling hills.
,	White Pine	3	Seedling	8		WI	hite Oak	Trace	5 - 10 feet	5 - 10 feet	
	Red Maple	10	Sapling	6	49	<u> </u>					-
Bi	gtooth Aspen	20	Seedling	7	49						
31	42220 - Natu	ural Jack F	Pine S	Sapling N	1edium	n 13.6	20	Immature	N/A		2015-Forested area within FOB. Cleared in summer 2005 with rest of
С	anopy Species	% Cover	Size Class	DBH	Age						FOB. Some oaks underneath but heavily browsed.
	Jack Pine	90	Log	2	20						
В	Black Cherry	10	Log	1							
32	42220 - Natu	ural Jack F	Pine Po	letimber	Mediu	ım 26.0	57	81-110	N/A		2025-2015-Buffer strip between FOB and Howe Road and/or
С	anopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	pipeline. Parts are more like J6 and parts are more like J3. No evidence of red pine planted parallel to road (mentioned in previous
	Red Pine	2	Seedling	7		Blac	ck Cherry	Low	5 - 10 feet	5 - 10 feet	inventory notes).
	Jack Pine	93	Sapling	6	57	Oa	ak (spp.)	Low	5 - 10 feet	5 - 10 feet	
В	Black Cherry	5	Pole	4		`					-
33	4191 - Mixed Upla Co	ınd Decidu nifer	ous with			20.0	105	81-110	N/A		Contains the headwaters of an unnamed stream that is a tributary to the Manistee River. Local name for the site is Cold Springs. The
С	anopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	stream appears to seep out of steep hill and springs near the transition between Portage Creek Road to King Road. The creek
	uaking Aspen	25		9			lsam Fir	Low	>20 feet	>20 feet	floodplain is rather wide and surrounded by a steep 20' bank that
Black/	Red (Hybrid) Oak	10		12		Black/Re	d (Hybrid) Oak	Low	10 - 20 feet	10 - 20 feet	leads to a forested upland area. Floodplain contains more of the
	White Pine	20		12			nite Pine	Low	Variable	Variable	balsam and white pine while most of the oak and jack pine is on top of
	Jack Pine	10		8				1			the bank.
	Red Maple	30		10	105						

Stand	Level 4 Co	over Type		Size Dei	sity	Acres	Stand Age B	BA Range	Managed Si	te	General Comments	
34	42221 - Natural Deci	Jack Pine, duous	Mixed			20.8	5	Immature	N/A		2025- Jack pine is starting to establish. Also some oak regeneration. Scattered mature white pine and oak left after harvest2015- 40 Laps	
	Canopy Species	% Cover	Size Class	DBH	Age						Mix, 61-653-17. Cut fall 2019. Clearcut except for scattered leave trees.2015: Significant jack pine mortality and some oak mortality.	
	White Oak	10		12							Stand is more diverse along edges especially northern boundary alon	
	Red Maple	10	Log	1	5						King Road. Rolling hills.	
Blac	k/Red (Hybrid) Oak	10	Log	1	5							
	White Pine	10	Sapling	7								
35	4124 - Red w	vith White C	Dak			8.2	84	81-110	N/A		2025- A part of the parent stand that was not harvested. Oak and	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	opy Species	Density	Avg. Height	Size	pine developing in the understory. On the ridge top. 2015-Fair quality oak stand. Mostly poles but starting to reach log size. Evidence	
	Red Pine	5		9		Wh	ite Pine	Low	5 - 10 feet	5 - 10 feet	of fire. Some remnant older red pines. White pine and red pine in the	
Е	Bigtooth Aspen	10		8		Red	d Maple	Low	Variable	Variable	understory on the slope with a southeast aspect. A few patches of	
	White Oak	45		9	84	Re	d Pine	Trace	5 - 10 feet	5 - 10 feet	dense oak regeneration but < 3' tall. Relatively flat terrain.	
	Red Oak	40		10	84	Wito	ch Hazel	Low	5 - 10 feet	5 - 10 feet		
						Wh	ite Oak	Low	5 - 10 feet	5 - 10 feet		
36	42200 - Natu	ral White F	ine			24.0	64	1-50	N/A		2025- Stand is in a valley. Many ages and sizes of pine overstory.	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	opy Species	Density	Avg. Height	Size	Mix of decidious species regenerating after harvest. Decent oak / pine component. Most of the oak is still below browse line. 2020-Cut	
	Red Pine	40		10	64	Wh	ite Oak	Low	5 - 10 feet	5 - 10 feet	everything except red and white pine 2020, Sauntering Salvage, 61-	
	White Pine	60		8	64	Red	d Maple	Low	5 - 10 feet	5 - 10 feet	669-16.	
						Bigtod	oth Aspen	Low	5 - 10 feet	5 - 10 feet		
						Black/Red	d (Hybrid) Oak	Medium	5 - 10 feet	5 - 10 feet		
						Wh	ite Pine	Medium	5 - 10 feet	5 - 10 feet		
37	123 - Other High	h Intensity	Urban	Unspec	ifed	96.6			No		CIED training area. Some forested areas but will likely never have a forest management objective.	
38	4126 - White, B	Black, N. Pi	n Oak			45.4	102	81-110	N/A		2025- Seeing some individual mortality. Small amounts of pine and	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	opy Species	Density	Avg. Height	Size	oak establishing in the understory. 2015- Most of stand is behind a chain link fence. Fair quality oak with scattered pine.	
					9 -						Chair min 1911991 an quality sait min seattered prior	
	Bigtooth Aspen	25		10	gc	Re	d Pine	Trace	10 - 20 feet	10 - 20 feet		
		25 30			102		d Pine I (Hybrid) Oak		10 - 20 feet 5 - 10 feet	10 - 20 feet 5 - 10 feet		
	Bigtooth Aspen			10		Black/Red						
E	Bigtooth Aspen White Oak	30		10		Black/Red	d (Hybrid) Oak	Low	5 - 10 feet	5 - 10 feet		
E	Bigtooth Aspen White Oak Red Pine	30 5 40	an	10 10 12	102	Black/Red	d (Hybrid) Oak	Low	5 - 10 feet	5 - 10 feet	Range 20.	
Black	Bigtooth Aspen White Oak Red Pine k/Red (Hybrid) Oak	30 5 40 stensity Urb		10 10 12 11	102	Black/Red Wh	d (Hybrid) Oak	Low	5 - 10 feet 10 - 20 feet	5 - 10 feet	Range 20. Military training area.	

Stand Size Density **General Comments** Level 4 Cover Type Acres Stand Age BA Range Managed Site 4126 - White, Black, N. Pin Oak 30.5 105 81-110 N/A 2025- Patches of oak establishing in the understory. Also Scattered 42 red and white pine present under the oak canopy. Berm around DBH Age Size Canopy Species % Cover Size Class **Sub-Canopy Species** Density Ava. Height stand. 2015: Fair quality oak with some pockets of pure aspen. White Oak 20 10 105 White Oak < 5 feet < 5 feet Medium Some oak mortality and heavy browse. Rolling hills but generally flatter. Stand is adjacent to Range 20 which is used for detonating 10 8 Red Maple Seedling Red Maple Iow >20 feet >20 feet small explosives. As a result, trees on the edge of the range may Bigtooth Aspen 10 9 Black/Red (Hybrid) Oak Low 5 - 10 feet 5 - 10 feet contain metal fragments. 5 8 Red Pine White Pine Low >20 feet >20 feet 45 Black/Red (Hvbrid) Oak 12 105 Red Pine Low >20 feet >20 feet 8 White Pine 10 43 4199 - Other Mixed Upland Deciduous 30.0 6 1-50 N/A 2025- Stand is regenerating well to a nice mix of species. Some of the oak is still below the browse line and some is getting chewed off. % Cover Size Class **DBH Age** Canopy Species Moderate terrain. More residual log sized trees on the ridge2020: 40 Red Pine 3 8 Laps Mix. 61-653-17. Cut fall 2019 with adjacent Sauntering Salvage. Cut everything except RP, WP, and white oak.2015: Fair quality oak 25 6 Red Maple 1 Loa stand but variable density. Trace of red pine and white pine in the 20 1 6 Bigtooth Aspen Log canopy. Heavy browse on seedlings < 3' tall. Evidence of fire. Pocket Black/Red (Hybrid) Oak 20 Log 1 6 of good size aspen in southeast corner near pipeline. 7 7 White Pine White Oak 15 10 104 White Oak 10 1 6 Log 429 - Mixed Upland Conifers 35 N/A 44 15.3 1-50 2025- Data was lost after field visit. Needs to be updated with a field data. Area is used heavily for military training activities. Semi open stand filling in with jack pine and white pine. 4310 - Pine, Oak Mix 45 39.5 80 81-110 N/A 2025- stand is pine oak mix, slightly heavier to pine. Southwestern part of stand has a heavy jack pine component. Quite a few size **DBH Age Canopy Species** % Cover Size Class **Sub-Canopy Species** Density Avg. Height Size classes and cores indicate some different ages. Overall healthy White Oak 10 Seedling 8 Red Maple Low >20 feet >20 feet stand. Red Pine 15 10 67 White Pine Medium Variable Variable 35 80 Red Oak 10 5 8 Bigtooth Aspen 20 8 White Pine Jack Pine 15 7 Seedling 53 4199 - Other Mixed Upland Deciduous 5 46 144.6 **Immature** N/A 2025- Stand is in the process of regenerating. oak is establishing on the hill tops but is under a fair amount of browse pressure. 2020-**Canopy Species** % Cover Size Class **DBH Age Sub-Canopy Species** Density Avg. Height Size Seedtree harvest in 2020. Yotta Oak, 61-654-17. Cut all aspen, red 2 Low Red Pine 10 >20 feet White Pine >20 feet maple and jack pine. Leave tree marked scattered oak2015: Some training infrastructure scattered throughout the stand. Rolling hills. 1 5 Low 5 - 10 feet White Oak 15 Log Witch Hazel 5 - 10 feet Scattered pockets of pine in valleys and pockets of denser aspen. White Oak 3 11 100 Red Pine Low >20 feet >20 feet Average BA is 109 sf/ac. Generally little understory. . 25 5 1 Black/Red (Hvbrid) Oak Loa

5

25

25

6

1

1

5

5

Log

Log

White Pine

Red Maple

Bigtooth Aspen

Compartment: 230

Year of Entry: 2027

12

9 59

White Oak

Stand	Level 4 Co	over Type		Size De	nsity	Acres S	tand Age B	A Range	Managed S	Site	General Comments
47	4126 - White, E	Black, N. P	in Oak			42.0	5	1-50	N/A	4	2025- cak is establishing on the south and west aspects, red maple
	Canopy Species	% Cover	Size Class	DBH	l Age						and aspen on the north. fair amount of browse. Much of the oak stil susceptable to browse. 2020-Final harvest in 2020. Yotta Oak, 61-
Blac	ck/Red (Hybrid) Oak	25	Log	1	5						654-17. Cut summer/fall 2020 and chipped. Cut all aspen,
	Red Maple	15	Log	1	5						black/red/hybrid oak, red maple and jack pine. Left all red pine, white
	Bigtooth Aspen	23	Log	1	5						pine and white oak. Left more white oak than original prescription to reduce labor on sale prep2017: Fair to good quality oak with some
	Red Pine	2		10							mortality. Rolling hills. Scattered pockets of advanced regeneration.
	White Oak	20		10	105						Generally more open in area outside of loop road
	White Oak	15	Log	1	5						
48	4310 - Pir	ne, Oak Mi	ix			44.6	57	81-110	N/A	4	2025- Stand has a few age and size classes. Quite a bit of vertical
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Cano	py Species	Density	Avg. Height	Size	structure. Some areas are more of a pine stand others more of an oak. Berm around the majority of the stand.BAs: 110, 110, 130,
	White Oak	15		10	101	White	Pine	High	10 - 20 feet	10 - 20 feet	our. Boilt around the majority of the stand. Brio. 110, 110, 100,
	Red Pine	30		9	57	Red	Pine	Trace	Variable	Variable	2015- Stand is adjacent to Range 20 which is used for detonating
Blad	ck/Red (Hybrid) Oak	25		10	101			-	1		I small explosives. As a result, trees on the edge of the range may contain metal fragments. Understory is dense white pine with a few
	White Pine	20		10							red pine sap/poles. Rolling hills with a slight depression in the middle
	Jack Pine	5		8	57						of the stand. Observed a large flock of turkeys.
	Red Maple	5	Seedling	8							
49	42110 - Plar	nted Red F	Pine			27.7	6 li	mmature	N/A	4	2025- Red pine is well established with just a little competition.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Cano	py Species	Density	Avg. Height	Size	Burned in Range 9 fire, May 2010. Contains several access roads to
Blac	ck/Red (Hybrid) Oak	2		8		Red	Pine	High	< 5 feet	< 5 feet	seasonal dwellings on private property to northwest. Chopped and
	Jack Pine	5	Log	1	6	Black/Red (Hybrid) Oak	Low	>20 feet	>20 feet	trenched fall 2016. Planted May 2017. 1-year regen survey 10/24/2018. 21% mortality. 81% FTG. Minimal competition
	Black Cherry	5	Log	1	6	Black	Cherry	Low	< 5 feet	< 5 feet	scattered cherry and oak seedlings. High sedge.Driveby 10/11/19
	Red Pine	88	Log	1	6	Oak ((spp.)	Low	< 5 feet	< 5 feet	seedlings look pretty good from the road. I think we should just
											continue on the established regen check schedule.
51	4126 - White, E	Black, N. P	in Oak			39.9	105	81-110	N/A	4	2025- Small pocket and individual stem mortality present but mostly healthy looking stand. Oak present in the understory but is stunted
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Cano	py Species	Density	Avg. Height	Size	and browsed down. BAs 70, 100, 1302015- Fair to good quality
	White Oak	25		11	105	Black/Red (Hybrid) Oak	Low	< 5 feet	< 5 feet	oak which increases with elevation. Some oak mortality. More jack
Blad	ck/Red (Hybrid) Oak	50		13	105	Witch	Hazel	Trace	5 - 10 feet	5 - 10 feet	pine mixed in on flat parts. Rolling hills. Part of stand is behind fence
	Jack Pine	5	Seedling	6		Red I	Maple	Trace	Variable	Variable	
	Red Maple	5	Seedling	8		White	e Oak	Medium	< 5 feet	< 5 feet	
	Bigtooth Aspen	10		9							_
	Red Pine	5		10							
53	42220 - Nati	ural Jack F	Pine			8.5	59	51-80	N/A	4	2025- Oak is well established in the understory. Over story is
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Cano	py Species	Density	Avg. Height	Size	deteriorating. 2015- Some jack pine mortality. Very dense oak saplings in understory; many could be considered advanced
	Red Oak	5		14		Black/Red (Hybrid) Oak	Low	10 - 20 feet	10 - 20 feet	regeneration.
	14/11/11 00 1										1 ~

High

10 - 20 feet

10 - 20 feet

5

90

White Oak

Jack Pine

Compartment: 230

Year of Entry: 2027

	iravers	se City Wig	t. Unit				1101				Year of Entry: 2027	
Stand	Level 4 C	over Type	;	Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments	
54	4119 - Mixed No	orthern Hard	dwoods			10.8	26	1-50	N/A	4	2025- Clumps of mature aspen but prodominetly Cherry and jack pine	
	Canopy Species	% Cover	Size Class	DBH	l Age						filling in the barrens. 2015-Clearcut in 1999. Heavy deer browse.	
	Red Maple	10	Sapling	6								
Blad	ck/Red (Hybrid) Oak	5	Log	2								
	Jack Pine	10	Pole	4								
	Black Cherry	65	Pole	3	26							
	Quaking Aspen	10		10								
55	4131 - A	spen, Oak				6.2	17	Immature	N/A	4	2025- Stand has regenerated well. Slightly less stocking on the north	
	Canopy Species	% Cover	Size Class	DBH	l Age						end. 2015 -Cut October 2008 as part of Smith Hill Oak, 61-602-07- 01, Mid-Michigan Logging, clearcut with 2" spec. Left a few overstory	
	Red Pine	5	Log	1							oak and pine. Heavy browse on the oak seedlings < 3' tall. There were	
Blad	ck/Red (Hybrid) Oak	20	Log	2	17						problems with bullets in the trees that were not picked up by metal	
	Red Maple	30	Log	2	17						detectors. Sale notes state that this 2007 sale was set up before retention guidelines went into effect.	
	Bigtooth Aspen	45	Log	2	17						Total Mon gardenness werk mits enest.	
57	6112 - Lov	wland Aspe	n Pol		r Mediu	m 1.6	67	Unspecified	N/A	4	2015-Burned in Range 9 fire, May 2010. Narrow stand bisected by intermittent drainage and wettest at western end.	
	Canopy Species	% Cover	Size Class	DBH	l Age		nopy Species	s Density	Avg. Height	Size	morniment dramage and wellest at western one.	
	Jack Pine	5	Seedling	8			ag Alder	Low	5 - 10 feet	5 - 10 feet		
	Black Cherry	15	Seedling	6			n Cherry	Low	5 - 10 feet	5 - 10 feet		
No	orthern White Cedar	2		8			ck Cherry	High	5 - 10 feet	5 - 10 feet		
	Quaking Aspen	50		8	67	Oa	ak (spp.)	Low	5 - 10 feet	5 - 10 feet		
	Red Maple	20		10								
	Red Pine	8		14								
58	330 - Low-I	Density Tre	es			2.1			No)	Small opening with lots of disturbance.	
60	42220 - Nat	ural Jack P	ine P	oletimb	er Well	22.7	65	51-80	N/A	4	2015-Variable stand that serves as buffer for training area. From 2005 KGR comments: Portions of the stand may have hazards in the form	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	of military ordnances. Some were found in this area in 1998.	
Blad	ck/Red (Hybrid) Oak	20		12		Black/Re	d (Hybrid) Oa	k Medium	5 - 10 feet	5 - 10 feet		
	Jack Pine	80	Seedling	8	65	W	hite Oak	Low	5 - 10 feet	5 - 10 feet		
61	4122 -	Oak, Pine				41.9	105	51-80	N/A	4	2025- Mature oak component in the southend. Quite a bit of oak reger	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	present. Individual and pocket mortality in the oak. Rolling terrain. Some Pockets of pole sized oak. More of air jack pine component in	
	Dod Dino	10		11		10/	hita Oak	Madium	F 10 foot	E 10 foot	the part of Code Verights about the part of the Mary Proposition in	

5 - 10 feet

Variable

5 - 10 feet

Variable

Medium

Trace

Low

Trace

5 - 10 feet

Variable

5 - 10 feet

Variable

Red Pine

Black/Red (Hybrid) Oak

Jack Pine

Bigtooth Aspen

White Oak

10

45

25

5

15

Seedling

11

6

9

12 | 105

10 105

59

White Oak

Red Pine

Black/Red (Hybrid) Oak

White Pine

the northend.2015-Variable stand, poor quality. More diverse at edges. Patchy BA; parts have open canopy with 10-20' oak saplings.

Moderate jack pine mortality. Mostly flat terrain.

Compartment: 230

Traverse City Mgt. Unit

Report 7 - Stands

Compartment: 230
Year of Entry: 2027

Level 4 Cover Type

Size Density

Acres Stand Age BA Range

Managed Site

General Comments

4126 - White, Black, N. Pin Oak

20.5 98 51-80

N/A 2025- Stand has lots of vertical structure with a health

05	,			
Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	10	Seedling	8	57
Black/Red (Hybrid) Oak	35		12	98
White Pine	2		10	
Jack Pine	10	Seedling	7	57
Red Pine	3		10	
White Oak	30		10	98
Red Maple	5	Seedling	7	57
Bigtooth Aspen	5	Seedling	8	57

Sub-Canopy Species	Density	Avg. Height	Size
White Oak	Medium	5 - 10 feet	5 - 10 feet
Red Pine	Trace	5 - 10 feet	5 - 10 feet
Black/Red (Hybrid) Oak	Medium	10 - 20 feet	10 - 20 feet
White Pine	Trace	5 - 10 feet	5 - 10 feet
Red Maple	Low	5 - 10 feet	5 - 10 feet

2025- Stand has lots of vertical structure with a healthy crop of oak regen in the understory. Areas of pole size oak. 2015- Variable, diverse stand. Scrubby stand with significant mortality. Most flat with some small canopy gaps.

64 42220 - Natural Jack Pine

Stand

63

Canopy Species	% Cove	Size Class	DBH	l Age
Black/Red (Hybrid) Oak	10	Log	2	
Jack Pine	90	Pole	3	25

9.5 25 Immature

N/A 201

N/A

N/A

N/A

2015-Opening that is filling in with very limby jack pine. Stocking is variable. Opening continues into adjacent compartments.

65 4126 - White, Black, N. Pin Oak

Canopy Species	%	6 Cove	r Size Class	DBH	Age
Red Pine		2		12	
White Oak		20		8	
Black/Red (Hybrid) Oak		48		12	91
Jack Pine		5	Sapling	6	
Red Maple		10	Sapling	6	
Bigtooth Aspen		15		9	

е	Sub-Canopy Species	Density	Avg. Height	Size
	White Oak	Medium	5 - 10 feet	5 - 10 feet
	Red Pine	Trace	5 - 10 feet	5 - 10 feet
	Black/Red (Hybrid) Oak	Low	5 - 10 feet	5 - 10 feet
	White Pine	Trace	5 - 10 feet	5 - 10 feet

51-80

111-140

51-80

2025- A few clones of aspen but dominated by oak. Pockets of Oak and pine establishing in the understory. 2015- Variable stand with fuzzy edges. Generally low quality. Small canopy gaps and multiple roads and trails as though this stand receives heavy training use. Jack pine mostly at edges and NW and SE corners.

4126 - White, Black, N. Pin Oak

Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canop
White Oak	20		10	90	Red I
Red Pine	5		8		White
Black/Red (Hybrid) Oak	55		13	90	Black/Red (H
White Pine	5		9		White
Bigtooth Aspen	15	Seedling	8		

Sub-Canopy Species	Density	Avg. Height	Size
Red Pine	Trace	Variable	Variable
White Oak	Low	< 5 feet	< 5 feet
Black/Red (Hybrid) Oak	Low	5 - 10 feet	5 - 10 feet
White Pine	Medium	Variable	Variable

2025- seeing some mortality in the western part of the stand. Oak regenerating in the areas of dieback.2015 -Stand transitions between pine stand to south and aspen/oak to north. Distinctive because it has an understory of older and variably sized red pine and white pine (dbh \sim 4-8"). Gentle slope. Heavy browse.

67 4122 - Oak, Pine

Canopy Species	% Cove	r Size Class	DBH	I Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Oak	35		12	90	Black/Red (Hybrid) Oak	Low	5 - 10 feet	5 - 10 feet
Red Pine	5		10		White Pine	Low	Variable	Variable
Red Maple	5	Seedling	6		White Oak	Medium	5 - 10 feet	5 - 10 feet
White Oak	25		10		Red Pine	Trace	5 - 10 feet	5 - 10 feet
White Pine	15		10			•		
Jack Pine	15		8					

24.7

10.5

16.8

91

90

90

Variable stand. Medium-quality oak with pockets of jack and other pine spp. Average BA is 76 sf/acre. Relatively dense oak understory, 1-2' tall but heavily browsed. More oak regeneration in southern part of stand. Rolling hills.

Stand	Level 4 Cover Type		5	Size Density		Acres Stand Age BA Rang		A Range	e Managed Site		General Comments	
70	4126 - White, Black, N. Pin Oak					12.0	115	51-80	N/A		2025- Some top dieback in the canopies as well as pocket and	
	Canopy Species	% Cover	Size Class	DBH Age		Sub-Ca	nopy Species	Density	Avg. Height	Size	nidividual mortality. Oak establishing in the understory. 2015- Poor quality and greater mortality than other oak stands in this	
	Red Pine	5		10		W	hite Oak	Medium	< 5 feet	< 5 feet	compartment. Heavy browse. Gentle slopes.	
	White Oak	35		10	115	Black/Re	d (Hybrid) Oak	Medium	5 - 10 feet	5 - 10 feet		
Blad	ck/Red (Hybrid) Oak	50		12	115						-	
	White Pine	5		10								
	Jack Pine	5	Seedling	8								
72	4199 - Other Mixed Upland Deciduous			90.4	5	1-50	N//	Ą	2025- Oak regeneration seems to be the most dense where the Over			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	story is thicker. Heavy deer browse has Kept the majority of the oak regen below 5'. 2020-Final harvest in 2020. Yotta Oak, 61-654-17.	
	Red Pine	2		8		Wit	tch Hazel	Low	5 - 10 feet	5 - 10 feet	Also chipped. Cut everything except red pine, white pine and white	
	White Oak	20	Log	1	5						oak. 2017: Fair quality oak with heavier aspen in some parts. White	
	White Oak	20		10	110						pine in understory is heavier along the northern aspect slopes along the north edge of the stand. Red maple may have been removed from	
Red Maple 22 Log 1 5 Bigtooth Aspen 18 Log 1 5 Black/Red (Hybrid) Oak 15 Log 1 5		5						part of stand in the mid-1990s. Average BA is 88 sf/ac. Some oak				
		5						mortality and heavy browse. Rolling hills with a local summit of 1,255'				
		15	Log	Log 1 5							south of road.	
	White Pine	3		7								
73 4124 - Red with White Oak					22.4	22.4 50 51-80		N/A		2025- Healthy looking StandBAs: 80, 60, 100, 90. 2015- Some		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	stems just reaching pole size. Multi-stem red oak and red maple. Variable stand. White pine is heavier in some pockets.	
	White Pine	10	Seedling	8		Re	ed Maple	Low	Variable	Variable		
	Red Maple	25	Sapling	5	50	WI	hite Pine	Medium	Variable	Variable		
	White Oak	20	Pole	4	50						_	

Red Pine

Red Oak

Seedling

Sapling

5

40

50

50

7

Compartment: 230

Year of Entry: 2027