Compartment Review Presentation

Cadillac Forest Management Unit

Compartment 63119 Entry Year: 2027 Acreage: 3,477

Management Area: Kalkaska Sandy Moraines

County: Missaukee

Stand Examiner: Joe Ventimiglia

Legal Description:

T24N R7W: Sections 4, 5, 8, 9, 16, 17

Identified Planning Goals:

Manage compartment for a mix of timber, wildlife, recreational and ecological concerns. Management plan and practiced silviculture methods will be implemented within management activities.

Soil and topography:

Soils are composed of rubicon sands. Site quality increases nearer the Manistee River and Hopkins and Ham Creeks. The lowest site indeces are within the oak-pine barrens restoration area.

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

A large portion of this compartment was formerly owned by Consumers Power and was acquired by the State of Michigan. Much of the former Consumers land was along the Manistee River. Overall, the compartment is mostly solid state ownership. Desirable parcels for acquisition would be the 80 acre parcel in the southeast corner of the compartment.

Unique Natural Features:

This compartment contains oak-pine barrens and northern wet meadow communities. Evidence of wood turtle has been identified and potential exists for Blanding's turtle in the Hopkins and Ham Creeks. Potential exists for massasauga and prairie warbler in the upland brush areas.

Archeological, Historical, and Cultural Features:

Numerous Native American archeological sites have been documented. The high banks area bordering the Manistee River was used as log rollaways in the late 1800's pine logging era.

Special Management Designations or Considerations:

A large portion of this compartment is being managed as shrub and herbaceous open land through the use of prescribed fire. Future goals for this open land are to maintain a fire return interval that enhances wildlife habitat, blueberry production, and vegetation associated with barrens. The Hopkins Burn Units were burned actively in the last 20 years with plans to continue such burning as funding and weather allows. The treatment map lays out the plans for the burns including adding a new burn unit. (Stand 48)

Watershed and Fisheries Considerations:

The mainstream of the Manistee, Hopkins Creek and Ham Creek flow through this compartment. Extensive past beaver activity has been documented along Ham and Hopkins Creeks. Occupied dens and some blockage were identified near the north edge of the compartment. Both Ham and Hopkins Creeks are designated tributaries under the Upper Manistee River State Natural River designation. The Upper Manistee River Natural River Plan has very specific native vegetation buffers for the mainstream and tributaries (pages 40-42, inclusive.)The mainstream buffer is 175 feet, except if the proposed treatment meets one of the eight criteria. On Ham Creek the buffer would be 100 feet, if the slope is 0-10%; 115 feet, if the slope is 11-20%; 135 feet, if the slope is 21-32%; and 155 feet, if the slope is 33+%. On Hopkins Creek, in addition to the above standards, there is a 100foot no cut zone, unless it meets one of the (a) through (h) criteria in the plan.

Wildlife Habitat Considerations:

Approximately 880 acres of this compartment are lands purchased with restricted Game and Fish or State Game Funds. This compartment offers a wide variety of valuable wildlife habitats. The river and creek corridors are valuable deer winter areas. They provide excellent habitat and travel areas for bear and bobcat. The management objective for the central (approximately) 700 acres of the area in proximity to the campground is to maintain an open grassland that provides blueberry and fruit bearing shrubs for songbirds and turkey. The surrounding oak, aspen, and pine areas provide adjacent food and cover for many different species. By maintaining this variety of cover types and age classes, this compartment can continue to provide valuable habitats to deer, ruffed grouse, woodcock, turkey, bear, bobcat, and numerous songbirds. Featured species of special interest include deer and bear. Timber sale specifications to benefit wildlife (where applicable) will include brush pile creation along lowland edges, protection of mast-bearing wildlife shrubs and ironwood, protection of standing dead snags, and creation of drumming logs (1-2 per acre) and woody debris (tops or whole trees) in aspen cuts.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel, post-glacial alluvium, and minor coarse-textured till. The glacial drift thickness varies between 200 and 400 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan Formation is quarried for gypsum in other areas of the state. Gravel pits are not located in the immediate area, but potential is good, especially the upland areas. State Pit 467 is located approximately three miles east (Section 18, T24N R7W). The northern portion of the compartment is located on the edge of Springfield Field. The field has produced from gas the Traverse Limestone. The bulk of the State mineral rights in the compartment are currently leased for oil and gas development.

Vehicle Access:

A forest road access plan is detailed on the compartment map. Identified are state and county roads as well as forest roads and trails under the jurisdiction of the DNR. As future timber sales occur logging roads and old State forest two tracks may be blocked to vehicle access as needed.

Survey Needs:

This compartment is almost solid state ownership. No surveying is needed at this time. The compartment boundary along the west edge of section 5 follows a bluff line heading north. This property line is very irregular and does not head straight north.

Recreational Facilities and Opportunities:

There are numerous recreational opportunities within this compartment including: Hopkins Creek rustic & designated equestrian campground, the Shore to Shore riding and hiking trail, the North Missuakee ORV trail, the Mis-Kal ORV route, Michigan Cross Country Cycle Trail (MCCCT), and Snowmobile trail #6. Proposed timber treatments negatively impacting campers should be taken into consideration. Providing a tree'd buffer adjacent to campsites, and harvesting during the winter months are two potential mitigating practices. Trail protection specifications should be included in any timber sale potentially impacting trails. Specifically, appropriate measures identified in DNR Policy & Procedures "32.22XX" (Best Management Practices for Forest and Wildlife Management Adjacent to Recreational Trails) should be taken into consideration when setting up timber sales. Furthermore, guidance provided in the "Logging Operations and Horse Events on State Lands" document should be followed for timber treatments impacting the Shore to Shore riding and hiking trail. There are numerous fishing and hunting opportunities and dispersed camping is very common in this compartment. Blueberry picking is popular within this compartment. (T.M.N. 12/16/14)

Fire Protection:

The areas of red pine provide the potential for large fire growth. There are some urban area concerns within the compartment. The potential for poor access exists with the varying terrain within the compartment. An area near Hopkins Creek Campground is managed for blueberries by prescribed fire.

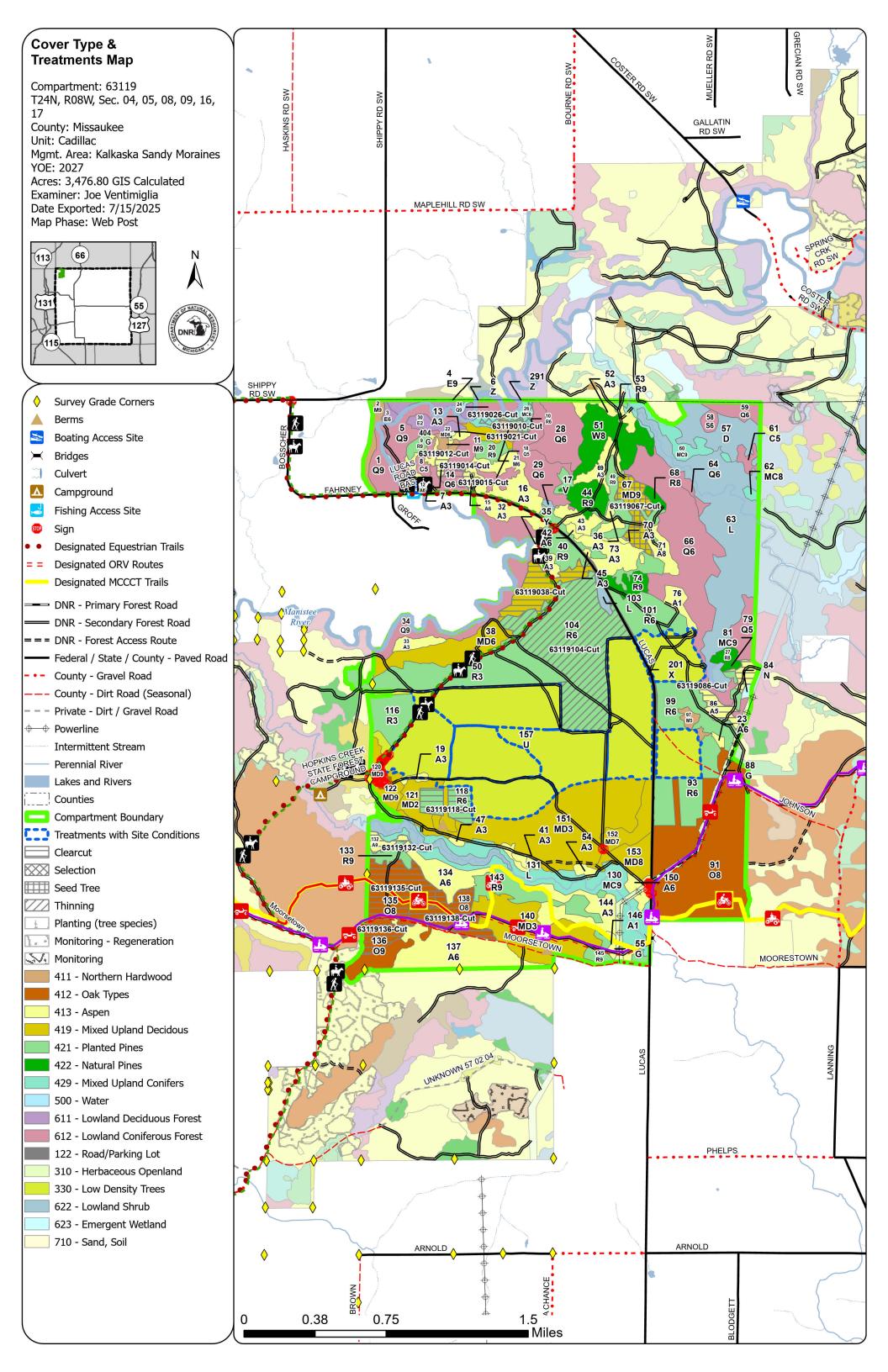
Additional Compartment Information:

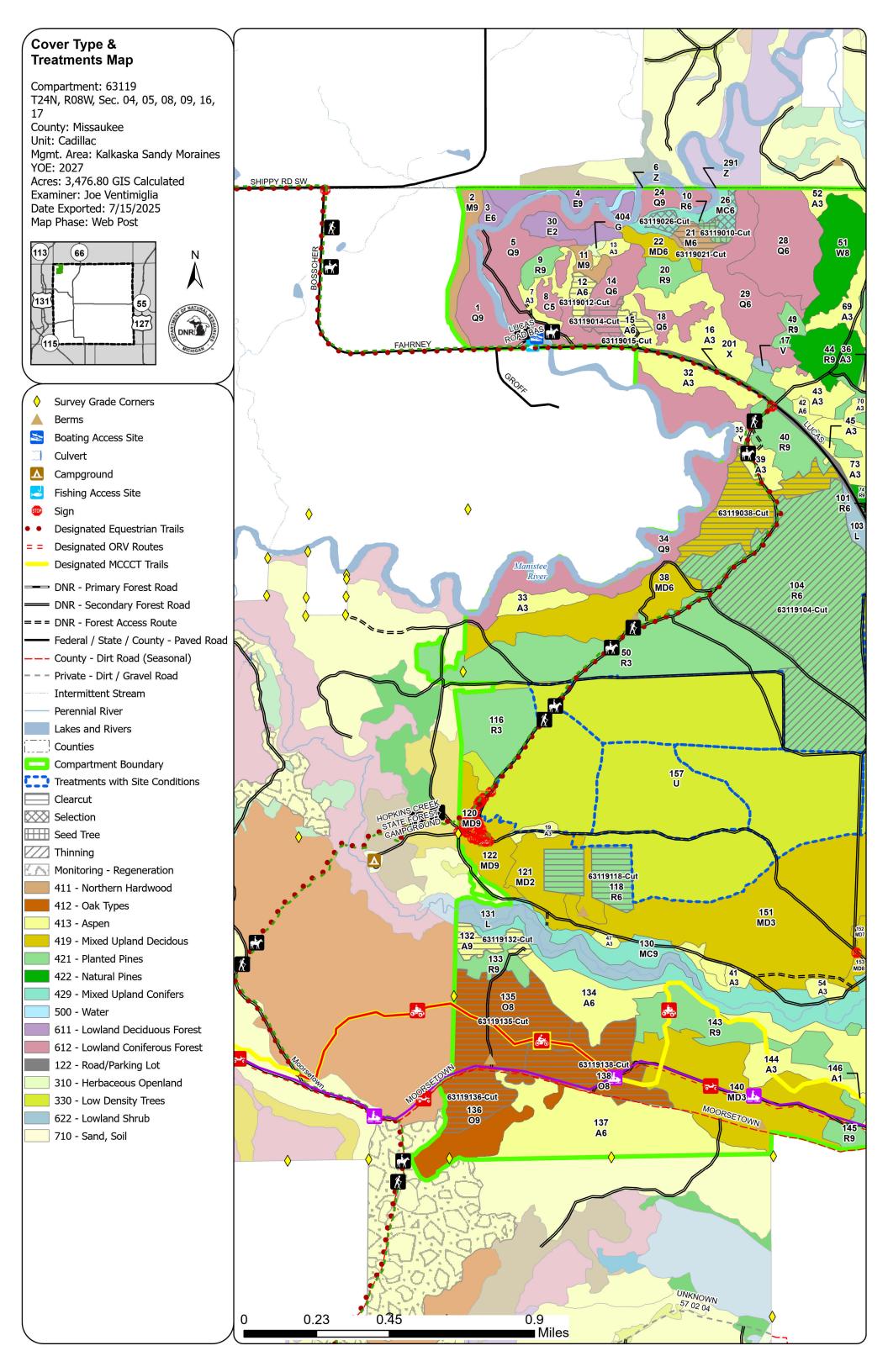
The following reports from the Inventory are attached:

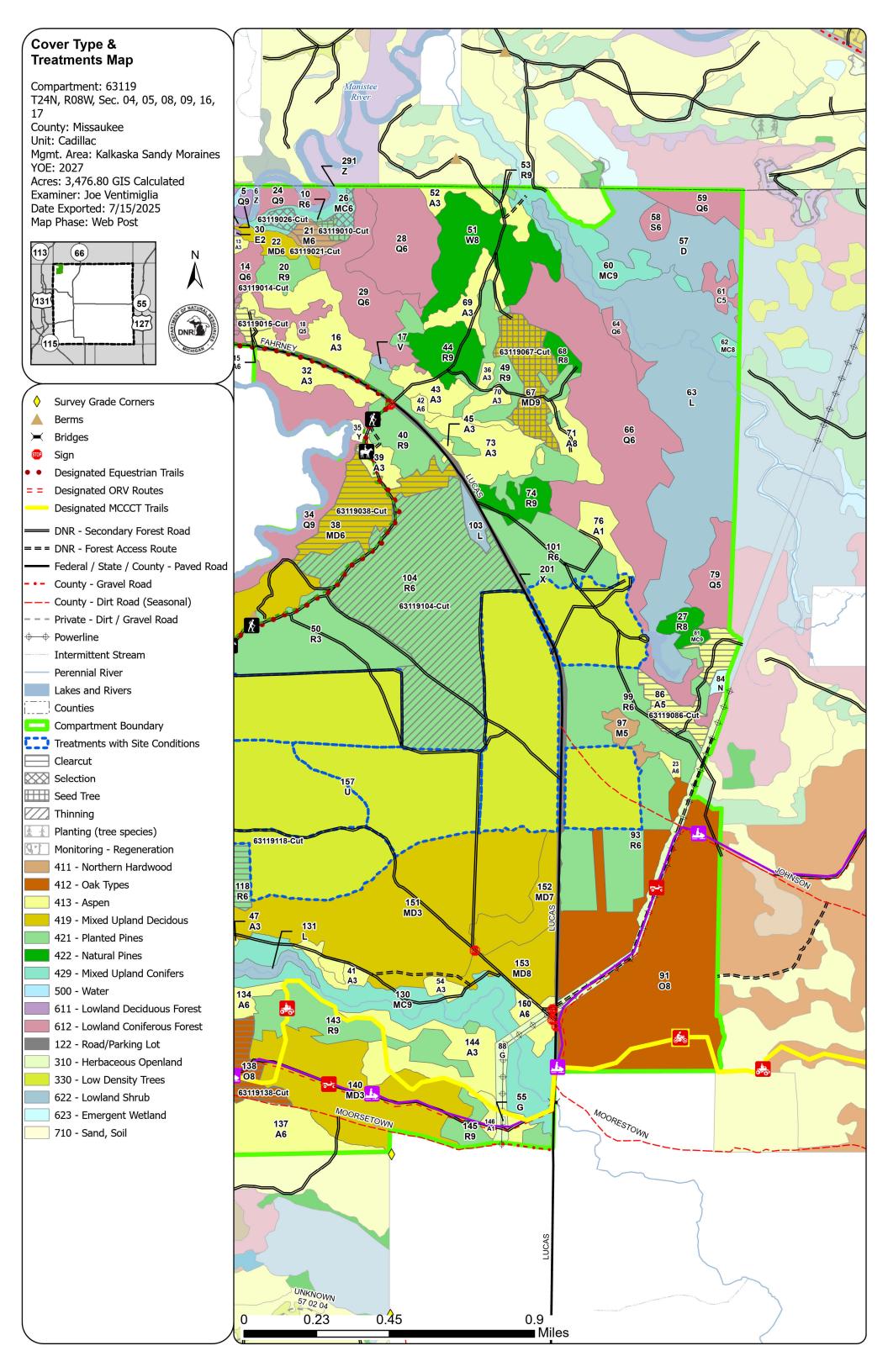
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

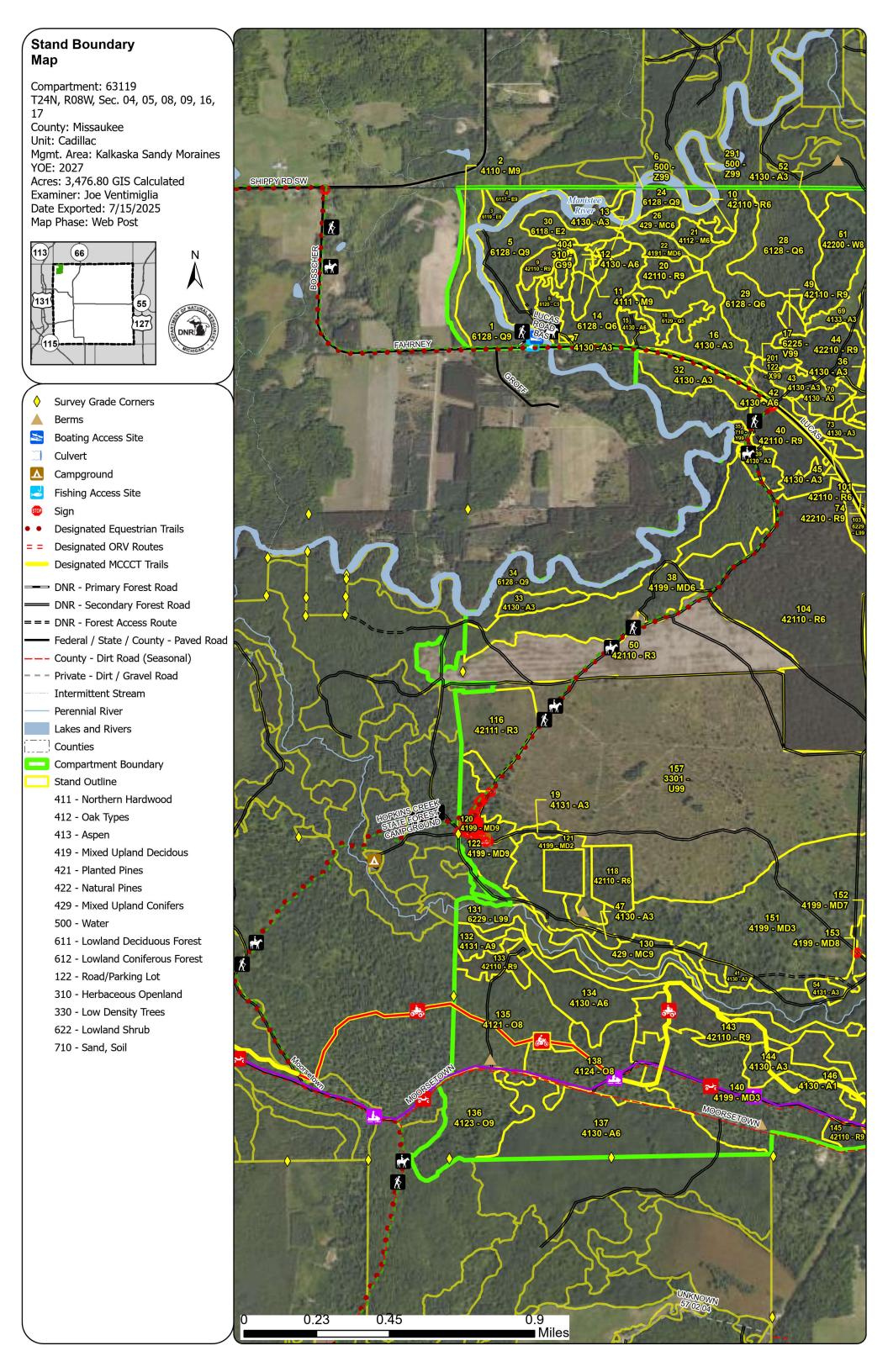
The following information is displayed, where pertinent, on the attached compartment maps:

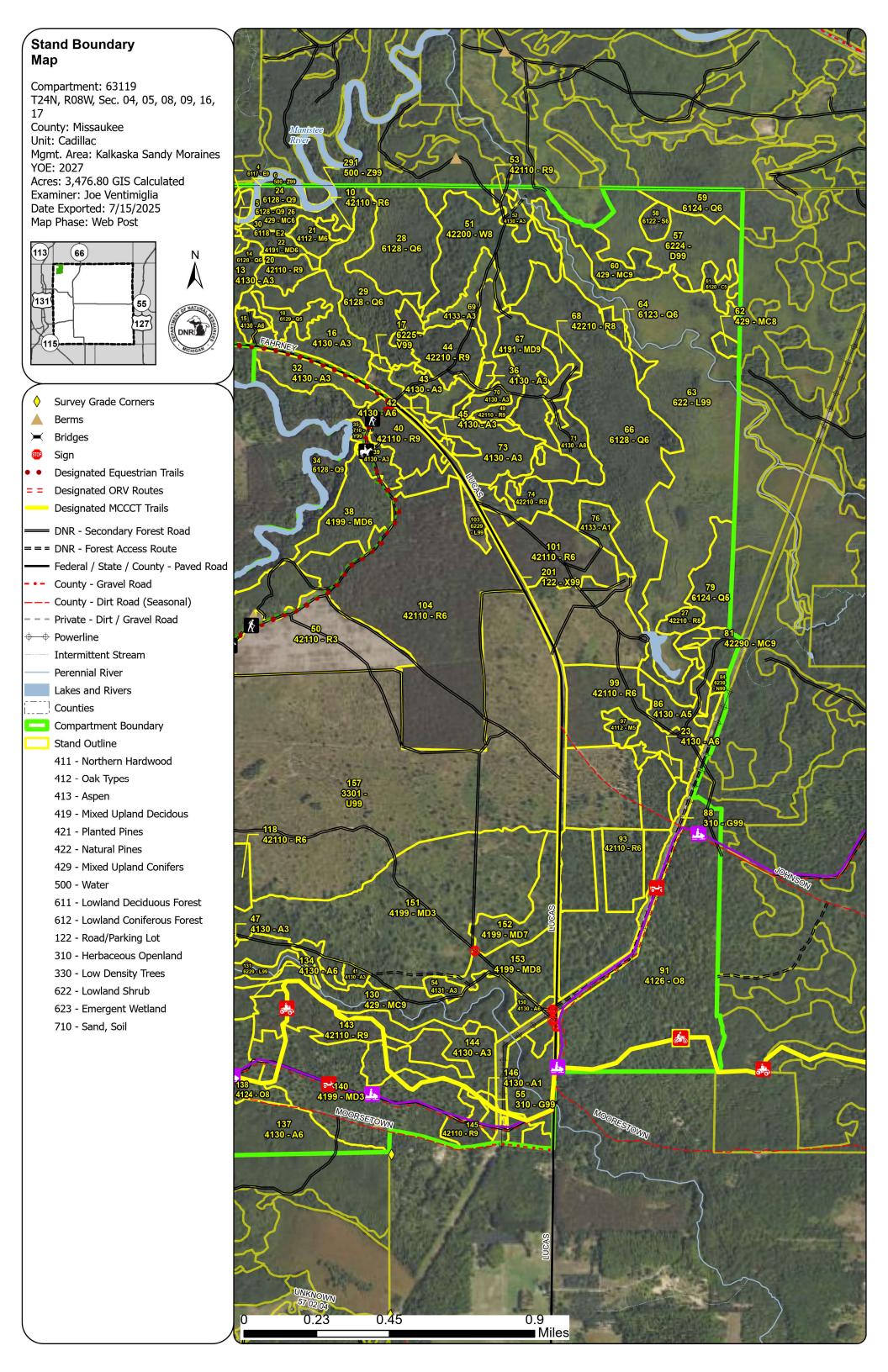
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

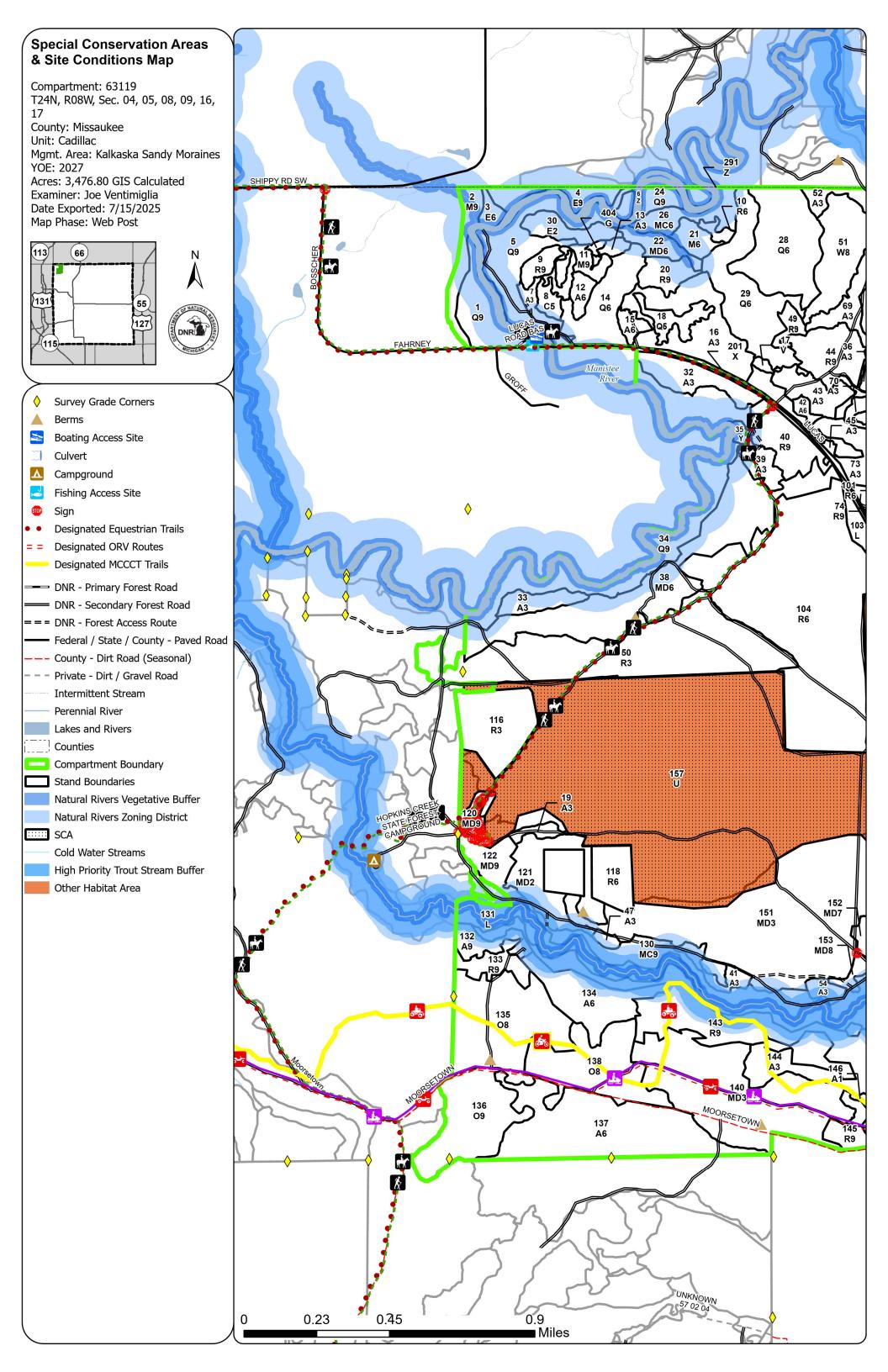


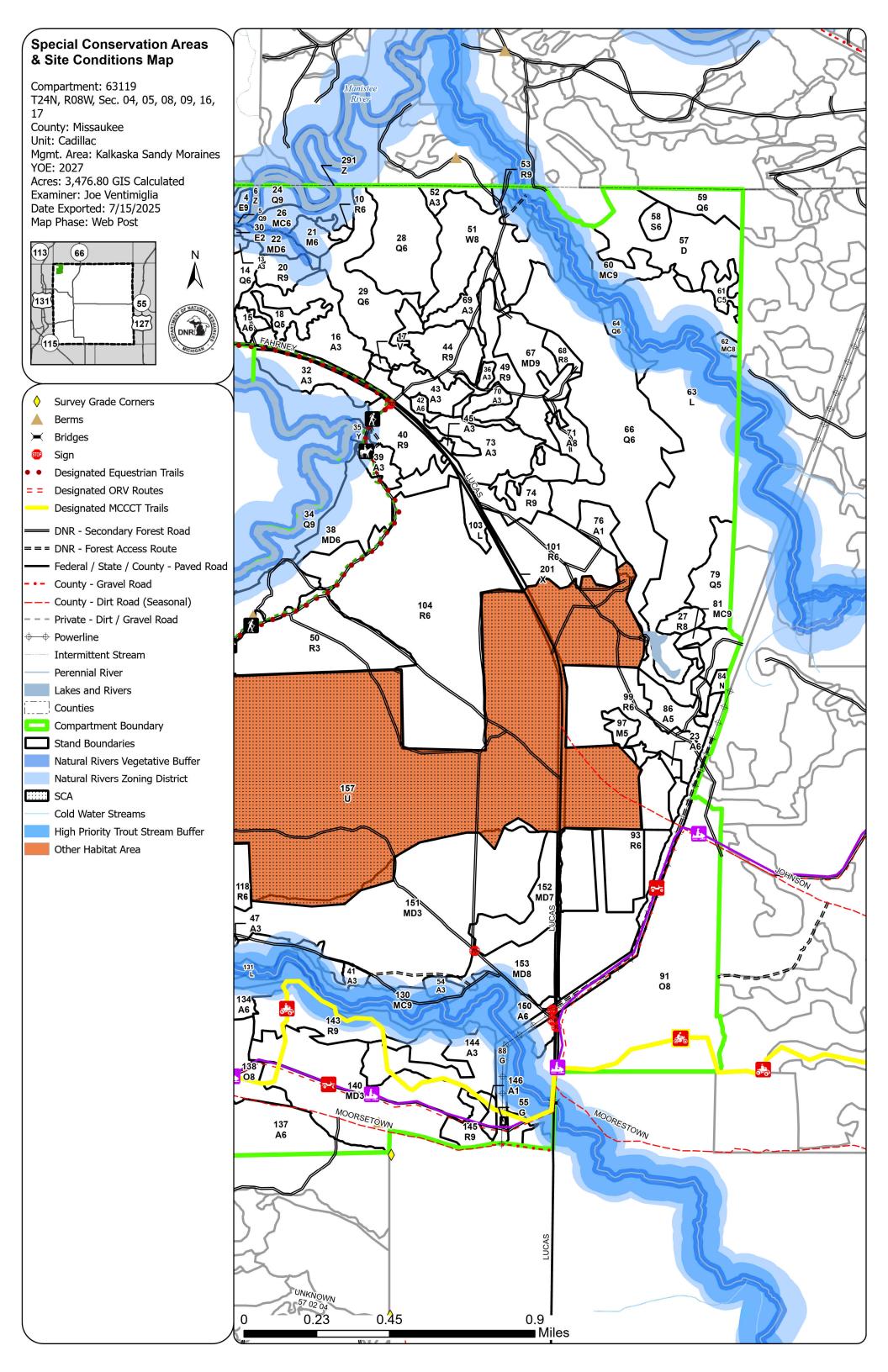












Cadillac Mgt. Unit

Joe Ventimiglia: Examiner

Age Class

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	₹ or		s / «		\$ \ \&	3/8		3/8			\$ \ &		a z		\$ / \$	1 ²³ 1 ⁸	1	N. Aug		/
Aspen	0	54	121	47	124	0	51	4	0	0	0	0	0	0	0	0	0	0	400	ĺ
Bog	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	l
Cedar	0	0	0	0	0	0	0	0	0	0	0	7	6	0	0	0	0	0	13	l
Herbaceous Openland	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	l
Low-Density Trees	552	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	552	l
Lowland Conifers	0	0	0	0	0	0	0	0	20	21	0	184	75	0	0	0	0	133	432	i
Lowland Deciduous	0	0	11	0	0	0	0	0	0	0	4	0	0	0	0	0	0	13	28	l
Lowland Shrub	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	210	i
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	l
Marsh	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	l
Mixed Upland Deciduous	0	0	255	0	0	0	0	135	0	0	13	0	0	0	0	0	0	76	478	l
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	l
Northern Hardwood	0	0	0	0	0	0	0	14	0	0	0	5	0	0	0	0	0	12	31	l
Oak	0	0	0	0	0	0	0	0	0	0	142	0	198	0	0	0	0	0	340	l
Red Pine	0	104	32	0	0	0	3	480	11	0	0	0	0	0	0	0	0	41	671	l
Sand, Soil	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	l
Treed Bog	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	l
Upland Conifers	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	121	134	1
Urban	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	1
Water	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	1
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	51	l
Total	892	158	419	47	124	0	54	646	31	24	159	196	279	0	0	0	0	452	3478	l

Report 2 – Treatment Summary

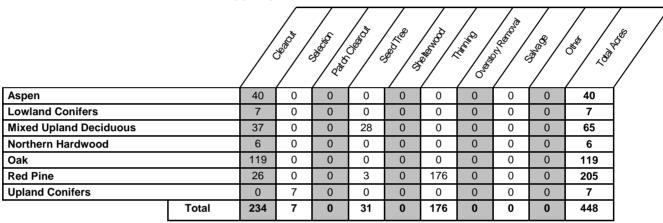
Cadillac Mgt. Unit Year of Entry: 2027

Acres of Harvest

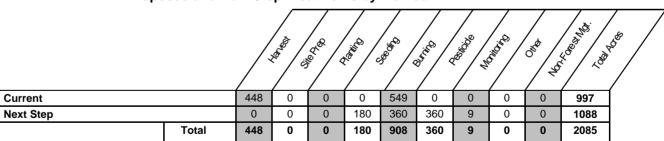
Compartment 119
Total Compartment Acres: 3,477

Commercial Harvest - 458 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		Cadilla	c Mgt. Unit		Repoi	rt 3 '	Treatments		Compartment Year of Enti		
a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habit Cut
157	63119157- Burn Unit 7	47.6	3301 - Low Density Deciduous Trees	99			Burn	Prescribed Burn	320 - Upland Shrub	Previous Inventory	No
Spec Next	cription Burn c s: Step tments:	on rotations									
Rege											
Othe Com	<u>r</u> ment:										
	Condition: Co										
157	63119157- Burn Unit 6	103.1	3301 - Low Density Deciduous Trees	99			Burn	Prescribed Burn	320 - Upland Shrub	Previous Inventory	No
Spec		n rotations	i.								
	Step tments:										
Acce Rege	e <u>ptable</u> en:										
Othe Com	<u>r</u> ment:										
Site (Condition: Co	nservation	Values								
Prop	osed Start Date	<u>e:</u> 10/01/20	026								
157	63119157- Burn Unit 5	78.3	3301 - Low Density Deciduous Trees	99			Burn	Prescribed Burn	320 - Upland Shrub	Previous Inventory	No
Preso Spec	cription Burn o	n rotations									
	Step tments:										
Rege											
Othe Com	<u>r</u> ment:										
	Condition: Co										
Prop	osed Start Date										
	63119157- Burn Unit 4 cription Burn o		3301 - Low Density Deciduous Trees	99			Burn	Prescribed Burn	320 - Upland Shrub	Previous Inventory	No
	Step tments:										
	ptable										
<u>Othe</u>											
Site (Condition: Co	nservation	Values								
Prop	osed Start Date	<u>e:</u> 10/01/2	026								

S t	Cadillac	Mgt. Unit		Repor	rt 3 '	Treatments		Compartmer Year of Entr		
a	cres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habita Cut
157 63119157- Burn Unit 2		801 - Low Density Deciduous Trees	99			Burn	Prescribed Burn	310 - Herbaceous Openland	Previous Inventory	No
Prescription Prescribed and grass		ler conditions approment in next steps						sh management	t as well as her	baceous
	Other - S						Openings Mgmt., Inte	erseeding; Burr	n, Opening; Pe	esticide,
Acceptable Regen:	Cony									
Other Comment:										
Site Condition: Conse	rvation V	alues								
Proposed Start Date: 1	0/01/202	25								
157 63119157- Burn Unit 1		801 - Low Density Deciduous Trees	99			Burn	Prescribed Burn	320 - Upland Shrub	Previous Inventory	No
Prescription Burn on ro Specs:	tations.									
Next Step Treatments:										
Acceptable Regen:										
Other Comment:										
Site Condition: Conse	rvation V	alues								
Proposed Start Date: 1	0/01/202	26								
157 63119157- Burn 3	[301 - Low Density Deciduous Trees	99			Burn	Prescribed Burn	320 - Upland Shrub	Previous Inventory	No
Prescription Burn on ro Specs:	tations.									
Next Step Treatments:										
Acceptable Regen:										
Other Comment:										
Site Condition: Conse	rvation V	alues								
Proposed Start Date: 1	0/01/202	26								
157 63119157- Burn Unit 8		801 - Low Density Deciduous Trees	99			Burn	Prescribed Burn	310 - Herbaceous Openland	Previous Inventory	No
Prescription Burn on ro Specs:	otations.							Орогнала		
Next Step Treatments:										
Acceptable Regen:										
Other Comment:										
Site Condition: Conse	rvation V	alues								
Proposed Start Date: 1	0/01/202	26								

Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 119 S Year of Entry: 2027 t а **Treatment** Size Stand BA **Treatment Treatment Cover Type** Acres Stand Age Habitat n Name CoverType Density Age Range Type Method Objective Structure Cut Ч 135 63119135-Cut 55.5 4121 - Oak, Aspen 8 51-80 Harvest Clearcut 412 - Oak Types Planting No Record Prescription Cut all trees 2 inches and greater at DBH. Leave all white and red pine. Leave 1 to 3 large oak per acre.leave 3-5 percent retention. Specs: Next Step Treatments: Acceptable Moderate to fully stocked oak types with some aspen, red maple, white pine and red pine mixed in. Regen: If stand fails to come back to predominantly oak types, plant to red pine per tms specs. Add oak wilt spec and trail protection spec. Other Comment: Site Condition: Proposed Start Date: 10/01/2026 12 63119012-Cut 4.8 4130 - Aspen 6 59 81-110 Harvest Clearcut 413 - Aspen **Planting** No Record Prescription Clearcut no retention - Cut all species 2 inch and larger except: hemlock, cedar, sugar maple, and 16" DBH and larger white pine. -Include balsam wooly quarantine spec. - Include dead and down creation: Hare, Grouse, Deer spec. Specs: Next Step **Treatments:** Acceptable Moderate or better stocking of aspen with components of red maple, white pine, cedar and hemlock. Regen: Other Comment: Site Condition: Proposed Start Date: 10/01/2026 63119014-Cut **Planting** 6.6 6128 - Lowland 6 112 171-Harvest Clearcut 6112 - Lowland Nο Coniferous, Mixed 200 Aspen Record Deciduous Prescription Clearcut no retention - Cut all species 2 inch and larger except: hemlock, cedar, paper birch, and 16" DBH and larger white pine. -Include balsam wooly quarantine spec - Include dry summer frozen winter spec Specs: Next Step Treatments: Acceptable moderate or better stocking levels of mixed hemlock, cedar, aspen, red maple, and paper birch Regen: **Other** Comment: Site Condition: Proposed Start Date: 10/01/2026 Planting 63119015-Cut 6 62 81-110 Clearcut 4.1 4130 - Aspen Harvest 413 - Aspen No Record Prescription Clearcut no retention- Cut all species 2 inch and larger except: hemlock, cedar, 16" DBH and larger white pine, or 16" DBH and larger red pine.- Include dead and down creation: Hare, Grouse, Deer spec.- Include balsam wooly guarantine spec. Specs: Next Step **Treatments:** Acceptable Moderate or better stocking of aspen with components of red maple, paper birch, hemlock, cedar, and white and red pine. Regen: Other Comment: Site Condition: Proposed Start Date: 10/01/2026

S t		Cadillac	Mgt. Unit		Repo	rt 3 ⁻	Γreatments		Compartmen Year of Entry		
a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habita Cut
86	63119086-Cu	t 22.1	4130 - Aspen	5	59	51-80	Harvest	Clearcut	413 - Aspen	Planting Record	No
Pres Spec		narvest cut a	all deciduous 2 inch	nes and gre	eater at	DBH. Le	ave all white and	d red pine.		Rooord	
	t Step htments:										
Acce Reg		ate to fully s	stocked aspen, map	ple, white a	and red	pine.					
Othe Com	<u>er</u> Includ nment:	e grouse sp	ec and brush piles	along lowl	and edg	jes.					
Site	Condition:										
Prop	osed Start Date	<u>e:</u> 10/01/20	26								
104	63119104-Cu	t 176.4	42110 - Planted Red Pine	6	69	141- 170	Harvest	Thinning	4211 - Planted Red Pine	Planting Record	No
Pres Spec		ge for best ti	ree in place thinnin	g to an ave	erage of	120 BA.					
	t Step utments:										
Acce Reg		ate to fully s	stocked red pine, or	aks, and m	naple.						
Othe Com	<u>er</u> Includ nment:	e trail proted	ction specs.								
Site	Condition:										
Prop	osed Start Date	<u>e:</u> 10/01/20	26								
10	63119010-Cu	t 2.5	42110 - Planted Red Pine	6	51	171- 200	Harvest	Seed Tree	429 - Mixed Upland Conifers	Cutting Record	No
Pres Spec		cut, no retent e Wood Turt	tion- Final harvest a tle specs.	all species	2 inch a	and larger.	- Mark to leave	3 to 5 red pine pe	r acre Do not cut	white pine	
	t Step htments:										
Acce Reg	•	ate of better	r stocking of red pir	ne, white p	ine, red	maple, a	spen, and black	cherry.			
Othe Com	e <u>r</u> nment:										
<u>Site</u>	Condition:										
Prop	osed Start Date	<u>e:</u> 10/01/20	26								
132	63119132-Cu	t 9.2 4	1131 - Aspen, Oak	9	55	81-110	Harvest	Clearcut	6112 - Lowland Aspen	Planting Record	No
Pres Spec		narvest all tr	ees 4 inches and g	reater. Le	ave all	cedar, her	mlock, and white	e/red pine 18 inche	es and greater at D	ВН.	
	t Step Monito	oring, Natura	al Regen (Re-Inven	tory)							
Acce Reg		ate to fully s	stocked aspen, ma	ple, pine, h	nemlock	and ceda	ır.				
Othe Com	<u>er</u> Includ nment:	e grouse sp	ec.								
Site	Condition:										
_	osed Start Date	e: 10/01/20	26								

Cadillac Mgt. Unit Report 3 -- Treatments Compartment: 119 S Year of Entry: 2027 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Habitat Acres Age n Method Name CoverType Density Age Range Type Objective Structure Cut Ч 136 63119136-Cut 22.6 4123 - Red Oak 9 98 51-80 Harvest Clearcut 412 - Oak Types Planting No Record Prescription Cut all trees 4 inches and greater at DBH. Leave all white and red pine. Leave 1 to 2 large oak per acre. Specs: Next Step Treatments: Acceptable Moderate to fully stocked oak Regen: If stand fails to come back to predominantly oak types, plant to red pine per tms specs. Include trail protection specs. Other Comment: Site Condition: Proposed Start Date: 10/01/2026 138 63119138-Cut 41.2 4124 - Red with 8 97 1-50 Harvest Clearcut 412 - Oak Types **Planting** No White Oak Record Prescription Cut all trees 2 inches and greater at DBH. Leave all white and red pine. Leave 1 to 3 large oak per acre.leave 3-5 percent retention. Specs: Next Step **Treatments:** Acceptable Moderate to fully stocked oak types with some aspen, red maple, white pine and red pine mixed in. Regen: **Other** If stand fails to come back to predominantly oak types, plant to red pine per tms specs. Add oak wilt spec and trail protection spec. Comment: Site Condition: Proposed Start Date: 10/01/2026 42110 - Planted **Planting** 118 63119118-Cut 25.7 6 64 111-Harvest Clearcut 412 - Oak Types Nο Red Pine 140 Record Prescription Final harvest leave 1-3 healthy red pine per acre where present. Specs: Next Step **Treatments:** Acceptable Moderate to fully stocked oaks, maple, and red pine. Regen: Other Comment:

Total Treatment 996.7 Acreage Proposed:

Proposed Start Date: 10/01/2026

Site Condition:

Cadillac Mgt. Unit

Joe Ventimiglia: Examiner

Compartment: 119 Year of Entry: 2027



Availability for Management

Total	Acres	Acres Avail	Acres	D	omina	nt Site	e Con	ditions	3					
Acres	Available	With Condition	Not Available		5B	5C	2F	2G	2H	3A	3D	3J	5A	5E
372	369	0	3	Aspen										3
1	1	0	0	Bog										
13	13	0	0	Cedar										
31	31	0	0	Herbaceous Openland										
550	0	0	550	Low-Density Trees						550				
426	25	9	392	Lowland Conifers	9			247	6			98	42	
27	11	0	17	Lowland Deciduous				4				13		
210	210	0	0	Lowland Shrub										
5	0	0	5	Lowland Spruce/Fir				5						
2	2	0	0	Marsh										
427	371	38	18	Mixed Upland Deciduous		38	5				13	1		
3	3	0	0	Natural Mixed Pines										
25	12	0	13	Northern Hardwood			10					3		
318	98	219	0	Oak	198	21								
670	670	0	0	Red Pine										
2	2	0	0	Sand, Soil										
48	48	0	0	Treed Bog										
127	0	0	127	Upland Conifers					3			124		
28	28	0	0	Urban										
18	18	0	0	Water										
51	51	0	0	White Pine										
3,355	1,963	266	1,126	Total Forested Acres	207	59	15	257	9	550	13	239	42	3
	59%	8%	34%	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.

	Dominant Site and Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	94	2F: Too steep	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified

Vegetated buffer along Hopkins Creek. Unavailable for management.

Cadillac Mgt. Unit

Joe Ventimiglia: Examiner



2	Unavailable	2F: Too steep	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Too steep and close	e to river. Stand not able to be	treated c	ommercially.			
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	16	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	19	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	43	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	2F: Too steep	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Cadillac Mgt. Unit Joe Ventimiglia: Examiner



8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	20	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	15	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	5A: Not able to obtain desirable regeneration	Unspecified	Unspecified
	Comments:						
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
11	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	24	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
	Comments: Between proximity	to creek and small creek that b	locks a	ccess to southern half of sta	and.		
12	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	3	3J: Water quality/BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
(Comments:						

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13	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	6	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
14	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	3J: Water quality/BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
(Comments:						
16	Available	5B: Maintain for regeneration purposes	9	Unspecified	Unspecified	Unspecified	Unspecified
-	Comments: Stand was cut last e	entry only mature cedar and he	emlock v	were left. Aspen and maple	regeneration coming in goo	od. Leave long lived conife	er over story.
17	Unavailable	5A: Not able to obtain desirable regeneration	42	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: _eave at this time, s	stand has potential for lowland	manag	ement in the future but majo	r concerns over wet nature	and regeneration concer	ns post harvest.
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	139	5A: Not able to obtain desirable regeneration	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	Unspecified	Unspecified
	Comments: _arge complex stan	d, in general large commercial	l manag	gement of this stand may no	t be warranted do to above	site conditions.	
20	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Natural River guidar	nce - native vegetation buffer f	or tribut	aries. 21-32% slope - 135 fe	eet. (Stand 21). 33+% slop	e - 155 feet (stand 26).	

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21 Unspecified Unspecified **Available** 198 Unspecified Unspecified 5B: Maintain for regeneration purposes Comments: Stand has been recently treated. Scattered large oak left for regeneration purposes. Do not enter stand, as a result of damage to oak understory. Stand can be entered in 40 plus years once oak gets more mature. 23 Unavailable 3J: Water quality/BMPs 57 Unspecified Unspecified Unspecified Unspecified (stream, river, or lake) Comments: Unspecified Unspecified Unspecified Unspecified 25 Unavailable 2G: Too wet (sensitive 3 soils, does not include access issues) Comments: 26 **Available** 5C: Delay treatment for 21 Unspecified Unspecified Unspecified Unspecified age/size class diversity or exceptional site quality Comments: 27 Unavailable 3D: Recreational/scenic 13 Unspecified Unspecified Unspecified Unspecified values Comments: Hopkins Creek campground. Only management that will take place is removal of hazard trees as Parks division sees fit over time. 28 Unavailable 2G: Too wet (sensitive Unspecified Unspecified Unspecified Unspecified 43 soils, does not include access issues) Comments:

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29	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	38	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Cut next YOE, allo	w stand to put on a little more gr	owth a	nd will keep a chunk of aspen	for next YOE.		
30	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Long term retention	n of Hopkins burn area. Trees w	ill be le	ft in these pockets to give sor	ne structure and refuge	in this burn area.	
31	Unavailable	3A: Conservation values incompatible with harvest at this time	550	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: This is the Hopkins	s creek SCA prescribed burn are	ea that	is being managed for wildlife.			
32	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Cut next YOE, allo	w stand to put on a little more gr	owth a	nd will keep a chunk of aspen	for next YOE.		
33	Unavailable	5E: Long-Term Retention	2	3J: Water quality/BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: Combination of lon	g term retention for aspen cut to	south	and river buffer.			
36	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:	n for stand 50.					

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37	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
38	Unavailable	2F: Too steep	3	3J: Water quality/BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:		_				
39	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: _TR for stand 43						
58	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Cadillac Mgt. Unit Compartment: 119
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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
Hopkins Creek Comments	Habitat Area or Habitat Corridor	Other Habitat Area	SCA	575

Year of Entry: 2027 Stand **Level 4 Cover Type** Size Density Acres Stand Age BA Range **Managed Site General Comments** 6128 - Lowland Coniferous, Mixed Sawtimber Well 21.2 150 81-110 N/A Lowland conifer dominated by cedar along the Manistee River. Boat 1 Deciduous access managed site in the southeast corner of stand. Many seeps running in stand. DBH Age % Cover Size Class **Sub-Canopy Species** Size **Canopy Species** Density Avg. Height Quaking Aspen 10 8 White Oak 10 - 20 feet 10 - 20 feet Low Northern White Cedar 41 11 150 Balsam Fir Low < 5 feet < 5 feet 5 8 < 5 feet Hemlock White Pine Low < 5 feet 5 8 Balsam Poplar Seedling Quaking Aspen Low 5 - 10 feet 5 - 10 feet 2 15 White Pine Red Maple Medium 5 - 10 feet 5 - 10 feet Balsam Fir 30 8 5 12 Basswood 2 15 Sugar Maple 2 4110 - Sugar Maple Association Sawtimber Well 12.3 112 51-80 N/A Side slope of hardwood, very steep terrain. Private corn field to west and lowland cedar swamp to east. Too steep to manage **Canopy Species** % Cover Size Class **DBH Age Sub-Canopy Species** Density Avg. Height Size commercially. Sugar Maple 69 10 112 Sugar Maple Low Variable Variable Red Maple 5 12 Ironwood Variable Variable Medium 20 13 Beech Basswood Medium Variable Variable White Pine 2 15 Beech 2 13 2 10 Hemlock 6119 - Mixed Lowland Deciduous Forest Poletimber Well N/A 3.7 99 81-110 Floodplain of lowland hardwood and aspen. 3 **Canopy Species** % Cover Size Class **DBH Age** Hemlock 5 6 Seedling White Ash 55 8 99 8 Quaking Aspen 35 5 5 Balsam Fir Seedling 6117 - Lowland Deciduous, Mixed 13.0 112 51-80 N/A Sawtimber Well Lowland land locked sliver of lowland hardwood and conifer along 4 Coniferous

Density

Medium

Avg. Height

Variable

Size

Variable

Sub-Canopy Species

Balsam Fir

Canopy Species

Red Maple

Quaking Aspen

Balsam Fir

White Ash

Northern White Cedar

Hemlock

% Cover Size Class

Seedling

10

10

5

50

15

10

DBH Age

10

10

8

12

10

8

112

Compartment: 119

Report 7 - Stands Compartment: 119 Cadillac Mgt. Unit Year of Entry: 2027 Stand **Level 4 Cover Type** Size Density Acres Stand Age BA Range **Managed Site General Comments** 6128 - Lowland Coniferous, Mixed 36.0 109 51-80 N/A Lowland conifer complex with pockets of upland aspen and a few 5 Deciduous openings along the river. Road goes all the way along west border of stand. Old consumers lease cabin has been removed in 2013. % Cover Size Class **DBH Age** Size **Canopy Species Sub-Canopy Species Density** Avg. Height Balsam Fir 30 8 Black Ash 5 - 10 feet 5 - 10 feet Seedling Iow Quaking Aspen 5 10 Red Maple Low < 5 feet < 5 feet Red Maple 8 13 Tag Alder Low 5 - 10 feet 5 - 10 feet 3 9 Paper Birch Balsam Poplar Low 5 - 10 feet 5 - 10 feet 2 12 Red Pine White Pine Low 5 - 10 feet 5 - 10 feet Northern White Cedar 32 11 109 9 12 Hemlock Balsam Poplar 3 8 5 12 White Pine 3 9 Black Cherry 500 - Water 6 Unspecifed 15.1 No Manistee River. 8.9 4130 - Aspen 15 **Immature** N/A Stand was final harvested in 2010 with green ringed trees left as well 7 as any cedar and hemlock. Came back well to aspen. **Canopy Species** % Cover Size Class **DBH Age** Red Maple 8 15 Log 5 12 White Pine 2 8 Northern White Cedar Seedling 2 15 Quaking Aspen 85 Log 6120 - Lowland Cedar N/A 8 Poletimber Medium 6.3 112 51-80 Stand was cut in 2010, with all cedar and hemlock left as well as some green marked trees. Cedar in hemlock with aspen in understory.

N/A

N/A

Size

< 5 feet

< 5 feet

< 5 feet

Size

< 5 feet

Avg. Height

< 5 feet

< 5 feet

< 5 feet

Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canopy Species	Density	Avg. Height	Size
Northern White Cedar	60		8	112	Quaking Aspen	Full	5 - 10 feet	5 - 10 feet
Hemlock	40		8		Ash (spp.)	Low	5 - 10 feet	5 - 10 feet
					Balsam Poplar	Low	5 - 10 feet	5 - 10 feet
					Balsam Fir	Low	< 5 feet	< 5 feet

5.7

70

Sub-Canopy Species

Red Pine

Balsam Fir

Beech

111-140

Density

Medium

Low

Trace

Stand third row thinned two entrys ago and second thinned in 2010. Stand thinned again in summer of 2018. Good quality stand. Average BA 120-130. Moderate amount of red pine seedling in understory.

10	42110 - Plan	ted Red F	Pine	Poletimb	er Well	2.6	51	171-200	N/A
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	Density	Avg. Height
	Red Maple	10		15		Bal	lsam Fir	Medium	< 5 feet
	White Pine	5	Seedling	7					
	Red Pine	85	Seedling	7	51				

DBH Age

12 70

> Small never thinned red pine plantation overtopped by maple in spots. Red pine is dense at approximately 210-220 BA. This stand is planted however planting records do not exist.

Canopy Species

Red Pine

9

42110 - Planted Red Pine

100

% Cover Size Class

Cadillac Mgt. Unit Report 7 - Stands

Stand	d Level 4 Co	over Type	5	Size De	nsity	Acres Stand Age	BA Range	Managed S	Site	General Comments
11	4111 - S.Maple, Ha	ard Mast As	ssociation			5.1 105	81-110	N/A	A	Stand was marked thinning in 2010. Small sliver of hardwood. Dece
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Speci	es Density	Avg. Height	Size	quality hardwoods with a high quantity of sugar maple. Sugar maple regen is low to moderate, though its experiencing browse.
	Yellow Birch	5		11		Balsam Fir	Medium	10 - 20 feet	10 - 20 feet	regen to low to medicate, alough to experiencing provide.
	Sugar Maple	60		12	105	Ironwood	Medium	10 - 20 feet	10 - 20 feet	
	Red Maple	20		11		Sugar Maple	High	< 5 feet	< 5 feet	
	Beech	10		12		Beech	Low	< 5 feet	< 5 feet	
	Hemlock	5		12						
12	4130	- Aspen				4.8 59	81-110	N/A	A	Small stand of pole- log aspen with red maple, low quantity of sugar
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Speci	es Density	Avg. Height	Size	maples log and log to x-log white pine.
	White Pine	5		12		Balsam Fir	Medium	5 - 10 feet	5 - 10 feet	
	Sugar Maple	5		12		White Pine	Medium	< 5 feet	< 5 feet	
	Red Maple	10		12						-
	Bigtooth Aspen	80		8	59					
13	4130	- Aspen				3.0 15	Immature	N//	A	Stand was final harvested in 2010, with all cedar and hemlock left.
	Canopy Species	% Cover	Size Class	DBH	Age					
	Quaking Aspen	93	Log	2	15					
	White Pine	2		12						
	Hemlock	5		8						
14	6128 - Lowland Dec	Coniferous iduous	Mixed			25.3 112	171-200	N//	A	Variable lowland conifer stand although pockets of aspen and red maple scattered throughout as well. Very mixed stand. Low wet
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Speci	es Density	Avg. Height	Size	pockets throughout.
	Quaking Aspen	22		8	60	Red Maple	Low	5 - 10 feet	5 - 10 feet	
	Red Pine	2		15		Balsam Fir	Medium	Variable	Variable	
	Balsam Fir	18		7		Ash (spp.)	Low	5 - 10 feet	5 - 10 feet	
	White Pine	2		15						-
No	orthern White Cedar	25		8	112					
	Hemlock	20		8						
	Red Maple	8		9						
	Paper Birch	3		9						
15	4130	- Aspen				4.1 62	81-110	N//	4	Small pocket of mature aspen and mixed conifer. Aspen to east was to take the conifer of the con
	Canopy Species	% Cover	Size Class		Age	Sub-Canopy Speci	es Density	Avg. Height	Size	Cut last TOE.
	Red Pine	2		14		Bigtooth Aspen	Low	5 - 10 feet	5 - 10 feet	
	White Pine	2		15		Balsam Fir	Medium	Variable	Variable	
	David Mariala									
	Red Maple	10		9						

Stand	d Level 4 Co	over Type		Size Density Acres Stand Age BA Range Managed Site		ite	General Comments				
16	4130	- Aspen				36.6	15	Immature	N/A	٨	Stand was final harvested in 2010, with all cedar and hemlock left as
	Canopy Species	% Cover	Size Class	DBH	Age						well as some green marked trees. Buffer strip of mature aspen and pine left along Lucas road.
	Bigtooth Aspen	83	Log	2	15						pine for along Educational.
	White Pine	2		15							
	Black Cherry	5	Log	1							
No	orthern White Cedar	5	Seedling	5							
	Hemlock	5	Seedling	7							
17	6225	i - Bog		Unspe	cifed	1.3			No	1	
18	6129 - Mixed Conife	erous Lowl	and Forest Po	oletimbe	Medium	8.7	109	1-50	N/A	١	Stand was cut in 2010, with all cedar and hemlock left as well as
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	some green marked trees. Two aged stand with hemlock and cedar scattered in over story and aspen flush from 2010 sale in understory.
No	orthern White Cedar	30	Seedling	7		Re	ed Maple	Low	>20 feet	>20 feet	scattered in over story and aspert hash from 2010 sale in understory.
	Hemlock	70		8	109	Quak	king Aspen	Full	>20 feet	>20 feet	
19	4131 - A	spen, Oak		Sapling	Well	3.6	30	Immature	N/A	١	Small aspen stand with mix of oak. Some larger oak on the edges
	Canopy Species	% Cover	Size Class	DBH	Age						were left.
	Quaking Aspen	80	Log	3	30						
	White Oak	20	Log	2							
20	42110 - Plar	nted Red F	Pine	Sawtimb	er Well	9.5	69	111-140	N/A	٨	Good quality stand that can mature one more inventory cycle to add
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	girth and volume. Stand was 3rd row thinned between 1989-92, and was marked second thinning in 2010. Third entry thinning took
	Red Pine	100		12	69	Re	d Maple	Low	< 5 feet	< 5 feet	place in summer of 2018.
						Ва	lsam Fir	Low	5 - 10 feet	5 - 10 feet	
						E	Beech	Trace	< 5 feet	< 5 feet	
						Wh	nite Pine	Low	5 - 10 feet	5 - 10 feet	
						Blac	ck Cherry	Low	5 - 10 feet	5 - 10 feet	
						Re	ed Pine	Low	< 5 feet	< 5 feet	
21	4112 - Maple, Beec	h, Cherry /	Association			6.9	62	81-110	N/A	٨	Stand is composed heavily of red maple clumps and black cherry.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	Beech is present but falling out. A drainage runs along boundary on the southern border. Access for harvest of the stand will be from the
	Red Maple	60	Seedling	8	62	Re	d Maple	Low	Variable	Variable	north.
	Red Pine	3	Seedling	8		Ва	lsam Fir	Medium	Variable	Variable	
	Balsam Fir	5	Seedling	5		Elr	m (Spp.)	Trace	>20 feet	>20 feet	
	White Pine	3		24		Iro	onwood	Low	10 - 20 feet	10 - 20 feet	
	White Pine	5	Seedling	5							
	Black Cherry	19	Seedling	7	62						
	Beech	2		14							
	Hemlock	3		17							

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10 65

8

Stand	Level 4 Co	over Type			Site	General Comments					
22	4191 - Mixed Upla Co	and Decidu	ous with			8.2	62	81-110	N/A	4	Stand is composed of red maple, black cherry, white pine, red pine, aspen. The eastern half of the stand is dominated by red maple with
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	cherry and beech present and the occasional red pine. Moving west the stand becomes more open, pine shows a larger presents and
	Red Pine	5	Seedling	8		Iro	onwood	Low	10 - 20 feet	10 - 20 feet	aspen fingers work in from adjacent stands. Overall A relatively mixed
	Red Maple	35		8	62	Re	ed Maple	Low	Variable	Variable	stands of conifers and deciduous. The stand is delineated by adjacent
	Bigtooth Aspen	20		9		Wh	hite Pine	Low	5 - 10 feet	5 - 10 feet	geographic features and cover types.
	White Pine	5	Seedling	5		Ва	Isam Fir	Medium	Variable	Variable	
	White Pine	20		24				'	1	1	-
23	4130	- Aspen	ı	Poletimb	er Well	1.9	50	81-110	N/A	4	Small stand of pole aspen.
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Maple	5	Sapling	7							
	Quaking Aspen	95	Sapling	7	50						
24	6128 - Lowland Dec	Coniferous, iduous	Mixed	Sawtimb	er Well	8.1	112	81-110	N/A	A	Two separate lowland stands off the bluff and within the natural rivers buffers. Cedar along the edges of the river.
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Maple	35		11							
	Balsam Fir	5		7							
No	rthern White Cedar	40		8	112						
	Hemlock	10		12							
	Basswood	5		12							
	White Pine	5		10							
26	429 - Mixed L	Jpland Con	ifers I	Poletimb	er Well	13.4	65	81-110	N/A	4	Variable mixed upland stand with red pine, white pine, red maple, oak
-	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	and aspen. Red pine is planted in rows in low to moderate density. However no planting record exists for this section (PLSS) the land was
	Balsam Fir	5	Seedling	8		WI	hite Oak	Low	10 - 20 feet	10 - 20 feet	purchased from consumers in 1997. The stands understory stocking
	Red Pine	35		8	65	Ва	ılsam Fir	Low	< 5 feet	< 5 feet	level is low with minimal regeneration present. The north edge of
	Red Oak	5		12							the stand is the crest of a bluff sloping steeply to the Manistee River. The south west edge of the stand is deeply cut ravine feeding the
	Quaking Aspen	10		8							river.
	White Pine	20		12							
	Black Cherry	5		9							

Red Maple

Paper Birch

15

5

Seedling

Stand	d Level 4 C	over Type			ite	General Comments					
27	42210 - Na	tural Red F	Pine S	awtimbe	Medium	5.5	83	51-80	N/A	\	Natural red pine stand on isolated upland pocket. Variable size class
	Canopy Species	% Cover	Size Class	DBH	Age						pine but mostly log red pine. Open to west end of stand.
	Red Maple	10		11							
	Red Pine	70		15	83						
	White Oak	5		15							
	Balsam Fir	8		7							
	White Pine	5		14							
	Black Cherry	2	Seedling	6							
28	6128 - Lowland Dec	Coniferous iduous	s, Mixed	Poletimb	er Well	43.4	75	141-170	N/A		Large lowland conifer complex, with some lowland hardwood and aspen on the north and west edges.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	8	Seedling	6		Re	d Maple	Low	Variable	Variable	
	Balsam Fir	20	Seedling	6		Ва	lsam Fir	Medium	Variable	Variable	
	Black Spruce	20	Seedling	6							_
No	orthern White Cedar	30	Seedling	7	75						
	Red Maple	10	Seedling	6							
	Paper Birch	10	Seedling	6							
	White Pine	2		15							
29	6128 - Lowland Dec	Coniferous iduous	s, Mixed	Poletimb	er Well	41.5	113	51-80	N/A		Cedar mixed with balsam red maple, black spruce, and tamarack to the west. Black ash fall out with cedar to the east. Small upland
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	pockets with Aspen are present as well.
	Red Maple	10		12		Re	d Maple	Low	5 - 10 feet	5 - 10 feet	
	White Pine	5		12		Bla	ack Ash	Low	< 5 feet	< 5 feet	
	Black Spruce	10		8		Ва	lsam Fir	Low	5 - 10 feet	5 - 10 feet	
No	orthern White Cedar	35		9	113				•	•	
	Balsam Fir	20	Seedling	8							
	Tamarack	10		9							
	Quaking Aspen	10		9							
30	6118 - Lowland D	eciduous v	vith Cedar			10.6	15	1-50	N/A	1	Stand was habitat cut by wildlife division in winter of 2010. Stand was cut and left, timber was not utilized. Cedar was left. FTP# W63-689.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Cedar is patchy with occasional pockets being wide open with aspen
	Black Ash	5	Sapling	5		As	sh (spp.)	Medium	< 5 feet	< 5 feet	and maple regeneration.
	Quaking Aspen	25	Log	2	15	Re	d Maple	Low	< 5 feet	< 5 feet	

5 - 10 feet

Low

5 - 10 feet

Northern White Cedar

Hemlock

Red Maple

20

10

40

8 110

8

3

15

Log

Tag Alder

Compartment: 119

tand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed Si	te	General Comments
32	4130	- Aspen		Sapling	Well	17.1	8	Immature	N/A		Good quality aspen on south side of Lucas road. Small sliver of red
	Canopy Species	% Cover	Size Class	DBH	Age						pine in northwest border. Stand is two level topography Also steep creek drainage splits stand north and south. STAND was final
	White Pine	5	Sapling	5							harvested in 2018.
	Red Pine	2	Log	1							
	Red Oak	2	Log	1							
	Balsam Fir	2	Log	4							
	Red Maple	5	Log	1							
	Bigtooth Aspen	84	Log	1	8						
33	4130	- Aspen	;	Sapling N	/ledium	9.2	8	Immature	N/A		Stand was final harvested in 2018, short wood operation.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	White Oak	2		15		Wit	ch Hazel	Medium	5 - 10 feet	5 - 10 feet	
	Balsam Fir	5	Log	1							_
	Red Oak	8	Log	1							
	Red Maple	15	Log	1							
	Bigtooth Aspen	70	Log	1	8						
34	6128 - Lowland Dec	Coniferous, iduous	Mixed	Sawtimb	er Well	68.1	112	51-80	N/A		Transitions from a white pine stand upslope into a mixed cedar, balsam, black ash etc. Q-type near river. All of it is off the slope and
	Canopy Species	% Cover	Size Class	DBH	Age						within the Manistee river buffer. Upslope portions of the stand are upland with all bottom slope portions being lowland near river.
	Quaking Aspen	5		12							upland with all bottom slope portions being lowland near river.
	Red Maple	10		12							
	Balsam Fir	5	Seedling	6							
	Black Ash	10	Seedling	8							
	White Pine	25		10							
Noi	rthern White Cedar	40		10	112						
35	710 - S	and, Soil		Unspe	cifed	2.2			No		Mantistee overlook. Sand bank all the way up to bluff. Appears to popular swimming spot. Road access right to top of bluff.
36	4130	- Aspen		Sapling	Well	2.1	17	Immature	N/A		Stand was final harvested in 2008.
	Canopy Species	% Cover	Size Class	DBH	Age						
	Bigtooth Aspen	100	Log	2	17						
38	4199 - Other Mixe	d Upland D	eciduous I	Poletimb	er Well	85.4	63	51-80	N/A		Variable mostly pole aspen stand with pockets of larger diameter lo
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	aspen. Low to medium quality aspen for the most part. Large stand with mostly level terrain. Stump sprouted maple. Converting to
	White Pine	10		8		WI	nite Pine	Medium	Variable	Variable	white oak and white pine.
	White Oak	18	Seedling	5		W	hite Oak	Low	5 - 10 feet	5 - 10 feet	
	Red Oak	2	_	15							-
	Red Maple	35		9	63						
	Bigtooth Aspen	35		9	63						

Stand	d Level 4 C	over Type		Size Density	Acres	Stand Age	BA Range	Managed Si	ite	General Comments
39	4130	- Aspen		Sapling Well	7.4	17	Immature	N/A		Stand was final harvested in 2008, with all oak left.
	Canopy Species	% Cover	Size Class	DBH Age						
	Bigtooth Aspen	95	Log	1 17						
	Red Oak	5		8						
40	42110 - Pla	nted Red P	ine	Sawtimber Well	28.5	68	111-140	N/A		Stand was marked second thinning in 2008 and was third row thinned some years before that. Good quality and height for the most part.
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	Scattered pockets of red maple.
	Red Pine	100		12 68	Re	ed Maple	Medium	5 - 10 feet	5 - 10 feet	STAND thinned again in 2018, marked.
41	4130	- Aspen		Sapling Well	6.8	15	Immature	N/A		Stand was final harvested in 2010, with all white pine under 4 inches
	Canopy Species	% Cover	Size Class	DBH Age						dbh left at a time. Came back well to aspen and red maple.
	Red Maple	20	Log	2 15						
	White Pine	15	Sapling	5						
	Red Oak	5	Log	2						
	Quaking Aspen	60	Log	2 15						
42	4130	- Aspen		Poletimber Well	2.3	31	Immature	N/A		Young pole aspen stand, with a few pine mixed in.
	Canopy Species	% Cover	Size Class	DBH Age						
	Red Pine	5		8						
	Bigtooth Aspen	95	Sapling	5 31						
43	4130	- Aspen		Sapling Well	12.9	8	Immature	N/A		Stand was final harvested in 2018, small island retention left as well
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	as small pine.
	Red Maple	5	Log	1	W	hite Pine	Medium	Variable	Variable	
	Quaking Aspen	80	Log	1 8						
	White Pine	15	Pole	4						
44	42210 - Nat	ural Red Pi	ine	Sawtimber Well	21.1	85	111-140	N/A		Nice natural red pine stand with pockets of white pine as well. Stand
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	was marked thinning in 2007, with all maple, aspen, jack pine, and fir spec cut. Pockets of aspen regeneration were created from this cut
	White Pine	15		13	Re	ed Maple	Low	< 5 feet	< 5 feet	with limited understory under the heavy pine cover.
	Red Pine	85		14 85	Ası	oen (spp.)	Medium	5 - 10 feet	5 - 10 feet	
					W	hite Pine	Low	5 - 10 feet	5 - 10 feet	
45	4130	- Aspen		Sapling Well	1.0	29	Immature	N/A		Small clone of solid aspen.
	Canopy Species		Size Class							
	Bigtooth Aspen	100	Sapling	5 29						
47		- Aspen		Sapling Well	3.7	22	Immature	N/A	_	Two separate aspen stands, with some oak and white pine mixed in. Nearly blend in as a result of all the recent cutting in this area.
	Canopy Species		Size Class							. 153, Siena in as a result of all the result outling in the area.
	Bigtooth Aspen	80	Log	2 22						
	White Oak	5	Log	1						
	Red Oak	10	Seedling	8						
	White Pine	5	Log	1						

									1001 01 21111 11 2021
Stand	Level 4 C	over Type	Size Density	Acres	Stand Age	BA Range	Managed Si	te	General Comments
49	42110 - Pla	nted Red Pine % Cover Size C	Sawtimber Well	30.1	69	111-140	N/A		Stand was third row thinned in 2008, all other trees besides oak mixed in the plantation were also cut at this time. Stand thinned again in
	Red Pine	100	11 69						2018, marked job.
	1100111110	100	11 00						
50	42110 - Pla	nted Red Pine	Sapling Well	103.5	4	Immature	N/A		9/14/2020 Stand Site Prep Sprayed with Weyerhaueser Mix 5/1/2021- Stand was planted.
	Canopy Species	% Cover Size C							Fall 2021- Stand had 1 year regeneration survey. Stand is Fully
	Red Pine	100 Lo	og 1 4						stocked and FTG.
									Stand was third row thinned in 2010. Winter Storm in 2012 causes significant snow load damage and resulted in a small percentage of the plantation being damaged. Pine short and small in diameter for age, likely the result of the sandy limited soils. Very large stand. STAND was final harvested in summer 2018 and was chipped. 2019 site was trenched.
51	42200 - Natu	ıral White Pine	Sawtimber Medium	51.3	95	1-50	N/A		Stand was thinned in 2010, with all aspen, maple, and jack pine cut as
	Canopy Species	% Cover Size C	lass DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	well. Was part of sale 630040801. White pine over story with full aspen and maple flush of growth in understory from 2010 cut.
	White Pine	95	11 95	Re	ed Maple	Low	5 - 10 feet	5 - 10 feet	appear and maple made of grown in anadiotory non-zone out.
	Red Pine	5	10	Asp	pen (spp.)	Full	10 - 20 feet	10 - 20 feet	
				Ва	alsam Fir	Low	< 5 feet	< 5 feet	
52	4130	- Aspen	Sapling Well	12.5	15	Immature	N/A		Stand was final harvested with reserves in 2010. All cedar, oak, hemlock and cherry were left along with white pine under 10 inches
	Canopy Species	% Cover Size C	lass DBH Age						dbh. Sale continues north into Kalkaska unit, was all part of the same
	Red Maple	5 Lo	0						sale. Continue to manage together in future rotation.
	Quaking Aspen	80 Lo	-						
	White Pine	15	10						
53	42110 - Pla	nted Red Pine	Sawtimber Well	1.7	65	111-140	N/A		Stand was 3rd row thin and cut all trees <6" dbh in remaining two rows. T-sale should include two stands to the north in Kalkaska Unit.
	Canopy Species	% Cover Size C	lass DBH Age						Portion of stand was in Kalkaska unit, manage our of the Manton
	Red Pine	100	11 65						office. East part of stand has a dead pocket that appears to be
									weakening the trees around it.
54	4131 - A	spen, Oak	Sapling Well	6.5	22	Immature	N/A		Young aspen with some oak mixed in. In two different locations. Almost blends in with recent cuts in the last 5 years.
	Canopy Species	% Cover Size C							All nost blonds in with recent outs in the last o yours.
	Bigtooth Aspen	70 Lc	-						
	White Pine	10 Lo	0						
	White Oak	20 Po	ole 3						
55	310 - Herbac	eous Openland	Unspecifed	0.2					Above ground oil and gas in fenced area.

Stand	Level 4 C	over Type		Size Density	Acres	Stand Age B	A Range	Managed S	Site	General Comments
58	6122 - Bl	ack Spruce	· I	Poletimber Well	5.4	95	51-80	N/A	A	Small 4 acre and 2 acre isolated pockets of spruce. Has F1, S1, alder
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	understory.
	Red Maple	5		12	Bla	ck Spruce	Low	Variable	Variable	
	Black Spruce	80	Seedling	8 95	Ва	alsam Fir	Medium	Variable	Variable	
	Balsam Fir	15	Seedling	6		Alder	Low	5 - 10 feet	5 - 10 feet	
59	6124 - Lowla	and Spruce	-Fir I	Poletimber Well	14.8	84	51-80	N/A	A	Stand is one small part of a larger swamp complex that goes into the
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	adjacent compartment and into Kalkaska county. Too wet and isolated for commercial management.
	Red Maple	10	Seedling	6	Re	ed Maple	Medium	Variable	Variable	Tor commorat management.
	Balsam Fir	20	Seedling	5	Ва	alsam Fir	Medium	< 5 feet	< 5 feet	
	Balsam Poplar	10	Seedling	5						
	White Pine	2		16						
	Black Ash	3	Seedling	5						
	Black Spruce	30	Seedling	6 84						
No	rthern White Cedar	25	-	5						
60	429 - Mixed l	Jpland Con	ifers	Sawtimber Well	23.6	105	51-80	N/A	A	Stand contains the upland portions of the bog and a portion bordering
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	Ham Crk. The upland portions of the bog contain a mix of red maple, balsam, and aspen with scattered oak. Beaver activity has removed
	Quaking Aspen	10	Seedling	6	W	hite Pine	Medium	Variable	Variable	some of the aspen component, but a few areas are regenerating. The
	Red Oak	5	Seedling	8	Ва	alsam Fir	Medium	Variable	Variable	portion of the stand to the north contains a heavier white pine
	White Spruce	10	Seedling	6						component. White pine component concentrated in northwest. Small creek cuts access off to southern half of stand.
	Red Maple	15	Seedling	7						order data docess on to southern half of stand.
	Balsam Fir	25	Seedling	6						
	White Pine	35		17 105						
61	6120 - Lo	wland Ceda	ar Po	letimber Medium	7.0	109	51-80	N/A	A	Northern part of stand contain some upland islands of a mix of fir and
	Canopy Species	% Cover	Size Class	DBH Age						red maple. Mostly sparsely grown stagnant cedar on the south edge mixed with birch. No accessible with for commercial harvest.
	Red Maple	30		9						
No	rthern White Cedar	55	Seedling	8 109						
	Balsam Fir	15	Seedling	5						
62	429 - Mixed l	Jpland Con	ifers Sa	wtimber Medium	2.8	105	51-80	N/A	A	FMD: contains scattered supercanopy red pine, log sized red maple,
	Canopy Species	% Cover	Size Class	DBH Age						and pockets of thick balsam poles. Isolated stand.
	Red Maple	35		12 105						
	Balsam Fir	35	Seedling	6						
	Red Pine	30		12						
63	622 - Lov	vland Shrub)	Unspecifed	177.3			No)	Large beaver flooding with scattered pockets of dead cedar and lowland grasses. Creek runs through stand

lowland grasses. Creek runs through stand.

Compartment: 119

tand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
64	6123 - L	owland Fir	P	oletimb		5.8	81	81-110	N/A		Isolated lowland conifer stands with some red maple. Few open spots in stand and wet but still higher then stands all around.
	Canopy Species	% Cover	Size Class	DBH	Age						in stand and wet but still higher then stands all around.
	Black Spruce	30	Seedling	7	81						
	Red Maple	10		9							
	Balsam Fir	60	Seedling	8	81						
66	6128 - Lowland Dec	Coniferous iduous	, Mixed P	oletimb	er Well	138.5	105	111-140	N/A		FMD: Large conifer swamp complex. Has a few more upland portions but on the whole is a very wet hummocky stand. Has variable density
	Canopy Species	% Cover	Size Class	DBH	Age						and has a mix of swamp aspen and balsam toward the northeast quarter that was cut between 1944-1948.
	Quaking Aspen	10		9							quarter that was out between 1944-1946.
	Black Ash	5	Sapling	6							
	Black Spruce	10	Seedling	6							
No	rthern White Cedar	40		9	105						
	Hemlock	10	Seedling	8							
	Balsam Fir	10		9							
	White Pine	5		15							
	Red Maple	5		12							
	Canopy Species Quaking Aspen	% Cover	Size Class	DBH	Age 62		nopy Specie nite Pine	Medium	Avg. Height Variable	Size Variable	canopy white pine scattered in stand as well. Old opening filling in in north portion of stand, appears to be from old landing.
	Red Pine	2		12	02		d Maple	Medium	Variable	Variable	
	White Pine	10		12			aap.o		7 4114210	7 0.100.0	
	White Pine	5		18							
	Black Cherry	5	Seedling	8							
	Balsam Fir	8	Seedling	6							
	Red Maple	30	<u> </u>	10							
68	42210 - Na	tural Red P	ine Sav	wtimber	Medium	1 4.8	75	51-80	N/A	\	Small natural red pine stand. Stand thinned in 2007, with all aspen,
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	maple, jack pine, and fir spec cut. Currently scattered log red pine wit mix of aspen, red maple, fir and white pine in understory.
	White Pine	5		11			d Maple	Medium	10 - 20 feet	10 - 20 feet	Thin of aspen, red maple, in and white pine in understory.
	Red Pine	90		12	75	Ва	lsam Fir	Low	5 - 10 feet	5 - 10 feet	
	Red Oak	5		15		Asp	en (spp.)	Medium	10 - 20 feet	10 - 20 feet	
						•	nite Pine	Low	5 - 10 feet	5 - 10 feet	
69	4133 - Aspe	en, Mixed P	Pine Sa	apling N	/ledium	14.5	8	Immature	N/A		Stand was final harvested in 2018. Was low quality aspen. Small pine
	Canopy Species	% Cover	Size Class	DBH	Age						was worked around where possible.
	White Pine	20	Log	2							

Compartment: 119

Stand	d Level 4 C	over Type		Size De	ensity	Acres	Stand Age E	BA Range	Managed S	ite	General Comments
70	4130	- Aspen		Saplin	g Well	6.5	31	Immature	N/A	L	Stand was final harvested in 1994. Came back well to aspen.
	Canopy Species	% Cover	Size Class	DBł	l Age						
	White Pine	5		15							
	Quaking Aspen	95	Pole	4	31						
71	4130	- Aspen	Sa	wtimbe	r Medium	12.8	55	51-80	N/A		Stand of lower quality aspen which becomes more of a lowland
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Can	opy Species	Density	Avg. Height	Size	hardwood stand on east border of stand.
	Red Maple	10		10		Red	l Maple	High	5 - 10 feet	5 - 10 feet	
	Red Oak	5	Seedling	8		Whi	te Pine	Low	Variable	Variable	
	Quaking Aspen	70		10	55	Bals	sam Fir	Low	< 5 feet	< 5 feet	
	Balsam Fir	10	Seedling	6							-
	Red Pine	3		8							
	White Pine	2		18							
73	4130	- Aspen		Saplin	g Well	26.0	17	Immature	N/A		Stand was final harvested in 2008, with all oak left. Came back well to
	Canopy Species	% Cover	Size Class	DBł	l Age						aspen, with some oak mixed in.
	Bigtooth Aspen	93	Log	1	17						
	Red Oak	5	Log	1	17						
	Red Oak	2		15							
74	42210 - Na	tural Red P	ine S	Sawtimb	er Well	13.7	96	81-110	N/A		Stand of natural red pine, with some aspen and white pine filling in
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Can	opy Species	Density	Avg. Height	Size	between the red pine. Hummocky ground with leather leaf.
	Quaking Aspen	20	Seedling	7		Cher	ry (spp.)	Medium	Variable	Variable	
	White Pine	9		12		Whi	te Pine	Low	Variable	Variable	
	Red Pine	65		13	96						
	Balsam Fir	6	Seedling	5							
76	4133 - Asp	en, Mixed P	ine	Sapling	g Poor	10.5	12	1-50	N/A		Stand was final harvested in 2014, with all white pine, red pine and
	Canopy Species	% Cover	Size Class	DBH	l Age						cedar left. Chipping operation, Heavy deer browse has set back the maple and aspen regeneration. May be a low stocked stand as a
	Red Maple	10		2	12						result of the deer pressure. (Likely a result of small size and proximity
	Red Pine	15		14							to swamp) Log white and red pine scattered in stand.

White Pine

Quaking Aspen

20

55

Log

15 85

2 12

Compartment: 119

Cadillac Mgt. Unit Report 7 – Stands Compartment: 119
Year of Entry: 2027

Stand	d Level 4 Co	Level 4 Cover Type Size Density		Acres Stand Age BA Range Managed Site					General Comments		
79	6124 - Lowla	and Spruce	-Fir Po	letimber	Medium	n 20.1	78	1-50	N/A		Lowland conifer complex with open flooded pockets of just alder.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	5	Seedling	7		Ta	ng Alder	Medium	5 - 10 feet	5 - 10 feet	
	White Pine	5		15							
	Red Maple	15	Seedling	6							
	Paper Birch	1	Seedling	7							
	Balsam Fir	40	Sapling	6	78						
	Black Spruce	10	Seedling	5							
No	orthern White Cedar	24	Seedling	6							
81	42290 - Natu	ral Mixed F	Pine S	Sawtimb	er Well	2.8	86	81-110	N/A		Good quality jack pine pocket with mix of white pine, red maple and
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	red pine.
	Red Maple	5		10		Wh	nite Pine	Low	Variable	Variable	
	Bigtooth Aspen	5	Seedling	7		Ja	ck Pine	Low	Variable	Variable	
	Red Pine	5		13							
	White Pine	45		11	86						
	Jack Pine	40		12	75						
84	6239 - Mixed Emergent W 4130 - Aspen		tland Unspecifed Poletimber Mediur		2.1			No			
86	4130	- Aspen	Po	letimber	Medium	n 22.1	59	51-80	N/A		
86	4130 - Canopy Species		Po Size Class		Medium Age		59	51-80 Density	N/A Avg. Height	Size	
86						Sub-Ca					
86	Canopy Species	% Cover		DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
86	Canopy Species Quaking Aspen	% Cover 70		DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
86	Canopy Species Quaking Aspen White Pine	% Cover 70 8		DBH 9 9	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Low quality rough looking aspen with some hardwood and pine mixe in. Two track goes through both stand. Low density and quality asper
86	Canopy Species Quaking Aspen White Pine Red Pine	% Cover 70 8 4 18	Size Class	DBH 9 9 8	Age 59	Sub-Ca	nopy Species	Density	Avg. Height	Size Variable	
	Canopy Species Quaking Aspen White Pine Red Pine Red Maple	% Cover 70 8 4 18 eous OpenI	Size Class	9 9 8 8 Unspe	Age 59	Sub-Car Wh	nopy Species	Density	Avg. Height Variable	Size Variable	in. Two track goes through both stand. Low density and quality aspetulity Line. Wet in pockets. Stand was modified shelter wood in 1999, with most of the red maple.
88	Canopy Species Quaking Aspen White Pine Red Pine Red Maple 310 - Herbace	% Cover	Size Class	DBH 9 9 8 8 8 Unspe	Age 59	29.9 198.0	nopy Species nite Pine	Density Low	Avg. Height Variable No	Size Variable	in. Two track goes through both stand. Low density and quality aspet Utility Line. Wet in pockets. Stand was modified shelter wood in 1999, with most of the red maple and aspen cut at that time and what appears to have been most of the standard control of the red maple and aspen cut at that time and what appears to have been most of the red maple and aspen cut at that time and what appears to have been most of the red maple and aspen cut at the standard control of the red maple and the standard control of the red maple and the standard control of the stan
88	Canopy Species Quaking Aspen White Pine Red Pine Red Maple 310 - Herbace	% Cover	Size Class land n Oak Sa	DBH 9 9 8 8 8 Unspe	Age 59 cifed Medium	29.9 1 198.0 Sub-Ca	nopy Species nite Pine	Density Low 1-50	Avg. Height Variable No	Size Variable	Utility Line. Wet in pockets. Stand was modified shelter wood in 1999, with most of the red mapl and aspen cut at that time and what appears to have been most of tred oak. Mostly open grown white oak in the over story. Open grown
88	Canopy Species Quaking Aspen White Pine Red Pine Red Maple 310 - Herbace 4126 - White, E	% Cover	Size Class land n Oak Sa	DBH 9 9 8 8 Unspe	Age 59 cifed Medium	29.9 1 198.0 Sub-Car	nopy Species nite Pine 112 nopy Species	Density Low 1-50 Density	Avg. Height Variable No N/A Avg. Height	Size Variable Size	Utility Line. Wet in pockets. Stand was modified shelter wood in 1999, with most of the red mapl and aspen cut at that time and what appears to have been most of t red oak. Mostly open grown white oak in the over story. Open grown white oak over story has variable size class oak, maple, aspen, whit pine and witch hazel in understory. A few opens pockets of clump re
88	Canopy Species Quaking Aspen White Pine Red Pine Red Maple 310 - Herbace 4126 - White, E Canopy Species Red Maple	% Cover 70 8 4 18 eous Open! 8lack, N. Pil % Cover 5	Size Class land n Oak Sa	DBH 9 9 8 8 Unspe	Age 59 Cifed Medium	Sub-Car Wh 29.9 1 198.0 Sub-Car Wit	nopy Species nite Pine 112 nopy Species ch Hazel	Density Low 1-50 Density Medium	No N/A Avg. Height 5 - 10 feet	Size Variable Size 5 - 10 feet	Utility Line. Wet in pockets. Stand was modified shelter wood in 1999, with most of the red mapl and aspen cut at that time and what appears to have been most of t red oak. Mostly open grown white oak in the over story. Open grown white oak over story has variable size class oak, maple, aspen, whit pine and witch hazel in understory. A few opens pockets of clump re maple with the rest being more of a oak mix. Good mix of size
88	Canopy Species Quaking Aspen White Pine Red Pine Red Maple 310 - Herbace 4126 - White, E Canopy Species Red Maple White Oak	% Cover 70 8 4 18 18	Size Class land n Oak Sa	Page	Age 59 Cifed Medium	29.9 198.0 Sub-Car With	nopy Species hite Pine 112 nopy Species ch Hazel hite Oak	Low 1-50 Density Medium Medium	Avg. Height Variable No N/A Avg. Height 5 - 10 feet 10 - 20 feet	Size Variable Size 5 - 10 feet 10 - 20 feet	Utility Line. Wet in pockets. Stand was modified shelter wood in 1999, with most of the red mapland aspen cut at that time and what appears to have been most of the red oak. Mostly open grown white oak in the over story. Open grown white oak over story has variable size class oak, maple, aspen, white pine and witch hazel in understory. A few opens pockets of clump re
88	Canopy Species Quaking Aspen White Pine Red Pine Red Maple 310 - Herbace 4126 - White, E Canopy Species Red Maple White Oak Red Pine	% Cover 70 8 4 18 eous OpenI % Cover 5 20 5	Size Class land n Oak Sa	9 9 8 8 Unspe	Age September 112	29.9 198.0 Sub-Car Wit Wit Wit Wit Wit	nopy Species hite Pine 112 nopy Species ch Hazel hite Oak hite Oak	Low 1-50 Density Medium Medium Medium	Avg. Height Variable No N/A Avg. Height 5 - 10 feet 10 - 20 feet Variable	Size Variable Size 5 - 10 feet 10 - 20 feet Variable	Utility Line. Wet in pockets. Stand was modified shelter wood in 1999, with most of the red maple and aspen cut at that time and what appears to have been most of the red oak. Mostly open grown white oak in the over story. Open grown white oak over story has variable size class oak, maple, aspen, white pine and witch hazel in understory. A few opens pockets of clump remaple with the rest being more of a oak mix. Good mix of size

	Cadillac Mgt. Unit						Repo	ort 7 – Sta	ands		Compartment: 119 Year of Entry: 2027	
Stand	Level 4 Cover Type			Size Density		Acres	Stand Age B	Stand Age BA Range		ite	General Comments Odd third row thinning in which stand was third row thinned with all	
93	42110 - Planted Red Pine			Poletimber Well		49.3	64	1-50	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	trees less than 7.5 inches dbh at stump cut as well regardless of row. Open plantation with hardwood/ aspen understory. Pine will be lost at	
	Red Pine	100		9	64	Re	d Maple	Full	>20 feet	>20 feet	this site. Sale took place in 2009.	
				'		Wh	nite Oak	Medium	>20 feet	>20 feet		
						Asp	en (spp.)	Medium	>20 feet	>20 feet		
97	4112 - Maple, Beech, Cherry Association Poletin		oletimber	Mediur	n 6.8	69	51-80	N/A		Small stand of low quality clump red maple and scattered log oak.		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	Density	Avg. Height	Size		
	Red Maple	80	Seedling	7	69	Wite	ch Hazel	Medium	5 - 10 feet	5 - 10 feet		
	White Oak	20		15		Wh	nite Oak	Medium	Variable	Variable		
				•		Re	d Maple	High	10 - 20 feet	10 - 20 feet		
99	42110 - Pla	nted Red P	ine	Poletimb	er Well	48.9	69	111-140	N/A	1	Stand was third row thinned in 2009, with all aspen and maple cut at	
	Canopy Species	% Cover	Size Class	DBH	Age						that time too that was mixed in plantation. Very short spindly trees. Very low site index. Stand thinned again in winter 2018.	
	Red Pine	100	Seedling	8	69							
101	42110 - Pla	nted Red P	ine	Poletimb	er Well	49.6	69	111-140	N/A	1	Stand was third row thinned in 2008, with all aspen, maple, white pine,	
	Canopy Species	% Cover	Size Class	DBH	Age						and cherry cut where present. Lots of doubles in stand, fairly short pine although one of the better stand in the area. Stand thinned in	
	Red Pine	100		9	69						2018, very poor form at that time be curious to see if this thinning	
				'							helps trees put on some growth.	
103	6229 - Mixed	Lowland S	hrub	Unspe	cifed	5.3			No		Leather leaf bog.	
104	42110 - Pla	nted Red P	ine	Poletimb	er Well	176.4	69	141-170	N/A	١	Stand was third row thinned in 2010. Winter Storm in 2012 causes	
104										Size	significant snow load damage and resulted in a small percentage of	
104	42110 - Pla Canopy Species Red Pine		Size Class		Age 69	Sub-Car	69 nopy Species d Maple	Density Low	Avg. Height 5 - 10 feet			

N/A

N/A

Avg. Height

5 - 10 feet

5 - 10 feet

5 - 10 feet

Size

5 - 10 feet

5 - 10 feet

5 - 10 feet

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Canopy Species

Canopy Species

Red Pine

White Oak

Black Cherry

42111 - Planted Red Pine, Mixed

Deciduous

42110 - Planted Red Pine

20

90

10

% Cover Size Class

% Cover Size Class

Log

Sapling Well

DBH Age

1

9

12

Poletimber Well

DBH Age

64

32.1

25.7

15

64

Sub-Canopy Species

Red Maple

Quaking Aspen

White Oak

Immature

111-140

Density

Low

Low

Medium

116

118

wildfire had occurred.

Stand treated by Sale #63-080-10-01 following wildfire that destroyed

portion of stand. Stand was final harvested in 2010. Stand was trenched in 2010 and planted in 2011. East half of stand was where

Stand was third row thinned in 2010, with all red pine less then 7.5

inches dbh also cut. Any aspen, maple was also cut out of the

plantation. Stand is over 1/3 live crown. Eastern portion of the

stand is a lower BA average with about half live crown ratio.

Stand	Level 4 Co	Level 4 Cover Type			nsity	Acres	Stand Age	BA Range	Managed Si	ite	General Comments	
120	<u>'</u>		Sawtimb	er Well		95	81-110	N/A		Stand is part of the Hopkins creek campground, used by heavily by horse campers. Mix of maple and oak with some aspen. Hazard trees		
	Canopy Species		Size Class		Age						have been cut over the years and will continue to be. Parks division	
	Red Maple	50		11	95						primarily maintains the site. Open in spots but mostly well shaded	
	Red Oak	30		15							campsites.	
	Quaking Aspen	10		11								
	White Oak	5		15								
	White Pine	5		11								
121	4199 - Other Mixe	d Upland D	eciduous	Sapling N	/ledium	28.2	14	Immature	N/A		Stand was final harvested in 2011, with some reserve trees left (Green marked). Scattered big oak were left. Came back to mix of red maple,	
	Canopy Species	% Cover	Size Class	DBH	Age						oak and aspen. Mostly stump sprouts.	
	Red Maple	50	Log	1	14							
	White Pine	2	Pole	4								
	White Oak	30	Log	1	14							
	Quaking Aspen	18	Log	1	14							
122	4199 - Other Mixe	d Upland D	eciduous	Sawtimb	er Well	13.2	60	51-80	N/A		Mix of aspen, red maple and oak. Some pockets of over mature log	
	Canopy Species	% Cover	Size Class	DBH	Age						aspen but mostly pole size aspen .	
	Red Oak	30		12								
	Quaking Aspen	35		9	60							
	Red Maple	27		10								
	White Pine	8		12								
130	429 - Mixed L	Ipland Con	ifers	Sawtimb	er Well	94.0	95	141-170	N/A		Buffer Complex along Hopkins Creek. Lowland conifer along the creek	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	edge with more upland species on the side slope. Not suitable for commercial management. Acts as vegetative buffer to trout stream.	
	Red Pine	2		11		Ta	ag Alder	Low	5 - 10 feet	5 - 10 feet	Are a few areas on some of the edges that could be cut but not nearly	
	White Oak	5		12		Ba	lsam Fir	Medium	Variable	Variable	large enough to make a sale. Again acts as a buffer to Hopkins.	
	Balsam Fir	10	Seedling	6								
	Beech	5		12								
No	rthern White Cedar	13		10								
	Hemlock	5		8								
	Red Maple	15		12								
	Bigtooth Aspen	10		15								
	White Pine	35		15	95							
131	6229 - Mixed	Lowland S	hrub	Unspe	cifed	27.5			No		FMD: alder along Hopkins Crk. HCVA - Natural River corridor.	
132	4131 - A	spen, Oak		Sawtimb	er Well	9.2	55	81-110	N/A		Small less then 10 acre chunk of mature aspen with some pine mixed	
	Canopy Species	% Cover	Size Class	DBH	Age						in. Hummocky ground, with all the aspen and oak just cut to the west.	
	Red Maple	5		9								
	Quaking Aspen	70		10	55							
	Red Oak	5		15								
	White Oak	20		10								

Stand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age B	BA Range	Managed Si	te	General Comments
133	42110 - Planted Red Pine			Poletimber Well		10.3	69	81-110	N/A		Pruned in 1980 and third row thinned in 1998. Ready to be second
	Canopy Species	% Cover	Size Class	DBH	Age						thinned. Good spot for landing and road already in place. Stand thinned again in 2018, marked job.
	Red Pine	100		10	69						tillilled agail ill 2010, marked job.
134	4130	- Aspen	F	Poletimb	er Well	28.0	36	81-110	N/A		Stand was final harvested in 1989. All pine was left. Aspen came
	Canopy Species	% Cover	Size Class	DBH	Age						back well with pine scattered. Aspen a little rough looking in spots.
	White Pine	5		12							
	Red Pine	10		13							
	Bigtooth Aspen	85	Sapling	5	36						
135	4121 - C	ak, Aspen	Sa	awtimber	Medium	55.5	97	51-80	N/A		Log oak stand with mix of pole aspen, aspen concentrated in north
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	end of stand. Large stand to west was just clear-cut with reserves 2014.
	Quaking Aspen	32	Seedling	7	53	WI	hite Pine	Low	< 5 feet	< 5 feet	2014.
	Red Pine	3		10		W	hite Oak	Medium	Variable	Variable	
	Red Oak	55		15	97						-
	White Oak	5		15							
	White Pine	5		9							
136	4123 -	Red Oak	;	Sawtimb	er Well	43.8	98	51-80	N/A		Stand was thinned in 2010, with all aspen and maple spec cut as
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	well. Very limited understory as a result of deer browse. Some red maple and oak regeneration on the hillside in east side of stand.
	Red Oak	100		16	98	Re	ed Maple	Medium	5 - 10 feet	5 - 10 feet	.,
						R	ed Oak	Low	< 5 feet	< 5 feet	
137	4130	- Aspen	ſ	Poletimb	er Well	75.3	36	111-140	N/A		Stand was final harvested in 1989. Small pole stand, still sapling size
	Canopy Species	% Cover	Size Class	DBH	Age						in pockets.
	Red Oak	5	Sapling	5							
	Red Maple	5	Sapling	5							
	Bigtooth Aspen	90	Sapling	6	36						
138	4124 - Red v	with White	Oak Sa	awtimber	Medium	42.8	97	1-50	N/A		Harvested in 1999, Oak over story was left at 30 to 60 BA. Oak,
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	aspen, and red maple have taken up the understory.
	White Oak	20		17	97	Re	ed Maple	Medium	10 - 20 feet	10 - 20 feet	
	Red Oak	80		16	97	WI	hite Pine	Low	5 - 10 feet	5 - 10 feet	
						Quak	king Aspen	Medium	10 - 20 feet	10 - 20 feet	
						W	hite Oak	Medium	10 - 20 feet	10 - 20 feet	
140	4199 - Other Mixe	d Upland D	eciduous S	Sapling N	/ledium	88.7	15 I	Immature	N/A		Stand was final harvested in 2010, with all oak less then 6 inches in
	Canopy Species	% Cover	Size Class	DBH	Age						dbh left as well as scattered green ringed mature oak. Aspen, red maple and oak have regenerated from the harvest. Good mix of all
	White Oak	35	Pole	1	15						three with all the advanced oak scattered throughout. Snowmobile and
	Red Oak	5		20							ORV trail in the stand and on the edge.
	Red Maple	35	Log	1	15						

25

Log

1 15

Bigtooth Aspen

Stand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed Site) 	General Comments
143	42110 - Pla Canopy Species Red Pine		ine Size Class	Sawtimbe DBH	Age 69	38.3	69	81-110	N/A		Pruned in 1980 and third row thinned in 2000. All maple and aspen was cut out of plantation at that time as well. Stand thinned again in 2019, all maple was cut at that time too.
144	4130	- Aspen		Sapling	Well	35.4	26	Immature	N/A		Stand was final harvested came back to mostly aspen with some oak
	Canopy Species	% Cover	Size Class	DBH	Age						and white pine mixed in. ORV trail goes through stand.
	White Pine	5	Sapling	5							
	White Oak	10	Sapling	5							
	Quaking Aspen	85	Pole	3	26						
145	42110 - Pla	nted Red P	ine	Sawtimbe	er Well	12.4	69	111-140	N/A		Pruned in 1980 and third row thinned in 2000. Stand is in good shape
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	limited understory. Snowmobile trail goes though stand. Stand is of better quality on east end. old two track or fire break on west
	Red Pine	100		10	69		ed Oak	Low	< 5 feet	< 5 feet	unit.(Good spot for landing) Stand thinned again in 2018.
146	4130	- Aspen		Sapling	Poor	7.3	15	Immature	N/A		Stand was final harvested in 2010, with all oak less then 6 inches d
	Canopy Species	% Cover	Size Class	DBH	Age						and scattered green ringed mature oak left as well. Regenerated well to aspen, maple and oak mix. Oak left mostly small pole, snowmobile
	Red Oak	10		8							trail goes though stand as well as ORV trail. Stand is separated by
	White Pine	3	Log	1	15						power line ROW.
	Red Maple	10	Log	1	15						
	Bigtooth Aspen	77	Log	1	15						
150	4130	- Aspen		Poletimbe	er Well	8.7	37	111-140	N/A		Stand was final harvested in 1988. Call back well to aspen, with some oak mixed in. A few large oak were left by the road. Leave for at
	Canopy Species	% Cover	Size Class	DBH	Age						least one more rotation.
	Red Oak	10	Pole	3	37						
	Bigtooth Aspen	90	Sapling	5	37						
151	4199 - Other Mixe	d Upland D	eciduous	Sapling	Well	165.7	12	Immature	N/A		Stand was treated on two separate occasions between 2013 and 2014. In 2013 PCA cut and chipped all of the wood with the exception
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	of the log oak.(PCA had no market for big oak at that time) Log oak
	Red Maple	55	Pole	1	12	Wit	ch Hazel	Medium	5 - 10 feet	5 - 10 feet	was then cut a year later in winter of 2014 by subcontracted producer
	White Oak	5	Log	4							Widely scattered green ringed oak were left as well as all oak under 4 inches dbh.
	White Pine	5	Log	2							IIIOIOS UNII.
	Quaking Aspen	5	Log	1	12						
	Red Oak	10		16							
	Red Oak	20	Log	4	45						
152	4199 - Other Mixe	d Upland D	eciduous	Poletimbe		23.0	114	1-50	N/A		Burned in 1998 and in 2001. Scheduled to burn again in 2009, but never happened. Open grown red maple clumps and oak with oak an
	Canopy Species		Size Class		Age		nopy Specie	s Density	Avg. Height	Size	maple understory. Variable stand with evidence of old fire scars from
	Red Maple	50		8			d Maple	Medium	>20 feet	>20 feet	previous prescribed burns.
	White Oak	50		17	114		k Cherry	Medium	>20 feet	>20 feet	
						\//k	nite Oak	Low	>20 feet	>20 feet	

Bracken Fern

White Pine

Black Cherry

											Year of Entry: 2027	
Stand	Level 4 Cover Type			Size De	nsity	Acres	Stand Age E	BA Range	Managed Site		General Comments	
153	4199 - Other Mixed Upland Deciduous			Sawtimber Mediur		24.3	.3 163	81-110	N/A		Variable stand of clump red maple and large open grown oak. White	
	Canopy Species	% Cover	Size Clas	ss DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	pine component as well.	
	Red Maple	38		8		Wit	ch Hazel	Medium	5 - 10 feet	5 - 10 feet		
	White Pine	19		11		WI	hite Oak	Medium	Variable	Variable		
	White Oak	43		18	163	Wh	nite Pine	Medium	Variable	Variable		
157	157 3301 - Low Density Deciduous Trees		- Low Density Deciduous Trees Unspecifed		cifed	552.3 Sub-Canopy Species			Yes	3	Last burned in 1996 and 2001. Stand was burned again in 2014. Stand was burned in Fall of 2024	
					Density			Avg. Height	Size			
						Blad	ck Cherry	High	10 - 20 feet	10 - 20 feet		
201	122 - Roa	d/Parking L	ot	Unspe	cifed	27.7			No)	Lucas Rd.	
291	1 500 - Water Unspecifed		cifed	2.5			No	1	FMD: small section of Manistee River			
404	310 - Herbad	ceous Open	land			1.0			No	1		
						Sub-Ca	nopy Species	Density	Avg. Height	Size		

Full

Trace

Trace

>20 feet

5 - 10 feet

Not Applicable Not Applicable

>20 feet

5 - 10 feet

Compartment: 119