Compartment Review Presentation

Cadillac Forest Management Unit

Compartment 63112 Entry Year 2022 Acreage: 1,800

County Missaukee

Management Area: Upper Muskegon

Revision Date: 2020-06-09

Stand Examiner: Blair Tweedale

Legal Description:

T23N,R8W,Sections 13,24,25,26,34

Identified Planning Goals:

This compartment is located within the Upper Muskegon Management Area. Some goals for this MA are as follows: Timber management for this 10-year period will focus on harvesting older jack pine and balancing age class distributions of oak, aspen and red pine. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation.

Soil and topography:

Rubicon and Roscommon sands with some Carbondale and Lupton Muck. Relatively rolling terrain, with some areas of more drastic elevation changes to the North.

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

Large solid blocks of state land with some private in every section. Lake City is just south of compartment. Two major state highways, M42 and M-66 are located in the compartment. M-42 bisects the compartment with M66 forming the east boundary of the compartment. Land use is primarily forest recreation.

Unique Natural Features:

Long Lake and Goose lake are located in portions of the Southern end of this compartment.

Archeological, Historical, and Cultural Features:

Woodland Indian mound listed on State Archeological Inventory.

Special Management Designations or Considerations:

Oak wilt has been found and treated within this compartment in multiple locations.

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations:

Featured wildlife species in this Management Area are diverse reflecting the wide range of habitat types present. Featured Species of wildlife include american bittern, american woodcock, beaver, black bear, eastern massasuga rattlesnake, golden-winged warbler, mallard, pileated woodpecker, ruffed grouse, snowshoe hare, white-tailed deer, and wood duck. Most of these species benefit from young forest and open types while some require some old trees for foraging and nest/den sites. Maintaining the opening types and balancing harvests with a diverse assortment of age classes in the timber types will meet the goals for these species.

Mineral Resource and Development Concerns and/or Restrictions

Vehicle Access:

Survey Needs:

Recreational Facilities and Opportunities:

A north-south spur of Miss-Kal Snowmobile Trail, which starts north of Lake City is located in the compartment. It connection with the main east-west portion of the Miss-Kal Trail to the north.

Goose Lake and Long Lake Campgrounds complex provides over 70 rustic forest campsite. Both campgrounds are in

great need of substantial renovations.

Missaukee Mountain ski area is located in section 13 and is owned and operated by the Lake City. The land was provided to Lake City under a public use deed by the DNR. Lake City also has an across county ski trail on adjacent state forest land and is being operated without permit. Dispersed hunting and fishing opportunities are available through out the compartment.

Fire Protection:

Fuel types within the compartment would not support a crown fire. Access is good with several 2 tracks and forest roads. Wheeled suppression units could be utilized in fire control. Dispersed camping and ORV trail activity could add to increase in wildfires.

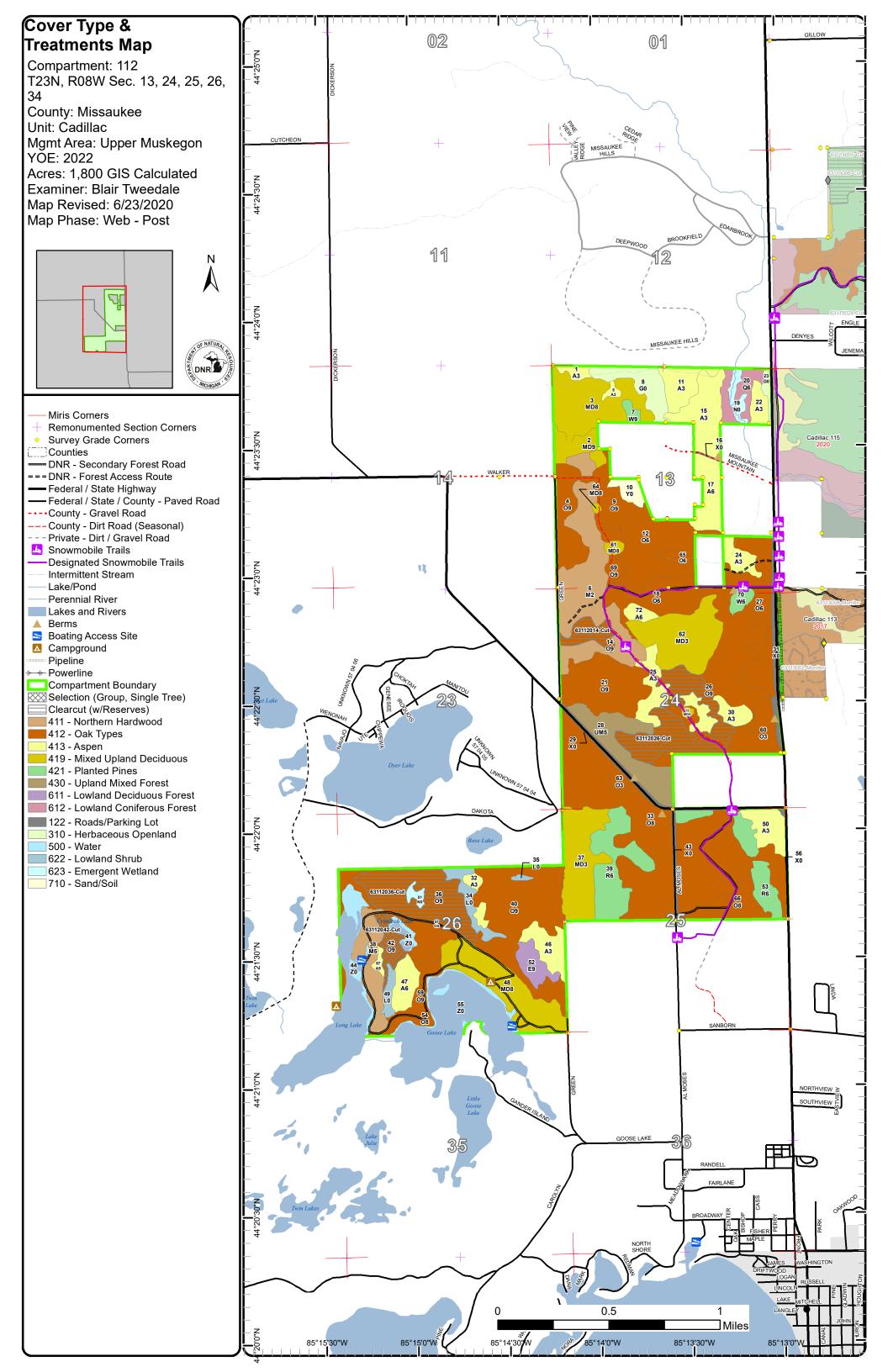
Additional Compartment Information:

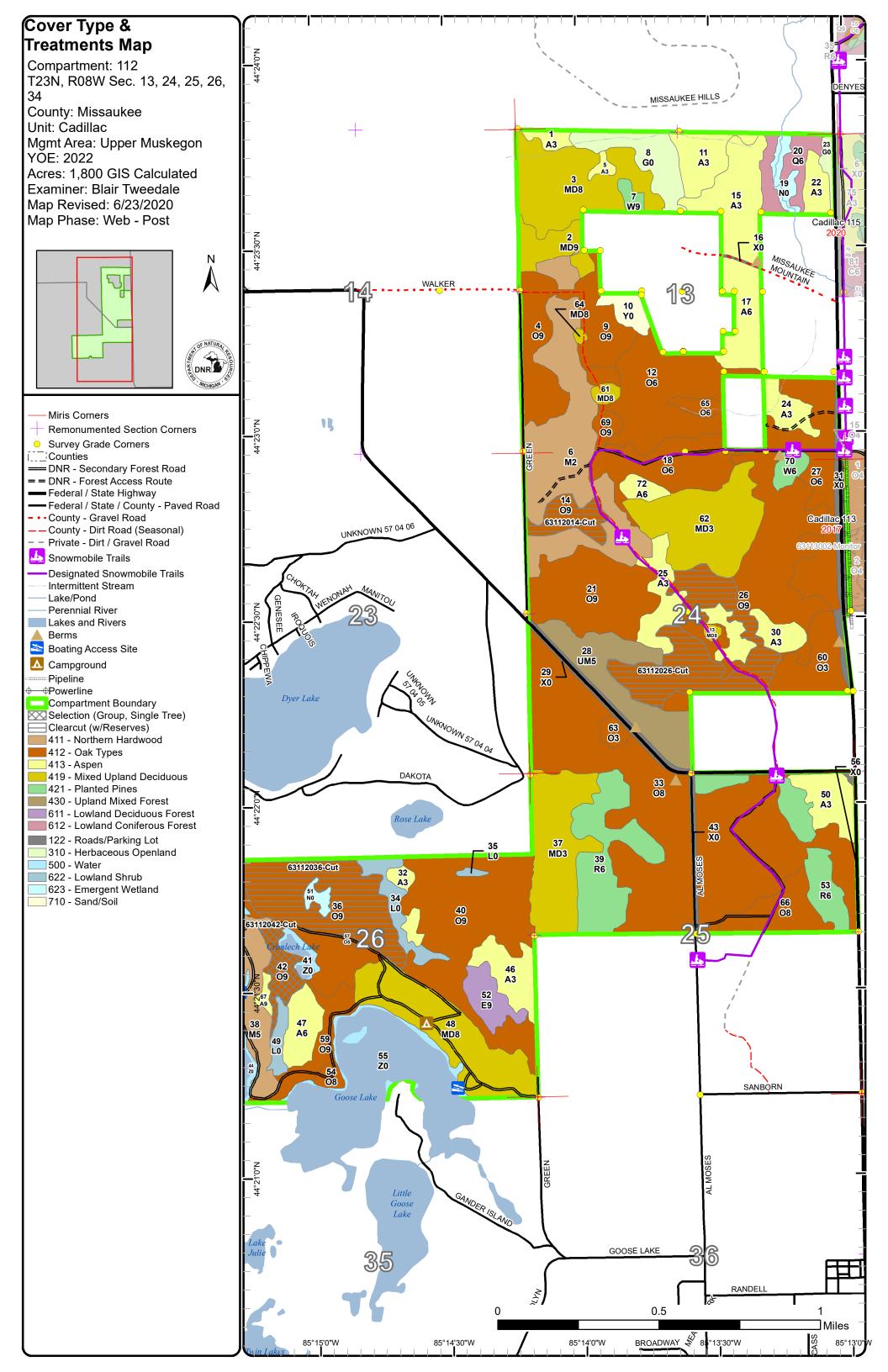
The following reports from the Inventory are attached:

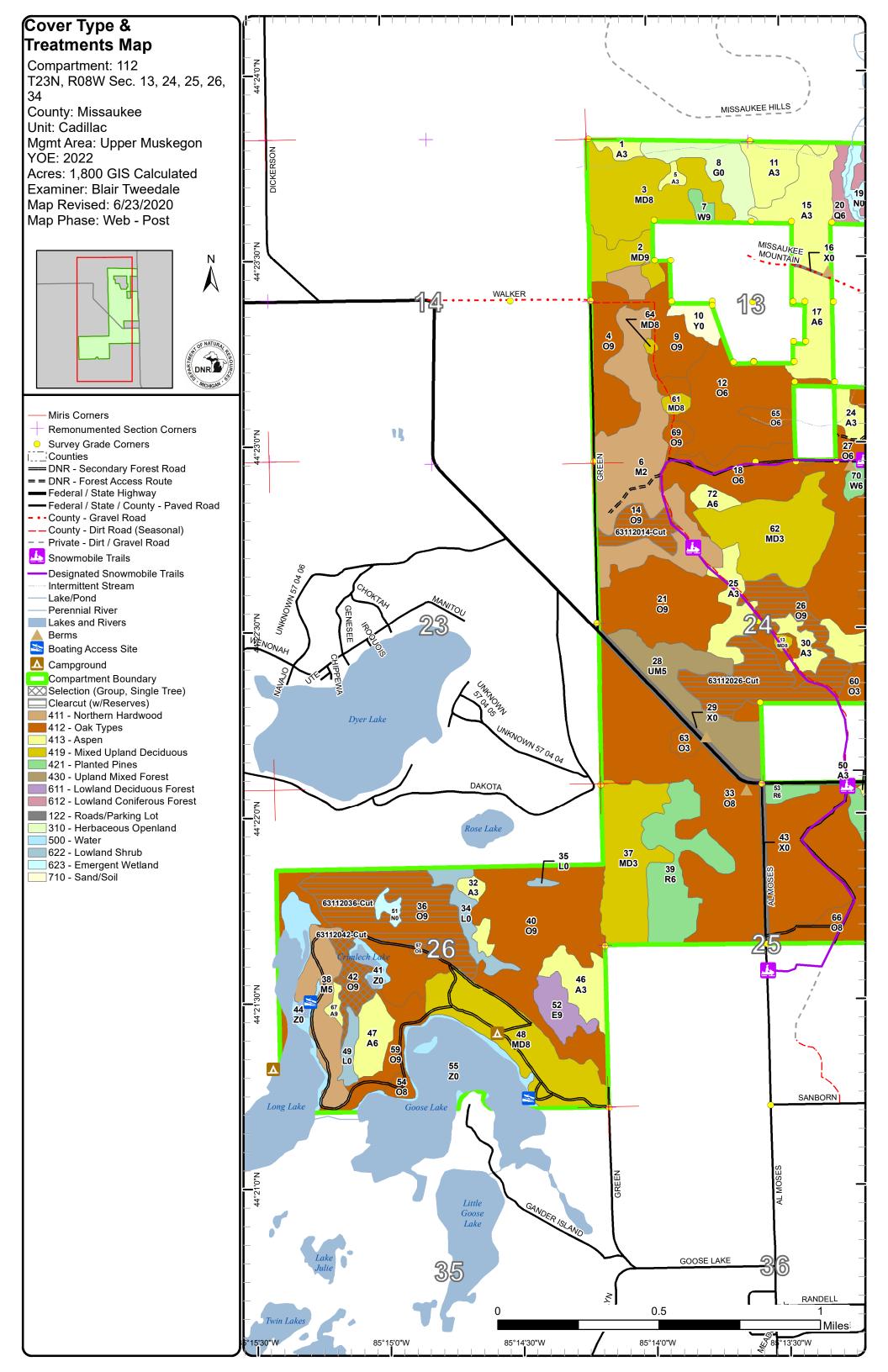
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

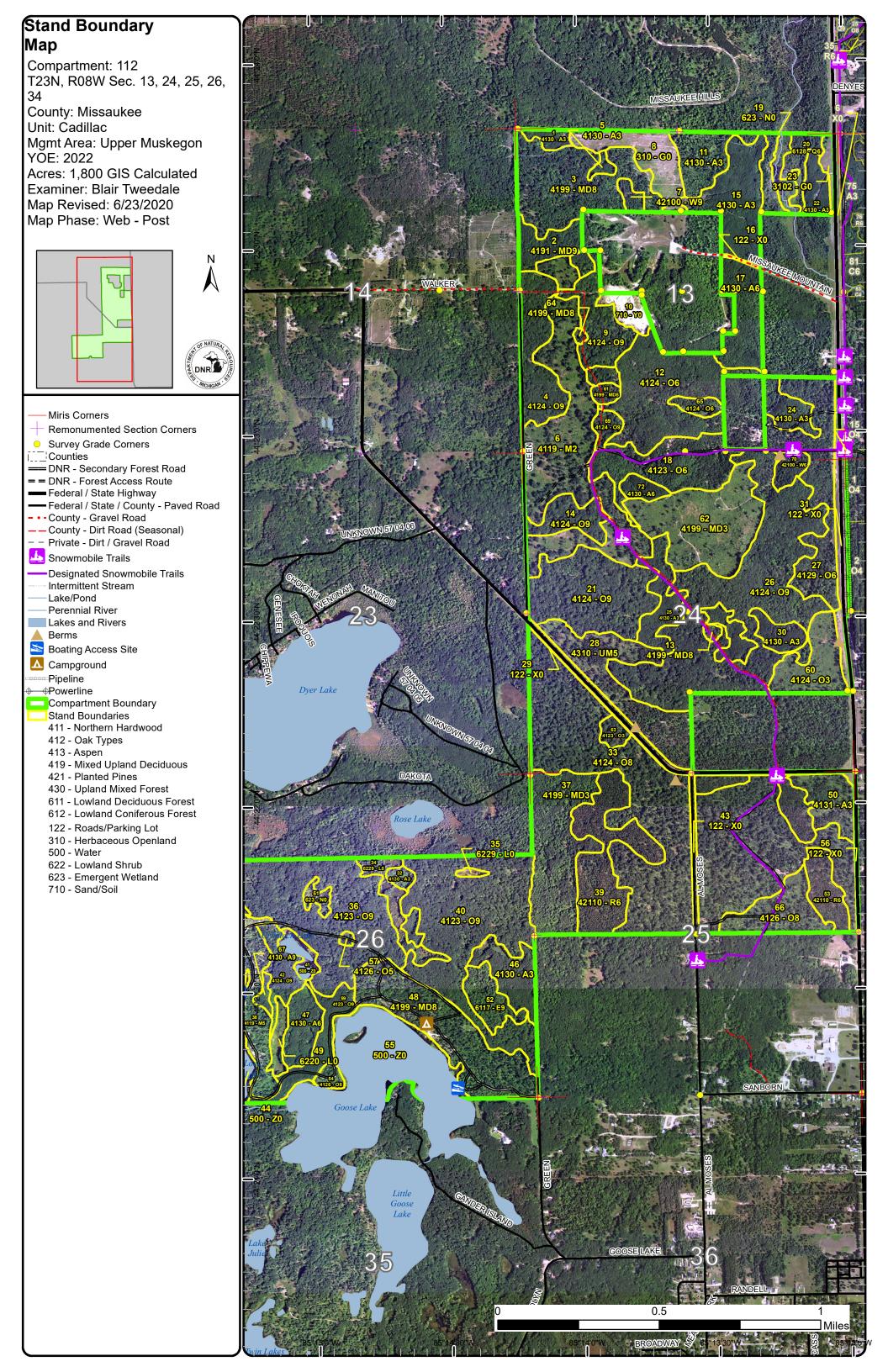
The following information is displayed, where pertinent, on the attached compartment maps:

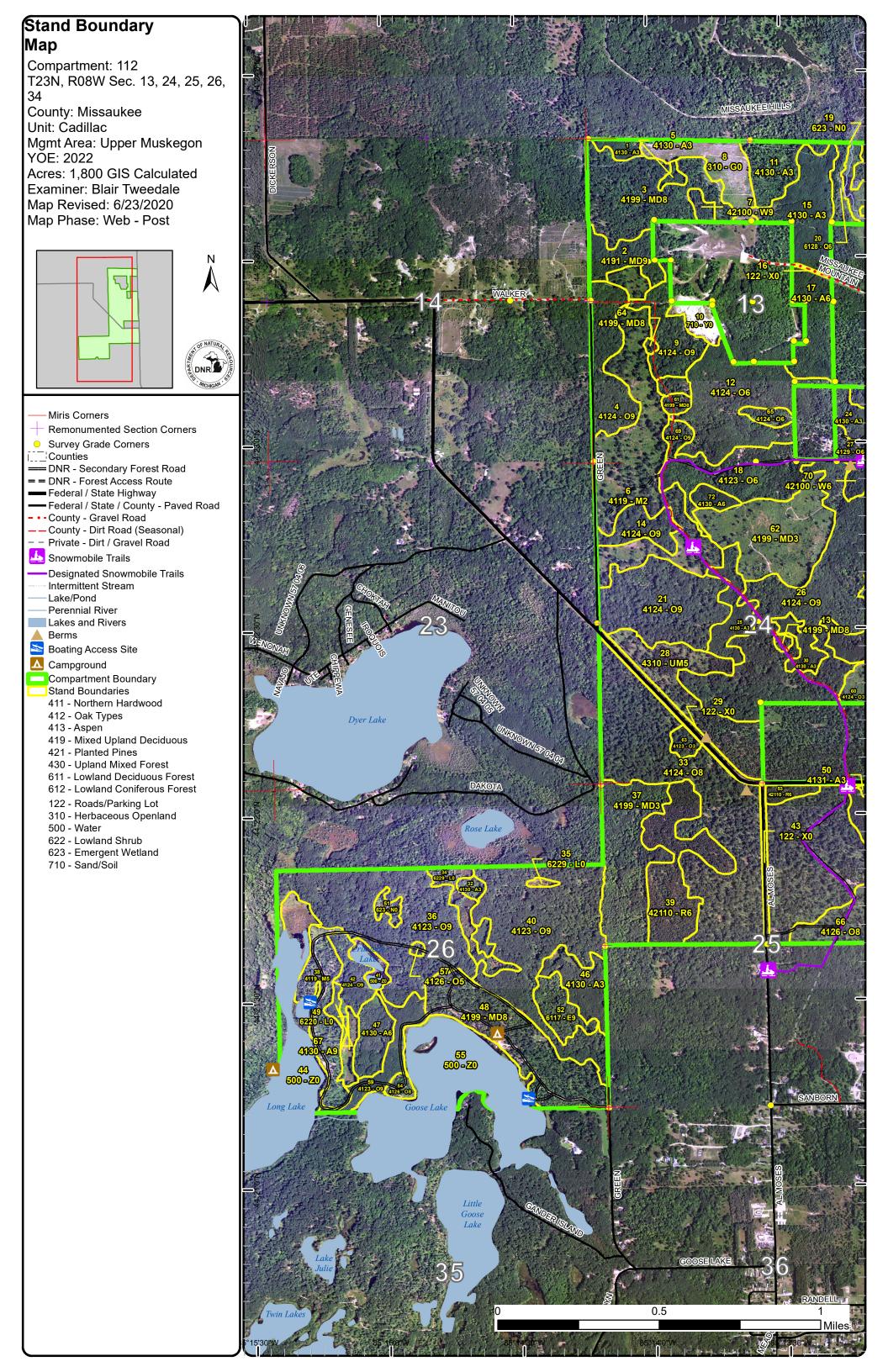
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

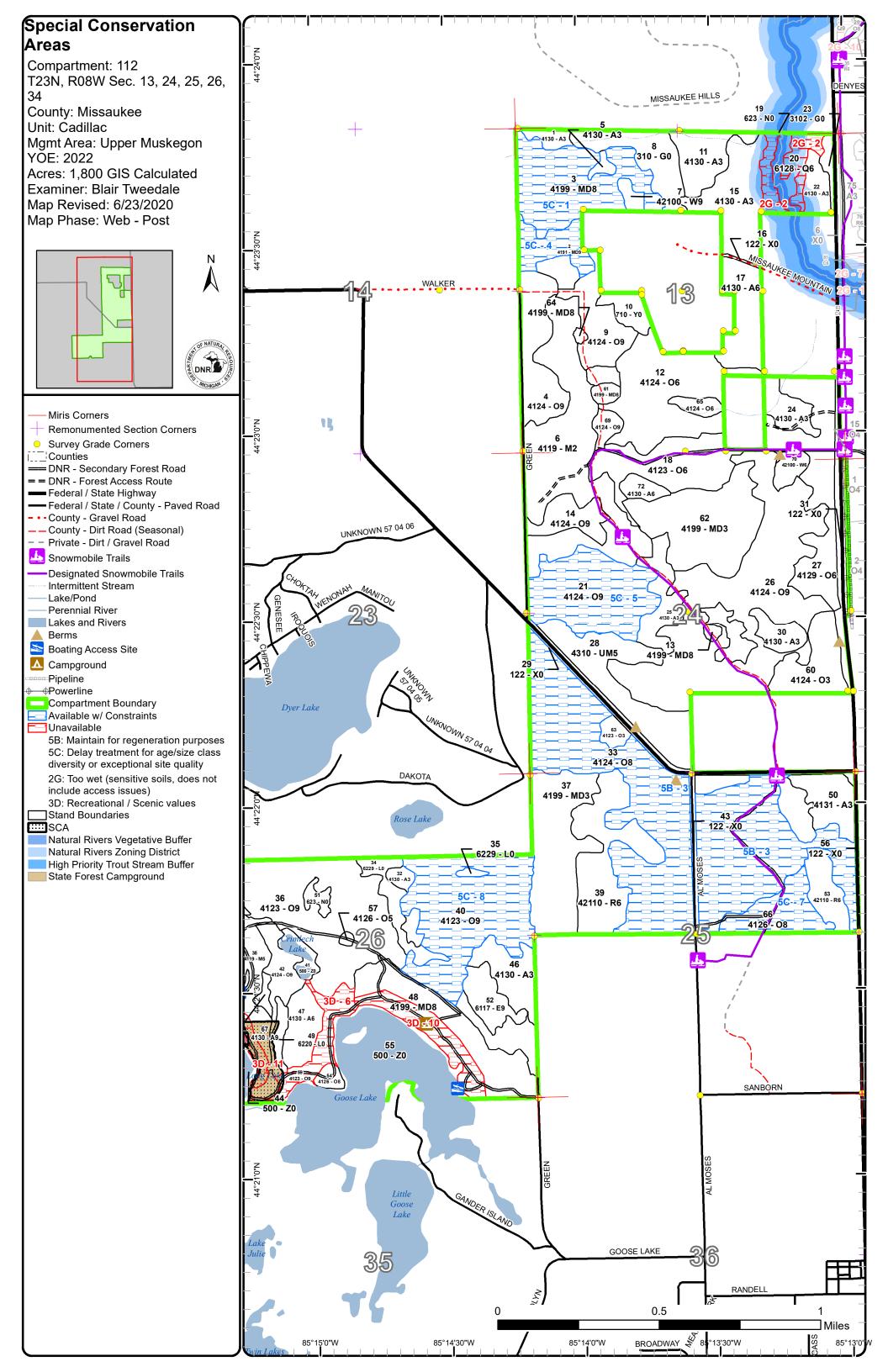


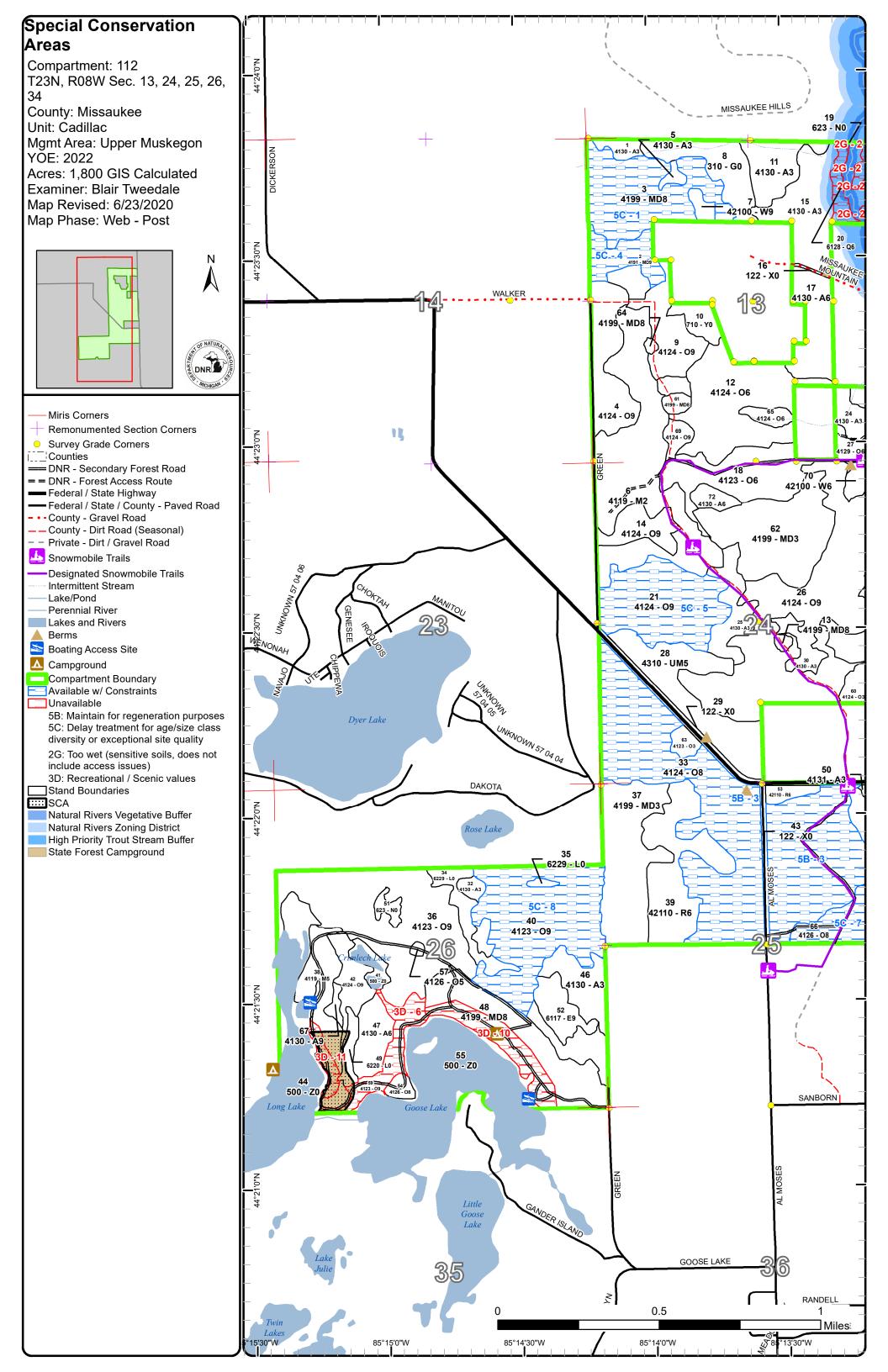












Compartment 112 Year of Entry 2022

Blair Tweedale : Examiner

Cadillac Mgt. Unit



Age Class

	**************************************		8° / 8	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		3 / 8		3/8	/ \$ / K				70,	Ø. / &		No. No.		da Reg	No. No.
Aspen	0	17	55	63	29	17	0	0	0	0	0	0	0	0	0	0	0	19	200
Herbaceous Openland	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Lowland Conifers	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	16
Lowland Deciduous	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	13
Lowland Shrub	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Marsh	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Mixed Upland Deciduous	0	55	0	0	51	0	56	0	0	70	0	0	0	0	0	0	0	6	237
Northern Hardwood	0	93	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	120
Oak	0	27	0	5	38	0	0	1	3	14	285	13	17	0	0	0	0	477	880
Red Pine	0	0	0	0	0	0	0	71	0	0	0	0	0	0	0	0	0	0	71
Sand, Soil	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Upland Mixed Forest	0	0	0	0	0	43	0	0	0	0	0	0	0	0	0	0	0	0	43
Urban	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Water	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106
White Pine	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	6	10
Total	210	192	55	68	146	60	72	76	16	84	285	13	17	0	0	0	0	508	1800



Report 2 – Treatment Summary

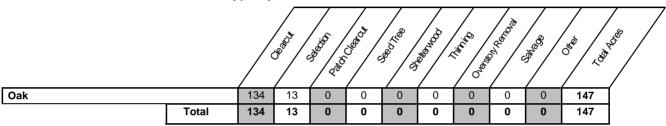
Cadillac Mgt. Unit Year of Entry: 2022

Acres of Harvest

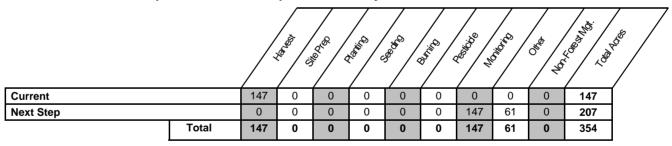
Compartment 112
Total Compartment Acres: 1,800

Commercial Harvest - 147 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



n d

Compartment: 112

5									Year of Entr	y: 2022	DNR OURCES
) 	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut

Proposed Treatments:

63112014-Cut 14.2 4124 - Red with Sawtimber 51-80 Harvest Clearcut with 412 - Oak Types Two-Aged No White Oak Well Retention

Prescription remove all red oak and red maple, leave white oak.

Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable oak and maple.

Regen:

Plan on leaving white oak in higher than normal densities to help reduce the potential damages in a wind event. The area has received 2 Other major wind events in the past 20 years, causing damage in the majority if the stands in this compartment. Comment:

Site Condition

Proposed Start Date: 10/1 /2021

63112026-Cut 59.2 4124 - Red with Sawtimber 98 111-Harvest Clearcut with 412 - Oak Types Two-Aged No White Oak Well 140 Retention

Prescription harvest all species Except leave pockets, with only white oak left in the pockets.

Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable mixed deciduous

Regen:

Other oak wilt spec

Comment:

Site Condition

Proposed Start Date: 10/1 /2021

63112036-Cut 60.6 4123 - Red Oak Sawtimber 120 81-110 Harvest Clearcut with 412 - Oak Types Even-Aged No Well Retention

<u>Prescription</u> Final harvest. Retention should be in the form of islands and corridors, avoid leaving single trees. Avoid operating in wet depressions.

Specs:

Monitoring, Natural Regen (Re-Inventory); Other, Pre-Commercial Thinning - Mechanical Next Step

Treatments:

Acceptable oak and maple

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2021

42 63112042-Cut 12.7 4124 - Red with Sawtimber Group Selection 412 - Oak Types Two-Aged 104 111-Harvest No 140

White Oak Well

Prescription Remove all species except white oak. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable oak and maple

Regen:

Another option would be to clear-cut while reserving islands of areas that are higher densities to white oak. Still should remove all red oak **Other**

Comment: due to age and occurrence of oak wilt in the area.

Site Condition

Proposed Start Date: 10/1 /2021

s	Cadillac Mgt. Unit				Repoi	t 3 '	Treatments		Compartme Year of Ent	DNR DNR	
t a n	Treatment Name	Acres	Stand CoverType	Size Densitv	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut

Total Treatment Acreage Proposed: 146.7

Cadillac Mgt. Unit

Blair Tweedale : Examiner

Compartment: 112
Year of Entry: 2022

Availa	ability for	Managemer	nt					
Total	Acres	Acres Avail	Acres		Domina	nt Site	e Con	ditions
Acres	Available	With Condition	Not Available		5B	5C	2G	3D
200	200	0	0	Aspen				
28	28	0	0	Herbaceous Openland				
16	0	0	16	Lowland Conifers			16	
13	13	0	0	Lowland Deciduous				
19	19	0	0	Lowland Shrub				
11	11	0	0	Marsh				
237	148	70	20	Mixed Upland Deciduous		70		20
113	113	0	0	Northern Hardwood				
880	498	365	17	Oak	208	157		17
71	71	0	0	Red Pine				
8	8	0	0	Sand, Soil				
43	43	0	0	Upland Mixed Forest				
38	38	0	0	Urban				
106	106	0	0	Water				
9	9	0	0	White Pine				
1,792	1,305	435	52	Total Forested Acres	208	226	16	37
	73%	24%	3%	Relative Percent		-		

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

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	54	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	16	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						

Report 4 – Site Conditions

Cadillac Mgt. Unit
Blair Tweedale: Examiner

3	Available	5B: Maintain for regeneration purposes	208	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	16	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	54	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	3D: Recreational / Scenic values	17	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	23	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	80	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Cadillac Mgt. Unit

Blair Tweedale : Examiner Year of

Compartment: 112 Year of Entry: 2022

10 Unavailable 3D: Recreational / Scenic 20 Unspecified Unspecifie

6/23/2020 8:47:42 AM - Page 3 of 3

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				

Cadillac Mgt. Unit Compartment: 112
Year of Entry 2022





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

Conservation Area	n Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosyst influences the aquatic ecosystem and vice-versa. Because streams and open water wetlands, riparian areas harbor a communities are ecologically and socially significant in the as aesthetics, habitat, bank stability, timber production, an	e of the unique conditions adjacent to lakes, high diversity of plants and wildlife. Riparian eir effects on water quality and quantity, as well
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived fr approved distance from the river centerlines. The Natural most Natural Rivers. The Vegetative Buffer ranges from 2 and Vegetative Buffers for each Natural River see the table folder.	Rivers Zoning District is a 400 foot buffer for 5 to 100 feet. To view specific Zoning Districts



Compartment: 112

Year of Entry: 2022

Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
1	4130	- Aspen		Sapling	Well	4.5	17	Immature	N/A		
	Canopy Species	% Cover	Size Class		Age						
	Red Oak	5	Log	14							
	Bigtooth Aspen	95	Sapling	3	17						
2	4191 - Mixed Upla Co	and Decidu	ous with S	Sawtimb	er Well	15.9	86	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Maple	20	Pole	7	86						
	Red Oak	35	Log/Pole	12	86						
	White Oak	10	Pole	6							
	Bigtooth Aspen	10	Pole/Log	8							
	White Pine	25	Pole	8							
3	4199 - Other Mixe	d Upland D	eciduous Sa	wtimber	Mediu	m 53.7	85	51-80	N/A		Stand was thinned in Summer of 2014. Sale # 63-016-14-01
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Sugar Maple	20	Log/Pole	10		Re	ed Maple	Low	10 - 20 feet	Sapling	
	Red Maple	15	Pole/Log	8		W	hite Oak	Low	5 - 10 feet	Sapling	
	Basswood	10	Log/Pole	14			Beech	Medium	5 - 10 feet	Sapling	
	Red Oak	30	Log/Pole	10	85						
	White Oak	15	Pole/Log	9							
	Paper Birch	5	Pole/Sapling	5							
	Black Cherry	5	Pole/Sapling	4							
4	4124 - Red v	with White (Oak S	Sawtimb	er Well	29.7	85	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	15	Pole/Sap/Log	7		Re	ed Maple	Low	10 - 20 feet	Sapling	
	Red Oak	60	Log/Pole	12	85	R	led Oak	Low	5 - 10 feet	Sapling	
	White Oak	20	Pole/Log/Sap	9		W	hite Oak	Low	< 5 feet	Sapling	
	Bigtooth Aspen	5	Pole	7							
5	4130	- Aspen		Sapling		2.2	17	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Bigtooth Aspen	100	Sapling	3	17						
6	4119 - Mixed No	orthern Hard	dwoods S	Sapling N	/ledium	92.5	5	Immature	N/A		Stand final harvested around 2015. Was white pine in the north and red pine in the south. Was initially planned to be planted but lost to hardwood
	Canopy Species		Size Class		Age						and oak. ALL oak was left. Wind damage (storm of fall 2018) to residual
	Red Oak	10	Log	16							oaks left in stand.
	White Pine	15	Sapling	1	5						
	Red Maple	59	Sapling	1	5						
	Black Cherry	16	Sapling	1	5						



Stand	d Level 4 C	over Type		Size De	ensity	Acres	Stand Age E	A Range	Managed Site		General Comments
7	42100 - Plan Canopy Species White Pine		Pine S Size Class Log/Pole	Sawtimb DBH 10	l Age	3.5	61	111-140	N/A		
8	310 - Herbac	eous Oper	nland	Nonst	ocked	23.6	0 L	Inspecified	42110 - Planted	Red Pine	Stand has been trenched and planted to red pine, with advanced
						Sub-Ca	nopy Species	Density	Avg. Height	Size	regeneration of white pine volunteers. Accept a mix of red and white pine to dominate the stand.
						Re	ed Pine	High	< 5 feet	Seeding	to dominate the stand.
						Wh	nite Pine	High	5 - 10 feet	Sapling	
						Re	d Maple	High	< 5 feet	Sapling	
9	4124 - Red	with White	Oak S	Sawtimb	er Well	22.6	96	51-80	N/A		multiple stemmed oaks with small diameter red maple.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	25	Pole/Log/Sap	6		Е	Beech	Low	10 - 20 feet	Sapling	
	Beech	10	Sapling/Pole	3		Re	d Maple	Low	5 - 10 feet	Sapling	
	Red Oak	45	Log/Pole	13	96	R	ed Oak	Low	10 - 20 feet	Sapling	
	White Oak	20	Pole/Sap/Log	5							
10	710 - \$	Sand, Soil		Nonst	ocked	8.3			No		Gravel Pit
11	4130 Canopy Species	- Aspen	Size Class	Sapling	g Well	18.6	12	1-50	N/A		Stand was cut in 2008 due to wind damage. Producer never finished sale. Some aspen still standing.
	Sugar Maple	5	Pole/Log	9	. Age						
	Red Maple	7	Sapling	1							
	Red Oak	3	Log/Pole	11							
	Bigtooth Aspen	85	Sapling	1	12						
12	4124 - Red	with White	Oak F	Poletimb	er Well	57.8	84	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	25	Pole/Sapling			Re	d Maple	Low	10 - 20 feet	Sapling	
	Beech	5	Sapling/Pole	3		Re	ed Oak	Low	5 - 10 feet	Sapling	
	Red Oak	40	Pole/Log/Sap		84						
	White Oak	20	Pole/Sap/Log	_							
	Bigtooth Aspen	10	Pole/Sapling	5							
13	4199 - Other Mixe						43	81-110	N/A		Oak wilt harvest occurred in 2016.
	Canopy Species		Size Class		l Age		nopy Species		Avg. Height	Size	
	Red Maple	45	Pole/Log/Sap		43		Beech	Low	10 - 20 feet	Sapling	
	Beech	10	Sapling/Pole				d Maple	Low	10 - 20 feet	Sapling	
	White Oak	45	Pole/Sap/Log	1 5	1 11	\/\/	nite Oak	Low	10 - 20 feet	Sapling	



Stand	d Level 4 C	over Type		Size De	ensity	Acres	Stand Age E	BA Range	Managed \$	Site	General Comments
14	4124 - Red v	with White (Dak S	Sawtimb		14.2	84	51-80	N/A		
	Canopy Species		Size Class		l Age		nopy Species	Density	Avg. Height	Size	
	Red Maple	5	Pole	5			d Maple	Low	10 - 20 feet	Sapling	
	White Oak	45	Log	13	84	Re	ed Oak	Low	5 - 10 feet	Sapling	
	Red Oak	50	Log	15	84						
15	4130	- Aspen		Sapling	g Well	34.1	18	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	I Age						
	Red Maple	10	Sapling	1							
	Bigtooth Aspen	80	Sapling	2	18						
	Red Oak	10	Sapling	2							
16	122 - Road	d/Parking L	ot	Nonsto	ocked	0.6			No		Road into Missaukee Mtn.
17	4130	- Aspen		Poletimb	er Well	23.8	36	51-80	N/A		
	Canopy Species		Size Class		l Age		nopy Species	Density	Avg. Height	Size	
	Bigtooth Aspen	80	Pole/Sapling		36	Wh	ite Oak	Low	10 - 20 feet	Sapling	
	Red Oak	10	Pole/Sapling								
	Red Maple	10	Pole/Sapling	5							
18	4123 -	Red Oak	P	Poletimb	er Well	37.7	38	111-140	N/A		Dominated by multi-stem oak and maple. Quality and density varies
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Can	nopy Species	Density	Avg. Height	Size	throughout stand.
	Red Maple	15	Sapling/Pole	4		Red	d Maple	Low	10 - 20 feet	Sapling	
	Red Oak	65	Pole/Sapling	5	38	Wh	ite Oak	Low	5 - 10 feet	Sapling	
	White Oak	10	Sapling/Pole	2							
	Bigtooth Aspen	10	Sapling/Pole	4	38						
19	623 - Emer	gent Wetla	nd	Nonst	ocked	7.2		Immature	No		
						Sub-Can	nopy Species	Density	Avg. Height	Size	
						A	Alder	Full	5 - 10 feet	Tall Shrub	
						Northern	White Cedar	Medium	>20 feet	Pole	
20	6128 - Lowland Dec	Coniferous, iduous	Mixed F	Poletimb	er Well	15.9	57	51-80	N/A		stand transitions upland to lowland from east to west.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Can	nopy Species	Density	Avg. Height	Size	
	Bigtooth Aspen	10	Log/Pole	10			sam Fir	Low	5 - 10 feet	Sapling	
	Balsam Fir	35	Pole	7	57	A	Alder	Medium	5 - 10 feet	Tall Shrub	
			Dolo/Log				-				
No	orthern White Cedar	20	Pole/Log	9							
No	White Pine	20	Log	16							
No											



Stand	Level 4 Co	over Type	,	Size De	ensity	Acres	Stand Age I	BA Range	Managed \$	Site	General Comments
21	4124 - Red w	vith White (Oak S	Sawtimb	er Well	53.6	99	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	25	Log/Pole	8		R	ed Oak	Low	10 - 20 feet	Sapling	
	Red Oak	45	Log/Pole	11	99	Re	d Maple	Low	5 - 10 feet	Sapling	
	White Oak	30	Pole/Log	7							-
22	4130 -	- Aspen		Sapling	g Well	8.5	18	Immature	N/A		check records for easement or two-track letter for road going through
	Canopy Species	% Cover	Size Class	DBH	l Age						state land to private parcel.
	Red Maple	8	Sapling	1							
	Bigtooth Aspen	80	Sapling	1	18						
	White Pine	2	Sapling	1							
	White Oak	10	Sapling/Pole	3							
23	3102	- Grass		Nonst	ocked	4.2	ι	Jnspecified	No		ROW for M-66
						Sub-Ca	nopy Species	Density	Avg. Height	Size	
						Mixe	d Grasses	Full	Unspecified	Non-Wood	
						Wh	nite Pine	Trace	Variable	Sapling	
						R	ed Oak	Trace	Variable	Pole	
24	4130 -	- Aspen		Sapling	g Well	10.8	25	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Bigtooth Aspen	75	Sapling	4	25						
	Red Oak	5	Sapling	2							
	Red Maple	15	Sapling	2							
	White Oak	5	Sapling	3							
25	4130 -	- Aspen		Sapling	g Well	17.2	25	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Bigtooth Aspen	80	Sapling/Pole	3	25						
	Red Maple	10	Sapling/Pole	3	25						
Bla	ck/Red (Hybrid) Oak	10	Sapling/Pole	3	25						
26	4124 - Red w	vith White 0	Dak S	Sawtimb	er Well	128.6	98	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	15	Pole	6		Re	d Maple	Low	10 - 20 feet	Sapling	
	Red Oak	40	Log/Pole	13	98	R	ed Oak	Low	10 - 20 feet	Sapling	
	White Oak	40	Log/Pole	10							-
	Bigtooth Aspen	5	Pole/Sapling	5							



Stand	d Level 4 Co	over Type	S	ize De	nsity	Acres	Stand Age B	A Range	Managed S	ite	General Comments
27	4129 - N	/lixed Oak	Po	oletimb	er Well	47.6	84	51-80	N/A		Salvage cut in the 90's. Variable diameter and densities throughout the
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	stand.
	Red Maple	15	Sapling/Pole	4		Red	l Maple	Low	10 - 20 feet	Sapling	
	Beech	5	Pole/Sapling	5		Re	d Oak	Low	10 - 20 feet	Sapling	
	Red Oak	35	Log/Pole	11	84	Whi	te Oak	Low	Variable	Sapling	
	White Oak	25	Pole/Log	8							
	Bigtooth Aspen	10	Sapling/Pole	4							
Bla	ck/Red (Hybrid) Oak	10	Pole/Log	8							
28	4310 - Pir	ne, Oak Mix	. Pole	etimbei	Medium	42.6	47	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	
	Red Oak	15	Log	12	100	Red	Maple	Medium	10 - 20 feet	Sapling	
	White Oak	30	Pole/Log	9		Whi	te Oak	Medium	10 - 20 feet	Sapling	
	White Pine	10	Pole	8							
	Red Pine	45	Pole/Log	8	47						
29	122 - Road	I/Parking Lo	ot	Nonsto	ocked	13.1	Ur	nspecified	No		M-42
30	4130	- Aspen	,	Sapling	y Well	16.9	24 Ir	mmature	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Oak	5	Log/Pole	11							
	Bigtooth Aspen	95	Sapling		0.4						
31	400 D		Sapility	4	24						
	122 - Road	l/Parking Lo	, ,	Nonsto		17.4			No		M-66/Morey Rd
32		d/Parking Lo	ot		ocked	17.4	17 lr	mmature	No N/A		M-66/Morey Rd
		- Aspen	ot	Nonsto	ocked		17 lr	mmature			M-66/Morey Rd
	4130	- Aspen	ot	Nonsto	ocked y Well		17 Ir	mmature			M-66/Morey Rd
	4130 Canopy Species	- Aspen	ot Size Class	Nonsto Sapling DBH	ocked y Well		17 lr	mmature			M-66/Morey Rd
	4130 Canopy Species Red Maple	- Aspen % Cover	ot Size Class Sapling	Nonsto	ocked J Well		17 Ir	mmature			M-66/Morey Rd
	4130 Canopy Species Red Maple Bigtooth Aspen	- Aspen **Cover* 10 85 5	Size Class Sapling Sapling Sapling	Sapling DBH 3 3 3	ocked J Well	6.0	17 lr 98	mmature			Stand was treated in winter/spring of 2015. Some pockets dominated by
32	A130 c Canopy Species Red Maple Bigtooth Aspen Red Oak 4124 - Red v	- Aspen % Cover 10 85 5	Size Class Sapling Sapling Sapling Sapling	Sapling DBH 3 3 3	ocked J Well Age 17 Medium	6.0	98	1-50	N/A	Size	,
32	Canopy Species Red Maple Bigtooth Aspen Red Oak 4124 - Red v Canopy Species	- Aspen	Size Class Sapling Sapling Sapling Sapling Sapling Sapling Sapling	Sapling DBH 3 3 3 vtimber	y Well Age 17 Medium Age	6.0 208.2 Sub-Can	98 opy Species	1-50 Density	N/A N/A Avg. Height		Stand was treated in winter/spring of 2015. Some pockets dominated by
32	A130 c Canopy Species Red Maple Bigtooth Aspen Red Oak 4124 - Red v	- Aspen	Size Class Sapling Sapling Sapling Sapling	Sapling DBH 3 3 3 vtimber	ocked J Well Age 17 Medium	6.0 208.2 Sub-Can	98	1-50	N/A	Size Sapling Sapling	Stand was treated in winter/spring of 2015. Some pockets dominated by



Stand	Level 4 Co	over Type		Size De	ensity	Acres	Stand Age B	A Range	Managed S	Site	General Comments
34	6229 - Mixed	l lowland sh	nrub	Nonst	ocked	12.4			No		Stand swapped from Forested to Non-Forested.
						Sub-Car	nopy Species	Density	Avg. Height	Size	
						Pap	er Birch	Low		Sapling	
						Wh	ite Pine	Low		Sapling	
						Re	d Maple	Low		Sapling	
						Lea	therleaf	Medium		Tall Shrub	
35	6229 - Mixed	l lowland sh	nrub	Nonst	ocked	1.3			No		small wet area in oak stand
36	4123 -	Red Oak	5	Sawtimb	er Well	90.0	120	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Red Oak	90	Log/XLog	16	120	Е	Beech	Low	5 - 10 feet	Sapling	
	White Oak	5	Pole/Log	9		Re	d Maple	High	10 - 20 feet	Sapling	
	Red Pine	5	Log	13		Bigto	oth Aspen	Medium	10 - 20 feet	Sapling	
						Wh	nite Oak	Low	< 5 feet	Sapling	
37	4199 - Other Mixe	d Upland D	eciduous	Sapling	g Well	50.5	34	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Red Maple	28	Sapling/Pole	3		Re	d Maple	Low	10 - 20 feet	Sapling	
	Red Oak	30	Sapling/Pole	4	34	Wh	ite Oak	Low	5 - 10 feet	Sapling	
	White Oak	27	Sapling/Pole	4		Re	ed Oak	Low	5 - 10 feet	Sapling	
	White Pine	15	Log/Pole	14							
39	42110 - Plar	nted Red P	ine F	Poletimb	er Well	43.8	60	111-140	N/A		Patchy, with pockets of oak and maple regeneration. Last thinned 2015,
	Canopy Species	% Cover	Size Class	DBH	H Age	Sub-Car	nopy Species	Density	Avg. Height	Size	112 Red Pine.
	Red Oak	10	Log/Pole	11			ite Oak	Low	< 5 feet	Sapling	
	Bigtooth Aspen	5	Pole	5		Re	d Maple	Low	5 - 10 feet	Sapling	
	Red Pine	85	Pole/Log	8	60						
40	4123 -	Red Oak	5	Sawtimb	er Well	92.7	97	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Red Maple	5	Pole/Sap/Log			Re	d Maple	High	10 - 20 feet	Sapling	
	Red Oak	85	Log	12	97	Wh	nite Oak	Low	5 - 10 feet	Sapling	
	White Oak	5	Log	10		Wh	ite Pine	Trace	5 - 10 feet	Sapling	
	White Pine	5	Log/XLog	16		Wite	ch Hazel	Low	10 - 20 feet	Tall Shrub	
41	500 -	Water		Nonst	ocked	6.1			No		



Stand	d Level 4 C	over Type	\$	Size De	nsity	Acres	Stand Age	BA Range	Managed \$	Site	General Comments
42	4124 - Red	with White	Oak S	awtimb	er Well	12.7	104	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	20	Pole	6		W	hite Pine	Medium	5 - 10 feet	Sapling	
	Red Oak	50	Log	13	104	Re	ed Maple	Low	10 - 20 feet	Sapling	
	White Oak	30	Log/Pole	10							
43	122 - Road	d/Parking L	ot	Nonsto	ocked	5.1			No		Al Moses Rd.
44	500	- Water		Nonsto	ocked	40.8			No		Long Lake (Missaukee)
46	4130	- Aspen		Sapling	g Well	17.9	26	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	I Age						
	Red Maple	10	Sapling	3							
	Bigtooth Aspen	80	Sapling/Pole	4	26						
	Red Oak	10	Sapling	3							
47	4130	- Aspen	Р	oletimb	er Well	14.5	40	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	I Age						
	Red Maple	25	Sapling/Pole	4							
	Bigtooth Aspen	60	Pole/Sapling	5	40						
	Red Oak	10	Sapling/Pole	4							
	White Oak	5	Sapling	3							
48	4199 - Other Mixe	ed Upland D	eciduous Sav	wtimbe	r Mediur	m 56.3	56	1-50	N/A		Stand was treated as part of the Goose Lake Oak Wilt sale. Trenched and all red oak removed.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	and all red bak removed.
	Red Maple	30	Pole	6			ed Maple	High	10 - 20 feet	Sapling	
	White Oak	55	Log/Pole	12	56		Red Oak	Medium	5 - 10 feet	Sapling	
	White Pine	15	Pole/Sapling	6			ooth Aspen	Medium	10 - 20 feet	Sapling	
						W	hite Oak	Medium	5 - 10 feet	Sapling	
49	6220 - A	Alder/willow		Nonsto	ocked	5.7			No		
-10											
-10						Sub-Ca	nopy Species	Density	Avg. Height	Size	



Stand	Level 4 C	over Type		Size De	ensity	Acres S	tand Age B	A Range	Managed S	ite	General Comments
50	4131 - A	spen, Oak		Saplin	g Well	16.9	6	1-50	N/A		Stand was harvested in spring 2014.
	Canopy Species	% Cover	Size Class	s DBF	I Age	Sub-Cano	py Species	Density	Avg. Height	Size	
	Red Maple	15	Sapling	1	6	Red	Maple	Low	5 - 10 feet	Sapling	
	Red Oak	5	Log/Pole	13	75	Red	l Oak	Low	5 - 10 feet	Sapling	
	White Oak	15	Pole/Log	8							-
	Bigtooth Aspen	55	Sapling	1	6						
	Red Pine	10	Log	10							
51	623 - Emer	gent Wetla	nd	Nonst	ocked	3.5	0		No		
						Sub-Cano	py Species	Density	Avg. Height	Size	
							e Pine	Low	Variable	Log	
52	6117 - Lowland Con	Deciduous, iferous	Mixed	Sawtimb		13.3	75	81-110	N/A		Wet pocket.
	Canopy Species		Size Class		I Age	Sub-Cano	py Species	Density	Avg. Height	Size	
	White Pine	35	Log/Pole	11	75	Red	Maple	Low	10 - 20 feet	Sapling	
	Red Maple	55	Log	11	75						
	Red Oak	10	Log	14							
53	42110 - Pla	nted Red P	ine	Poletimb	er Well	27.6	60	111-140	N/A		harvested in 2015.
	Canopy Species	% Cover	Size Class	s DBH	I Age						
	Red Maple	10	Pole	8							
	Red Pine	90	Pole/Log	8	60						
54	4126 - White, I	Black, N. Pi	n Oak	Sawtimbe	r Mediun	n 3.4	79	1-50	N/A		
	Canopy Species	% Cover	Size Class	s DBH	I Age	Sub-Cano	py Species	Density	Avg. Height	Size	
	Red Maple	25	Pole	6		Red	Maple	Medium	10 - 20 feet	Sapling	
	White Oak	75	Log/Pole	12	79						
55	500	- Water		Nonsto	ocked	59.2			No		Goose Lk.
56	122 - Road	d/Parking L	ot	Nonsto	ocked	1.7			No		M-66/Morey Rd.
57	4126 - White, I			Poletimbe			68	1-50	N/A		Stand was treated as part of the Goose Lake Oak Wilt sale. Trenched and all red oak removed.
	Canopy Species		Size Class		I Age		py Species	Density	Avg. Height	Size	and an iou out formorou.
	Red Maple	10	Pole	6		Red	Maple	Low	10 - 20 feet	Sapling	
	White Oak	90	Pole/Log	9	68						

Compartment: 112 Year of Entry: 2022 Stand **Level 4 Cover Type** Size Density Acres Stand Age BA Range Managed Site **General Comments** Poletimber Medium 28.2 33 1-50 N/A 4119 - Mixed Northern Hardwoods 58 **Canopy Species** % Cover Size Class **DBH Age Sub-Canopy Species** Density Avg. Height Size Pole 6 33 Red Maple 10 - 20 feet Red Maple 60 Low Sapling 12 White Oak 25 Log/Pole 78 White Pine High 5 - 10 feet Sapling White Pine 15 Pole/Sapling 4123 - Red Oak Sawtimber Well 17.0 119 111-140 N/A low red maple regeneration. Hilly with hydrology and aesthetics. 59 DBH Age Size **Canopy Species** Size Class **Sub-Canopy Species** Avg. Height % Cover Density Red Maple 15 Pole/Loa 8 Red Maple Iow 10 - 20 feet Sapling Red Oak 80 16 Log/XLog 119 White Oak 5 Log/Pole 10 122 4124 - Red with White Oak 7 Sapling Well 23.0 **Immature** N/A Stand was final harvested in spring of 2014. A few green ringed oak were 60 left as well as trees under 4inches in diameter. **Canopy Species** % Cover Size Class **DBH Age** Red Maple 20 Sapling 1 Red Oak 40 Sapling 7 White Oak 20 Sapling 11 1 Bigtooth Aspen 5 Sapling 1 11 10 White Pine Sapling 1 11 5 1 11 Black Cherry Sapling 4199 - Other Mixed Upland Deciduous Sawtimber Medium 3.1 43 81-110 N/A Oak wilt harvest occurred in 2016. 61 Size Class **Canopy Species** % Cover **DBH Age Sub-Canopy Species** Avg. Height Size Density 43 Red Maple 45 Pole/Log/Sap 6 Red Maple Low 10 - 20 feet Sapling 10 3 Red Oak Beech Sapling/Pole 10 - 20 feet Sapling Low White Oak 45 Pole/Sap/Log 5 White Oak Low 5 - 10 feet Sapling 4199 - Other Mixed Upland Deciduous Sapling Well 7 N/A Stand was final harvested in spring of 2014. A few green ringed oak were 54.7 **Immature** 62 left. **Canopy Species** % Cover Size Class **DBH Age** Red Maple 30 Sapling 7 Red Oak 40 Sapling 1 7 White Oak 7 17 Sapling 1 Bigtooth Aspen 5 Sapling 1 7 White Pine 7 5 Sapling 1 **Black Cherry** 3 Sapling 4123 - Red Oak 4.2 4 1-50 N/A 63 Sapling Well Stand was treated in winter/spring of 2015. Cut by hand cutters. Small

area in 2016 winter.

stand was discovered to have oak wilt and all red oak was cut from this

Canopy Species

Red Oak

Size Class

Sapling

DBH Age

4

1

% Cover

100



Compartment: 112

	C	adiliac iviç	gt. Unit				i top	0117 011			Year of Entry: 2022
Stand	Level 4 C	over Type		Size D	ensity	Acres	Stand Age B	A Range	Managed S	iite	General Comments
64	4199 - Other Mixe	ed Upland [Deciduous Sa	awtimbe	r Mediun	n 1.0	43	81-110	N/A		Oak wilt harvest occurred in 2016.
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	
	Red Maple	45	Pole/Log/Sap	ip 6	43		Beech	Low	10 - 20 feet	Sapling	
	Beech	10	Sapling/Pole	e 3		R	ed Maple	Low	10 - 20 feet	Sapling	
	White Oak	45	Pole/Sap/Log	g 5		F	Red Oak	Low	10 - 20 feet	Sapling	
65	4124 - Red	with White	Oak I	Poletim	oer Well	4.6	28	81-110	N/A		Multi stem oak and maple. Did not locate cut records.
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-C	anopy Species	Density	Avg. Height	Size	
	Red Maple	20	Sapling/Pole	e 4		R	ed Maple	Low	10 - 20 feet	Sapling	
	Red Oak	45	Sapling/Pole	e 3	28	F	Red Oak	Low	5 - 10 feet	Sapling	
	White Oak	35	Sapling/Pole	e 2							•
66	4126 - White,	Black, N. P	in Oak Sa	awtimbe	r Mediun	n 23.1	99	1-50	N/A		Harvested in 2015. Heavy aspen regeneration.
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	
	Red Oak	25	Log/Pole/Sap	ıp 13	99	R	ed Maple	Medium	5 - 10 feet	Sapling	
	White Oak	75	Log/Pole/Sap	ıp 11	99	V	hite Oak	Medium	5 - 10 feet	Sapling	
						Bigt	ooth Aspen	Full	5 - 10 feet	Sapling	
						F	Red Oak	Low	5 - 10 feet	Sapling	
67	4130	- Aspen	;	Sawtimb	oer Well	2.4	41	111-140	N/A		less red maple regen throughout stand than stand to the north.
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	
	Red Maple	5	Pole/Log	8		R	ed Maple	Low	10 - 20 feet	Sapling	
	Red Oak	10	Log/XLog	16	119						-
	White Oak	5	Log/Pole	10	122						
	Bigtooth Aspen	80	Pole	7	41						
69	4124 - Red	with White	Oak	Sawtimb	oer Well	8.2	96	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	
	Red Maple	25	Pole/Log/Sap	ip 6			Beech	Low	10 - 20 feet	Sapling	
	Beech	10	Sapling/Pole	е 3		R	ed Maple	Medium	10 - 20 feet	Sapling	
	Red Oak	45	Log/Pole	13	96	V	hite Oak	Medium	10 - 20 feet	Sapling	
	White Oak	20	Pole/Sap/Log	g 5							_
70	42100 - Plar	nted White	Pine I	Poletiml	per Well	5.8	59	51-80	N/A		Salvage cut in the 90's. Variable diameter and densities throughout the
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	stand.
	Red Maple	5	Pole	6			ed Maple	Low	10 - 20 feet	Sapling	
						_			_	T	1

10 - 20 feet

Variable

Low

Low

Sapling

Sapling

White Pine

Red Oak

90

5

Pole/Log

Pole/Log

59

9

8

Red Oak

White Oak

Cadillac Mgt. Unit

Report 7 - Stands



Stan	d Level 4 Co	over Type	;	Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site
72	4130 -	- Aspen	Р	oletimb	er Well	5.3	38	141-170	N/A	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Can	opy Species	s Density	Avg. Height	Size
	Red Maple	10	Pole/Sapling	5		Red	d Maple	Low	10 - 20 feet	Sapling
	Red Oak	10	Pole/Sapling	5		Re	ed Oak	Low	5 - 10 feet	Sapling
	White Oak	5	Sapling/Pole	2				,		
	Bigtooth Aspen	75	Pole/Sapling	7	38					