

Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72024 Entry Year 2022 Acreage: 1,832

Management Area: AuSable Outwash

County Oscoda

Revision Date: 2020-04-03

Stand Examiner: Kevin Ehlert

Legal Description:

Oscoda County - Elmer Township: T28N, R2E: Sections 4, 5, 8 and 9

Identified Planning Goals:

Our goal is to manage and maintain a healthy, productive, and diverse ecosystem beneficial to the Prairie Warbler, Kirtland Warbler, Rough Fescue, and other prairie species. We also need to consider species diversity, visual management and multiple-use in management of this compartment. As a note, this compartment is not a designated Kirtland Warbler Management Unit.

Soil and topography:

Soil types, within this compartment consist mostly of Grayling sands, Graycalm sands and Roselawn sands. Topography of the compartment is mostly gently rolling terrain with flat areas on the west side of compartment.

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

The compartment is comprised of one large contiguous block of state ownership and two large blocks of private ownership. The largest block of private ownership (440 acres) is found in section 8 and is well developed with private homes and seasonal cabins. The smaller block of private ownership (240 acres) is located in the south east quarter of section 9 and is the least developed. Other development and land use ongoing within this compartment consists of several gas wells, pumping station, and cycle trail.

Unique Natural Features:

The Prairie Warbler (Dendrocia, discolor.), Kirtland Warbler (Dendrocia, kirtlandii.), Rough Fescue (Festuca scabrella), Hill's Thistle and Allegheny Plum.

Archeological, Historical, and Cultural Features:

None at this time.

Special Management Designations or Considerations:

None at this time.

Watershed and Fisheries Considerations:

None at this time.

Wildlife Habitat Considerations:

To maintain existing Jack Pine forest cover types as habitat for the Prairie Warbler and the Kirtland Warbler. Secondly, to provide and manage habitat for deer, bear, grouse and turkey in the surrounding stands.

Mineral Resource and Development Concerns and/or Restrictions

No known potential exists for commercial metallic mineral production in this part of the state. Multiple active sand/gravel pits are within three or four miles of the compartment, and sand & gravel potential within the compartment appears to be good. The compartment has been developed for Antrim Shale gas production, and there is limited potential for any additional Antrim wells in the compartment. There is no known hydrocarbon potential from other formations beneath the compartment. All State-owned mineral rights in the compartment are currently leased and held by production.

Vehicle Access:

The compartment is accessed from the County Roads of Eastwood Road, Hill Road and Granholm Road. Several, two tracks branch off from these roads and wind through portions of the compartment. Many of these two tracks are being used by oil and gas companies to access well sites and facilities. A cycle trail runs through section 4, 8 and 9.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

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Hunt Creek ORV Cycle Trail & MCCCT occurs within as a stand alone trail and shares some segments of Forest Roads. The varying cover type provides dispersed hunting, and camping opportunities.

Fire Protection:

Fire protection is the responsibility of the Michigan DNRE and the Elmer Township Volunteer Fire Department. The current road system is adequate to provide access for fire suppression equipment and the closest, accessible water sources are Eleventh Lake, Oak Lake, Perry Lake and La Belle Lake.

Additional Compartment Information:

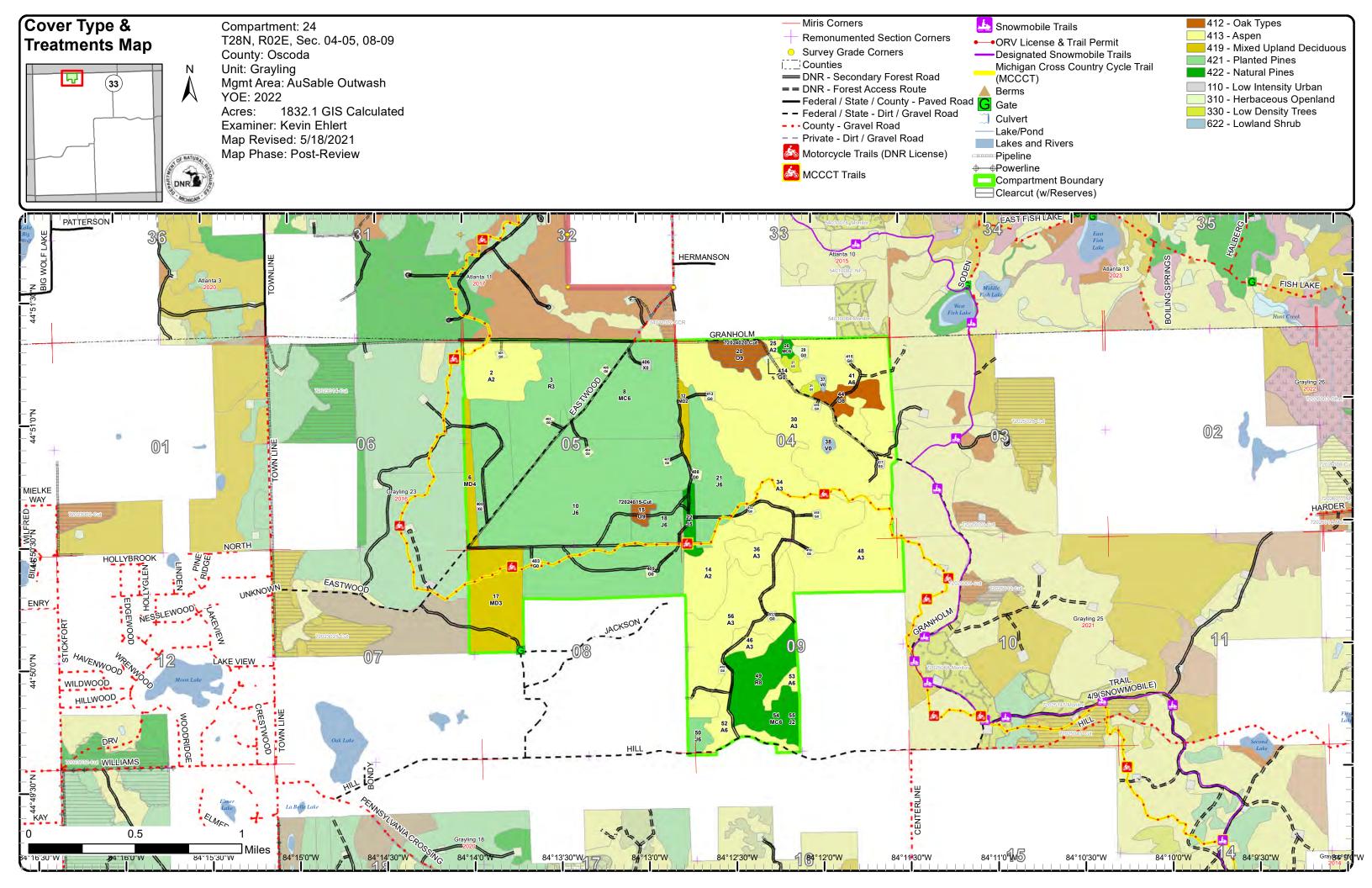
Most of the northeast portion of this compartment under went salvage harvest operations in the past. This was due to windstorm damage to the area in June/July 1999.

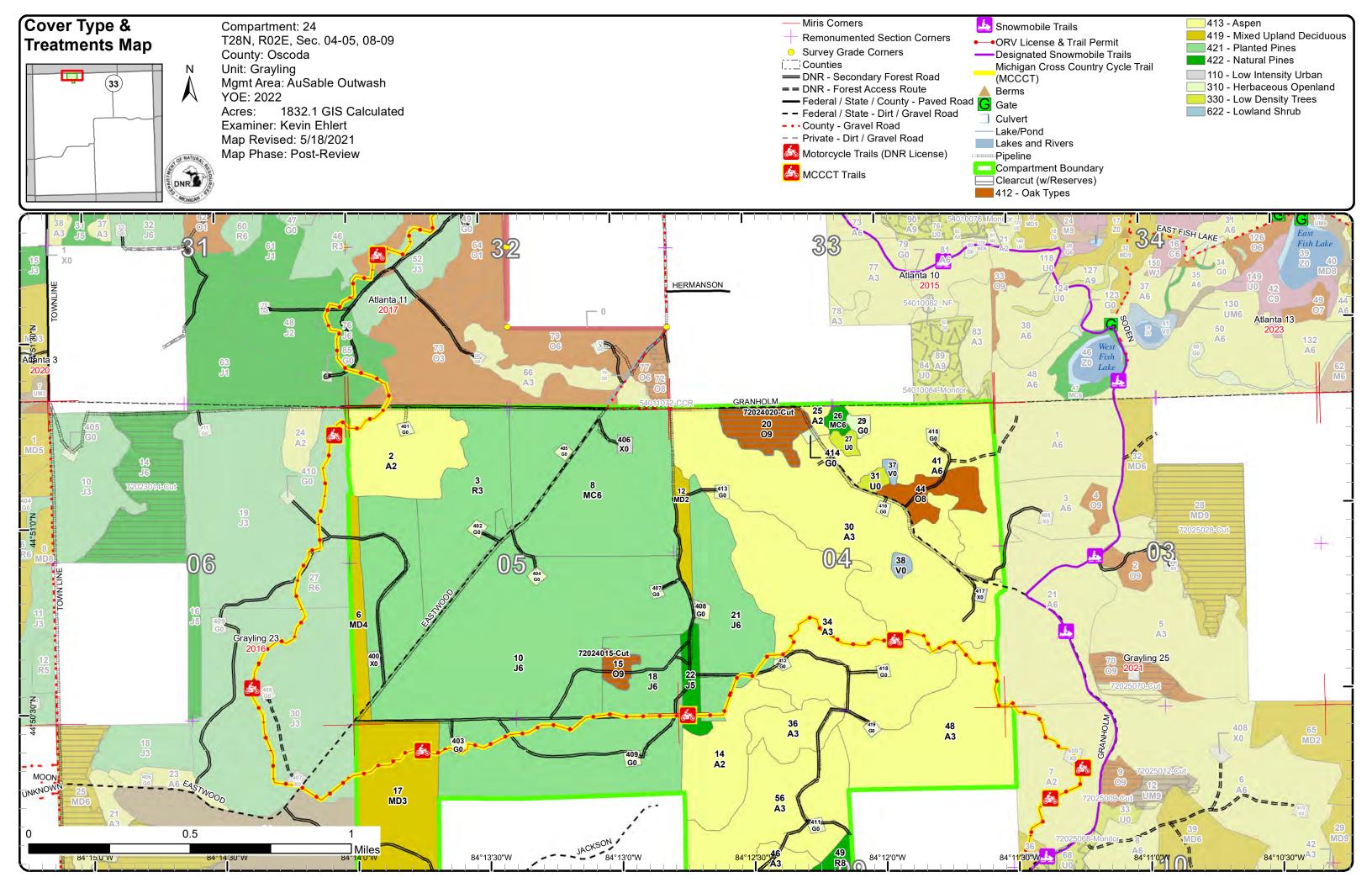
The following reports from the Inventory are attached:

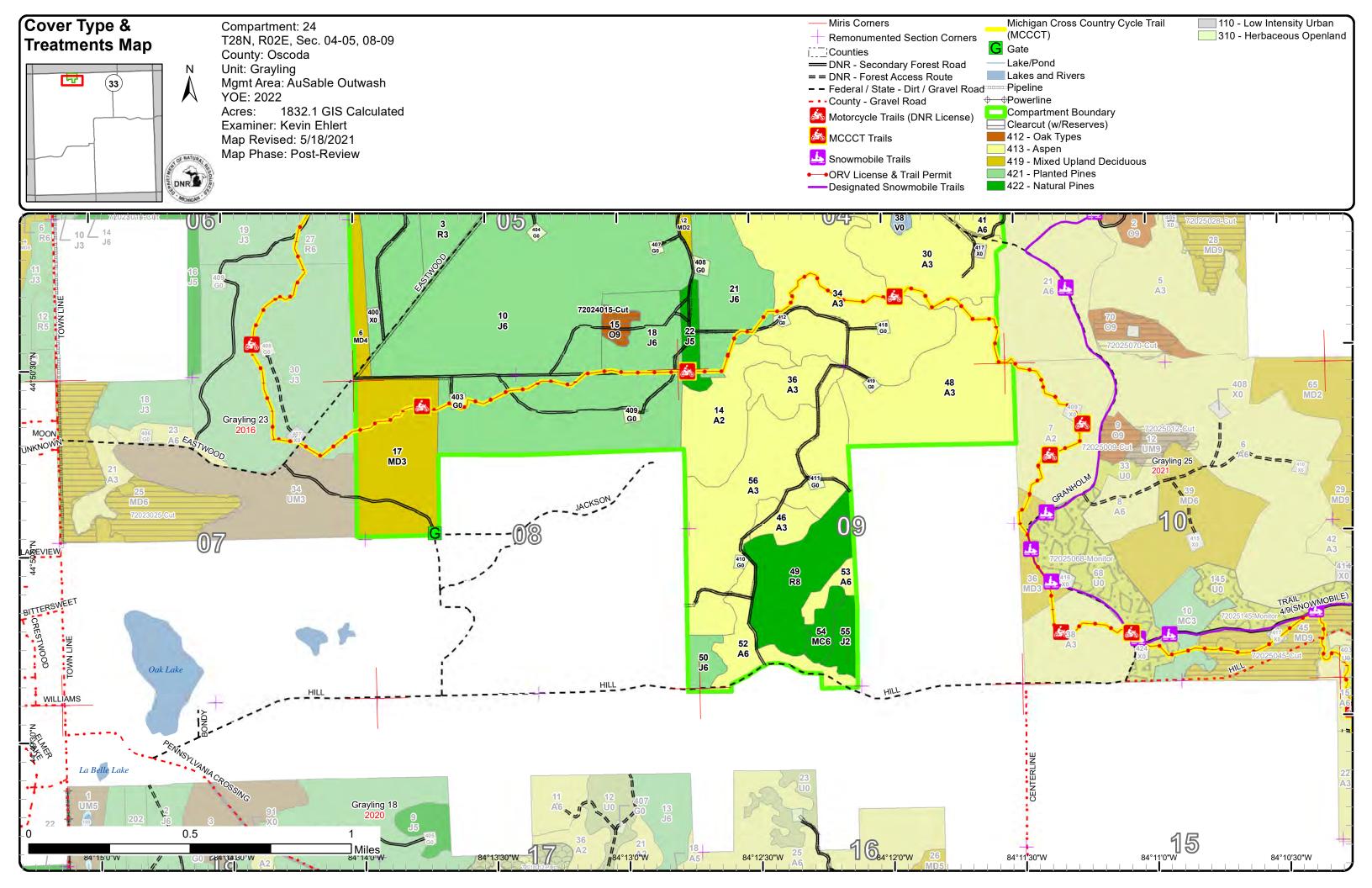
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

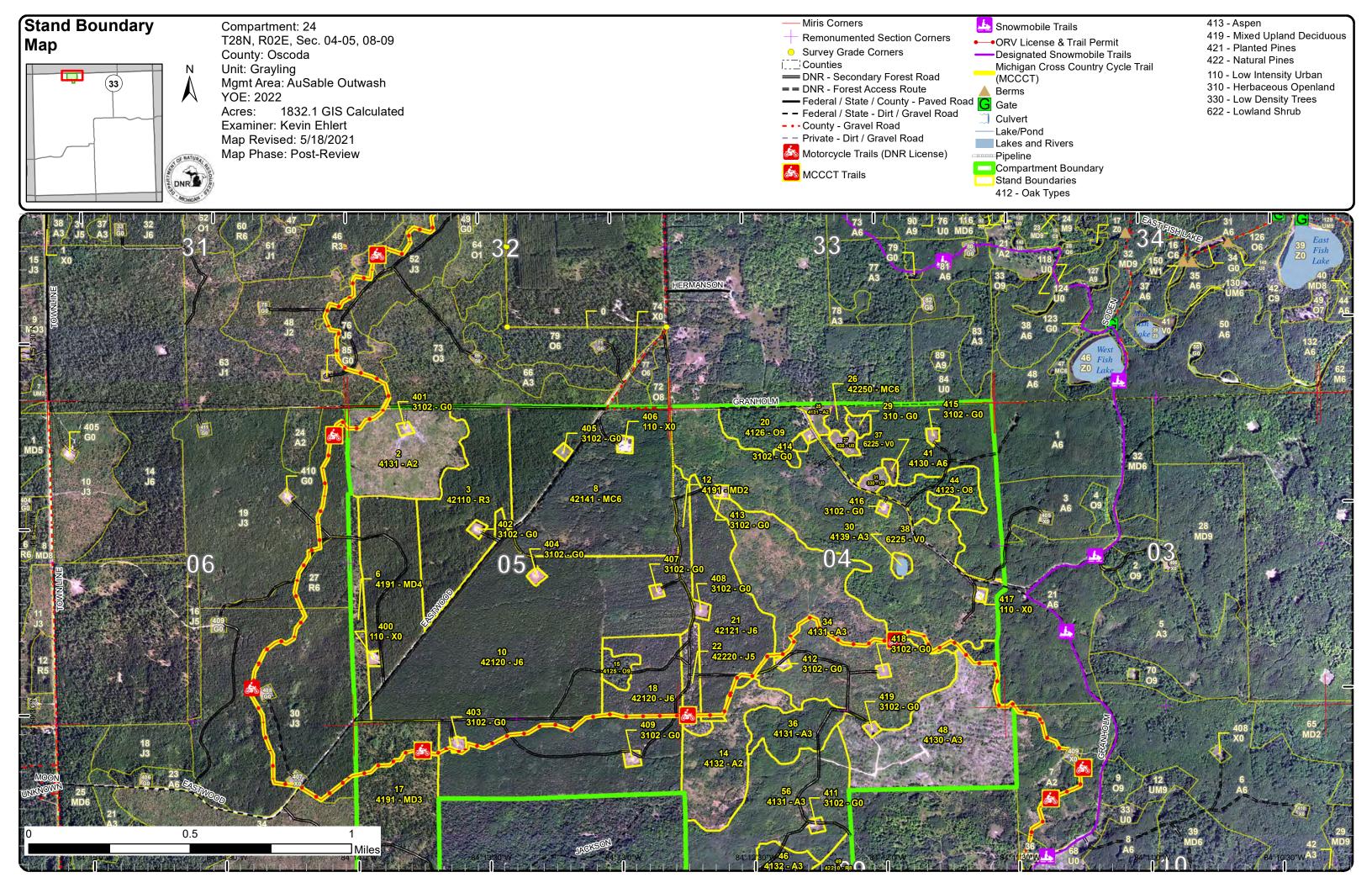
The following information is displayed, where pertinent, on the attached compartment maps:

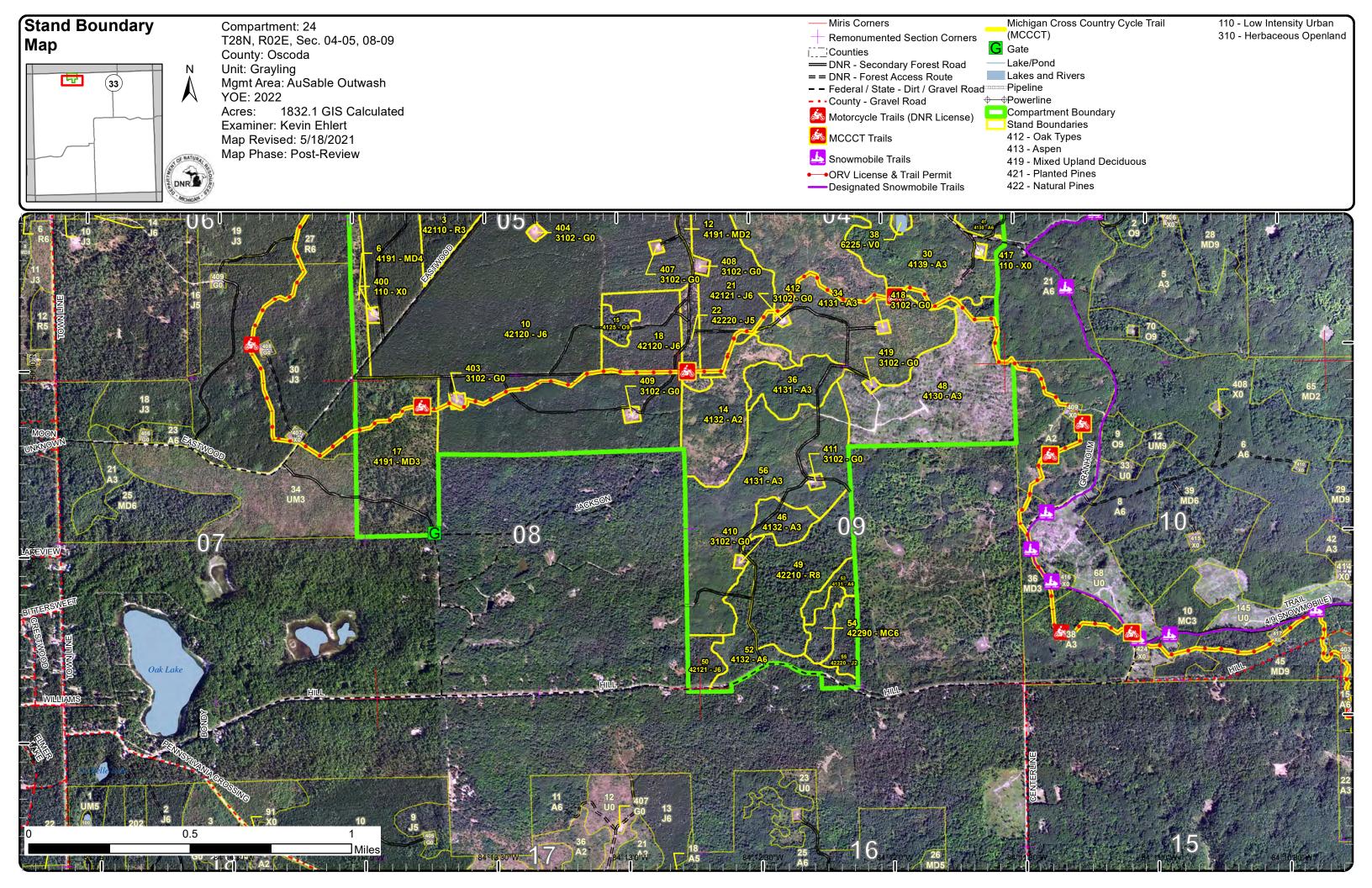
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

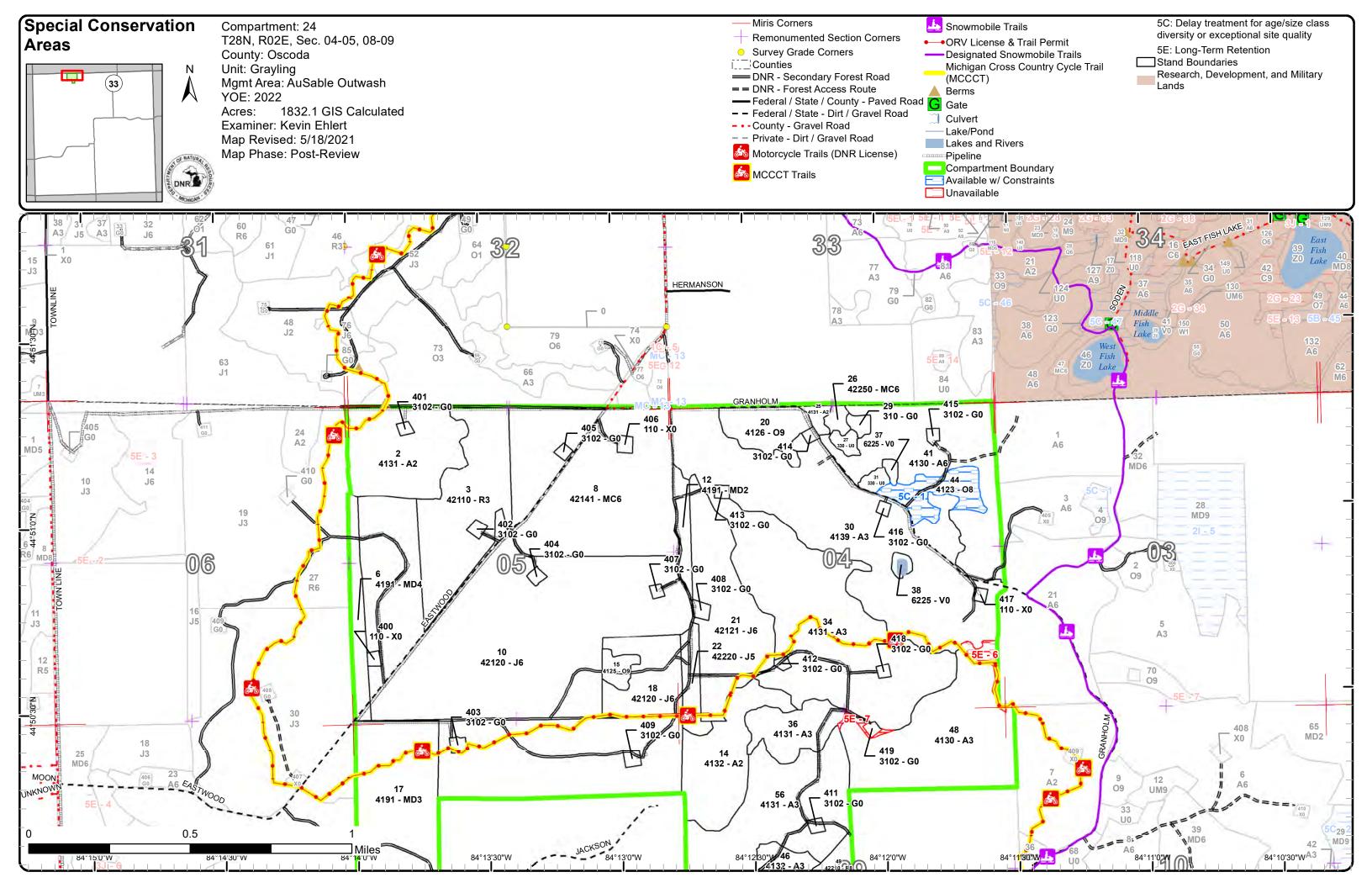


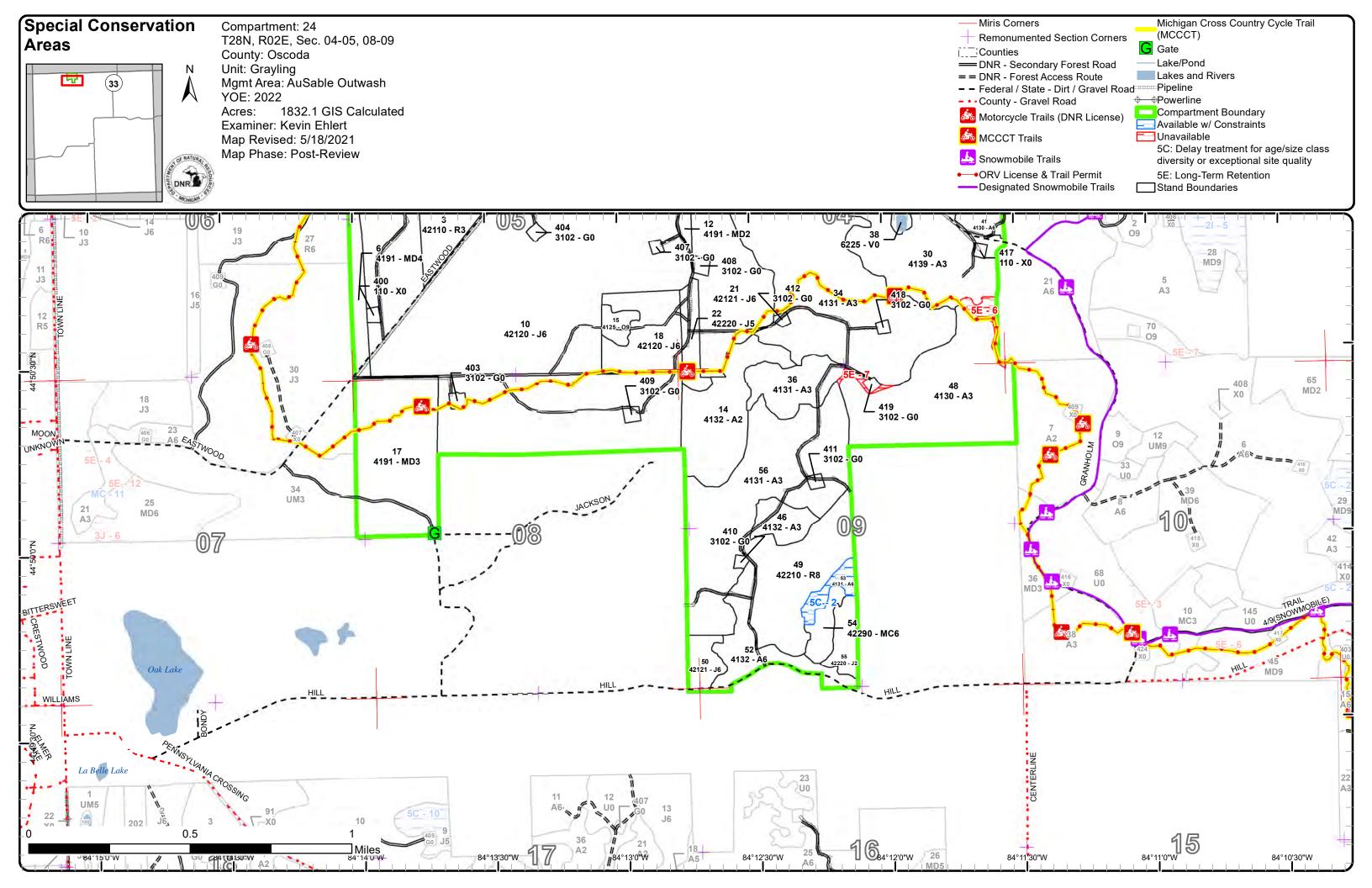












Grayling Mgt. Unit

Kevin Ehlert: Examiner

Compartment 24 Year of Entry 2022



Age Class

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	No.	Kon C	3/4	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		3 /) } 		R / 6			70 72 A				N. S.	St Just	N. N
Aspen	0	161	264	269	82	29	8	0	0	0	0	0	0	0	0	0	0	0	813
Bog	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Herbaceous Openland	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Jack Pine	0	0	0	0	526	0	11	0	0	0	0	0	0	0	0	0	0	0	537
Low-Density Trees	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Mixed Upland Deciduous	0	0	0	81	28	0	0	0	0	0	0	0	0	0	0	0	0	0	109
Natural Mixed Pines	0	0	0	0	0	0	4	0	10	0	0	0	0	0	0	0	0	0	14
Oak	0	0	0	0	0	0	0	0	0	0	29	0	19	0	0	0	0	0	48
Planted Mixed Pines	0	0	0	0	147	0	0	0	0	0	0	0	0	0	0	0	0	0	147
Red Pine	0	0	0	0	73	0	0	0	57	0	0	0	0	0	0	0	0	0	130
Urban	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	37	161	264	350	856	29	23	0	67	0	29	0	19	0	0	0	0	0	1834



Report 2 – Treatment Summary

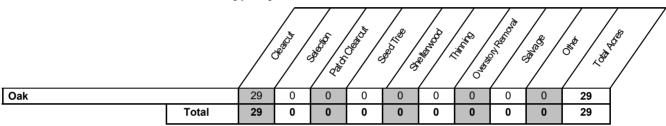
Grayling Mgt. Unit Year of Entry: 2022

Acres of Harvest

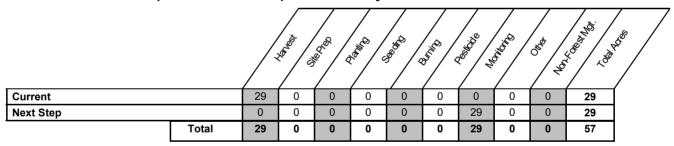
Compartment 24
Total Compartment Acres: 1,832

Commercial Harvest - 29 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

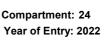
Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Grayling Mgt. Unit





Treatment Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age Habitat Method Density Objective Structure Name CoverType Age Range Type Cut

Approved Treatments:

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n

d

72024015-Cut 6.2 4125 - Black, N. Pin Sawtimber 51-80 Harvest Clearcut 4199 - Other Even-Aged No Mixed Upland Oak Well

Deciduous

Deciduous

Prescription Final harvest all species 4" DBH and up. Minimize damage to current sub canopy oak as much as possible during harvest. No retention due Specs:

to small stand size to help maximize successful regeneration.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Mixed upland deciduous stand including oak, maple, aspen and scattered conifers. Prefer 30% oak canopy cover, but will accept any

Regen: species composition meeting minimum stocking levels.

Pipelines in area of sale and access routes. **Other**

Comment:

Site Condition

Proposed Start Date: 10/1 /2021

72024020-Cut 22.5 4126 - White, Sawtimber 96 1-50 Harvest Clearcut with 4199 - Other No Even-Aged Black, N. Pin Oak Well Retention Mixed Upland

Prescription Final harvest all species 4" DBH and up. Minimize damage to current sub canopy oak as much as possible during harvest. Follow standard

retention guidelines. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Mixed upland deciduous stand including oak, maple, aspen and scattered conifers. Prefer 30% oak canopy cover, but will accept any Regen:

species composition meeting minimum stocking levels.

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2021

Total Treatment Acreage Proposed:

Compartment: 24

Grayling Mgt. Unit

Kevin Ehlert : Examiner Year of Entry: 2022

Availability for Management Total Acres Avail Acres Acres Available With Condition Not Available 5C 5F

Acres	Available	With Condition	Not Available		5C	5E
812	797	8	7	Aspen	8	7
4	4	0	0	Bog		
22	22	0	0	Herbaceous Openland		
537	537	0	0	Jack Pine		
6	6	0	0	Low-Density Trees		
109	109	0	0	Mixed Upland Deciduous		
13	13	0	0	Natural Mixed Pines		
48	29	19	0	Oak	19	
147	147	0	0	Planted Mixed Pines		
130	130	0	0	Red Pine		
4	4	0	0	Urban		
1,832	1,799	27	7	Total Forested Acres	27	7
	98%	1%	0%	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.

5C: Delay treatment for age/size class diversity or exceptional site quality	19	Unspecified much of the surrounding a	Unspecified rea was salvaged after the	Unspecified 1999 tornado.	Unspecified
and to leave a mature component	t where r	much of the surrounding a	rea was salvaged after the	1999 tornado.	
5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
with stand 40 in future VOE					
٨	age/size class diversity or	age/size class diversity or exceptional site quality			

Report 4 – Site Conditions

Compartment: 24

Grayling Mgt. Unit

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6	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
7	Unavailable Comments:	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified

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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				

Grayling Mgt. Unit Compartment: 24
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Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

Conservation Area	Туре	Description	HCVA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
	esearch and Military Areas	These areas provide facilities and lands specifically dedicated include the 5,847 acre Forest Fire Experiment Station, the 12,4 Area, the Beaver Islands Archipelago Wildlife Research Area High and Hog Islands, all state owned land on Beaver, South Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries F Nursery, and over 144,000 acres of Military Lands.	000 acre Houghton Lake Wildlife Research (that includes most of Garden Island, all of Fox and North Fox Islands), the Cusino

Report 7 – Stands



Compartment: 24

Year of Entry: 2022

Stand	Level 4 Co	ver Type		Size De	nsity	Acres	Stand Age E	BA Range	Managed S	Site	General Comments
2	4131 - As	spen, Oak	S	Sapling I	Medium	n 58.9	7	Immature	N/A		Stand harvested under contract #72-031-12-01, Granholm Jack in 2014.
(Canopy Species	% Cover	Size Class	DBH	I Age						Regeneration is a combination of Aspen, oak, and jack pine. Oak averages 3-7' height. Aspen is 5-10'. North end of stand heavier to
В	Sigtooth Aspen	40	Sapling	1	7						oak.
Q	Quaking Aspen	30	Sapling	1							
Black	/Red (Hybrid) Oak	20	Sapling	1							
	Jack Pine	10	Sapling	1							
3	42110 - Plan	ted Red P	ine	Sapling	g Well	73.0	33	81-110	N/A		Planted red pine. West end seems to be doing slightly better than East and for growth. Not yet ready for first thin.
(Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	end for growth. Not yet ready for first tillin.
No	orthern Pin Oak	5	Sapling	3		Che	rry (spp.)	Low	Variable	Sapling	
	Red Pine	75	Sapling/Pole	3	33	Oa	ık (spp.)	Low	Variable	Sapling	
	Jack Pine	15	Sapling/Pole	3							
	Black Cherry	5	Sapling	3							
6	4191 - Mixed Upla Cor	nifer		Poletimb		r 18.4	36	1-50	N/A		Designated fuel break. Mix of pole and sapling size pin oak and jack pine. Barely meets 25% canopy closure, as much of it is open. In order to ensure fuel break is effective, stand should be cleared when adjacent
C	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	reaches rotation age.
	Red Oak	50	Pole/Sapling	7	36	Servicebe	erry (Juneberry) Low	Variable	Tall Shrub	isasinos istanon ago.
	Jack Pine	40	Pole/Sapling	j 4		Asp	en (spp.)	Low	Variable	Sapling	
	Black Cherry	10	Sapling	3		Che	rry (spp.)	Medium	Variable	Sapling	
						Oa	ık (spp.)	Low	Variable	Sapling	
8	42141 - Planted N	Mixed Pine duous	, Mixed F	Poletimb	er Wel	I 146.8	39	111-140	N/A		Harvested under 12-78A, complete in 1979. Mix of planted red pine, jack pine, and pockets of white pine.
C	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Red pine plantation mixed with Jack pine and other deciduous species in
	Red Maple	3	Sapling/Pole	4		Servicebe	erry (Juneberry) Low	Variable	Tall Shrub	areas where red pine did not take. Variable density, 110-140 in
Black	/Red (Hybrid) Oak	15	Pole/Sapling	5		Che	erry (spp.)	Medium	Variable	Sapling	successful plantation areas, lower elsewhere.
В	Sigtooth Aspen	8	Pole/Sapling	5		Oa	ık (spp.)	Medium	Variable	Sapling	
	Red Pine	55	Pole	6	39	Wi	low spp.	Low	Variable	Tall Shrub	
				O	00						
	Jack Pine	14	Pole/Sapling		33						
10							33	1-50	N/A		Planted jack pine, ranging from large sapling to small pole size. Basal
	Jack Pine	ted Jack P		5 Poletimb		I 400.1			N/A Avg. Height	Size	Planted jack pine, ranging from large sapling to small pole size. Basal area will increase as more stems reach pole class. Aspen pocket
(Jack Pine 42120 - Plan	ted Jack P	ine F	5 Poletimb	er Wel	I 400.1 Sub-Ca	33	Density			Planted jack pine, ranging from large sapling to small pole size. Basal
(Jack Pine 42120 - Plan Canopy Species	ted Jack P	ine F	poletimb	er Wel	I 400.1 Sub-Ca Servicebe	33 nopy Species	Density	Avg. Height	Size	Planted jack pine, ranging from large sapling to small pole size. Basal area will increase as more stems reach pole class. Aspen pocket inclusions throughout, more common in the East end. Plan to expand
No	Jack Pine 42120 - Plan Canopy Species orthern Pin Oak	ted Jack P % Cover 5	rine F Size Class Sapling	poletimb	er Wel	Sub-Ca Servicebe	33 nopy Species rry (Juneberry	Density) Low	Avg. Height Variable	Size Tall Shrub	Planted jack pine, ranging from large sapling to small pole size. Basal area will increase as more stems reach pole class. Aspen pocket inclusions throughout, more common in the East end. Plan to expand



Stand	Level 4 Co	over Type Size Density Acres Stand Age BA Range Managed Site		Site	General Comments						
12	4191 - Mixed Upla Co	and Decidu	ous with S	Sapling N	/ledium	10.3	34	1-50	N/A		Stand was part of some of the tornado damage. Oak and Jack pine with cherry.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	opy Species	Density	Avg. Height	Size	
Blac	k/Red (Hybrid) Oak	40	Sapling/Pole	2	34	Servicebe	rry (Juneberry)	Low	Variable	Tall Shrub	
	Jack Pine	35	Sapling/Pole	4		Chei	ry (spp.)	Low	< 5 feet	Seeding	
	Black Cherry	20	Sapling/Pole	3		Oa	k (spp.)	Low	< 5 feet	Seeding	
	Bigtooth Aspen	5	Sapling	2		Will	ow spp.	Low	Variable	Tall Shrub	
14	4132 - Asp	en, Jack Pi	ine S	Sapling N	/ledium	48.1	27 I	mmature	N/A		Stand was final harvested in 1994. Everything 6" and above was cut.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	opy Species	Density	Avg. Height	Size	ORV trail traverses through a portion of the north part of the stand. Parent stand was typed as J6. Jack pine pockets with aspen/mixed
Blac	k/Red (Hybrid) Oak	22	Sapling	2		Aspe	en (spp.)	Low	< 5 feet	Seeding	deciduous/open brushy areas. Cut through 006-92-01.
	Quaking Aspen	18	Sapling	2		Chei	ry (spp.)	Low	< 5 feet	Seeding	
	Bigtooth Aspen	30	Sapling	2	27	Oa	k (spp.)	Low	< 5 feet	Seeding	
	Jack Pine	20	Sapling	3					1		
	Black Cherry	10	Sapling	2							
15	4125 - Blac	k, N. Pin O	oak S	Sawtimbe		6.2	99	51-80	N/A		Small Mature Oak stand with Aspen and Jack Pine mixed. Oak is declining rapidly with quite a bit of mortality.
	Canopy Species	% Cover	Size Class	DBH	Age		opy Species	Density	Avg. Height	Size	declining rapidly with quite a bit of mortality.
	lorthern Pin Oak	85	Log/Pole	12	99		rry (Juneberry)		Variable	Tall Shrub	
	Bigtooth Aspen	10	Pole/Sapling			Aspe	en (spp.)	Low	Variable	Sapling	
	Jack Pine	5	Pole/Sapling	4		Chei	ry (spp.)	Medium	Variable	Sapling	
						Oal	k (spp.)	Medium	Variable	Sapling	
17	4191 - Mixed Upla Co	and Decidu	ous with	Sapling	Well	80.6	29 I	mmature	N/A		Natural Jack pine mixed with deciduous spieces. Jack pine / Oak.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
١	lorthern Pin Oak	30	Sapling	3		Servicebe	rry (Juneberry)	Low	Variable	Tall Shrub	
	Jack Pine	40	Sapling/Pole	4	29	Chei	ry (spp.)	Medium	Variable	Sapling	
	Black Cherry	25	Sapling	3		Oa	k (spp.)	Medium	Variable	Sapling	
	Bigtooth Aspen	5	Sapling	3		Will	ow spp.	Low	Variable	Tall Shrub	
18	42120 - Plar	nted Jack P	Pine F	Poletimbe	er Well	33.2	39		N/A		Planted Jack pine with deciduous spieces mix.
	Canopy Species		Size Class		Age		nopy Species	Density	Avg. Height	Size	
١	lorthern Pin Oak	10	Pole/Sapling				rry (Juneberry)		Variable	Tall Shrub	
	Jack Pine	90	Pole/Sapling	5	39		ry (spp.)	Medium	Variable	Sapling	
							k (spp.)	Medium	Variable	Sapling	
						Will	ow spp.	Low	Variable	Tall Shrub	

Report 7 - Stands



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Stand	nd Level 4 Cover Type			Size Density		Acres	Stand Age E	A Range	Managed S	Site	General Comments
20	4126 - White, B	lack, N. Pi	n Oak	Sawtimb	oer Well	22.5	96	1-50	N/A		Red and White Oak stand with a mixed understory. Stand borders
С	anopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Granholm rd. Die back in the oak. Ready for final harvest.
No	rthern Pin Oak	80	Log/Pole	12	96	Re	d Maple	Medium	Variable	Sapling	
	White Oak	20	Pole/Log	9		Asp	en (spp.)	Medium	Variable	Sapling	
				-		Che	erry (spp.)	Medium	Variable	Sapling	
						Oa	ak (spp.)	Medium	Variable	Sapling	
21	42121 - Planted Deci	Jack Pine, duous	Mixed F	Poletimb	ber Well	68.5	32	Immature	N/A		Immature Jack pine stand. Starting to transition to small pole size. A few aspen inclusions.
С	anopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
No	rthern Pin Oak	10	Sapling	3		Servicebe	erry (Juneberry)) Low	Variable	Tall Shrub	
	Jack Pine	80	Sapling/Pole	9 4	32	Che	erry (spp.)	Medium	Variable	Sapling	
Е	Black Cherry	5	Sapling	3		Oa	ak (spp.)	Medium	Variable	Sapling	
Bi	igtooth Aspen	5	Sapling/Pole	9 4		Wil	llow spp.	Low	Variable	Tall Shrub	
22	42220 - Natu	ıral Jack P	ine Po	oletimbe	r Mediu	m 12.6	32	1-50	N/A		Immature Jack Pine with mixed deciduous and scattered open areas.
С	anopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
No	rthern Pin Oak	10	Sapling	2		Che	erry (spp.)	Low	< 5 feet	Seeding	
	Jack Pine	80	Pole/Sapling	5	32	Oa	ak (spp.)	Low	< 5 feet	Seeding	
E	Black Cherry	10	Sapling	2				1	,		-
25		spen, Oak		Sapling		3.7	6	Immature	N/A		Stand harvested under contract #72-031-12-01, Granholm Jack. Harve completed in November, 2014. Regen is a mix of bigtooth aspen and
	anopy Species		Size Class		H Age						oak, approximately 5' tall.
	igtooth Aspen	60	Sapling	1	6						Stand borders Granholm Road and private to the north.
Black/	/Red (Hybrid) Oak	40	Sapling	1							otaliu borders oralinoini road and private to the north.
26	42250 - 1	Pine, Oak	F	Poletimb	ber Well	3.5	55	51-80	N/A		Small pocket of mature Jack Pine.
	anopy Species	% Cover			H Age		nopy Species		Avg. Height	Size	
No	rthern Pin Oak	30	Pole/Sapling	,			d Maple	Low	< 5 feet	Seeding	
	Jack Pine	70	Pole/Sapling	9 6	55		erry (spp.)	Low	< 5 feet	Seeding	
						Oa	ak (spp.)	Low	< 5 feet	Seeding	
27	330 - Low-D	ensity Tre	es	Nonst	ocked	3.3	0 U	Inspecified	42221 - Natural Mixed Decid	,	Stand harvested under contract #72-031-12-01, Granholm Jack. Harve completed in November, 2014. Clumps of jack pine regen, approx 1-2'
						Sub-Ca	nopy Species	Density	Avg. Height	Size	all. Mix of cherry, oak, and herbaceous open areas in between. Accel as is.
						Ja	ck Pine	Low	< 5 feet	Seeding	
						Oa	ak (spp.)	Low	< 5 feet	Seeding	
						Blad	ck Cherry	Low	5 - 10 feet	Sapling	
29	g 310 - Herbaceous Openland Nonstocked				ocked	2.5			No		Upland brush/grassy open, low density jack pine and pin oak.



Stand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments			
30	4139 - Aspen,	Mixed Deci	duous	Sapling	Well	183.2	21	Immature	N/A		Aspen mixed deciduous stand. Stand was salvaged in 1999 after tornado			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	Density	Avg. Height	Size	damage on 7/10/99. Stand does have some scattered and patches of mature timber within it that was not salvaged. ORV trail runs through a			
Blad	ck/Red (Hybrid) Oak	15	Sapling/Pole	3		Asp	en (spp.)	Medium	Variable	Sapling	portion of the stand.			
	Quaking Aspen	10	Sapling	3		Che	rry (spp.)	Medium	Variable	Sapling				
	Bigtooth Aspen	45	Sapling	3	21	Oa	k (spp.)	Medium	Variable	Sapling				
	Black Cherry	30	Sapling	1										
31	330 - Low-I	Density Tre	es	Nonsto	cked	3.1	0 ι	Jnspecified	42221 - Natural Mixed Deci		Stand harvested under contract #72-031-12-01, Granholm Jack. Harves completed in November, 2014. Scattered understory oak left from			
						Sub-Car	nopy Species	Density	Avg. Height	Size	harvest. Clumps of jack pine regen, approx 1-2' tall. Mix of cherry, oak, and herbaceous open areas in between. Accept as is.			
						Ja	ck Pine	Low	< 5 feet	Sapling	and norvaccous open areas in between. Accept as is.			
						Blac	k Cherry	Low	5 - 10 feet	Tall Shrub				
						Oa	k (spp.)	Low	< 5 feet	Sapling				
34	4131 - A	spen, Oak		Sapling	Well	149.0	19	Immature	N/A		Stand was final harvested in 1994. Everything 6" and above was cut. ORV trail traverses through a portion of the stand. Cut through 72-028-			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	Density	Avg. Height	Size	02-01.			
	Red Oak	22	Sapling	2		Asp	en (spp.)	Low	< 5 feet	Seeding				
	Quaking Aspen	25	Sapling	2		Che	rry (spp.)	Low	< 5 feet	Seeding				
	Bigtooth Aspen	35	Sapling	2	19	Oa	k (spp.)	Low	< 5 feet	Seeding				
	Jack Pine	8	Sapling	2										
	Black Cherry	10	Sapling	2										
36	4131 - A	spen, Oak		Sapling	Well	25.0	27	Immature	N/A		Immature Aspen stand mixed with other deciduous species. Was			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	Density	Avg. Height	Size	harvested along with stand 14 in 1994, sale # 006-92-01. This area regenerated to mostly aspen/oak.			
	Red Oak	30	Sapling	3		Asp	en (spp.)	Low	< 5 feet	Seeding	Togotorates to information			
	Quaking Aspen	35	Sapling	3	27	Che	rry (spp.)	Low	< 5 feet	Seeding				
	Bigtooth Aspen	15	Sapling	3		Oa	k (spp.)	Low	< 5 feet	Seeding				
	Jack Pine	10	Sapling	3										
	Black Cherry	10	Sapling	2										
37	6225	5 - Bog		Nonsto	cked	1.8			No		Bog with a few scattered jack pines.			
38	6225	5 - Bog		Nonsto	cked	2.5			No		Bog			



Stand	Level 4 Ce	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments		
41	4130	- Aspen	I	Poletimbe	er Well	82.4	36	Unspecified	N/A		Aspen pole stand mixed with other deciduous species. Some of the areas are younger along Granholm Rd due to tornado damage.		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	a leas are younger along Grannolli Nu due to tornado damage.		
	Red Maple	23	Pole/Sapling	g 5		Re	ed Maple	Low	Variable	Sapling			
	Red Oak	10	Pole/Sapling	g 4		Asp	pen (spp.)	Low	Variable	Sapling			
	Quaking Aspen	22	Pole/Sapling	g 6		Che	erry (spp.)	Medium	Variable	Sapling			
	Bigtooth Aspen	45	Pole/Sapling	g 6	36	Oa	ak (spp.)	Low	Variable	Sapling			
						Hazelnı	ut (American)	Low	Variable	Tall Shrub			
44	4123 -	Red Oak	Sa	awtimber	Medium	19.3	111	51-80	N/A		Stand was salvaged after the tornado. Blow down was salvaged only.		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Regeneration scattered throughout the stand. Density is highly variable based on extent of salvage.		
	Red Maple	40	Pole/Log/Sa				ed Maple	Medium	Variable	Sapling	based on extent of salvage.		
	Red Oak	50	Log/Pole	13	111	Asp	pen (spp.)	Low	Variable	Sapling			
	White Oak	10	Log	13			erry (spp.)	Medium	Variable	Sapling			
							ak (spp.)	Low	< 5 feet	Seeding			
							ut (American)	Medium	Variable	Tall Shrub			
46	4132 - Asp	en, Jack Piı	ne	Sapling	Well	12.7	27	Immature	N/A		Immature Aspen, Jack pine and other deciduous species. Cut in 1994,		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	72-006-92-01.		
Blac	ck/Red (Hybrid) Oak	15	Sapling	3	- 3-		pen (spp.)	Low	< 5 feet	Seeding			
	Bigtooth Aspen	52	Sapling	3	27		erry (spp.)	Low	< 5 feet	Seeding			
	Jack Pine	25	Sapling	3			ak (spp.)	Low	< 5 feet	Seeding			
	Black Cherry	8	Sapling	3			(11)						
48	4130	- Aspen		Sapling	Well	97.6	5	Immature	N/A		Sale was cut in the spring of 2016. The sale number is 72-011-12-01.		
	Canopy Species	% Cover	Size Class	DBH	Age						Stand is filling in nicely with aspen, oak, and red maple. Average height		
Blac	ck/Red (Hybrid) Oak	15	Sapling	1	- 5-						of regen is 5-10' currently. Scattered conifer present.		
	Bigtooth Aspen	70	Sapling	1	5								
	Red Maple	15	Sapling	1									
49	42210 - Nat	ural Red Pi	ne Sa	awtimber	Medium	56.8	78	81-110	N/A		Red pine and Oak with some White pine. Oak/Red maple/Aspen under		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	story. Cut through 72-029-02-01.		
	Red Oak	25	Log/Pole	12		Re	ed Maple	Medium	Variable	Sapling			
	White Pine	10	Log/Pole	12		Asp	pen (spp.)	Medium	Variable	Sapling			
	Red Pine	65	Log/Pole	13	78	Che	erry (spp.)	Low	Variable	Sapling			
						Oa	ak (spp.)	Low	Variable	Sapling			
50	42121 - Planted Deci	Jack Pine, iduous	Mixed	Poletimbe	er Well	10.6	53	111-140	N/A		Natural Jack pine mixed with pockets of Aspen. Similar to stand 19, but with Aspen with pockets of Jack pine. Stand borders Hill rd.		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size			
	Quaking Aspen	20	Pole	8		Asp	pen (spp.)	Low	Variable	Sapling			
	Jack Pine	80	Pole	6	53	Che	erry (spp.)	Low	Variable	Sapling			



Stand	Level 4 Co	over Type		Size De	ensity	Acres	Stand Age BA Range Managed Site		Site	General Comments	
52	4132 - Asp	en, Jack Pi	ne P	oletimb	er Wel	l 28.6	47	51-80	N/A		Aspen pole stand with mixed deciduous spieces and scattered red/jack
(Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Can	opy Species	Density	Avg. Height	Size	pine.
	Red Maple	20	Pole/Sapling	7		Red	d Maple	Medium	Variable	Sapling	
Black	k/Red (Hybrid) Oak	4	Log/Pole	10		Witc	h Hazel	Low	Variable	Tall Shrub	
	Paper Birch	3	Pole/Sapling	6		Serviceber	ry (Juneberry)	Low	Variable	Tall Shrub	
Е	Bigtooth Aspen	40	Pole/Log/Sap	8	47	Cher	ry (spp.)	Medium	Variable	Sapling	
	Red Pine	3	Log/Pole	12		Oal	k (spp.)	Medium	Variable	Sapling	
	Jack Pine	30	Pole	7							
53	4131 - A	spen, Oak	Р	oletimb	er Wel	l 7.7	52	51-80	N/A		Aspen mixed with other deciduous spieces. Some scattered pine
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Can	opy Species	Density	Avg. Height	Size	throughout the stand. Stand is mostly kettle holes and ridges.
	Red Maple	24	Pole/Sap/Log	7		Red	d Maple	Medium	Variable	Sapling	
	Red Oak	20	Log/Pole	10		Whi	ite Pine	Low	Variable	Sapling	
(Quaking Aspen	40	Pole/Sapling	7	52	Serviceber	ry (Juneberry)	Low	Variable	Tall Shrub	
	White Pine	4	Pole/Sapling	5		Aspe	en (spp.)	Medium	Variable	Sapling	
	Red Pine	6	Log	16		Cher	ry (spp.)	Low	Variable	Sapling	
	Jack Pine	3	Pole	5					<u> </u>	-	1
	Black Cherry	3	Pole/Sapling	5							
54	42290 - Natu				er Wel			81-110	N/A		Older Red pine and some Oak mixed with younger Jack pine. Other deciduous spieces mixed. Rolling terrain and kettle holes limit operabilit
-	Canopy Species		Size Class		l Age		opy Species	Density	Avg. Height	Size	within the stand. Scattered super canopy red pine with legacy tree type
	Red Maple	5	Pole/Sapling	7			d Maple	Low	Variable	Sapling	traits.
	orthern Pin Oak	14	Pole/Log/Sap				ite Pine	Low	Variable	Sapling	
(Quaking Aspen	6	Pole/Sapling	7			k Pine	Low	Variable	Sapling	
	White Pine	3	Log	14			en (spp.)	Low	Variable	Sapling	
	Red Pine	30	Log	14	91		ry (spp.)	Low	Variable	Sapling	
	Jack Pine	42	Pole/Log/Sap	7	70	Oak	k (spp.)	Medium	Variable	Sapling	
55	42220 - Nat				Medium	n 11.7	36	1-50	N/A		Natural Jack pine stand (immature). Rolling terrain. May have been planted, but didn't see any furoughs or rows. Open brushy areas mixed
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Can	opy Species	Density	Avg. Height	Size	in throughout.
	Jack Pine	76	Sapling/Pole	4	36	Cher	ry (spp.)	Low	Variable	Sapling	
	Black Cherry	14	Sapling	2							
(Quaking Aspen	10	Pole/Sapling	5							
56	4131 - A	spen, Oak		Saplin		114.9	19 I	mmature	N/A		Stand was final harvested in 1994. Everything 6" and above was cut. C through 72-028-02-01.
	Canopy Species		Size Class	DBH	I Age	Sub-Can	opy Species	Density	Avg. Height	Size	1110ugii 12-020-02-01.
	Red Oak	22	Sapling	2		Aspe	en (spp.)	Low	< 5 feet	Seeding	
(Quaking Aspen	25	Sapling	2		Cher	ry (spp.)	Low	< 5 feet	Seeding	
Е	Bigtooth Aspen	35	Sapling	2	19	Oal	k (spp.)	Low	< 5 feet	Seeding	
	Jack Pine	8	Sapling	2							-
	Black Cherry	10	Sapling	2							



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	MICHIGAN .
400	110 - Low Intensity Urban	Nonstocked	1.2		Unspecified		Producing GAS Well BreitBurn, State Elmer 13-5 Permit #48505 Emergency #: 888-250-1681	
401	3102 - Grass	Nonstocked	1.0		Unspecified		Producing GAS Well State Elmer 4-5 BreitBurn, Permit #45763 Emergency #: 888-250-1681	
402	3102 - Grass	Nonstocked	1.3		Unspecified		Producing GAS well. State Elmer 6-5 BreitBurn, Permit #45734 Emergency #: 888-250-1681	
403	3102 - Grass	Nonstocked	1.4		Unspecified		Producing GAS Well BreitBurn State Elmer 3-8 HDL1, permit #48408 Emergency #: 888-250-1681	
404	3102 - Grass	Nonstocked	1.2	0	Unspecified		Directional start hole, Producing GAS BreitBurn State Elmer 5, D3-5 HD1, Permit #58669 Emergency #: 888-250-1681	
405	3102 - Grass	Nonstocked	1.1		Unspecified		Producing GAS Well BreitBurn State Elmer 2-5, Permit #45488 Emergency #: 888-250-1681	
406	110 - Low Intensity Urban	Nonstocked	1.6		Unspecified		BDW Well and CPF for Elmer Field IA Project. BreitBurn State Elmer 1-5SWD, Permit #44968 Emergency #: 888-250-1681	
407	3102 - Grass	Nonstocked	1.0		Unspecified	No	Producing GAS Well BreitBurn State Elmer 9-5, Permit #45719 Emergency #: 888-250-1681	
408	3102 - Grass	Nonstocked	1.8		Unspecified	No	Producing GAS Well BreitBurn State Elmer 12-4, Permit #45730 Emergency #: 888-250-1681	
409	3102 - Grass	Nonstocked	1.6		Immature		Producing GAS Well BreitBurn State Elmer 1-8, permit #45743 Emergency #: 888-250-1681	
410	3102 - Grass	Nonstocked	1.0	0	Unspecified		Producing GAS Well, BreitBurn State Elmer 12-9, Permit #45750 Emergency #: 888-250-1681	
411	3102 - Grass	Nonstocked	1.3		Unspecified		Producing GAS Well. BreitBurn State Elmer 6-9, Permit #45749 Emergency #: 888-250-1681	

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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age BA Range	Managed Site	General Comments
412	3102 - Grass	Nonstocked	1.1	Unspecified		Producing GAS Well BreitBurn State Elmer 14-4 HD SUMP, Permit #45781 Emergency #: 888-250-1681
413	3102 - Grass	Nonstocked	1.2	Unspecified		Producing GAS well, BreitBurn State Elmer 5-4HDN1, Permit #45762
414	3102 - Grass	Nonstocked	1.1	Unspecified		Producing GAS Well BreitBurn State Elmer 3-4 Permit# 45733
415	3102 - Grass	Nonstocked	1.1	Unspecified		Producing GAS Well BreitBurn State Elmer 1-4 Permit# 45761
416	3102 - Grass	Nonstocked	1.0	Unspecified		Producing GAS Well BreitBurn State Elmer 7-4 Permit# 45731
417	110 - Low Intensity Urban	Nonstocked	1.0	Unspecified		Producing GAS Well BreitBurn State Elmer 9-4
418	3102 - Grass	Nonstocked	1.0	Unspecified		Producing GAS Well BreitBurn St Elmer 15-4, Permit #45762
419	3102 - Grass	Nonstocked	1.0	Unspecified		Producing GAS well BreitBurn, State Elmer 2-9 Permit #45747 Emergency #: 888-250-1681