

Compartment Review Presentation

Gaylord Forest Management Unit

Compartment 52046 Entry Year 2021 Acreage: 1,602

County Antrim

Management Area: Jordan Valley

Revision Date: 2019-07-14

Stand Examiner: Zach Crew

Legal Description:

31N 05W Sections 4, 5, 7, 9

Identified Planning Goals:

To provide for the protection, integrated management and responsible use of a healthy, productive, and undiminished forest resource base for the social, recreational, environmental, and economic benefit of the State of Michigan.

Soil and topography:

Soils belong to the Kalkaska-Montcalm type. They are sandy in nature and are well drained to somewhat excessively drained on hills and ridges.

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

This compartment is one contiguous block of state land with one small landlocked 40 in the SW. There is a small amount of oil and gas development in sections 4 and 5. Hunting, hiking, and snowmobiling are the main public uses.

Unique Natural Features:

None

Archeological, Historical, and Cultural Features:

None

Special Management Designations or Considerations:

Warner Creek passes through Section 7 and is a tributary of the Jordan River.

Watershed and Fisheries Considerations:

This compartment contains portions of Collins Creek and Warner Creek, both within the Jordan River Watershed. Since all streams are part of the Jordan River Natural River zone, Natural River buffers should be applied.

Wildlife Habitat Considerations:

This compartment has some openings that should be maintained for wildlife values and forested areas are primarily northern hardwoods which provide habitat for several featured wildlife species like turkey and deer.

Mineral Resource and Development Concerns and/or Restrictions

Active sand/gravel pits are located within two miles of the compartment to the southeast and northeast, and there is good sand & gravel potential within the compartment. The compartment has been developed for Antrim Shale gas production and nearly all state-owned mineral rights in this area are currently under lease and in production. There is no known metallic mineral potential in this part of the state.

Vehicle Access:

Vehicle access is limited to one small two track from the south off of M 32, and oil and gas lease roads from the north and east off of Metros and Grygier Roads.

Survey Needs:

None

Recreational Facilities and Opportunities:

The north country trail passes through section 9.

Fire Protection:

Fire protection for this area is provided out of the Bellaire Office. The cover types in this area are not commonly affected by large scale fire events. In the event of a wildfire, access would be limited and difficult.

Additional Compartment Information:

The following reports from the Inventory are attached:

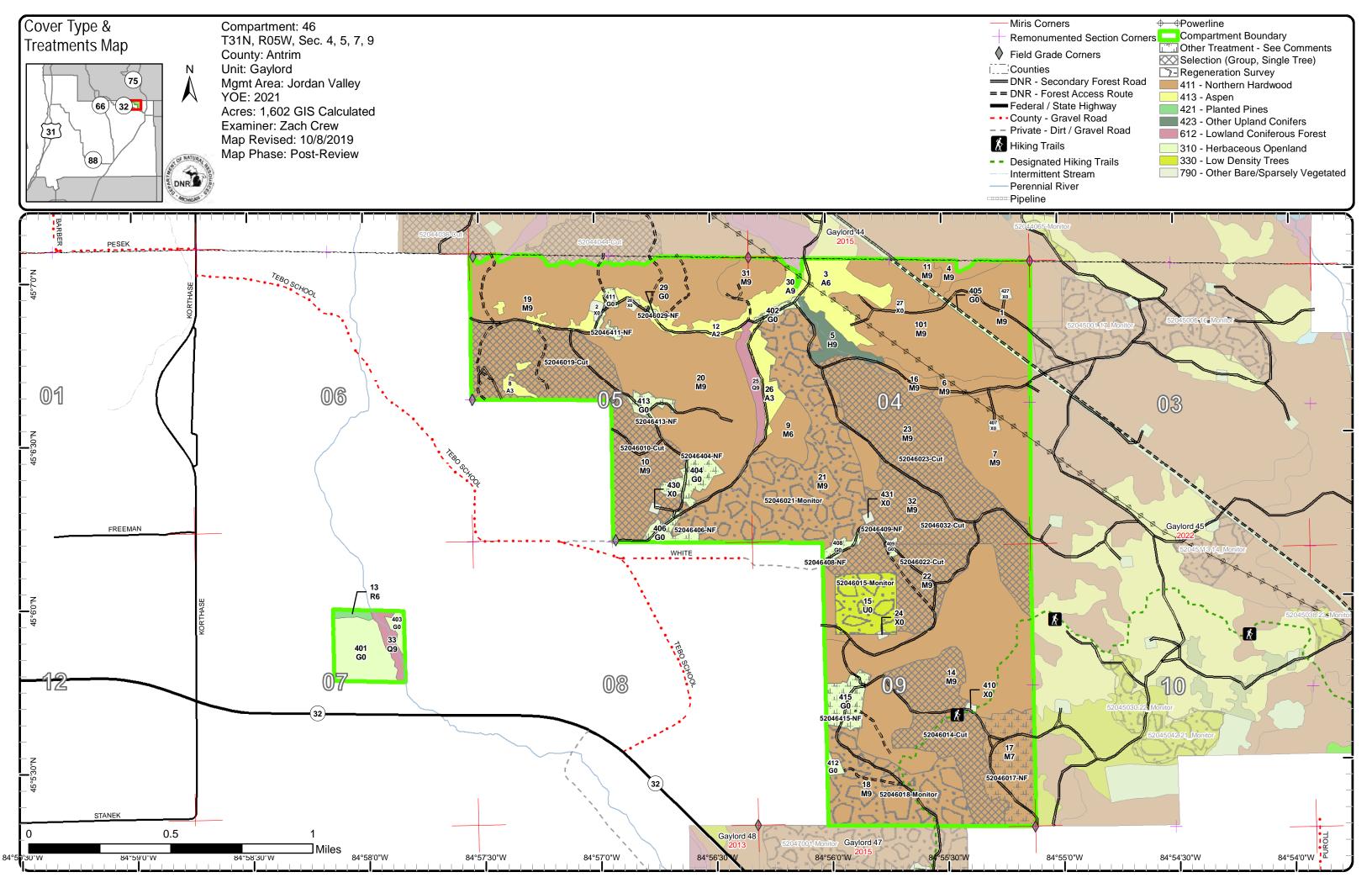
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

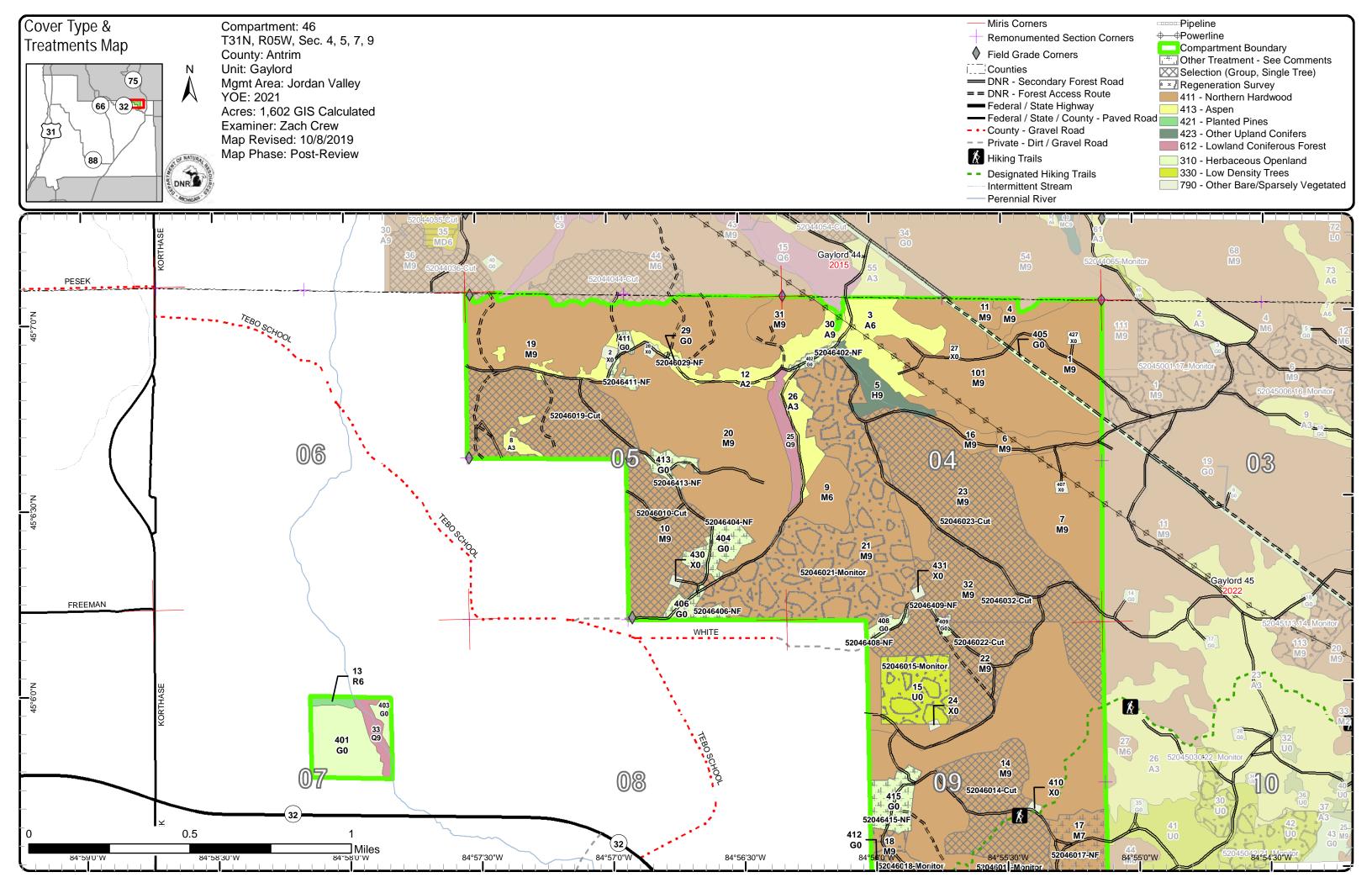
The following information is displayed, where pertinent, on the attached compartment maps:

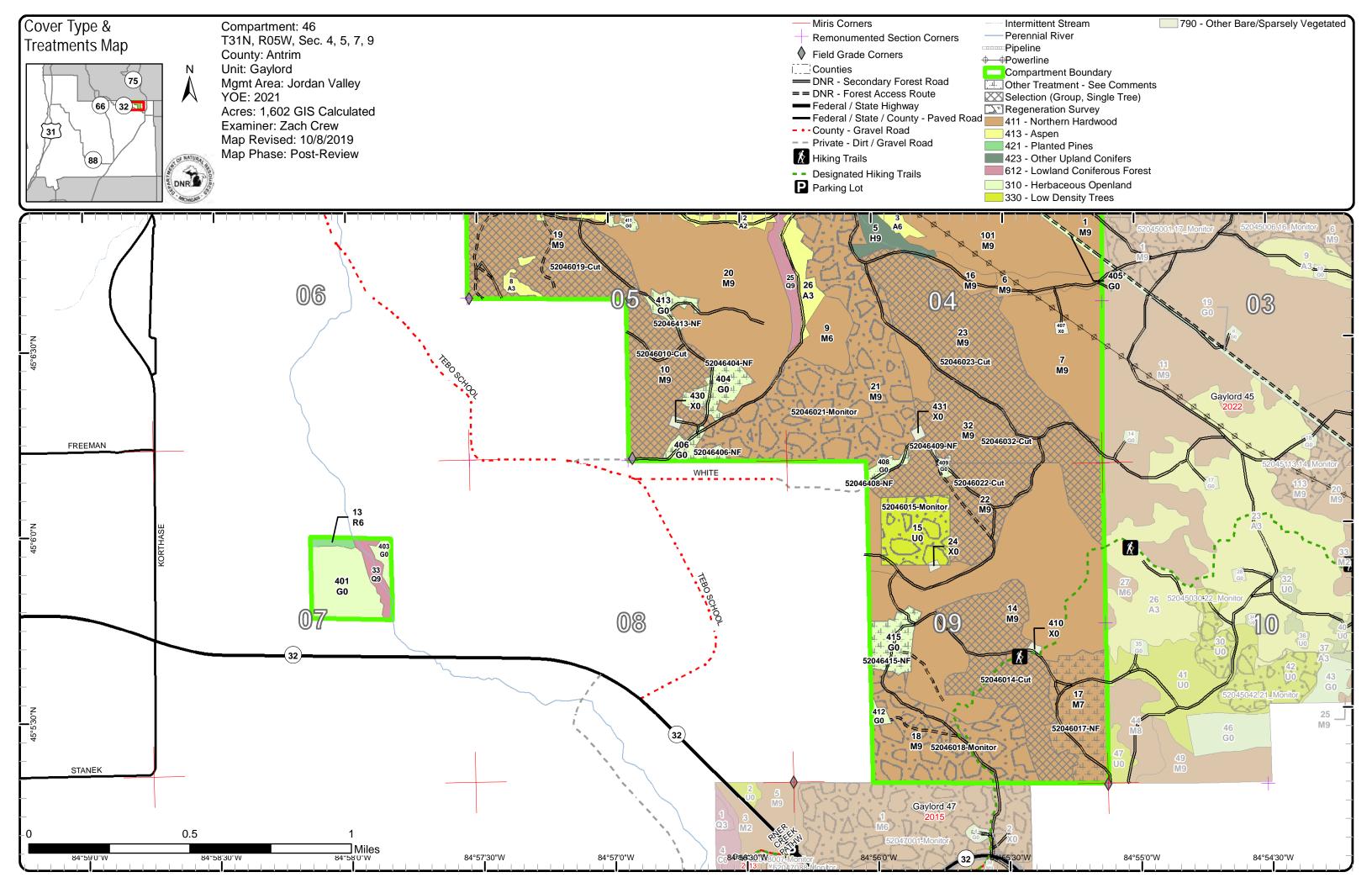
Base feature information, stand boundaries, cover types, and numbers Proposed treatments

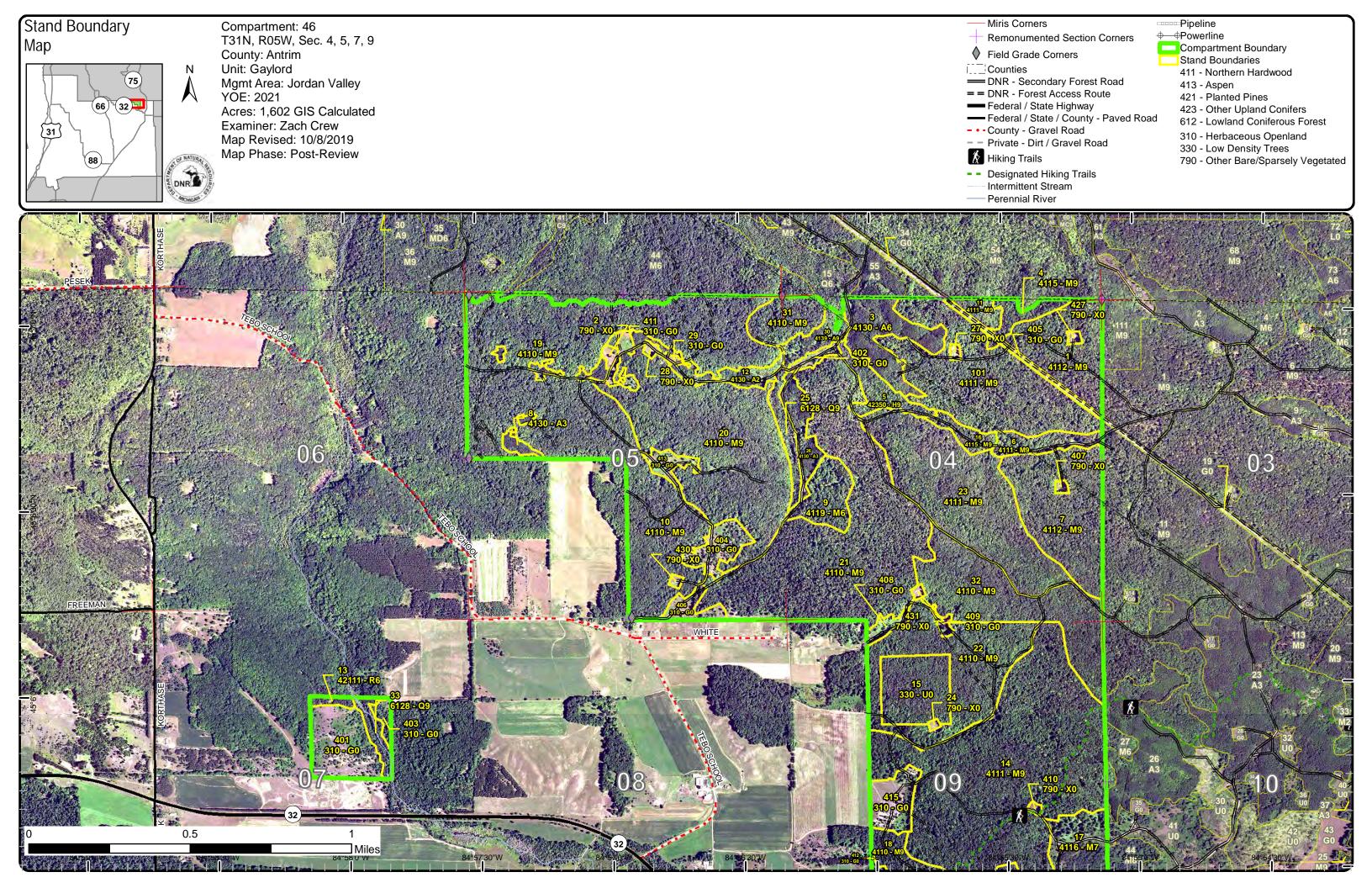
Site condition boundaries

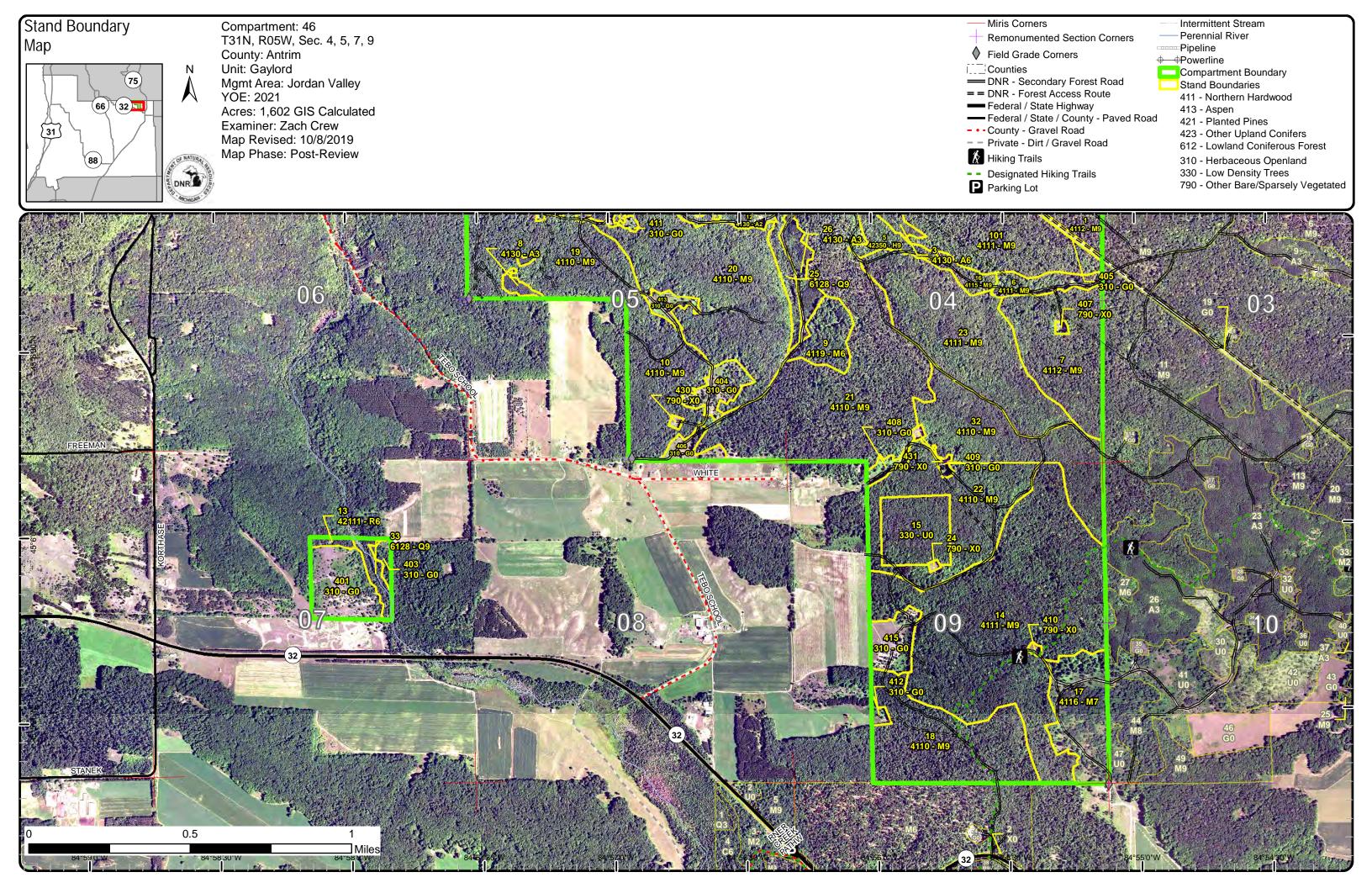
Details on the road access system

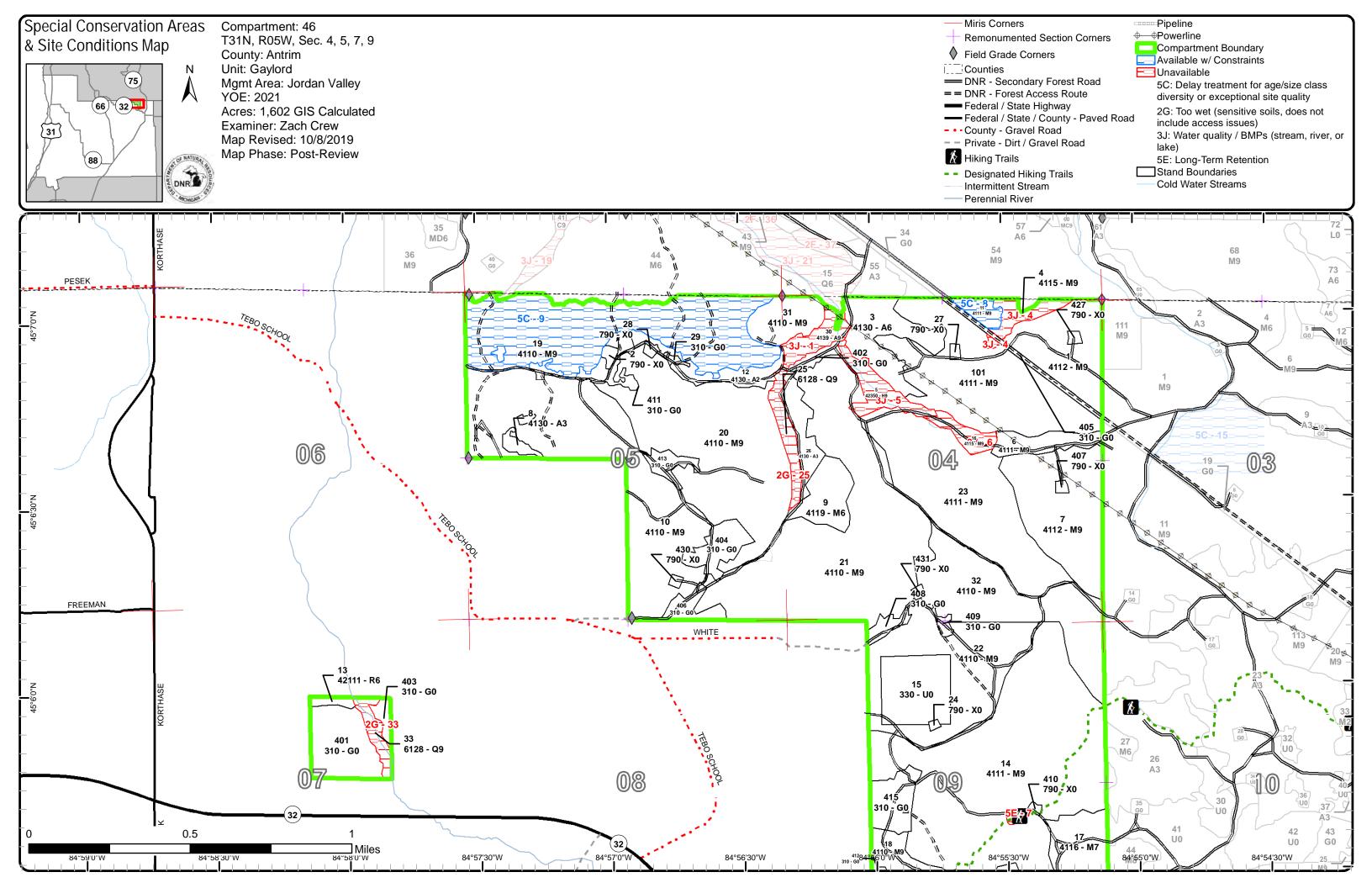


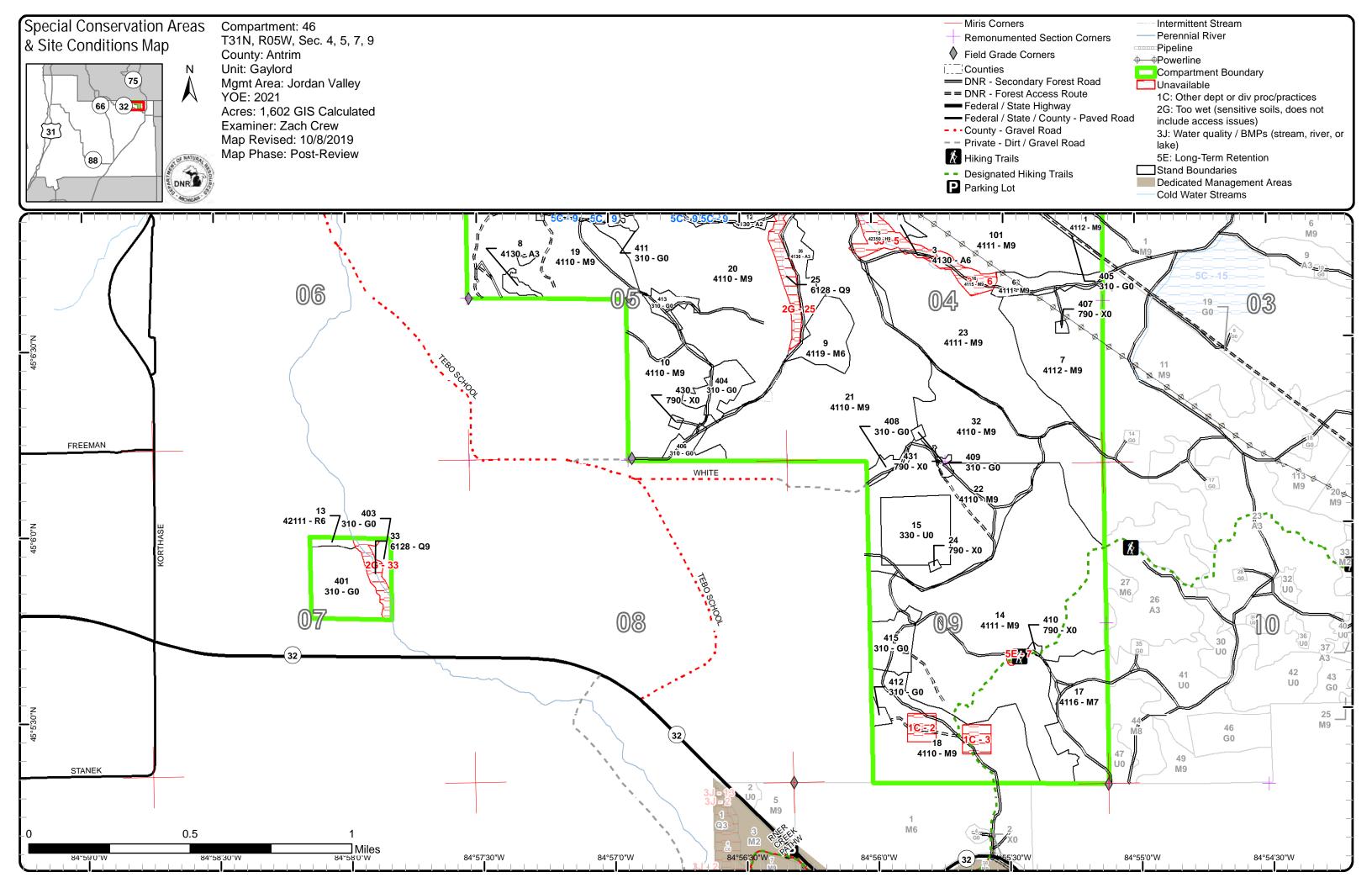












Gaylord Mgt. Unit

Zach Crew: Examiner

Compartment 46

Year of Entry 2021



Age Class

	/	400	/	<u> </u>	8 / S	, ,	<u> </u>	, 9 /	/ & /	/ ^9 /	/ /	, s /	<u>°</u> ,	<u>,</u>	/ & /	/ 3 /	<u> </u>		700 X	<u> </u>
	₽ os	*/	3 / 5	2,00		, / &		³ /&		¹ 2, 20		"/ <u>,</u> §		`/ %	\$\\\ \?	18 18 18 18 18 18 18 18 18 18 18 18 18 1	ar A	S [*] Jre	, 140°	
Aspen	0	0	36	0	30	0	0	0	10	0	0	0	0	0	0	0	0	0	76	
Bare/Sparsely Vegetated	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
Hemlock	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	13	
Herbaceous Openland	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93	
Low-Density Trees	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	
Lowland Conifers	0	0	0	0	0	0	0	0	7	0	10	0	0	0	0	0	0	0	17	
Northern Hardwood	0	0	0	0	0	0	0	53	933	170	0	0	0	0	0	0	0	207	1363	
Red Pine	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Total	131	0	36	0	33	0	0	53	950	183	10	0	0	0	0	0	0	207	1602	



Report 2 – Treatment Summary

Gaylord Mgt. Unit Year of Entry: 2021

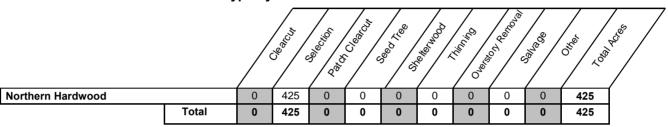
Acres of Harvest

Compartment 46
Total Compartment Acres: 1,602

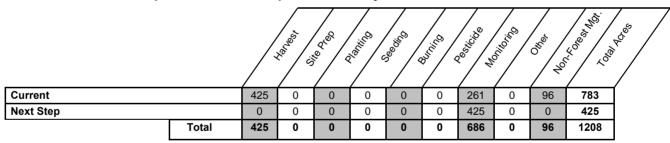
SWARTZN3

Commercial Harvest - 425 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Next Step

10/1 /2018 **Proposed Start Date:**

52046017-NF 40.7 4116 - Mixed N. Sawtimber 67 1-50 NonForestMat Other - Specify 310 -Draft Field Hardwood - Aspen Herbaceous Boundary Poor Openland

Habitat Cut: No Site Condition:

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Specs:

Next Step Treatments:

<u>Acceptable</u>

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2020

Gaylord Mgt. Unit Report 3 -- Treatments Compartment: 46 s Year of Entry: 2021 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Objective Name CoverType Density Age Range Type Method Structure **Status** d Natural Regen 18 52046018-75.7 4110 - Sugar Maple Sawtimber 411 - Northern Uneven-Draft Field 74 81-110 Monitoring Association Well (Re-Inventory) Hardwood Aged Boundary Monitor **Habitat Cut: No Site Condition:** Prescription Regen survey 2019 YOE. Specs: Next Step **Treatments:** Acceptable A mix of desirable hardwood species that meets minimum stocking requirements Regen: Other Comment: **Proposed Start Date:** 10/1 /2020 19 52046019-Cut 76.9 4110 - Sugar Maple Sawtimber 111-Single Tree 411 - Northern Even-Aged Draft Field Harvest Association Well 140 Selection Hardwood Boundary **Habitat Cut: No Site Condition:** Prescription Mark stand to cut. Target a residual BA 70 - 90 square feet. Remove all beech. Leave 1 beech tree per acre. Establish regen gaps at least 100 feet in diameter at a rate of 1 per 5 acres. Avoid marking through pockets of hemlock. If possible drop a few basswood trees to act as nurse Specs: logs where hemlock is prevalent. Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable A mix of northern hardwood species not dominated by beech or ironwood that meets minimum stocking criteria. Regen: Other Comment: **Proposed Start Date:** 10/1 /2020 21 155.8 4110 - Sugar Maple Sawtimber 83 Natural Regen 4110 - Sugar Draft Field 52046021-81-110 Monitoring Even-Aged Monitor Association (Re-Inventory) Maple Boundary Association **Habitat Cut: No Site Condition: Prescription** Specs: Next Step Treatments: Acceptable northern hardwoods not dominated by beech or ash Regen: Other Percent to Treat = 100% Comment: **Proposed Start Date:** 12/12/2015 54.1 4110 - Sugar Maple Sawtimber 22 52046022-Cut 71 81-110 Harvest Single Tree 411 - Northern Even-Aged Draft Field

Association Well Selection Hardwood Boundary

Site Condition: Habitat Cut: No

Prescription Mark to cut with a target residual of 70-90 BA. Cut all beech, except mark one beech to leave per acre. Establish regen gaps at least 100 feet in diameter at a rate of no less than 1 per 5 acres. Avoid marking through pockets of hemlock. If possible drop a few basswood trees to act as Specs:

nurse logs where hemlock is prevalent. Monitoring, Natural Regen (Re-Inventory)

Next Step Treatments:

Acceptable A mix of northern hardwood species not dominated by beech and ironwood that meets minimum stocking criteria.

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2020

Regen:

Other Comment:

Proposed Start Date: 10/1 /2020

402 52046402-NF 3.5 310 - Herbaceous Nonstocked Unspec NonForestMgt 310 -Draft Field Other - Specify Openland ified Herbaceous Boundary

Openland

Habitat Cut: No Site Condition:

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Specs:

Next Step Treatments:

<u>Acceptable</u>

Regen:

Other Comment:

Proposed Start Date: 10/1 /2020

s t		G	aylord Mgt. Unit		Re	eport 3	Treatmen	ts		tment: 46 Entry: 2021	OF NATURAL PROBLEMS OF NAT
a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
404	52046404-NF	12.5	310 - Herbaceous Openland	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
		mow, pla	Site Condition nt, burn and/or herb		ntain op	ening. P	lanting of hard a	nd soft mast.	Operiianu		
	: Step tments:										
Acce Rege	eptable en:										
	ment:										
Prop	osed Start Date	<u>:</u> 10/1	/2020								
406	52046406-NF	7.2	310 - Herbaceous Openland	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
		mow, pla	Site Condition nt, burn and/or herb		ntain op	ening. P	lanting of hard a	nd soft mast.	·		
	Step tments:										
Acce Rege	eptable en:										
Othe Com	er iment:										
Prop	osed Start Date	<u>:</u> 10/1	/2020								
408	52046408-NF	4.1	310 - Herbaceous Openland	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
		mow, pla	Site Condition nt, burn and/or herb		ntain op	ening. P	lanting of hard a	nd soft mast.			
	: Step tments:										
Acce Rege	eptable en:										
Othe Com	<u>er</u> iment:										
Prop	osed Start Date	<u>:</u> 10/1	/2020								
409	52046409-NF	1.8	310 - Herbaceous Openland	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
		mow, pla	Site Condition nt, burn and/or herb		ntain op	ening. P	lanting of hard a	nd soft mast.			
	Step tments:										
Acce Rege	eptable en:										
Othe Com	er iment:										

Proposed Start Date: 10/1 /2020

S t		G	aylord Mgt. Unit		Re	eport 3	Treatmer	nts		tment: 46 Entry: 2021	DNR DNR
a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
411	52046411-NF	4.7	310 - Herbaceous Openland	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
		mow, pla	Site Condition ant, burn and/or herb	_	ntain op	pening. P	Planting of hard a	nd soft mast.	·		
	Step tments:										
Acce Rege	eptable en:										
Othe Com	<u>er</u> iment:										
Prop	osed Start Date:	10/1	/2020								
413	52046413-NF	5.9	310 - Herbaceous Openland	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
		mow, pla	Site Condition ant, burn and/or herb		ntain op	pening. F	Planting of hard a	nd soft mast.			
	Step tments:										
Acce Rege	e <u>ptable</u> en:										
Othe Com	e <u>r</u> iment:										
	osed Start Date:	10/1	/2020								
415	52046415-NF	14.9	310 - Herbaceous Openland	Nonstocke	d	Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
		mow, pla	Site Condition ant, burn and/or herb		ntain op	pening. P	Planting of hard a	nd soft mast.			
	Step tments:										
Acce Rege	eptable en:										
Othe Com	<u>er</u> Iment:										

Proposed Start Date:

Total Treatment

Acreage Proposed:

10/1 /2020

782.5

Compartment: 46

Gaylord Mgt. Unit

Zach Crew : Examiner Year of Entry: 2021

Availa	ability for	Managemer	nt						
Total	Acres	Acres Avail	Acres		Domina	nt Site	Cond	ditions	S
Acres	Available	With Condition	Not Available		5C	1C	2G	3J	5E
75	65	0	10	Aspen			0	10	
8	8	0	0	Bare/Sparsely Vegetated					
13	0	0	13	Hemlock				13	
94	94	0	0	Herbaceous Openland			0	0	
29	29	0	0	Low-Density Trees					
17	0	0	17	Lowland Conifers			17	0	
1363	1218	118	27	Northern Hardwood	118	10	0	16	1
2	2	0	0	Red Pine			0		
1,602	1,416	118	67	Total Forested Acres	118	10	17	39	1
	88%	7%	4%	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	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Stand basically cons	stitutes the slopes on either s	ide of the	creek before it flows into	a wetland, leave uncut as a	a buffer to prevent any eros	sion into creek.
2	Unavailable	1C: Other dept or div proc/practices	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Walters Research P	Project: Long-term beech rege	eneration	monitoring, up to 20 years	s (through 2039)		
3	Unavailable	1C: Other dept or div proc/practices	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Walters Research P	Project: Long-term beech rege	eneration	monitoring, up to 20 years	s (through 2039)		

Report 4 – Site Conditions

Gaylord Mgt. Unit Zach Crew : Examiner

4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	9	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	13	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
	Comments:						
ô	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Grove of nice hem	lock					
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Stand should be he	eld until adjacent stands are han	vested	(either 54 or 101).			
9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	113	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Portion of stand wi	th better stocking and form design	gnated	for treatment this YOE.			

Report 4 – Site Conditions

Gaylord Mgt. Unit Zach Crew : Examiner

25	Unavailable	Unavailable 2G: Too wet (sensitive soils, does not include access issues)		3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
С	comments:						
33	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
С	Comments:						

Mgt. Unit

Compartment: #Type! Year of Entry:

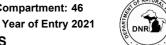


Report 5 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Gaylord Mgt. Unit Compartment: 46
Year of Entry 203



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	n Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxyg stocked trout populations and those of other coldwater fir year to year. Coldwater streams in Michigan typically pro contributions of groundwater to their stream flows. Such designated as trout resources by Fisheries Order 210.	sh species (e.g., slimy sculpin) to persist from ovide these conditions due to substantial
HCVA	Dedicated Management Areas	Such areas are dedicated by the DNR Director for specifical rules, as governed by Part 5, Department of Natural Res 324.504). Section 38 of the Administrative Procedures A the promulgation of rules. This is an active program, with DNR.	ources, of the NREPA (MCL 324.502(2) and ct (MCL 24.238) provides for public requests for

Report 7 - Stands



Stand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
1	4112 - Maple Asso	, Beech, Ch ociation	nerry	Sawtimb	er Well	39.0	78	81-110	N/A		Average BA ~ 91 from 6 plots. Lots of clumps, very few single stems. Beech understory. Harvested 2005.
	Canopy Species	% Cover	Size Class	DBH	Age	Cano	py Species	Density	Avg. Height	Size	
	Sugar Maple	15	Pole/Log	9		I	Beech	High	Variable	Sapling	
	Red Maple	40	Log/Pole	10	78	Iro	onwood	High	10 - 20 feet	Sapling	
	Beech	40	Log/Pole	10				·			•
2	790 - Other Bare	/Sparsely V	egetated	Nonsto	ocked	1.5		Unspecified	Managed Op	pening	Oil/gas facility.
3	4130	- Aspen		Poletimb	er Well	29.6	34	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Cano	py Species	Density	Avg. Height	Size	
	Quaking Aspen	80	Pole/Saplin		35	I	Beech	Medium	5 - 10 feet	Sapling	
						Iro	onwood	Low	5 - 10 feet	Sapling	
						Blad	ck Cherry	Trace	5 - 10 feet	Sapling	
						Sug	gar Maple	Trace	5 - 10 feet	Sapling	
						Re	ed Maple	Low	5 - 10 feet	Sapling	
4	4115 - Y.Bird	ch, Hemlock	k NH	Sawtimb	er Well	8.6	77	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Cano	py Species	Density	Avg. Height	Size	
	Sugar Maple	20	Log/Pole	10		I	Beech	Medium	Variable	Sapling	
	Yellow Birch	25	Log/Pole	12	78	Strip	ed Maple	Low	10 - 20 feet	Sapling	
	Red Maple	20	Log/Pole	12		Sug	gar Maple	Trace	< 5 feet	Sapling	
	Basswood	10	Log/Pole	12		Re	ed Maple	Trace	10 - 20 feet	Sapling	
	Beech	20	Log/Pole	12				,			•
5	·	land Hemlo		Sawtimb		13.2	88	111-140	N/A		Multiple braided streams. Hemlock red maple and yellow birch dominate. pockets of cattails in lower spots but no other lowland species
	Canopy Species		Size Class		Age						, and an animal special state of the special state
	Hemlock	60	Log/Pole	10	89						
	Yellow Birch	25	Log	12							
	Red Maple	10	Pole/Log	8							
6	4111 - S.Maple, H			Sawtimb		12.0	68	1-50	N/A		Looks to be numerous open grown trees, canopy finally starting to come together. Most of the opening have filled in with beech and ironwood
	Canopy Species	% Cover			Age		py Species	Density	Avg. Height	Size	brush, a few isolated black cherry saplings around the areas still open.
	Sugar Maple	55	Log/Pole	10	69		Beech	High	Variable	Sapling	Previous comments mentioned leaving stand as/promoting a wildlife
	Basswood	20	Log/Pole	10			onwood	Low	Variable	Sapling	opening, probably a good use of this area.
	Beech	20	Log/Pole	10			gar Maple	Trace	Variable	Sapling	
						Blac	ck Cherry	Trace	Variable	Sapling	



Stand	Level 4 Co	over Type		Size De	nsity	Acres Stand Age	BA Range	Managed S	ite	General Comments			
7	4112 - Maple, Asso	Beech, Ch	erry	Sawtimb	er Well	62.4 74	81-110	N/A		fully stocked under story of beech and ironwood, no other species noted. Harvested 2005.			
	Canopy Species	% Cover	Size Class	DBH	l Age	Canopy Species	Density	Avg. Height	Size				
	Sugar Maple	50	Log/Pole	10	75	Beech	High	Variable	Sapling				
	Beech	38	Log/Pole	10		Ironwood	High	Variable	Sapling				
	Red Maple	10	Log/Pole	10									
8	4130	- Aspen		Sapling	y Well	8.8 14	Immature	N/A		Small aspen cut delineated when surrounding hardwood was previously			
	Canopy Species	% Cover	Size Class	DBH	l Age	Canopy Species	Density	Avg. Height	Size	treated. Multiple pockets of aspen regen spread throughout the harvest, areas where beech and ironwood dominated canopy, typically on the			
	Quaking Aspen	90	Sapling/Pole	9 4	15	Beech	Medium	5 - 10 feet	Sapling	edges of the cuts.			
					· ·	Sugar Maple	Trace	5 - 10 feet	Sapling				
						Ironwood	Medium	5 - 10 feet	Sapling				
						Striped Maple	Trace	5 - 10 feet	Sapling				
_	4119 - Mixed No	uthorn Hora	huoodo l	Poletimb	٥٣ ١٨/٥١١	18.0 69	51-80	N/A		Lots of ironwood poles. Multi stemmed red maple and basswood			
9										dominate overstory, some low quality sugar maple and black cherry			
	Canopy Species	% Cover			Age	Canopy Species		Avg. Height	Size	stems.			
	Ironwood	40	Pole	7	70	Ironwood	Medium	Variable	Sapling				
	Red Maple	30	Log/Pole	10		Sugar Maple	Trace	5 - 10 feet	Sapling				
	Basswood	15	Log/Pole	10		Black Cherry	Trace	5 - 10 feet	Sapling				
	Sugar Maple	10	Pole/Log	8		Red Maple	Trace	5 - 10 feet	Sapling				
10	4110 - Sugar M												
	4110 Gugar IV	laple Assoc	ciation	Sawtimb	er Well	57.8 76	111-140	N/A		Last time harvested was 1995. Good quality saw logs throughout sale,			
	Canopy Species	•	Size Class		er Well	57.8 76 Canopy Species		N/A Avg. Height	Size	low quality timber centered around gas well in the SW. BA ~ 129 from 7			
		•							Size Sapling				
	Canopy Species	% Cover	Size Class	DBH	l Age	Canopy Species	Density	Avg. Height		low quality timber centered around gas well in the SW. BA ~ 129 from 7			
	Canopy Species Sugar Maple	% Cover 75	Size Class Log/Pole	DB H	l Age	Canopy Species Beech	Density Medium	Avg. Height 5 - 10 feet	Sapling	low quality timber centered around gas well in the SW. BA ~ 129 from 7			
11	Canopy Species Sugar Maple	% Cover 75 20	Size Class Log/Pole Log/Pole	DB H	77	Canopy Species Beech Ironwood	Density Medium Medium	Avg. Height 5 - 10 feet Variable	Sapling Sapling	low quality timber centered around gas well in the SW. BA ~ 129 from 7 plots. Decent north facing knob of log sized saw timber, red maple and birch			
11	Canopy Species Sugar Maple Basswood	% Cover 75 20 ard Mast As	Size Class Log/Pole Log/Pole	DBH 12 12 12 Sawtimb	77	Canopy Species Beech Ironwood Sugar Maple	Density Medium Medium Trace	Avg. Height 5 - 10 feet Variable Variable	Sapling Sapling	Decent north facing knob of log sized saw timber, red maple and birch mostly found along the east side of the stand towards the seeps and			
11	Canopy Species Sugar Maple Basswood 4111 - S.Maple, Ha	% Cover 75 20 ard Mast As	Size Class Log/Pole Log/Pole	DBH 12 12 12 Sawtimb	1 Age 77 er Well	Canopy Species Beech Ironwood Sugar Maple 5.9 81	Density Medium Medium Trace	Avg. Height 5 - 10 feet Variable Variable N/A	Sapling Sapling Sapling	low quality timber centered around gas well in the SW. BA ~ 129 from 7 plots. Decent north facing knob of log sized saw timber, red maple and birch			
11	Canopy Species Sugar Maple Basswood 4111 - S.Maple, Ha Canopy Species	% Cover 75 20 ard Mast As % Cover	Size Class Log/Pole Log/Pole ssociation Size Class	DBH 12 12 Sawtimb	r Well	Canopy Species Beech Ironwood Sugar Maple 5.9 81 Canopy Species	Density Medium Medium Trace 111-140 Density	Avg. Height 5 - 10 feet Variable Variable N/A Avg. Height	Sapling Sapling Sapling	Decent north facing knob of log sized saw timber, red maple and birch mostly found along the east side of the stand towards the seeps and			
11	Canopy Species Sugar Maple Basswood 4111 - S.Maple, Ha Canopy Species Sugar Maple	% Cover 75 20 ard Mast As % Cover 40	Size Class Log/Pole Log/Pole ssociation Size Class Log/Pole	DBH 12 12 Sawtimb	r Well	Canopy Species Beech Ironwood Sugar Maple 5.9 81 Canopy Species Beech	Density Medium Medium Trace 111-140 Density High	Avg. Height 5 - 10 feet Variable Variable N/A Avg. Height Variable	Sapling Sapling Sapling Sapling Size Sapling	Decent north facing knob of log sized saw timber, red maple and birch mostly found along the east side of the stand towards the seeps and			
11	Canopy Species Sugar Maple Basswood 4111 - S.Maple, Ha Canopy Species Sugar Maple Red Maple	% Cover	Size Class Log/Pole Log/Pole ssociation Size Class Log/Pole Log/Pole	DBH	r Well	Canopy Species Beech Ironwood Sugar Maple 5.9 81 Canopy Species Beech Ironwood	Medium Medium Trace 111-140 Density High Low	Avg. Height 5 - 10 feet Variable Variable N/A Avg. Height Variable Variable	Sapling Sapling Sapling Size Sapling Sapling	Decent north facing knob of log sized saw timber, red maple and birch mostly found along the east side of the stand towards the seeps and			



Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments		
12	4130	- Aspen	:	Sapling N	/ledium	13.6	13	Immature	N/A		Stand harvested in 2005. Some open areas still. Quaking aspen responded well to harvest and the clones spread.		
	Canopy Species	% Cover			Age	Cano	py Species	Density	Avg. Height	Size	responded well to harvest and the clones spread.		
	Quaking Aspen	75	Sapling/Pole		14	Blad	ck Cherry	Low	5 - 10 feet	Sapling			
	Black Cherry	10	Sapling/Pole	e 4		Re	d Maple	Low	5 - 10 feet	Sapling			
						I	Beech	Low	5 - 10 feet	Sapling			
						Iro	onwood	Low	5 - 10 feet	Sapling			
						Strip	ed Maple	Trace	5 - 10 feet	Sapling			
13	42111 - Planted Dec	d Red Pine, ciduous	Mixed	Poletimb	er Well	2.5	35	51-80	N/A		According to previous comments, may have been a trespass from the adjacent landowner that resulted in this stand. No other notes on the		
	Canopy Species	% Cover	Size Class	DBH	Age						trespass were found. Pine is planted along very steep slopes and draws making it unmanageable. Age was estimated as no planting records		
	Red Pine	80	Pole	7	36						were found.		
	Black Cherry	10	Pole	6									
14	4111 - S.Maple, H	ard Mast As	ssociation	Sawtimb	er Well	216.7	74	81-110	N/A		Central and SE portions of stand contain the best timber with good		
	Canopy Species	% Cover	Size Class	DBH	Age	Cano	py Species	Density	Avg. Height	Size	stocking. Not sure why the other portions of the stand are such low quality. Outside of the central and SE portions, stand is open grown,		
	Sugar Maple	45	Log/Pole	10	75	[Beech	High	Variable	Sapling	stems have poor form, and beech and ironwood dominate the		
	Beech	20	Log/Pole	10		Iro	onwood	Medium	Variable	Sapling	understory. Basswood found within the higher quality portion of the		
	Basswood	15	Log/Pole	11		Sug	jar Maple	Trace	Variable	Sapling	stands, red maple and aspen generally found in lower quality areas.		
	Red Maple	15	Pole/Log	9		Strip	ed Maple	Trace	Variable	Sapling			
15	330 - Low-	Density Tre	es	Nonsto	cked	29.0	2018		411 - Northern I	Hardwood	Broken out of stand 22 as part of the MWR project. 6-8 trees per acre were left as a seed source (5-7% canopy closure). Tops 9 inches and less were left scattered on site.		
16	4115 - Y.Biro	ch, Hemlock	NH	Sawtimb	er Well	7.3	74	81-110	N/A		Numerous seeps and draws coming out of the slopes and then braiding		
	Canopy Species	% Cover	Size Class	DBH	Age	Cano	py Species	Density	Avg. Height	Size	together and flowing NW into stand 5.		
	Sugar Maple	35	Log/Pole	12	75	I	Beech	Medium	Variable	Sapling			
	Red Maple	20	Log/Pole	12		Iro	onwood	Low	Variable	Sapling			
	Yellow Birch	20	Log	12		Sug	jar Maple	Trace	< 5 feet	Sapling			
	Basswood	10	Log/Pole	12		Strip	ed Maple	Trace	5 - 10 feet	Sapling			
	Beech	15	Log/Pole	10									
17	4116 - Mixed N.			Sawtimbe		40.7	67	1-50			Areas of understory dominated by pockets of witch hazel. Poorly formed trees open grown stems throughout. Some of the aspen clones consist		
	Canopy Species		Size Class		Age		py Species	Density	Avg. Height	Size	of small pole sized aspen that is already in decline.		
	Quaking Aspen	20	Pole/Log	8	68		ch Hazel	Low	5 - 10 feet	Tall Shrub			
	Black Cherry	25	Log/Pole	10	62		d Maple	Low	Variable	Sapling			
	Red Maple	25	Log/Pole	10	65		ar Maple	Low	5 - 10 feet	Sapling			
	Sugar Maple	10	Pole	7			ck Cherry	Low	Variable	Sapling			
	Basswood	10	Log/Pole	12			Beech	Low	Variable	Sapling			
						Iro	onwood	Low	Variable	Sapling			

Report 7 - Stands



Stand	d Level 4 C	Size De	ensity	Acres Sta	and Age B	A Range	Managed Site		General Comments		
18	4110 - Sugar M	Sawtimber Well		75.7	74	81-110	N/A				
	Canopy Species	% Cover	Size Class	DBH	l Age	Canopy	Species	Density	Avg. Height	Size	
	Sugar Maple	62	Log/Pole	10	74	Bee	ch	High	5 - 10 feet	Sapling	
	Basswood	22	Log/Pole	11		Ironw	ood	Low	5 - 10 feet	Sapling	
	Red Maple	10	Log/Pole	12							
19	4110 - Sugar M	laple Assoc	ciation	Sawtimber Well		189.4	79	111-140	N/A		Large diameter timber throughout stand. Stocking is patchy. Heavy beech and ironwood understory. Pockets of hemlock. Average BA from
	Canopy Species	% Cover	Size Class	DBH	l Age	Canopy	Species	Density	Avg. Height	Size	14 plots ~121. BA Swings = 150, 120, 70, 130, 170, 90, 150, 130, 80,
	Sugar Maple	70	Log/Pole	13	80	Bee	ch	High	10 - 20 feet	Sapling	120, 140, 160, 70, 120
	Basswood	19	Log/Pole	14		Ironw	ood	Medium	5 - 10 feet	Sapling	
						Sugar N	Maple	Trace	5 - 10 feet	Sapling	
						Heml	ock	Trace	Variable	Sapling	
						Striped	Maple	Trace	5 - 10 feet	Sapling	
						Serviceberry	(Juneberry)	Trace	10 - 20 feet	Sapling	
20	4110 - Sugar M	Maple Assoc	ciation	Sawtimber Well		l 124.6 77		81-110	N/A		Last cut in 1995. Poor quality stand lots of clumps and defect.
	Canopy Species	% Cover	Size Class	DBH	l Age	Canopy	Species	Density	Avg. Height	Size	Occasional Hem, BC, YB, RM, located along east boundary of stand.
	Sugar Maple	65	Log/Pole		77	Bee		High	Variable	Sapling	Heavy beech understory. E and SE portions of stand look to have been not harvested as part of the 95 harvest. Better quality timber in the E a
	Basswood	18	Log/Pole			Ironw	ood	Medium	Variable	Sapling	SE also.
	Beech	9	Log/Pole			Sugar N	Maple	Trace	10 - 20 feet	Sapling	
			3	1		9					
						Heml	ock	Trace	>20 feet	Sapling	
21	4110 - Sugar M	Maple Assoc	ciation	Sawtimb	er Well		83	81-110	>20 feet N/A	Sapling	Treatment completed 2015. Not much development in the understory
21	4110 - Sugar M	-	ciation Size Class				83			Sapling	yet. Good quality stems left, should be a nice saw timber stand in 15 to
21		-		DBH	er Well	164.1	83 Species	81-110	N/A		
21	Canopy Species	% Cover	Size Class	DB I 12	l Age	164.1 Canopy 9	83 Species	81-110 Density	N/A Avg. Height	Size	yet. Good quality stems left, should be a nice saw timber stand in 15 to
21	Canopy Species Sugar Maple	% Cover 68	Size Class Log/Pole	12 12	l Age	164.1 Canopy 9	83 Species	81-110 Density	N/A Avg. Height	Size	yet. Good quality stems left, should be a nice saw timber stand in 15 to
21	Canopy Species Sugar Maple Basswood	% Cover 68 20 10	Size Class Log/Pole Log/Pole Log/Pole	12 12	84	164.1 Canopy S	83 Species	81-110 Density	N/A Avg. Height	Size	yet. Good quality stems left, should be a nice saw timber stand in 15 to
	Canopy Species Sugar Maple Basswood Red Maple	% Cover	Size Class Log/Pole Log/Pole Log/Pole	12 12 12 12	84	164.1 Canopy S	83 Species ch	81-110 Density Medium	N/A Avg. Height 5 - 10 feet	Size	yet. Good quality stems left, should be a nice saw timber stand in 15 to 20 years.
	Canopy Species Sugar Maple Basswood Red Maple 4110 - Sugar M	% Cover	Size Class Log/Pole Log/Pole Log/Pole	12 12 12 12 Sawtimb	84 Der Well	164.1 Canopy S Bee	83 Species ch 71 Species	81-110 Density Medium 81-110	N/A Avg. Height 5 - 10 feet N/A	Size Sapling	yet. Good quality stems left, should be a nice saw timber stand in 15 to 20 years.
	Canopy Species Sugar Maple Basswood Red Maple 4110 - Sugar M Canopy Species	% Cover 68 20 10 Maple Assoc	Size Class Log/Pole Log/Pole Log/Pole ciation Size Class	12	84 Der Well	164.1 Canopy S Bee	83 Species ch 71 Species ch	81-110 Density Medium 81-110 Density	N/A Avg. Height 5 - 10 feet N/A Avg. Height	Size Sapling	yet. Good quality stems left, should be a nice saw timber stand in 15 to 20 years.
	Canopy Species Sugar Maple Basswood Red Maple 4110 - Sugar M Canopy Species Sugar Maple	% Cover	Size Class Log/Pole Log/Pole Log/Pole ciation Size Class Log/Pole	12	84 Der Well	164.1 Canopy: Bee 68.7 Canopy: Bee	83 Species ch 71 Species ch ood	81-110 Density Medium 81-110 Density Low	N/A Avg. Height 5 - 10 feet N/A Avg. Height Variable	Size Sapling Size Sapling	yet. Good quality stems left, should be a nice saw timber stand in 15 to 20 years.
	Canopy Species Sugar Maple Basswood Red Maple 4110 - Sugar M Canopy Species Sugar Maple	% Cover	Size Class Log/Pole Log/Pole Log/Pole ciation Size Class Log/Pole Log/Pole	12	er Well	68.7 Canopy: 68.7 Canopy: Bee Ironw Sugar M	83 Species ch 71 Species ch ood Maple	81-110 Density Medium 81-110 Density Low Low	N/A Avg. Height 5 - 10 feet N/A Avg. Height Variable Variable	Size Sapling Size Sapling Sapling	yet. Good quality stems left, should be a nice saw timber stand in 15 to 20 years.
22	Canopy Species Sugar Maple Basswood Red Maple 4110 - Sugar M Canopy Species Sugar Maple Basswood	% Cover	Size Class Log/Pole Log/Pole Log/Pole ciation Size Class Log/Pole Log/Pole	12	er Well Age 71 Der Well	68.7 Canopy: 68.7 Canopy: Bee Ironw Sugar M	83 Species ch 71 Species ch ood Maple	81-110 Density Medium 81-110 Density Low Low Trace	N/A Avg. Height 5 - 10 feet N/A Avg. Height Variable Variable 5 - 10 feet	Size Sapling Size Sapling Sapling	yet. Good quality stems left, should be a nice saw timber stand in 15 to 20 years. Decent quality hardwood stems. Last harvested around 1995.
22	Canopy Species Sugar Maple Basswood Red Maple 4110 - Sugar M Canopy Species Sugar Maple Basswood 4111 - S.Maple, Ha	% Cover	Size Class Log/Pole Log/Pole Ciation Size Class Log/Pole Log/Pole Sociation	12	er Well Age 71 Der Well Age 71 Der Well	164.1 Canopy S Bee 68.7 Canopy S Bee Ironw Sugar N	83 Species ch 71 Species ch ood Maple 74 Species	81-110 Density Medium 81-110 Density Low Low Trace 111-140	N/A Avg. Height 5 - 10 feet N/A Avg. Height Variable Variable 5 - 10 feet N/A	Size Sapling Size Sapling Sapling Sapling	yet. Good quality stems left, should be a nice saw timber stand in 15 to 20 years. Decent quality hardwood stems. Last harvested around 1995.
22	Canopy Species Sugar Maple Basswood Red Maple 4110 - Sugar M Canopy Species Sugar Maple Basswood 4111 - S.Maple, Ha Canopy Species	% Cover	Size Class Log/Pole Log/Pole Log/Pole Ciation Size Class Log/Pole Log/Pole Sociation Size Class	12	er Well Age 71 Der Well Age 71 Der Well	68.7 Canopy S Bee Ironw Sugar N 95.0 Canopy S	83 Species ch 71 Species ch ood Maple 74 Species ch	81-110 Density 81-110 Bensity Low Low Trace 111-140 Density	N/A Avg. Height 5 - 10 feet N/A Avg. Height Variable Variable 5 - 10 feet N/A Avg. Height	Size Sapling Size Sapling Sapling Sapling Sapling	yet. Good quality stems left, should be a nice saw timber stand in 15 to 20 years. Decent quality hardwood stems. Last harvested around 1995.



Stand	d Level 4 Co	over Type		Size De	nsity	Acres	Stand Age	BA Range	e Mana	ged Site	General Comments		
25	6128 - Lowland (Deci	Coniferous iduous	, Mixed	Sawtimb	er Well	9.7	98	81-110		N/A	Open spots contain cattails. Stand surrounds stream flowing north into Kondrat swamp. Too wet to cut also stand serves as an effective RMZ		
	Canopy Species	% Cover	Size Class	DBH	Age								
	Hemlock	30	Log/Pole	12	99								
	Yellow Birch	25	Log/Pole	12									
No	orthern White Cedar	30	Pole/Log	9									
26	4130 - Aspen			Sapling	Well	12.9	13	Immature)	N/A	Aspen has regenerated well, a few scattered cedar left during the cut,		
	Canopy Species	% Cover	Size Class	DBH	Age						elm was left as well but it has fallen over.		
	Quaking Aspen	75	Sapling	2	14								
	Beech	10	Sapling	1									
	Red Maple	10	Sapling	1									
27	790 - Other Bare/Sparsely Vegetated		egetated	Nonsto	cked	0.9	2018			No	Previously not mapped, not sure when opening was established. Gas/oil facility pad.		
28	790 - Other Bare/	Sparsely V	egetated	Nonsto	cked	1.1	2018			No	Oil/gas facility.		
29	310 - Herbac	eous Open	lland	Nonsto	cked	1.0	2018			No	Grassy opening.		
30	4139 - Aspen, I	Mixed Deci	duous	Sawtimber Well 1		10.2	74	81-110		N/A	Sparse timber along the west end transitions to a fully stocked stand that		
	Canopy Species	% Cover	Size Class	DBH	Age						slopes down towards a creek in the south.		
	Quaking Aspen	45	Log	12	75								
	Red Maple	30	Log/Pole	12									
	Beech	15	Log/Pole	10									
	Sugar Maple	10	Log/Pole	10									
31	4110 - Sugar M	laple Asso	ciation	Sawtimb	er Well	17.7	77	81-110		N/A	Broken out of stand 19. Treated at the same time but hasn't responded		
	Canopy Species	% Cover	Size Class	DBH	Age	Cano	py Species	Dens	ity Avg. He	ght Size	to thinning, poorer site quality perhaps, understory dominated by a lot more ironwood and beech, and trees seem to be smaller and growth		
	Sugar Maple	60	Log/Pole	10	78	E	Beech	Hig	h 10 - 20 i	eet Sapling	rates far slower from age cores.		
	Basswood	20	Log/Pole	11		Iro	nwood	Hig	h 5 - 10 f	eet Sapling			
		20	Log/Pole			Ctrin	1 1 1 1 -	Trac	e 5 - 10 f	eet Sapling			
	Beech	20	LUg/FUIE	10		Suit	ed Maple	IIa		oapiii (
	Beech	20	LOG/FOIE	10			ar Maple	Trac		. ,			
	Beech	20	LOG/FOIE	10		Sug			ce < 5 fe	et Sapling	9		
32	Beech 4110 - Sugar M			10 Sawtimb	er Well	Sug	ar Maple	Trac	ce < 5 fe	et Sapling	Under story stocking is very sporadic for beech and ironwood. Decent		
32			ciation	Sawtimb	er Well	Sug WI 70.1	ar Maple nite Ash	Trac	ce < 5 fe ce < 5 fe	et Sapling et Sapling N/A	Under story stocking is very sporadic for beech and ironwood. Decent quality single stems throughout stand. Mainly a north facing slope.		
32	4110 - Sugar M	laple Asso	ciation	Sawtimb		Sug WI 70.1	ar Maple nite Ash	Trac Trac	ce < 5 fee ce < 5 fee	et Sapling N/A ght Size	Under story stocking is very sporadic for beech and ironwood. Decent quality single stems throughout stand. Mainly a north facing slope. Lower quality and heavier beech stocking is found in the NW corner of		
32	4110 - Sugar M	1aple Asso % Cover	ciation Size Class	Sawtimb DBH	Age	Sug WI 70.1 Cano	ar Maple nite Ash 74 py Species	Trac Trac 111-140 Dens	ce < 5 fee ce < 5 fee dity Avg. He v Variab	et Sapling N/A ght Size Sapling	Under story stocking is very sporadic for beech and ironwood. Decent quality single stems throughout stand. Mainly a north facing slope. Lower quality and heavier beech stocking is found in the NW corner of the stand.		



Stand	Level 4 C		Size Density	Acres	Stand Age	BA Range	ge Managed Site		General Comments		
33	6128 - Lowland Coniferous, Mixed Deciduous			Sawtimber Well	7.0	71	81-110	N/A		Warner creek runs through this stand, edges are steep slopes that are predominatly aspen, as you get down into the flood plain there is a mix o	
	Canopy Species	% Cover	Size Class	DBH Age						tamarack, cedar, and white pine mostly.	
	Quaking Aspen	20	Log/Pole	12							
	Tamarack	15	Log/Pole	10							
	White Pine	20	Log/Pole	12							
Nor	rthern White Cedar	30	Pole/Log	9 72							
101	4111 - S.Maple, H	ard Mast As	sociation	Sawtimber Well	89.4	71	81-110	N/A		Harvested 2005. North side of stand except for small portion in the NW	
	Canopy Species	% Cover	Size Class	DBH Age	Can	opy Species	Density	Avg. Height	Size	corner similar to stand 1, lots of clumps, very little single stems. Quality in stems improves south of the gas well road. SW boundary of stand	
	Sugar Maple	45	Log/Pole	10 72		Beech	High	Variable	Sapling	slopes down to a number of seeps and draws that flow south down the ill	
	Basswood	25	Log/Pole	10	lı	ronwood	Low	Variable	Sapling	and then down a draw to the NW through stand 5. Average BA ~ 94 from	
	Beech	20	Log/Pole						, ,	11 plots. A few knobs and north facing slopes fully stocked with BA's in excess of 120, but exist in isolated pockets.	
401	310 - Herbaceous Openland		Nonstocked	27.0		Unspecified	No		Survey monument in SW corner. NE corner has a steep slope down to the creek. Some cherry, occasional maple, a couple of elm, occasional white pine and a patch of sumac all scattered across the stand.		
402	310 - Herbaceous Openland		Nonstocked	3.5		Unspecified	No				
403	310 - Herbaceous Openland			Nonstocked	3.5		Unspecified	No		Scattered open grown cherry and white pine; almost a U type. Much of the open area is bracken. Warner Creek separates it from the rest of the parcel.	
404	310 - Herbaceous Openland No.			Nonstocked	12.5		Unspecified	Managed Op	ening		
405	310 - Herbac	Nonstocked	5.4			No		Powerline ROW.			
406	310 - Herbac	Nonstocked	7.2		Unspecified	No					
407	790 - Other Bare/	Nonstocked	0.9		Unspecified	No		Well Site			
408	310 - Herbac	Nonstocked	4.1		Unspecified	Managed Op	pening				
409	310 - Herbac	eous Open	land	Nonstocked	1.8		Unspecified	No			
410	790 - Other Bare/	Sparsely Ve	egetated	Nonstocked	0.8		Unspecified	No		Well Site	

Gaylord Mgt. Unit

Report 7 - Stands



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age BA Range	Managed Site	General Comments	MICHIGAN
411	310 - Herbaceous Openland	Nonstocked	4.7	Unspecified	Managed Opening		
412	310 - Herbaceous Openland	Nonstocked	2.1	Unspecified	No	Open field	
413	310 - Herbaceous Openland	Nonstocked	5.9	Unspecified	Managed Opening		
415	310 - Herbaceous Openland	Nonstocked	14.9	Unspecified	No		
427	790 - Other Bare/Sparsely Vegetated	Nonstocked	1.0	Unspecified	No	Well Site	
430	790 - Other Bare/Sparsely Vegetated	Nonstocked	0.8	Unspecified	No	Well Site	
431	790 - Other Bare/Sparsely Vegetated	Nonstocked	0.9	Unspecified	No	OPIC - FMD: 1999: a well site.	