

### **Compartment Review Presentation**

**Gaylord Forest Management Unit** 

Compartment 52007 Entry Year 2023 Acreage: 1,508

County Otsego

Management Area: Kirtland's Warbler

Revision Date: 2021-03-11

Stand Examiner: Matthew Foster

**Legal Description:** 

T29N R01W Sections 26, 27, 28, 29.

#### **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:

This compartment is very flat with no upland topographical features that would restrict equipment operability. Lindquist sand is the dominant upland soil type supporting the isolated stands of aspen within the compartment. Jack pine cover types are generally associated with the excessively drained Grayling, Rubicon and Graycalm sands. Tawas-Lupton mucks are found adjacent to the West Branch of Big Creek.

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

One private 40 acre in-holding occurs within section 28. Numerous private parcels also adjoin exterior compartment boundaries most notably in Section 29. A privately owned electric transmission line corridor crosses through the compartment in sections 27 and 28. Numerous Antrim gas wells and associated flow lines are in production throughout the compartment.

#### **Unique Natural Features:**

A recent search of the Michigan Natural Features Inventory database indicated the possible presence of Hill's thistle (Cirsium hillii) within this compartment. Numerous occurrences of Kirtland's warbler (Dendroica kirtlandii) have also been documented.

#### Archeological, Historical, and Cultural Features:

None

#### **Special Management Designations or Considerations:**

This compartment is designated as a High Conservation Value Area due to the Kirtland's Warbler habitat that it contains.

#### Watershed and Fisheries Considerations:

This compartment is within the N Br Au Sable River and W Br Big Creek watersheds, both of which are within the larger Au Sable River drainage basin. The compartment contains Round Lake and a portion of West Branch Big Creek. Since no treatments are scheduled near waterbodies, there are no fisheries concerns at this time.

#### Wildlife Habitat Considerations:

This compartment consists mostly of upland areas with a small lake in the middle of Section 27 and West Branch of Big Creek runs through the northeast corner of the same section. These wetland areas are used by some waterfowl and furbearers and a variety of amphibians. The rest of the compartment contains mainly a jack pine/oak complex that lies within the Kirtland's Warbler management area. Large harvests and plantings have been performed over the past few rotations to provide early successional habitat for the Kirtland's warbler along with white-tailed deer, wild turkey, black bear, and various oak/pine barren species.

#### Mineral Resource and Development Concerns and/or Restrictions

The nearest active sand/gravel pit is located more than six miles to the east, but there appears to be some potential for sand & gravel within the compartment. All State-owned mineral rights in the compartment are currently leased and in production for Antrim Shale gas. The compartment lies on the southern edge of the Guelph (Niagaran) reef trend, and potential for oil & gas from this play appears to be limited. There is no known potential for metallic minerals in this part of the state.

#### **Vehicle Access:**

Access is good throughout the compartment, due in large part to the continuing Antrim gas development.

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#### **Survey Needs:**

None

#### **Recreational Facilities and Opportunities:**

The North Branch snowmobile trail passes through section 29 following Shupac Trail which is a seasonal maintained County Road.

#### **Fire Protection:**

The compartment is composed of extremely high risk fuel types. This combined with the activities associated with the intense Antrim Gas development puts this compartment at a very high risk for future wildfires similar to the Big Creek fire which burned a portion of this compartment in 1981. The existing road network does provide easy access to most off road areas within the compartment.

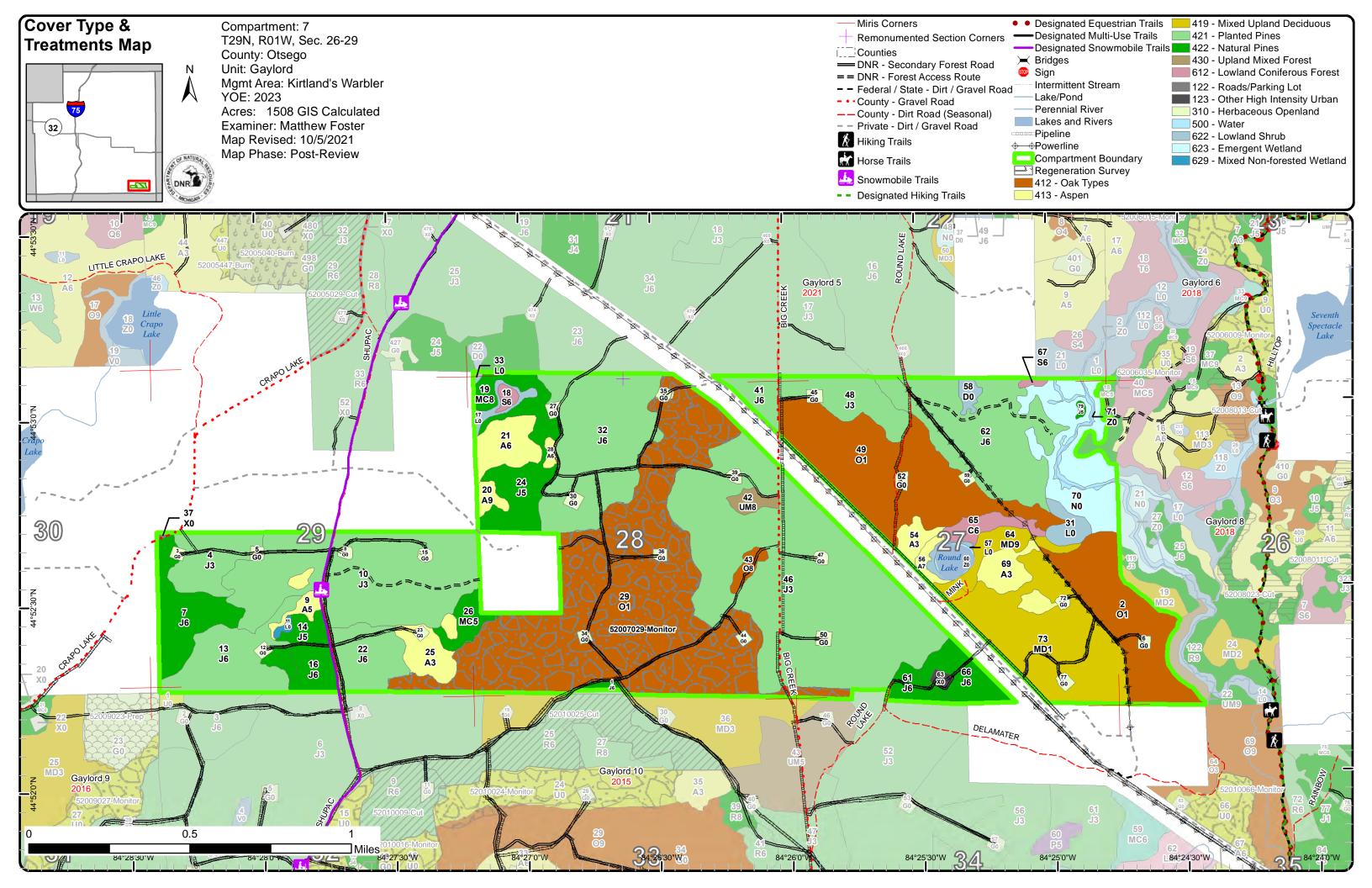
#### **Additional Compartment Information:**

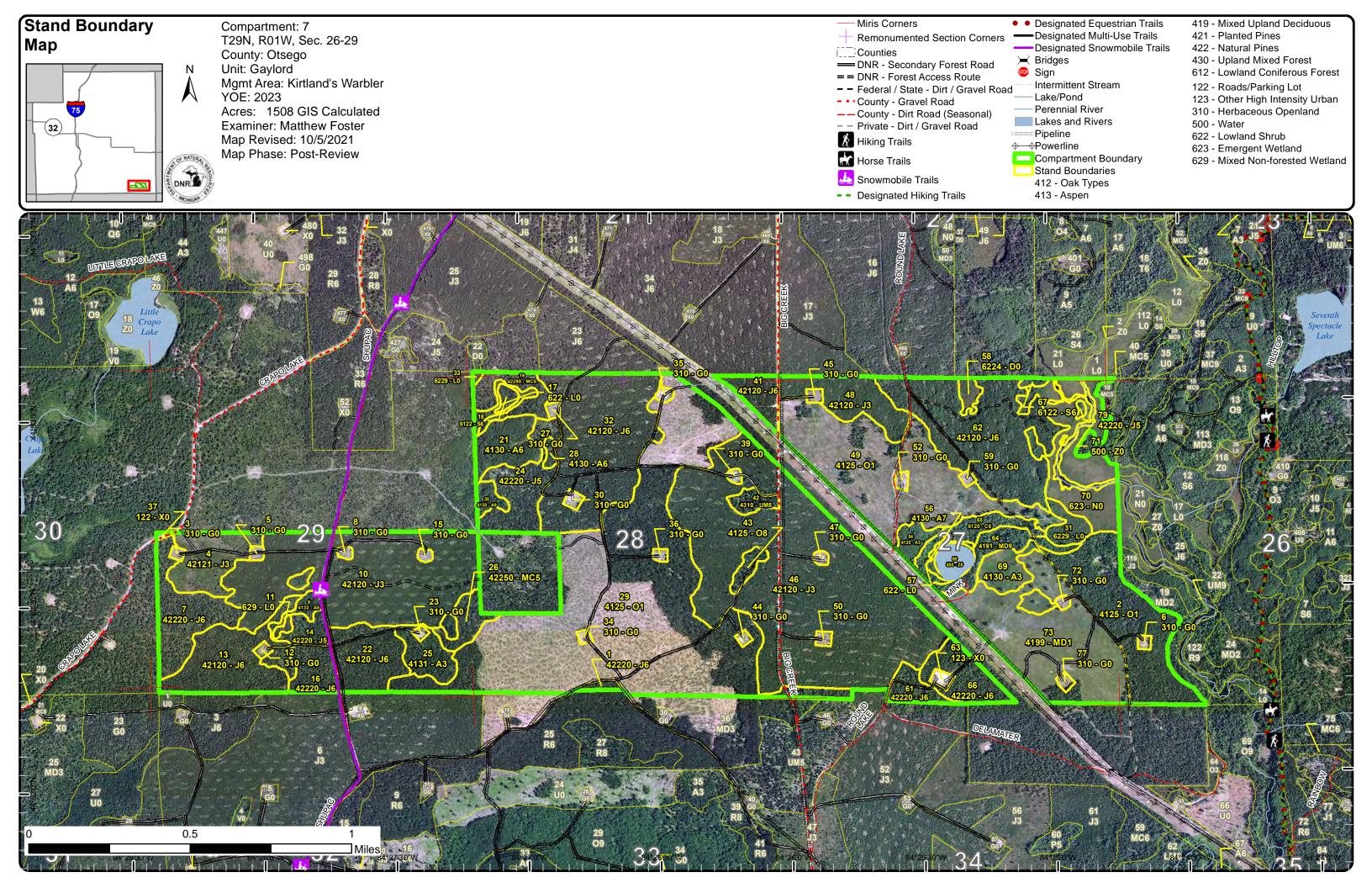
The following reports from the Inventory are attached:

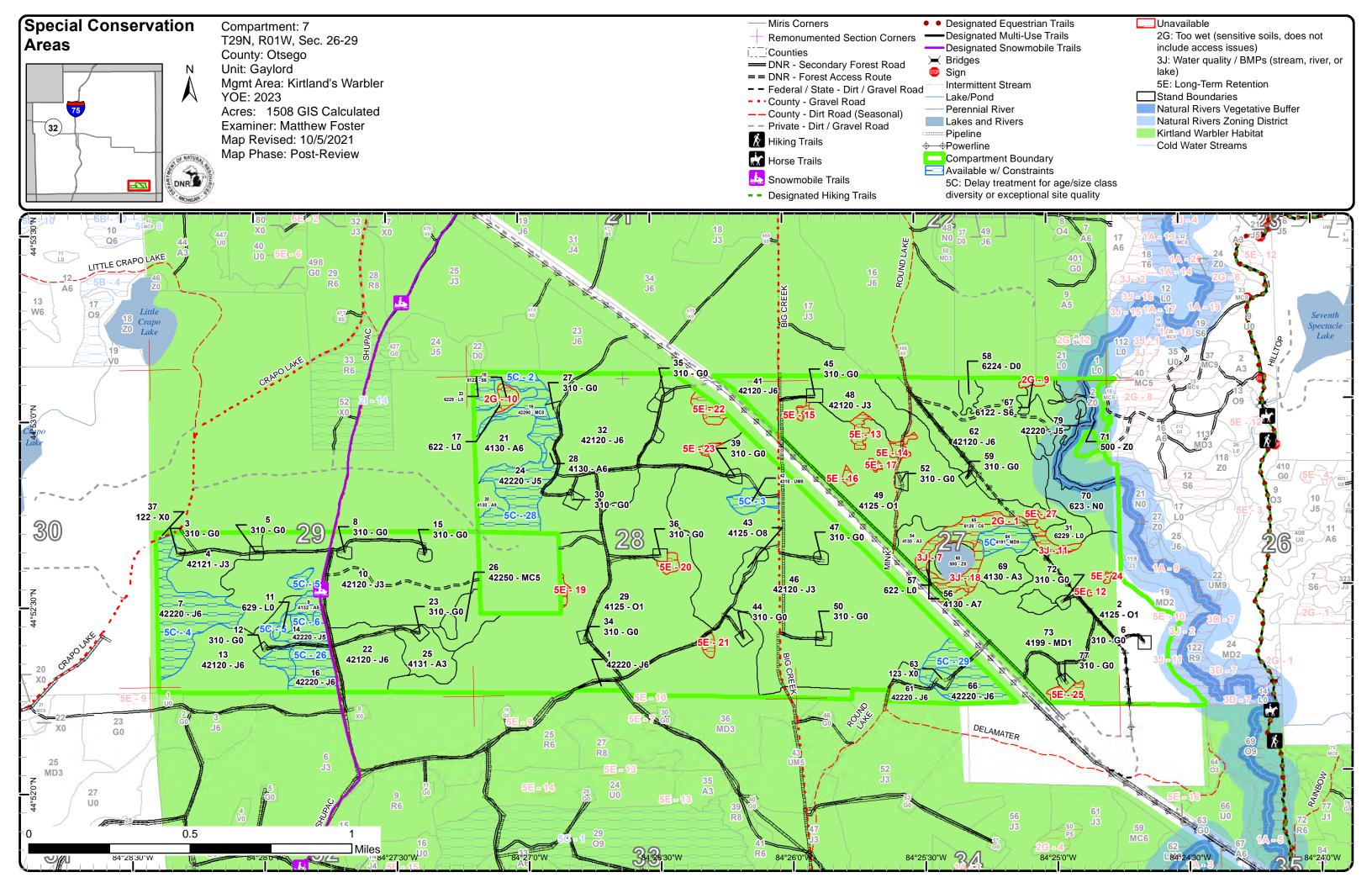
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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 7

Year of Entry 2023



Matthew Foster : Examiner

Gaylord Mgt. Unit

#### Age Class

			,	,	,	,	,	,	,	,		,	,	,				,	, ,
	No.		3 / 2			3 / 6		3/8					"a"					Jres	L'AND
Aspen	0	30	0	25	0	0	0	0	8	8	0	0	0	0	0	0	0	0	71
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10
Herbaceous Openland	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Jack Pine	0	0	25	371	178	48	27	70	31	0	0	0	0	0	0	0	0	0	750
Lowland Shrub	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
Marsh	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
Mixed Upland Deciduous	0	85	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	99
Natural Mixed Pines	0	0	0	0	0	0	0	0	10	0	0	0	14	0	0	0	0	0	24
Oak	0	432	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	436
Treed Bog	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5
Urban	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Water	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total	98	547	25	396	178	48	27	70	49	32	0	0	18	10	0	0	0	0	1497



### **Report 2 – Treatment Summary**

# Gaylord Mgt. Unit Year of Entry: 2023

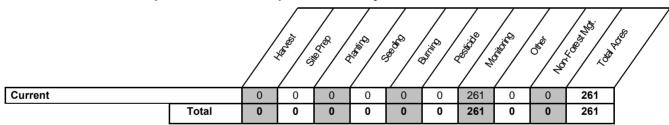
#### **Acres of Harvest**

Compartment 7
Total Compartment Acres: 1,508

**SWARTZN3** 

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

### **Proposed and Next Step Treatments by Method**



Gaylord Mgt. Unit Report 3 -- Treatments Compartment: 7 Year of Entry: 2023 **Cover Type** Acres Stand Size Stand BA **Treatment Treatment** Age Habitat Method Objective

Type

**Approved Treatments:** 

**Treatment** 

Name

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n

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Sapling 29 52007029-261.1 4125 - Black, N. Pin Immatu Monitoring Artificial 42120 - Planted Even-Aged No Poor Jack Pine Monitor Oak re Regen(3yr) Prescription Year 3 survey. Specs: Next Step Treatments: Acceptable A stand of planted Jack Pine that meets KW standards. Regen: **Other** Percent to Treat = 100% Comment: Site Condition

Range

Density Age

CoverType

Total Treatment 261.1 Acreage Proposed:

Proposed Start Date: 10/1 /2021

Structure

Cut

Gaylord Mgt. Unit

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Compartment: 7
Year of Entry: 2023

Availa	ability for	Managemer	nt					
Total	Acres	Acres Avail	Acres		Domina	nt Site	Con	ditions
Acres	Available	With Condition	Not Available		5C	2G	3J	5E
71	61	6	4	Aspen	6		4	
9	0	0	9	Cedar		9		
24	24	0	0	Herbaceous Openland				
749	648	101	0	Jack Pine	101	0		
8	8	0	0	Lowland Shrub		0		
4	0	0	4	Lowland Spruce/Fir		4		
48	48	0	0	Marsh		0		
99	81	7	11	Mixed Upland Deciduous	7		8	3
24	10	14	0	Natural Mixed Pines	14			
432	418	0	15	Oak				15
4	4	0	0	Treed Bog				
5	0	5	0	Upland Mixed Forest	5			
2	2	0	0	Urban				
12	12	0	0	Water				
1,491	1,315	133	43	Total Forested Acres	133	13	11	18
	88%	9%	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.

l U							
	Jnavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comr	ments:						
2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	14	Unspecified	Unspecified	Unspecified	Unspecified
Comr	ments:						

Gaylord Mgt. Unit

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3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	31	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	12	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Gaylord Mgt. Unit
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9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
11	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
12	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
13	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
14	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
15	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

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16	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
17	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
18	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
19	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
20	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
21	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
22	Unavailable	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
23	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

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24	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
25	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
26	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
27	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
28	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	27	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
29	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	19	Unspecified	Unspecified	Unspecified	Unspecified
C	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: 7
Year of Entry 2023



### 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.

Conservatio 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 oxygen condistocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	es (e.g., slimy sculpin) to persist from se conditions due to substantial
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and coop U.S. Fish and Wildlife service for the recovery of threatened and 365, Endangered Species Protection, of the Natural Resources a PA 451, and the Federal Endangered Species Act of 1973. This species plans in various stages of review. As of now only two ex Plover Habitat.	endangered species, as governed by Part and Environmental Protection Act, 1994 is an active program, with proposed
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from sp approved distance from the river centerlines. The Natural Rivers most Natural Rivers. The Vegetative Buffer ranges from 25 to 10 and Vegetative Buffers for each Natural River see the table locat folder.	Zoning District is a 400 foot buffer for 00 feet. To view specific Zoning Districts



Stand	Level 4 Co	over Type		Size De	nsity	Acres	Stand Age E	3A Range	Managed S	ite	General Comments
2	4125 - Blac	k, N. Pin O	)ak	Sapling	Poor	61.8	5	Immature	N/A		Harvested in 2016, a few red pine left. Planted 75 red oak and 75 white
(	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	oak summer 2018. Also planted in 2018 with 80% jack pine and 20% red pine in straight rows. Overall this is a borderline forested/non-forested
No	orthern Pin Oak	70	Sapling	1	5	Ja	ack Pine	High	< 5 feet	Sapling	stand right now. Regeneration survey was not done until now: 720
	Black Cherry	10	Sapling	1		R	led Pine	Low	< 5 feet	Sapling	jp/acre, 250 rp/acre, 420 oak/acre, 320 aspen/acre, 80 cherry/acre.
В	Bigtooth Aspen	20	Sapling	1							Average height of planted pine is 1.7ft, natural regeneration is 5-7ft tall.  This will grow into a mixed jack pine/oak stand once pine gets above 3ft
	-										tall. Accepted current regeneration through 2021 compartment review.
3	310 - Herbaco	eous Open	land	Nonsto	ocked	1.0		Immature			Gas well, Muskegon Development State Charleton C1-29.
4	42121 - Planted Deci	Jack Pine,	Mixed	Sapling	g Well	24.7	14	Immature	N/A		This stand was harvested in 2004 leaving all sub-merchantable jack pine plus some scattered residual oak log trees, was planted in 2007. The
(	Canopy Species	% Cover	Size Class	DBH	l Age						jack pine that was left during the harvest is now pole sized and scattered throughout the stand.
No	orthern Pin Oak	1	Log	11							throughout the stand.
No	orthern Pin Oak	10	Sapling	1							
	Jack Pine	9	Pole	7							
	Jack Pine	70	Sapling	2	14						
	Odok i ilio		1 3								
5	310 - Herbaco			Nonsto		1.2		Immature			Gas well, Muskegon Development State Charleton C2-29.
5		eous Open	land	Nonsto	ocked	1.2		Immature			Gas well, Muskegon Development State Charleton C2-29.  Gas well, Muskegon Development State Charleton D 1-26.
	310 - Herbaco	eous Open	land		ocked		75	Immature 51-80	N/A		Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open
6	310 - Herbaco 310 - Herbaco 42220 - Nati	eous Open eous Open ural Jack P	land land	Nonsto Poletimb	ocked ocked er Well	1.0	75	51-80		Size	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open areas, this is on the lower end of this canopy closure. This stand needs
7	310 - Herbaco 310 - Herbaco	eous Open eous Open ural Jack P	land	Nonsto Poletimb	ocked	1.0 31.0 Sub-Ca		51-80	N/A  Avg. Height 5 - 10 feet	<b>Size</b> Sapling	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open
6 7	310 - Herbaco 310 - Herbaco 42220 - Natu Canopy Species	eous Open eous Open ural Jack P	aland Pine Size Class Pole	Nonsto Poletimb <b>DB</b> H	ocked ocked er Well	1.0 31.0 <b>Sub-Ca</b>	75 anopy Species	51-80	Avg. Height	Sapling	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open areas, this is on the lower end of this canopy closure. This stand needs
6 7	310 - Herbaco 310 - Herbaco 42220 - Natu Canopy Species Quaking Aspen	eous Open eous Open ural Jack P % Cover	aland Pine Size Class Pole Log/Pole	Poletimb  DBH  8  10	ocked ocked er Well	1.0 31.0 <b>Sub-Ca</b> WI	75 anopy Species hite Pine ack Pine	51-80  Density  Low  Low	Avg. Height 5 - 10 feet 5 - 10 feet	Sapling Sapling	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open areas, this is on the lower end of this canopy closure. This stand needs
6 7	310 - Herbaco 310 - Herbaco 42220 - Natu Canopy Species Quaking Aspen orthern Pin Oak	eous Open eous Open ural Jack P Cover 1 28	aland Pine Size Class Pole	Nonsto	ocked ocked er Well	31.0  Sub-Ca  WI  Ja  Pii	75 anopy Species hite Pine	51-80  Density  Low	Avg. Height 5 - 10 feet	Sapling	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open areas, this is on the lower end of this canopy closure. This stand needs
6 7	310 - Herbaco 310 - Herbaco 42220 - Natu Canopy Species Quaking Aspen orthern Pin Oak Jack Pine	eous Open  eous Open  ural Jack P  **Cover*  1 28 70 1	lland lland line Size Class Pole Log/Pole Pole/Log Log	Poletimb  DBH  8  10  9	ocked ocked er Well Age	31.0  Sub-Ca  WI  Ja  Pii	75 anopy Species hite Pine ack Pine n Cherry	51-80  S Density  Low  Low  Medium	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet	Sapling Sapling Sapling	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open areas, this is on the lower end of this canopy closure. This stand needs
6 7 C C No	310 - Herbaco 310 - Herbaco 42220 - Natu Canopy Species Quaking Aspen orthern Pin Oak Jack Pine Red Pine	eous Open  eous Open  ural Jack P  % Cover  1 28 70 1  eous Open	lland lland lland line Size Class Pole Log/Pole Pole/Log Log	Poletimb  DBH  8 10 9 12	ocked ocked er Well 75 ocked	1.0 31.0 Sub-Ca Wi Ja Pin Northe	75 anopy Species hite Pine ack Pine n Cherry	51-80  S Density  Low  Low  Medium	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet	Sapling Sapling Sapling	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open areas, this is on the lower end of this canopy closure. This stand needs to be restarted.  Gas well, Muskegon Development State Charleton C3-29.  This is a multi-poly stand of low quality, over-mature aspen. The
6 7 C C No	310 - Herbaco 310 - Herbaco 42220 - Natu Canopy Species Quaking Aspen orthern Pin Oak Jack Pine Red Pine 310 - Herbaco	eous Open  eous Open  ural Jack P  Cover  1 28 70 1  eous Open  eous Open	lland lland lland line Size Class Pole Log/Pole Pole/Log Log	Poletimb  DBH  8 10 9 12  Nonsto	ocked  ocked  er Well  Age  75  ocked	1.0  31.0  Sub-Ca  WI  Ja  Pin  Northe  1.0	75 Anopy Species hite Pine ack Pine n Cherry ern Pin Oak	51-80  Density  Low  Low  Medium  High	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet 5 - 10 feet 7 - 10 feet 8 - 10 feet	Sapling Sapling Sapling	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open areas, this is on the lower end of this canopy closure. This stand needs to be restarted.  Gas well, Muskegon Development State Charleton C3-29.  This is a multi-poly stand of low quality, over-mature aspen. The northern portion was left as a residual island when the surrounding jack
6 7 C C No	310 - Herbaco 310 - Herbaco 42220 - Natu Canopy Species Quaking Aspen orthern Pin Oak Jack Pine Red Pine 310 - Herbaco 4132 - Aspe	eous Open  eous Open  ural Jack P  Cover  1 28 70 1  eous Open  eous Open	land land line Size Class Pole Log/Pole Pole/Log Log land ne Pole Size Class	Poletimb  DBH  8 10 9 12  Nonsto	ocked ocked er Well 75 ocked	1.0  31.0  Sub-Ca  Will  Ja  Pin  Norther  1.0  m 6.1  Sub-Ca	75 anopy Species hite Pine ack Pine n Cherry ern Pin Oak	51-80  Density  Low  Low  Medium  High	Avg. Height 5 - 10 feet	Sapling Sapling Sapling Sapling Sapling	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open areas, this is on the lower end of this canopy closure. This stand needs to be restarted.  Gas well, Muskegon Development State Charleton C3-29.  This is a multi-poly stand of low quality, over-mature aspen. The northern portion was left as a residual island when the surrounding jack pine stand was harvested. The aspen component in all areas of the
6 7 C C No	310 - Herbaco 310 - Herbaco 42220 - Natu Canopy Species Quaking Aspen orthern Pin Oak Jack Pine Red Pine 310 - Herbaco	eous Open  eous Open  ural Jack P  Cover  1 28 70 1  eous Open  en, Jack Pi  Cover	land  Size Class Pole Log/Pole Pole/Log Log Size Class Pole/Log	Nonsto  Poletimb  BBH  8 10 9 12  Nonsto  Oletimber	ocked  er Well  Age  75  ocked	1.0  31.0  Sub-Ca  Will  Ja  Pir  North  1.0  m 6.1  Sub-Ca  Qual	75 anopy Species hite Pine ack Pine n Cherry ern Pin Oak  76 anopy Species king Aspen	51-80  Density Low Low Medium High  51-80  Density Low	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet 5 - 10 feet N/A Avg. Height 10 - 20 feet	Sapling Sapling Sapling Sapling Sapling Sapling	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open areas, this is on the lower end of this canopy closure. This stand needs to be restarted.  Gas well, Muskegon Development State Charleton C3-29.  This is a multi-poly stand of low quality, over-mature aspen. The northern portion was left as a residual island when the surrounding jack
6 7 C C No	310 - Herbace 310 - Herbace 42220 - Nate 42220 - Nate Canopy Species Quaking Aspen orthern Pin Oak Jack Pine Red Pine 310 - Herbace 4132 - Aspe Canopy Species Quaking Aspen	eous Open  eous Open  ural Jack P  Cover  1 28 70 1  eous Open  eous Open  en, Jack Pi  Cover 75	land land line Size Class Pole Log/Pole Pole/Log Log land ne Pole Size Class	Poletimb  BH  8  10  9  12  Nonstc	ocked  er Well  Age  75  ocked	1.0  31.0  Sub-Ca  Pin  North  1.0  m 6.1  Sub-Ca  Qual	75 anopy Species hite Pine ack Pine n Cherry ern Pin Oak	51-80  Low Low Medium High	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet 5 - 10 feet 7 - 10 feet 8 - 10 feet Avg. Height	Sapling Sapling Sapling Sapling Sapling	Gas well, Muskegon Development State Charleton D 1-26.  Low quality oak, mortality occurring in the oak and pine. Some open areas, this is on the lower end of this canopy closure. This stand needs to be restarted.  Gas well, Muskegon Development State Charleton C3-29.  This is a multi-poly stand of low quality, over-mature aspen. The northern portion was left as a residual island when the surrounding jack pine stand was harvested. The aspen component in all areas of the stand is rapidly declining and a heavy understory of mixed species is



	d Level 4 Co	over Type		Size De	ensity	Acres	Stand Age I	BA Range	Managed S	ite	General Comments
10	42120 - Plar	nted Jack I	Pine	Sapling	g Well	118.9	26	Immature	N/A		This stand was harvested during multiple operations that spanned several years. The entire block was then planted in 1995 as part of the
	Canopy Species	% Cover	Size Class	DBH	l Age						KW management plan. The jack pine averages about 15 feet tall. Dense
	Northern Pin Oak	2	Sapling	4							a few scattered log sized oak throughout.
	Jack Pine	96	Sapling	4	26						
	Pin Cherry	1	Sapling	4							
	Quaking Aspen	1	Sapling/Pole	9 4							
11	629 - Mixed non	n-forested	wetland	Nonst	ocked	1.3			No		A small isolated area of lowland grass and shrub species.
12	310 - Herbac	eous Oper	nland	Nonsto	ocked	1.1					Gas well, Muskegon Development State Charleton D2-29.
13	42120 - Plar	nted Jack I	Pine I	Poletimb	er Wel	II 39.4	48	51-80	N/A		Planted species are pole sized while some of the older trees are close to log sized. Could be considered a two aged stand. Hold another 10 years.
	Canopy Species	% Cover	Size Class	DBH	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	log sized. Codid be considered a two aged stand. Hold another 10 years.
	Quaking Aspen	3	Pole	8		Pi	n Cherry	Low	5 - 10 feet	Sapling	Old comment: This stand was harvested in the early 1970's and then
	Jack Pine	97	Pole	7	48	North	ern Pin Oak	Low	5 - 10 feet	Sapling	machine seeded to jack pine in 1973. My assumption is that the timber sale only removed merchantable timber and that all sub-merchantable
											trees were left uncut. This would explain why there are some larger
14	42220 - Nati	ural Jack F	Pine Po	oletimbe	r Mediu	um 11.5	66	1-50	N/A		diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.  Similar to stand 16 to the south, just lower stocking and less developed
14										Size	diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.
14	42220 - Nate Canopy Species Jack Pine	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	<b>Size</b> Sapling	diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.  Similar to stand 16 to the south, just lower stocking and less developed
14	Canopy Species					Sub-Ca	nopy Species ack Pine			Sapling	diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.  Similar to stand 16 to the south, just lower stocking and less developed
14	Canopy Species Jack Pine	% Cover	Size Class	<b>DB</b> H	l Age	Sub-Ca Ja Pi	nopy Species	<b>Density</b> Low	Avg. Height 5 - 10 feet		diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.  Similar to stand 16 to the south, just lower stocking and less developed
14	Canopy Species Jack Pine	% Cover 98 2	Pole Pole	<b>DB</b> H	66	Sub-Ca Ja Pi	nopy Species ack Pine n Cherry	Low Low	Avg. Height 5 - 10 feet 5 - 10 feet	Sapling Sapling	diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.  Similar to stand 16 to the south, just lower stocking and less developed
	Canopy Species Jack Pine Quaking Aspen	% Cover 98 2	Pole Pole	<b>DBH</b> 9 6	H Age 66 ocked	Sub-Ca  Ja  Pi  North	nopy Species ack Pine n Cherry	Low Low	Avg. Height 5 - 10 feet 5 - 10 feet	Sapling Sapling	diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.  Similar to stand 16 to the south, just lower stocking and less developed understory. Old RR grade goes through the middle.  Gas well, Muskegon Development State Charleton C4-29.  Pretty much the same as the stand to the north just higher stocking.
15	Canopy Species Jack Pine Quaking Aspen  310 - Herbace	% Cover 98 2 2 eous Oper	Pole Pole	DBH 9 6	H Age 66 ocked	Sub-Ca Ja Pi North  1.0	anopy Species ack Pine n Cherry ern Pin Oak	Low Low Low	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet	Sapling Sapling	diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.  Similar to stand 16 to the south, just lower stocking and less developed understory. Old RR grade goes through the middle.  Gas well, Muskegon Development State Charleton C4-29.
15	Canopy Species Jack Pine Quaking Aspen  310 - Herbace 42220 - Nate	% Cover 98 2 2 eous Oper	Pole Pole Pole Pole	DBH 9 6	1 Age 66 ocked	Sub-Ca  Ja  Pii  North  1.0  II 12.5  Sub-Ca	anopy Species ack Pine n Cherry ern Pin Oak	Low Low Low	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet N/A	Sapling Sapling Sapling	diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.  Similar to stand 16 to the south, just lower stocking and less developed understory. Old RR grade goes through the middle.  Gas well, Muskegon Development State Charleton C4-29.  Pretty much the same as the stand to the north just higher stocking.
15	Canopy Species Jack Pine Quaking Aspen  310 - Herbace 42220 - Nate Canopy Species	% Cover 98 2 2 eous Oper ural Jack F	Pole Pole Pole Pole Pole Pole Pole Pole	DBH 9 6 Nonsto	1 Age 66 ocked	Sub-Ca  Pi  North  1.0  II 12.5  Sub-Ca	anopy Species ack Pine n Cherry ern Pin Oak  66 anopy Species	Low Low Low 51-80 Density	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet N/A Avg. Height	Sapling Sapling Sapling	diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.  Similar to stand 16 to the south, just lower stocking and less developed understory. Old RR grade goes through the middle.  Gas well, Muskegon Development State Charleton C4-29.  Pretty much the same as the stand to the north just higher stocking.
15	Canopy Species Jack Pine Quaking Aspen  310 - Herbace 42220 - Nate Canopy Species Quaking Aspen	% Cover 98 2 eous Oper ural Jack F % Cover	Pole Pole Pole Pole Pole Pole Pole Pole	DBH 9 6 Nonsta	1 Age 66 ocked	Sub-Ca  Pi  North  1.0  II 12.5  Sub-Ca	anopy Species ack Pine n Cherry ern Pin Oak  66 anopy Species ack Pine	Low Low Low S1-80 S Density Low	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet	Sapling Sapling Sapling Sapling Sapling	diameter trees scattered throughout. A few aspen clones exist but they are too small to meet mapping standards.  Similar to stand 16 to the south, just lower stocking and less developed understory. Old RR grade goes through the middle.  Gas well, Muskegon Development State Charleton C4-29.  Pretty much the same as the stand to the north just higher stocking.

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Stand	Level 4 Cover Type Size Density		Acres	Acres Stand Age BA Range Managed Site				General Comments			
18	6122 - B	lack Spruce	e F	Poletimb	er Wel	1 2.4	115	81-110	N/A		A small stand of small diameter lowland conifers. Leatherleaf and black
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	spruce saplings throughout the understory. Very wet.
	Black Spruce	55	Pole	7	115	Blad	ck Spruce	Medium	5 - 10 feet	Sapling	
	Tamarack	40	Pole	7		WI	hite Pine	Low	5 - 10 feet	Sapling	
	White Pine	5	Pole	7							
19	42290 - Nati			awtimbe			110	81-110	N/A		Most of this stand had pine selectively removed in a 1985 harvest. This stand is extremely variable in part due to that earlier harvest treatment
	Canopy Species		Size Class		H Age		nopy Species	Density	Avg. Height	Size	but also due to the influence of the nearby wetlands. Both the overstory
	Quaking Aspen	10	Pole	9			ed Maple	Low	5 - 10 feet	Sapling	and understory is more open in the west half of this stand. Hold this
	Northern Pin Oak	2	Log/Pole	10			king Aspen	Low	5 - 10 feet	Sapling	stand and look to manage when aspen in stand 21 is ready to be harvested.
	White Pine	20	Log	16		WI	hite Pine	Low	Variable	Sapling	narvested.
	Red Pine	51	Log	15	110		ack Pine	Low	10 - 20 feet	Sapling	
	Jack Pine	15	Pole	9		Pii	n Cherry	Medium	5 - 10 feet	Sapling	
	Black Spruce	2	Pole	8		North	ern Pin Oak	Medium	5 - 10 feet	Sapling	
20	4130	Sawtimb	er Wel	4.4	80	51-80	N/A		A low quality, overmature stand of aspen that should have been harvested by now. Mortality is occurring, look to harvest.		
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	narvested by now. Mortality is occurring, look to harvest.
	Quaking Aspen	95	Log/Pole	10	80	Servicebe	erry (Juneberry)	Low	5 - 10 feet	Sapling	
	Jack Pine	5	Pole/Log	9		North	ern Pin Oak	Low	< 5 feet	Sapling	
						Pii	n Cherry	Medium	5 - 10 feet	Sapling	
						Qual	king Aspen	Medium	10 - 20 feet	Sapling	
21	4130	- Aspen	F	Poletimber W		l 17.7	27	51-80	N/A		This stand was cut in 1994, all red and white pine were left as residual.   Most of these trees are widely scattered except along the western edge
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	of the stand were there is a significant concentration near the lowlands.
	Quaking Aspen	90	Pole/Sapling	5	27	Servicebe	erry (Juneberry)	Low	5 - 10 feet	Tall Shrub	The western and southwestern portions of this stand are wet. Stand is
	White Pine	2	Log	12		Pii	n Cherry	Medium	5 - 10 feet	Sapling	just entering pole size class.
	Red Pine	3	Log	14							
	Pin Cherry	5	Sapling	3							
22	2 42120 - Planted Jack Pine P			Poletimber Well		l 27.2	50	51-80	N/A		This stand was harvested in the late 1960's and then re-planted in 1970.  Apparently the survival rate of that planting was so low that the stand was
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	apparently the survival rate of that planting was so low that the stand was machine seeded in 1971. Stand is now developing an oak understory.
	Quaking Aspen	2	Pole	7		Pii	n Cherry	Low	5 - 10 feet	Sapling	There are scattered larger diameter jack pine throughout the stand that
	Northern Pin Oak	3	Log/Pole	11		North	ern Pin Oak	Medium	5 - 10 feet	Sapling	were probably left during the initial harvest.
	Jack Pine	95	Pole	7	50						
23	310 - Herbac	eous Open	land	Nonst	ocked	1.0					Gas well, Muskegon Development State Charleton D-4-29.



Stand	Level 4 C	over Type		Size D	ensity	Acres	Stand Age	BA Range	Managed S	iite	General Comments		
24	42220 - Na	tural Jack P	ine Po	oletimbe	r Medium	27.2	65	51-80	N/A		This is a variable stand both in stocking density and in represented size		
Car	nopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	classes. It is very heavy to jack pine with only occasional oak, aspen red pine. This is definitely not a fully stocked stand, especially on the		
Qua	king Aspen	3	Pole	8		Pir	n Cherry	Medium	5 - 10 feet	Sapling	north end. Some spots may have been planted, jack pine mortality is		
North	nern Pin Oak	3	Log/Pole	11		Northe	ern Pin Oak	Medium	5 - 10 feet	Sapling	starting to occur.		
F	Red Pine	4	Log	14				'			-		
J	ack Pine	90	Pole/Log	9	65								
25	4131 - <i>F</i>	Aspen, Oak		Saplin	g Well	15.3	4	Immature	N/A		Harvested in 2017, coming back well. Despite being harvested with an		
Car	nopy Species	% Cover	Size Class	DBI	DBH Age		nopy Species	Density	ity Avg. Height	Size	aspen/oak management objective, the west polygon was trenched and planted with adjacent stand 29. This portion of the stand has jack pine		
Bigt	ooth Aspen	50	Sapling	1	4	Ja	ack Pine	Medium	< 5 feet	Sapling	and red pine underneath the aspen/oak.		
North	nern Pin Oak	35	Sapling	1		R	ed Pine	Low	< 5 feet	Sapling	· ·		
Bla	ack Cherry	5	Sapling	1							1		
Qua	king Aspen	9	Sapling	1									
R	ed Maple	1	Sapling	1									
26	42250 -	Pine, Oak	Po	oletimbe	r Medium	9.9	70	51-80	N/A		It appears that this stand had some type of a partial harvest many year ago since there are cut oak stumps throughout. As a result the canop not closed which has allowed a heavy understory to develop. Some of		
Car	nopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size			
North	nern Pin Oak	40	Pole	9		Ja	ack Pine	Low	10 - 20 feet	Sapling	mortality is starting to occur. Would like to hold 10 years with all of the		
F	Red Pine	5	Log/Pole	11		Pir	n Cherry	Low	5 - 10 feet	Sapling	adjacent cutting that has occurred.		
J	ack Pine	55	Pole	9	70	Northe	ern Pin Oak	Medium	5 - 10 feet	Sapling			
27	310 - Herbad	ceous Open	land	Nonst	ocked	1.2					Gas well, Muskegon Development State Charleton A2-28.		
28	4130	- Aspen	1	Poletim	per Well	1.9	71	81-110	N/A		Low quality aspen pocket with some jack pine mixed in. Look to harvest		
Car	nopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	this stand.		
Qua	king Aspen	95	Pole/Log	9	71	Pir	n Cherry	Medium	5 - 10 feet	Sapling			
J	ack Pine	5	Pole/Log	9		Northe	ern Pin Oak	Low	5 - 10 feet	Sapling			
29	4125 - Blad	ck, N. Pin O	ak	Saplin	g Poor	270.1	4	Immature	N/A		Harvested in 2017, trenched in 08/2017. Planted and failed Year 1 reger		
Car	nopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	survey, replanted 5/7/2020, year 1 regen survey completed 09/12/2020, 869 JP/acre (planted and volunteer), 75 planted RP/acre, 2,000 oak/acr		
North	nern Pin Oak	85	Sapling	1	4	Ja	ack Pine	High	< 5 feet	Sapling	41 cherry/acre, and 14 rm/acre. Average height of volunteers is 3-4ft tal		
W	/hite Oak	1	Sapling	1		R	ed Pine	Low	< 5 feet	Sapling	and average height of planted species is 1.5ft. Some areas are more		
R	ed Maple	4	Sapling	1							open than others due to oak browse.		
Bla	ack Cherry	10	Sapling	1									
30	310 - Herbad	ceous Open	land	Nonst	ocked	1.6					Gas well, Muskegon Development State Charleton B2-28.		



Stand	Level 4 C	over Type	;	Size Den	sity	Acres Stand	Age BA Range	Managed S	Site	General Comments			
32	42120 - Plar	nted Jack P	Pine P	oletimber	Well	86.3 35	Immature	N/A		This is a 1986 KW planting block that extends north into the adjacent			
	Canopy Species % Cover Size Clas		Size Class	DBH A	Age	Sub-Canopy Sp	ecies Density	Avg. Height	Size	compartment. It is almost pure jack pine with only occasional oak stump sprout clumps. Red pine trees were left as residual throughout. Stand is			
١	Northern Pin Oak 2 Pole		Pole/Sapling	5		Pin Cherry	Low	5 - 10 feet	Sapling	thick, just entering pole size class.			
	Red Pine	2	Log/Pole/XLog	g 12					•	-			
	Jack Pine	96	Pole/Sapling	5	35								
34	310 - Herbac	eous Open	land	Nonstock	ked	1.0				Gas well, Muskegon Development State Charleton D2-28.			
35	310 - Herbac	eous Open	land	Nonstock	ked	1.3				Gas well, Muskegon Development State Charleton A3-28.			
36	310 - Herbac	eous Open	land	Nonstock	ked	1.1				Gas well, Muskegon Development State Charleton C3-28.			
39	310 - Herbac	eous Open	land	Nonstock	ked	1.1				Gas well, Muskegon Development State Charleton B4-28.			
41	42120 - Plar	nted Jack P	Pine P	oletimber	Well	10.8 35		N/A		This is a 1986 KW planting that extends well to the north into the			
	Canopy Species	% Cover	Size Class	DBH A	Age	Sub-Canopy Sp	ecies Density	Avg. Height	Size	adjacent compartment. The jack pine is currently about 20 feet tall. Oak stump sprouts are found throughout as are a few widely scattered oak			
١	Northern Pin Oak	5	Pole/Sapling	5		Pin Cherry	Low	5 - 10 feet	Sapling	residual trees. Stand is dense, about 20-25ft tall.			
	Jack Pine	95	Pole/Sapling	5	35	Pin Oak (South	ern) Low	< 5 feet	Sapling				
42		ne, Oak Mix		wtimber N			51-80	N/A		This is a residual island that was intentionally left when the surrounding stand was cut. This is not a fully stocked stand, as a result the understory			
	Canopy Species		Size Class	DBH A	Age	Sub-Canopy Sp		Avg. Height	Size	is well developed, especially with oak. Jack pine is working its way up			
	Northern Pin Oak	45	Log	11		Red Pine	Low	5 - 10 feet	Sapling	into the canopy.			
	Red Pine	50	Log		80	Jack Pine	Low	10 - 20 feet	Sapling				
	Jack Pine	5	Pole	7		Pin Cherry		5 - 10 feet	Sapling				
						Northern Pin C	Dak High	5 - 10 feet	Sapling				
43	4125 - Blac			wtimber N			1-50	N/A		This stand was intentionally left as a residual island when the surrounding stand was cut. This is primarily a lightly stocked stand of low quality			
	Canopy Species		Size Class	DBH A		Sub-Canopy Sp		Avg. Height	Size	oak. It has a well developed understory of jack pine and oak. Jack pine			
١	Northern Pin Oak	77	Log		80	Jack Pine	Medium	>20 feet	Sapling	is working its way up into the canopy.			
	Red Pine	17	Log	12		Pin Cherry		5 - 10 feet	Sapling				
	Jack Pine	5	Pole	8		Northern Pin C	<u> </u>	5 - 10 feet	Sapling				
	White Oak	1	Log	12		White Oak	Low	5 - 10 feet	Sapling				
44	310 - Herbac	eous Open	land	Nonstocl	ked	1.0				Gas well, Muskegon Development State Charleton D4-28.			
45	310 - Herbac	eous Open	land	Nonstock	ked	1.3				Gas well, Muskegon Development State Charleton A1-27.			

Gaylord Mgt. Unit

Report 7 - Stands



Stand Level 4 Cove		over Type		Size Density		Acres	Stand Age	BA Range	Managed S	ite	General Comments		
46	42120 - Plar	nted Jack P	ine	Sapling	Well	226.7	25	Immature	N/A		This is a large KW block that was cut during multiple harvest operations		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	and then re-planted in 1996. Most of the jack pine averages between 20ft tall, a few scattered log sized red pine.		
1	Northern Pin Oak	5	Sapling	4		Pir	Cherry	Low	< 5 feet	Sapling	2011 tall, a 1011 coatto og ci200 tod pillol		
	Jack Pine	92	Sapling	4	25	Northe	ern Pin Oak	Low	< 5 feet	Sapling			
	Quaking Aspen	2	Sapling	4							-		
	Red Pine	1	Log	13									
47	310 - Herbac	eous Openi	and	Nonsto	cked	1.1					Gas well, Muskegon Development State Charleton C1-27.		
48	42120 - Plar	nted Jack P	ine	Sapling	Well	25.1	25	Immature	N/A		This is part of a large 1996 KW planting block, the majority of which		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	extends to the north into the adjacent compartment. No residual trees were left when this stand was cut, jack pine is about 15-20ft tall.		
1	Northern Pin Oak	3	Sapling	3		Pir	Cherry	Low	< 5 feet	Sapling	, , , , , , , , , , , , , , , , , , ,		
	Jack Pine	95	Sapling	3	25	Northe	ern Pin Oak	Low	< 5 feet	Sapling			
	Bigtooth Aspen	2	Sapling	4				'		1	•		
49	4125 - Blac	k, N. Pin O	ak	Sapling	Poor	100.4	6	Immature	N/A		Harvested in 2015, planted in 2017 in KW weave pattern. Regence		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	survey has not been done until now. About 527 jp/acre, 707 oak/acre, 120 cherry/acre, 33 aspen/acre. Average height of planted jack pine is		
1	Northern Pin Oak	70	Sapling	1	6	Ja	ck Pine	High	< 5 feet	Sapling	2ft, natural regeneration is 4-6ft. East half of this stand has more natural		
	Black Cherry	15	Sapling	1							regeneration than west half. Accepted current regeneration through 2021		
	Bigtooth Aspen	15	Sapling	1							compartment review.		
50	310 - Herbac	eous Open	land	Nonsto	cked	1.4					Gas well, Muskegon Development State Charleton D1-27.		
52	310 - Herbac	eous Open	land	Nonsto	cked	1.3					Gas well, Muskegon Development State Charleton B2-27.		
		eous Openi	land	Nonstoo		1.3	27	Immature	N/A				
52 54	4130	- Aspen		Sapling	Well	6.9				Size	This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this		
	4130 Canopy Species	- Aspen	Size Class	Sapling <b>DBH</b>	Well	6.9 Sub-Ca	nopy Specie	s Density	Avg. Height	<b>Size</b> Sapling	This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this stand after the harvest. Aspen is growing well now, overall this is a		
	4130 Canopy Species Red Maple	- Aspen  **Cover 6	Size Class Sapling	Sapling  DBH  3	Well	6.9 Sub-Ca				Size Sapling	This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this		
54	4130 Canopy Species Red Maple Bigtooth Aspen	- Aspen % Cover 6 90	Size Class Sapling Sapling/Pole	Sapling  DBH  3 4	Well	6.9 Sub-Ca	nopy Specie	s Density	Avg. Height		This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this stand after the harvest. Aspen is growing well now, overall this is a		
54	4130 Canopy Species Red Maple	- Aspen  **Cover 6	Size Class Sapling	Sapling  DBH  3 4	Well	6.9 Sub-Ca	nopy Specie	s Density	Avg. Height		This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this stand after the harvest. Aspen is growing well now, overall this is a		
54	4130 Canopy Species Red Maple Bigtooth Aspen Northern Pin Oak Red Pine	- Aspen  **Cover 6 90 3	Size Class Sapling Sapling/Pole Sapling/Pole Log	Sapling  DBH  3 4 4 4 4	Well Age	6.9 Sub-Ca	nopy Specie	s Density	Avg. Height		This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this stand after the harvest. Aspen is growing well now, overall this is a borderline sapling/pole stand developing a red maple understory.  This stand was left when the adjacent stand #54 was cut. This stand is		
54	4130 Canopy Species Red Maple Bigtooth Aspen Northern Pin Oak Red Pine 4130	- Aspen  **Cover 6 90 3 1	Size Class Sapling Sapling/Pole Sapling/Pole Log	Sapling  DBH  3 4 4 11	Well Age 27 er Poor	6.9 Sub-Cal Re	nopy Specie d Maple 85	Medium  1-50	Avg. Height 5 - 10 feet N/A		This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this stand after the harvest. Aspen is growing well now, overall this is a borderline sapling/pole stand developing a red maple understory.  This stand was left when the adjacent stand #54 was cut. This stand is over-mature and is slowly falling apart, being replaced by a heavy red		
54	4130 Canopy Species Red Maple Bigtooth Aspen Northern Pin Oak Red Pine 4130 Canopy Species	- Aspen  **Cover 6 90 3 1	Size Class Sapling Sapling/Pole Sapling/Pole Log Size Class	Sapling  DBH  3 4 4 11	Well Age 27 er Poor	6.9  Sub-Cal  Re  3.9  Sub-Cal	nopy Specie d Maple	Medium  1-50  S Density	Avg. Height 5 - 10 feet	Sapling	This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this stand after the harvest. Aspen is growing well now, overall this is a borderline sapling/pole stand developing a red maple understory.  This stand was left when the adjacent stand #54 was cut. This stand is over-mature and is slowly falling apart, being replaced by a heavy red maple understory. Most of this stand is on a downslope to the lake, leave		
54	4130 Canopy Species Red Maple Bigtooth Aspen Northern Pin Oak Red Pine 4130 Canopy Species Red Maple	- Aspen  **Cover   6   90   3   1    - Aspen  **Cover   10	Size Class Sapling Sapling/Pole Sapling/Pole Log Size Class Pole/Log	Sapling  DBH  3 4 4 11  Sawtimbe  DBH  9	Well Age 27 er Poor Age	6.9  Sub-Cal  Re  3.9  Sub-Cal	nopy Specie d Maple  85  nopy Specie d Maple	Medium  1-50  S Density  High	Avg. Height 5 - 10 feet  N/A  Avg. Height >20 feet	Sapling  Size  Sapling	This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this stand after the harvest. Aspen is growing well now, overall this is a borderline sapling/pole stand developing a red maple understory.  This stand was left when the adjacent stand #54 was cut. This stand is over-mature and is slowly falling apart, being replaced by a heavy red		
54	4130 Canopy Species Red Maple Bigtooth Aspen Northern Pin Oak Red Pine 4130 Canopy Species	- Aspen  **Cover   6   90   3   1    - Aspen  **Cover   10   58	Size Class Sapling/Pole Sapling/Pole Log Size Class Pole/Log Log	Sapling  DBH  3 4 4 11  Sawtimbe  DBH  9 11	Well Age 27 er Poor	6.9  Sub-Cal  Re  3.9  Sub-Cal	nopy Specie d Maple  85  nopy Specie	1-50  S Density  1-50  S Density  High Low	Avg. Height 5 - 10 feet  N/A  Avg. Height >20 feet  Variable	Size Sapling Sapling Sapling	This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this stand after the harvest. Aspen is growing well now, overall this is a borderline sapling/pole stand developing a red maple understory.  This stand was left when the adjacent stand #54 was cut. This stand is over-mature and is slowly falling apart, being replaced by a heavy red maple understory. Most of this stand is on a downslope to the lake, leave		
54	4130 Canopy Species Red Maple Bigtooth Aspen Northern Pin Oak Red Pine  4130 Canopy Species Red Maple Quaking Aspen	- Aspen  **Cover   6   90   3   1    - Aspen  **Cover   10	Size Class Sapling Sapling/Pole Sapling/Pole Log Size Class Pole/Log	Sapling  DBH  3 4 4 11  Sawtimbe  DBH  9	Well Age 27 er Poor Age	6.9  Sub-Cal  Re  3.9  Sub-Cal	nopy Specie d Maple  85  nopy Specie d Maple nite Pine	Medium  1-50  S Density  High	Avg. Height 5 - 10 feet  N/A  Avg. Height >20 feet	Sapling  Size  Sapling	This stand was harvested in 1994, a few widely scattered red pine were left as residual. Old notes indicated beaver activity in portions of this stand after the harvest. Aspen is growing well now, overall this is a borderline sapling/pole stand developing a red maple understory.  This stand was left when the adjacent stand #54 was cut. This stand is over-mature and is slowly falling apart, being replaced by a heavy red maple understory. Most of this stand is on a downslope to the lake, leave		



Stand	Level 4 C	over Type	;	Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
57	622 - Lov	wland Shrub	)	Nonst	ocked	2.4			No		A narrow strip of lowland brush immediately adjacent to Round Lake, slowly filling in with some trees.
58	6224 - `	Treed Bog		Nonst	ocked	3.6			No		This is a leatherleaf bog that is filling in with spruce and jack pine following the Big Creek fire.
59	310 - Herbac	ceous Open	land	Nonst	ocked	1.0					Gas well, Muskegon Development State Charleton B 3-27.
60	500	- Water		Nonst	ocked	6.7			No		Round Lake.
61	42220 - Nat	tural Jack P	ine P	Poletimb	er Well	8.8	45	1-50	N/A		Old notes indicate a harvest in this stand at some point, looks like
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	residual oak and red pine were left. Jack pine is now pole size and the stand is developing a heavy oak understory.
1	Northern Pin Oak	8	Log	11			ed Pine	Low	5 - 10 feet	Sapling	, , , , , , , , , , , , , , , , , , ,
	Red Pine	2	Log	11		Pi	n Cherry	Low	5 - 10 feet	Sapling	
	Jack Pine	90	Pole	6	45	North	ern Pin Oak	Medium	5 - 10 feet	Sapling	
62	2 42120 - Planted Jack Pine		Pine P	Poletimber Well			80.4 35		N/A		This stand was burned during the 1981 Big Creek fire, re-planted in 1987 and is now a KW management block. There are a few scattered aspen
	Canopy Species	% Cover	Size Class	DBH	l Age		nopy Specie	s Density	Avg. Height	Size	clones in this plantation as well. The far northern edge of this stand was
	Quaking Aspen	5	Pole/Sapling				n Cherry	Low	5 - 10 feet	Sapling	not planted possibly due to property line concerns. This area is
1	Northern Pin Oak	5	Pole/Sapling			North	ern Pin Oak	Low	< 5 feet	Sapling	regenerating naturally to jack pine. Stand is dense, some of the weak tops are snapping. The far west end of the stand has a small pocket (~1
	Jack Pine	90	Pole/Sapling	5	35						acre), of older natural jack pine, most likely survived the Big Creek Fire.
63	123 - Other Hiç	gh Intensity	Urban	Nonst	ocked	1.8					This is a fenced and gated CPF site. Muskegon Development Round Lake Facility.
64	4191 - Mixed Upl	and Decidu	ous with S	Sawtimb	er Well	14.3	85	51-80	N/A		The quality of the aspen and oak in this stand is similar to that of stand #72. This stand though is entirely lacking the red pine component plus
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	there is more jack pine here as compared to stand #72. mixed stand, take out finger, more rm understory north, code adjacent stand low shru
	Red Maple	10	Pole/Log	9		Re	ed Maple	Low	5 - 10 feet	Sapling	filling with some spruce
	Bigtooth Aspen	7	Log	11		North	ern Pin Oak	Medium	5 - 10 feet	Sapling	
	Northern Pin Oak	55	Log/Pole	11	85	W	hite Pine	Low	10 - 20 feet	Sapling	
1		20	Log	10			-			-	
1	Jack Pine	20	Log	12							



Stan	d Level 4 C	Cover Type		Size Density	Acres	Stand Age E	BA Range	Managed S	ite	General Comments		
65	6120 - Lo	owland Cedar  % Cover Size Clas		Poletimber Well	9.6	120	111-140	N/A		A fairly dense stand with a thick tag alder understory. This stand occupies a low run which connects Round Lake with the marshlands		
	Canopy Species			DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	along Big Creek. Very wet, a couple of sparse areas full of tag alder		
	Paper Birch	2	Pole	9	Bla	ck Spruce	Low	10 - 20 feet	Sapling	included.		
	Black Spruce	34	Pole	9	Ta	ag Alder	High	5 - 10 feet	Tall Shrub			
N	orthern White Cedar	60	Pole/Log	9 120								
	White Pine	2	Pole/Log	9								
	Red Pine	2	Log	14								
66	42220 - Nat	ural Jack P	ine	Poletimber Well	18.9	61	51-80	N/A		Some mortality occurring in the jack pine, thick oak understory is		
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	developing. Look to harvest this stand.		
	Northern Pin Oak	5	Log/Pole	11	Já	ack Pine	Low	10 - 20 feet	Sapling			
	Jack Pine	95	Pole/Log	8 61	Pi	n Cherry	Low	5 - 10 feet	Sapling			
					North	ern Pin Oak	High	5 - 10 feet	Sapling			
67	6122 - BI	ack Spruce		Poletimber Well	1.4	115	111-140	N/A		This stand was within the interior of the 1981 Big Creek fire. The majority		
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	of the stand survived due to the lowland character of the stand. The far eastern portion, however, is actually upland and did burn to be replaced		
	Black Spruce	80	Pole	7 115	Bla	ck Spruce	Medium	5 - 10 feet	Sapling	by natural regeneration. This upland area was less than an acre in size		
	Tamarack	18	Pole	7	Ta	ag Alder	Medium	5 - 10 feet	Tall Shrub	though so it did not meet the mapping standards for a stand. Tag alder		
	White Pine	2	Pole	7						and leatherleaf common in the understory.		
69	4130 - Aspen			Sapling Well	14.8 6	6	Immature	N/A		Harvested in 2015 with adjacent stand 73, this portion was not trenched		
	Canopy Species	% Cover	Size Class	DBH Age						and planted. Good aspen regeneration in most spots, a little more open with cherry in the northwest portion of the stand. Some natural jack pine		
	Bigtooth Aspen	85	Sapling	1 6						coming up underneath the aspen.		
	Red Oak	10	Sapling	1								
	Black Cherry	5	Sapling	1								
70	623 - Emer	gent Wetla	nd	Nonstocked	47.8			No		A marshland that lies adjacent to Big Creek. Near the edges with the uplands, tag alder and leatherleaf are common.		
71	500 -	- Water		Nonstocked	5.6			No		West Branch Big Creek, designated Natural River.		
72	310 - Herbac	eous Open	land	Nonstocked	1.0					Gas well, Muskegon Development State Charleton C4-27.		
73	4199 - Other Mixe	ed Upland Deciduous		Sapling Poor	84.8	6	Immature	N/A		Harvested in 2015, planted in spring 2018 in KW weave pattern. Year 3		
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	survey completed in fall of 2020. Results indicate 811 JP/acre (volunteer and planted), 1,017 oak/acre, 365 aspen/acre and 94 cherry/acre.		
	Northern Pin Oak	55	Sapling	1 6	Ja	ack Pine	High	< 5 feet	Sapling	Volunteer species average 3-6ft tall while planted pine average 2ft tall.		
	White Oak	2	Sapling	1			'		,	More of a mixed stand now than a jack pine plantation, per policy will not		
	Quaking Aspen	30	Sapling	1						replant JP.		
	Black Cherry	12	Sapling	1								
1	Red Pine	1	Log	12								

Gaylord Mgt. Unit Report 7 – Stands



Stand	Level 4 Cover Type	Size Density	Acres Stand Age BA Range	Managed Site	General Comments	MICHIGAN .
77	310 - Herbaceous Openland	Nonstocked	1.3		Gas well, Muskegon Development State Charleton D4-27.	