

Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32037 Entry Year 2021 Acreage: 1,138

County Marquette

Management Area: Chain Lakes Moraine

Revision Date: 2019-07-25

Stand Examiner: Eric Brolin

Legal Description:

T45N - R26W, Sections 20, 29, 32

Identified Planning Goals:

Strive to perpetuate the component of maple, aspen, and dry mesic conifers where they now occur.

Soil and topography:

Ranges from level lowlands and wetland drainages to upland ridges.

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

Private ownership around the lakes, but state land located on all other borders of this compartment. Bass Lake State Forest Campground located in Sec. 29.

Unique Natural Features:

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

This compartment contains three sections (north, central, and south). The northeast region of the northern section of this compartment contains an unnamed waterbody (stream) which serves as a tributary to Pike Lake. The unnamed tributary is designated a Type 1 trout stream less than 50' width. A 300' buffer is recommended for the unnamed stream in riparian areas susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration, 100' plus 5' per 1% increase in slope; buffers are recommended to protect these areas in accordance with Best Management Practices. This region of this compartment also contains two unnamed waterbodies (small lakes). 100' plus 5' per 1% increase in slope; buffers are recommended for these unnamed waterbodies to protect shoreline areas in accordance with Best Management Practices. The southern region of the northern section of this compartment is adjacent to Spring Lake. 100' plus 5' per 1% increase in slope; buffers are recommended for Spring Lake to protect shoreline areas in accordance with Best Management Practices.

The central section of this compartment borders Bass Lake (West). 100' plus 5' per 1% increase in slope; buffers are recommended for Bass Lake (West) to protect shoreline areas in accordance with Best Management Practices. There are no fisheries concerns in the southern section of this compartment.

Wildlife Habitat Considerations:

Compartment 037 is found within the Chain Lakes Moraine Management Area; on a Disintegration Moraine in Southwestern Marquette County. The dominant Natural Communities are dry mesic northern forests, poor conifer swamps, and mesic northern forests. This management area offers opportunities to increase diversity and perhaps long-term oak sustainability through under planting white and red pine. Another priority is to maintain or increase wildlife corridors especially along riparian corridors. Wildlife management issues in the management area are: mast (hard and soft); habitat fragmentation; mature forest conditions; mesic conifer; course woody debris; and retention or development of large living and dead standing trees (for cavities). This management area represents approximately ¼ of the oak resource on WUP state forest.

The following have been identified as featured species for the Chain Lakes Management Area: black bear, gray jay, pileated woodpecker, Northern goshawk, red crossbill.

Mineral Resource and Development Concerns and/or Restrictions

Sections 20, 29, & 32, T45N-R26W, Marguette County

The nearest active sand/gravel pit is located three miles to the south, and there appears to be good sand & gravel potential within the compartment on the uplands. Abandoned iron mines are located five miles to the east, and some additional iron exploration was completed three miles east of the compartment. Historically, there has been metallic mineral leasing within the compartment, but nothing within the last 30 years, and there was no known exploration work completed in the compartment. Metallic mineral potential is considered low at this time. There is no known potential for economic hydrocarbon production in the UP.

Vehicle Access:

Very good access to all of the compartment. Bass Lake Motorcycle Trail runs through Sec. 32.

Survey Needs:

Corners needed in the south section of this compartment for a red pine and black spruce stand.

Recreational Facilities and Opportunities:

Camping, fishing, hunting, cycling, ORV

Fire Protection:

This compartment lies within the Gwinn Unit protection area.

Additional Compartment Information:

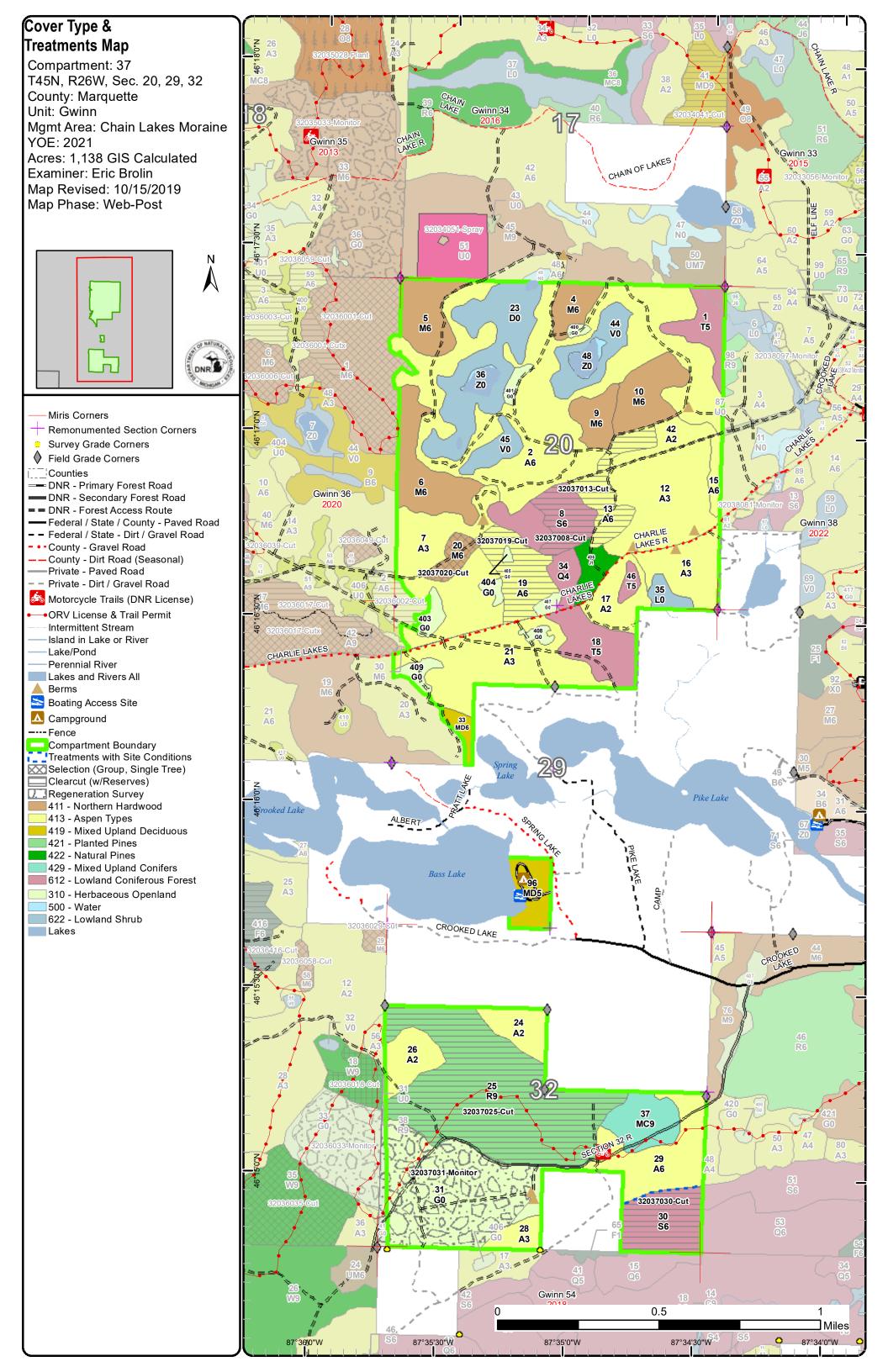
The following reports from the Inventory are attached:

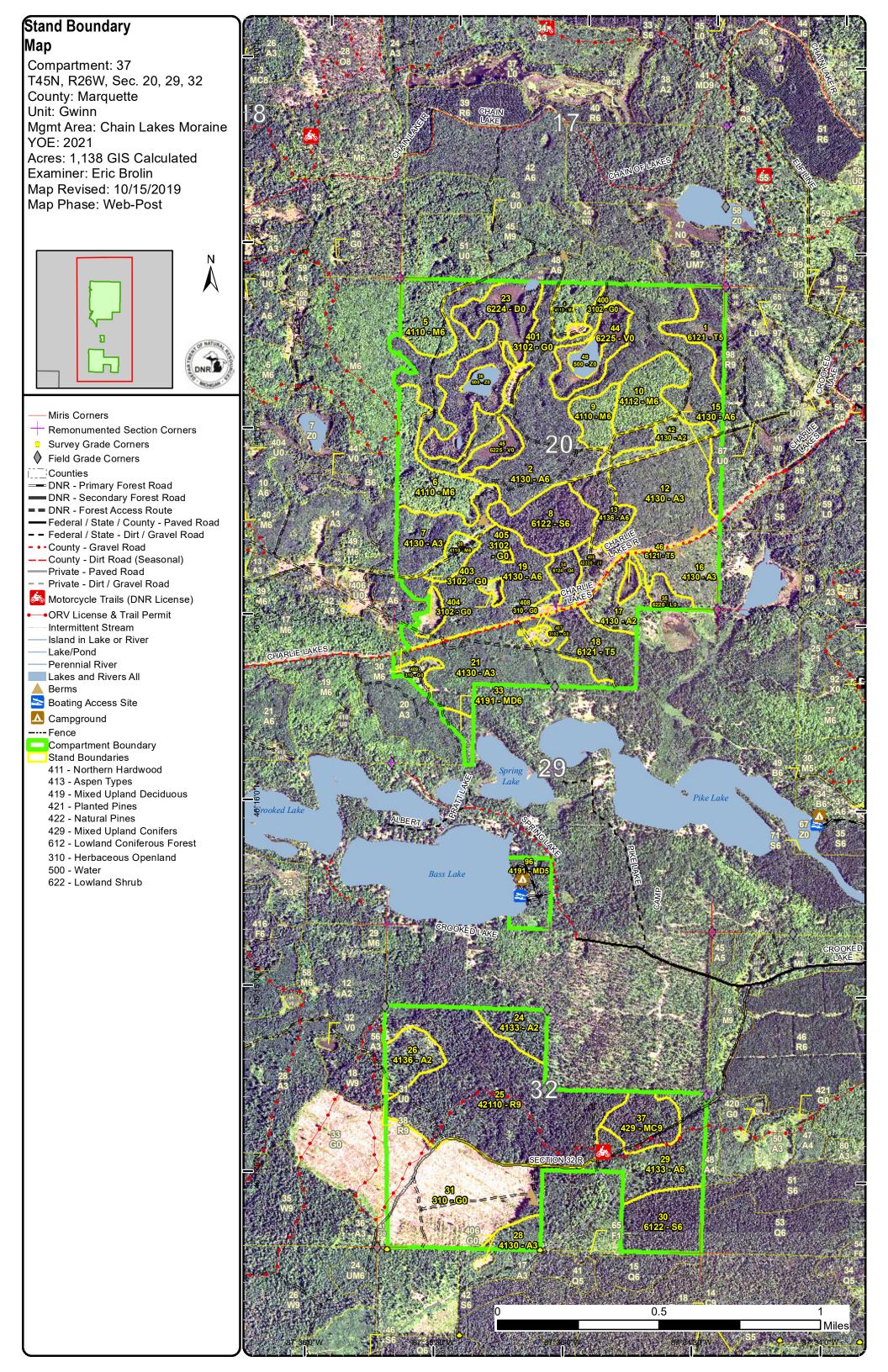
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

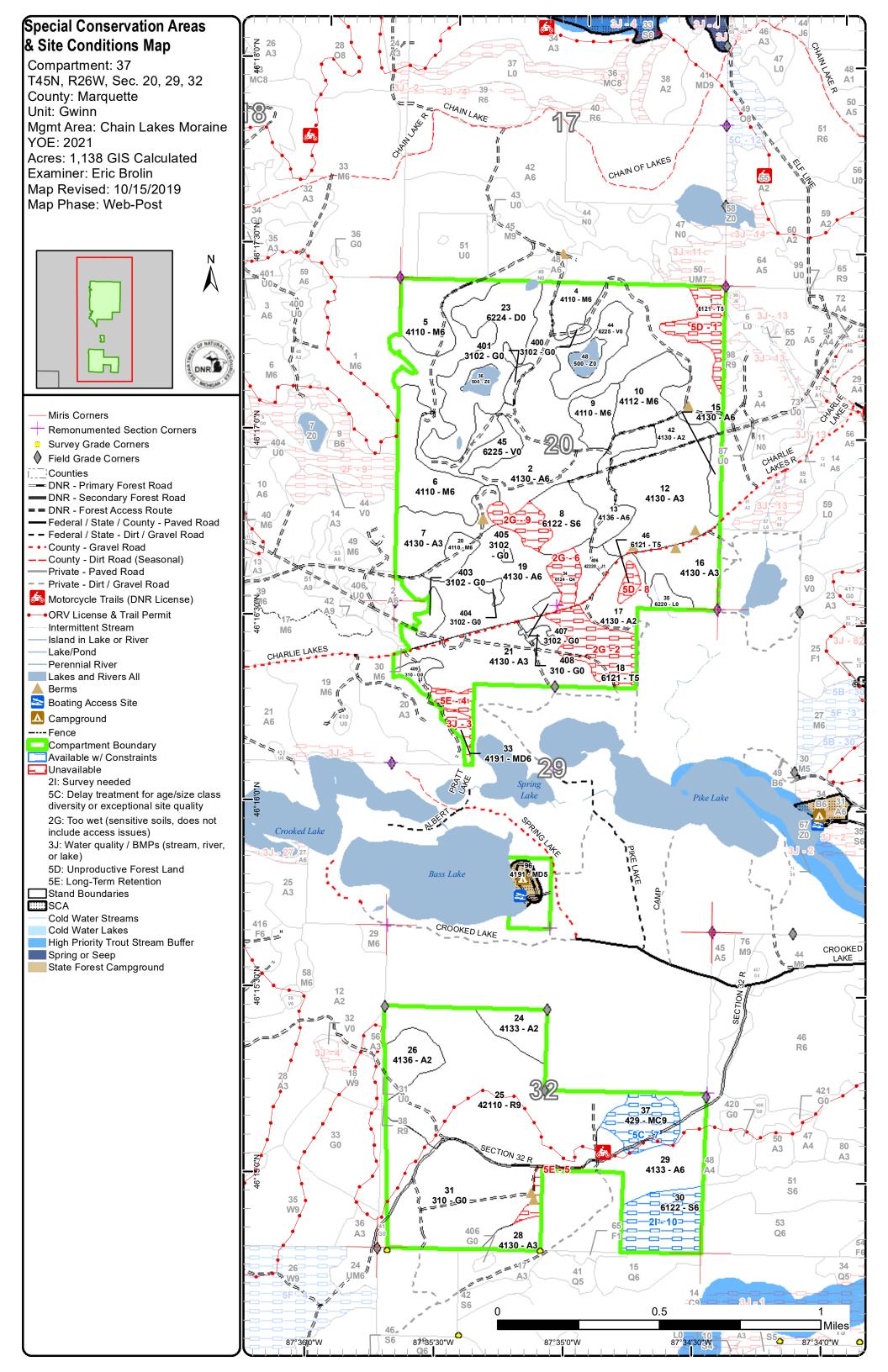
The following information is displayed, where pertinent, on the attached compartment maps:

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

Details on the road access system







Gwinn Mgt. Unit **Eric Brolin: Examiner**



Age Class

	No.	Kode /		\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$ /\$	\$ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \) } / &		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	80.00	\$ / ₀ /	70.7	81, K	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	D. J.	By July	De A Paris
Aspen	0	55	154	27	174	117	0	0	0	0	0	0	0	0	0	0	0	0	526
Bog	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Herbaceous Openland	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	112
Jack Pine	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Lowland Conifers	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	8
Lowland Shrub	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	30	0	29	0	0	0	0	0	0	58
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	17	22
Northern Hardwood	0	0	0	0	0	12	36	0	0	0	32	0	0	0	0	0	0	30	110
Red Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135	135
Tamarack	0	0	0	0	0	0	0	0	17	0	25	3	0	0	0	0	0	0	45
Treed Bog	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
Upland Conifers	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	20
Water	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Total	206	55	154	36	174	129	36	0	25	56	57	32	0	0	0	0	0	182	1139



Report 2 – Treatment Summary

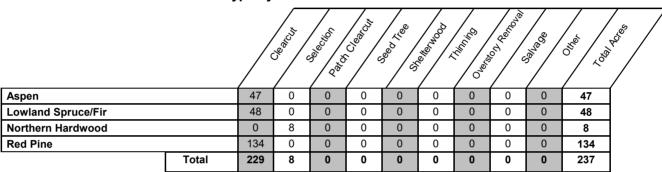
Gwinn Mgt. Unit Year of Entry: 2021

Acres of Harvest

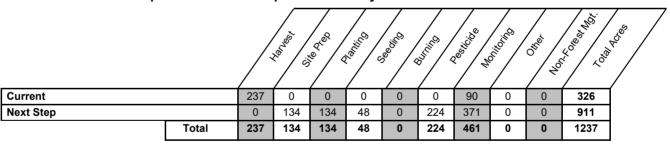
Compartment 37
Total Compartment Acres: 1,138

Commercial Harvest - 237 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



s

Compartment: 37 Year of Entry: 202

21	DNR
	Approval
re	Status

OF HATURAL

Treatment Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age n Method Name CoverType Density Age Range Type Objective Structure d 8 32037008-Cut 17.9 6122 - Black Spruce Poletimber Clearcut with 6122 - Black 111-Harvest Even-Aged Proposal Well 140 Retention Spruce

Habitat Cut: No Site Condition:

Prescription Harvest to a 2" spec. to promote lowland conifer regeneration. Exclude approximately the west 1/3 of this stand where it becomes too wet and Specs:

dense to cedar. Include some larger tamarack and black spruce in retention. Leave cedar and white pine.

Monitoring, Natural Regen (Re-Inventory); Seeding, Machine Seed Next Step

Treatments:

Acceptable black spruce, cedar, tamarack

Regen:

t а

Other Harvest during dry or frozen conditions.

Comment:

Proposed Start Date: 10/1 /2020

4136 - Aspen, 13 32037013-Cut 21.5 Poletimber 44 111-Harvest Clearcut with 413 - Aspen Even-Aged Proposal Mixed Conifer Well 140 Retention

Habitat Cut: No Site Condition:

Prescription Harvest to a 2" spec. to promote aspen regeneration. Retention should include larger mixed spruce and fork crowned aspen. Leave cedar, red

pine, white pine, and oak if present. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, spruce/fir

Regen:

Other Comment:

Proposed Start Date: 10/1 /2020

32037019-Cut Poletimber 47 25.6 4130 - Aspen 81-110 Clearcut with 413 - Aspen Even-Aged Proposal Harvest Well Retention

Habitat Cut: No Site Condition:

Prescription Harvest to a 4" spec. to promote aspen regeneration. Retention should include fork crowned bigtooth aspen if present. Leave cedar, red pine,

white pine, black cherry, and oak. Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable aspen, hardwoods, spruce/fir

Regen: **Other**

Comment:

Proposed Start Date: 10/1 /2020

7.9 4110 - Sugar Maple Poletimber 411 - Northern 32037020-Cut 81 81-110 Single Tree Uneven-Proposal Harvest Association Well Selection Hardwood Aged

Site Condition:

Prescription Mark stand to 70-90 BA. Focus on releasing crop trees while marking to improve quality.

Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

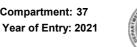
Habitat Cut: No

Acceptable northern hardwood

Regen: Other

Comment:

Proposed Start Date: 10/1 /2020



Compartment: 37

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
25	32037025-Cut	134.1	42110 - Planted Red Pine	Sawtimber Well	86	111- 140	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No Site Condition:

Prescription Harvest stand to a 2" spec. This will be a red pine final harvest treatment. Leave edge retention along stand 24 to avoid conflict with site Specs: preparation while favoring white pine.

SitePrep, Trenching; Planting, Initial Plant; Pesticide, Aerial - Release; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr) Next Step

Treatments:

S

Acceptable red pine

Regen: Other Comment:

Proposed Start Date: 10/1 /2020

Harvest 32037030-Cut 29.8 6122 - Black Spruce Poletimber 111-Clearcut with 612 - Lowland Even-Aged Proposal Well 140 Retention Coniferous Forest

Habitat Cut: No Site Condition:

Prescription Harvest to a 2" spec. to promote lowland conifer regeneration. Retention should include larger tamarack and black spruce. Leave cedar, white

Specs: pine, elm, and paper birch.

Next Step Monitoring, Natural Regen (Re-Inventory); Seeding, Machine Seed

Treatments:

Acceptable cedar, black spruce, tamarack, white pine

Regen:

<u>Other</u> Harvest during dry or frozen conditions.

Comment:

Proposed Start Date: 10/1 /2020

89.6 310 - Herbaceous Nonstocked Draft Field 31 32037031-4211 - Planted Unspec Monitoring Artificial Even-Aged Openland ified Regen(3yr) Red Pine Boundary Monitor

Site Condition: Habitat Cut: No

Prescription Count per WI

Specs:

Next Step ; Pesticide, Aerial - Release

Treatments:

Acceptable Red pine

Regen:

32-825

Other Comment:

Proposed Start Date: 10/1 /2019

Total Treatment Acreage Proposed:

326.4

Compartment: 37

Gwinn Mgt. Unit

Eric Brolin : Examiner Year of Entry: 2021

Availa	bility for	Managemer	nt						
Total	Acres	Acres Avail	Acres	D	omina	nt Site	Cond	ditions	8
Acres	Available	With Condition	Not Available		5C	2G	3J	5D	5E
525	520	0	5	Aspen				0	5
27	27	0	0	Bog					
112	107	0	5	Herbaceous Openland		0			5
9	9	0	0	Jack Pine		0			
8	0	0	8	Lowland Conifers		8			
6	6	0	0	Lowland Shrub					
58	48	0	11	Lowland Spruce/Fir		11			
22	17	0	5	Mixed Upland Deciduous			5		
109	109	0	0	Northern Hardwood					
135	135	0	0	Red Pine					
46	0	0	46	Tamarack		25		20	
52	52	0	0	Treed Bog					
20	0	20	0	Upland Conifers	20				
9	9	0	0	Water					
1,138	1,039	20	79	Total Forested Acres	20	44	5	20	10
	91%	2%	7%	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	5D: Unproductive Forest Land	17	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: /ery wet floating, ur	productive bog ground.					
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	25	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Flooded heavy to al	der with sparse lowland conif	ers acros	s much of this stand.			

Report 4 – Site Conditions

Gwinn Mgt. Unit Eric Brolin : Examiner

3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	2F: Too steep	Unspecified	Unspecified	Unspecified
	Comments: Small lake buffer st future.	and with steep ground down to	the lak	e in the south. Small piece	s of this stand may be inclu	ided with the adjoining sta	nd to the west in the
4	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Retention for stand	21 located on a steep south fac	cing slo	ppe.			
5	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Retention from red	pine final harvest in stand 31.					
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: Too wet.						
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	21	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Let the smaller diar	meter aspen mature for one mo	re inve	ntory cycle. Re-evaluate fo	r harvest in YOE20131.		
8	Unavailable	5D: Unproductive Forest Land	3	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Small bog with span	rse tamarack.					

Report 4 – Site Conditions

Gwinn Mgt. Unit

Compartment: 37 Year of Entry: 2021 Eric Brolin : Examiner

9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	11	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
	Comments:						
	Too wet and more of	dense to cedar. Leave as long-	term star	nd retention.			

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Compartment: 037 Year of Entry: 2021



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
Bass Lake (Marquette) Campground	Concentrated Recreation Area	State Forest Campground	SCA	6
Comments boat launch, picnic area				

Gwinn Mgt. Unit Compartment: 37
Year of Entry 2021





* 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	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions stocked trout populations and those of other coldwater fish specific conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable ey are relatively deep, have substantial the state. Such lakes are established by
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
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high d communities are ecologically and socially significant in their effect as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well



Stan	d Level 4 C	over Type	;	Size De	ensity	Acres	Stand Age	BAR	ange	Managed Si	te	General Comments
1	6121 -	Tamarack	Pol	letimbe	r Medium	16.9	78	51-	-80	N/A		Very wet lowland conifer. Stunted tamarack and black spruce bog.
	Canopy Species	% Cover	Size Class	DBH	H Age							
	Tamarack	50	Pole	6	78							
	Black Spruce	23	Pole/Sapling	6								
N	orthern White Cedar	15	Pole	8								
	Balsam Fir	7	Sapling/Pole	4								
2	4130	- Aspen	Р	oletimb	er Well	168.3	37	81-	110	N/A		Rolling terrain across much of the stand. Vernal ponds scattered within.
	Canopy Species	% Cover	Size Class	DBH	H Age							Overall this is a fairly uniform young aspen stand except for some areas that show better quality with larger diameter aspen. The entire area of
	Sugar Maple	8	Pole/Sapling	6								this stand was harvested, completed in 1982 as the Pothole Lakes Sale.
	Paper Birch	10	Pole/Sapling	5								
	Quaking Aspen	52	Pole/Sapling		37							
	Bigtooth Aspen	15	Pole/Sapling	6	37							
4	4110 - Sugar N	/laple Assoc	ciation P	oletimb	er Well	11.6	46	81-	110	N/A		Maple pole stand. Dense ironwood understory. Plenty of canopy growing
	Canopy Species	% Cover	Size Class	DBH	H Age							room yet, average of 85 BA. 60 90 70 OPIC - FMD: M6M7 now, cut prmt. #17-96-1,
	Red Maple	10	Log/Pole	12								F
	Sugar Maple	90	Pole	7	46							
5	4110 - Sugar N	/laple Assoc	ciation P	Poletimb	oer Well	22.5	81	81-	110	N/A		Hardwood pole/small sawlog stand. Very heavy to sugar maple except for some red maple mixed in along the north border. Scattered large
	Canopy Species	% Cover	Size Class	DBH	H Age							hemlock within. Understory is somewhat thicker with ironwood, fir, and
	Sugar Maple	86	Pole/Log	9	81							white pine saplings. Rolling terrain with some steeper areas. Average of
	Red Maple	10	Pole	8								100 BA. 120 90 80
												OPIC - FMD: M6M7 now, HILLY AREA. CUT UNDER PERMIT#007-01- 01 BY GARY GAZAN
6	4110 - Sugar N	/laple Assoc	ciation P	Poletimb	oer Well	31.6	91	81-	110	N/A		Heavy to sugar maple. Deceny quality small sawlogs with many poles.
	Canopy Species	% Cover	Size Class	DBH	H Age	Cano	py Species	D	ensity	Avg. Height	Size	Canopy ranges from closed in small patches of poles to having plenty of growing room yet. More terrain and better quality in the north. 90 90 100
	Sugar Maple	85	Pole/Log	9	91	Ва	alsam Fir		Low	10 - 20 feet	Sapling	60 70 Average of 80 BA.
	Red Maple	15	Log/Pole	11		Ir	onwood	٨	/ledium	5 - 10 feet	Sapling	OPIC - FMD: M6M7 now, HILLY AREA, A FEW OAK IN STD. CUT
												UNDER PERMIT #007-01-01.
7	4130	- Aspen		Saplin	g Well	26.5	27	Imma	ature	N/A		OPIC - FMD: A5A3 now, CUT 1992 PERMIT 14-91-1.
	Canopy Species	% Cover	Size Class	DBH	H Age							
	Quaking Aspen	73	Sapling/Pole		27							
	Balsam Fir	10	Pole/Sapling	5								
	Bigtooth Aspen	15	Pole/Sapling	5								
				-								



	d Level 4 C	over Type		Size Density	Acres	Stand Age	BA Range	Managed S	Site	General Comments
8	6122 - BI	ack Spruce	e F	Poletimber Well	28.5	102	111-140	N/A		Very nice lowland conifer stand. Some trees showing decline. Nearly
	Canopy Species	% Cover	Size Class	DBH Age	Cano	py Species	Density	Avg. Height	Size	solid large diameter black spruce in the east half with more tamarack mixed in heading west, to more of a sparse alder/cedar mix far west.
	Tamarack	14	Log/Pole	12	Ва	lsam Fir	Medium	5 - 10 feet	Sapling	Dense floor of fir seedlings. Access would be from the east of this stand.
Ν	orthern White Cedar	30	Pole/Log	9		Alder	Medium	5 - 10 feet	Tall Shrub	ODIC EMP. SAVE FOR WILDLIFF COVER
	Black Spruce	51	Pole/Log	9 102						OPIC - FMD: SAVE FOR WILDLIFE COVER.
9	4110 - Sugar N	laple Assoc	ciation F	Poletimber Well	12.6	51	81-110	N/A		Solid sugar maple pole stand. Patchy dense understory fir and ironwood
	Canopy Species	% Cover	Size Class	DBH Age	Cano	py Species	Density	Avg. Height	Size	saplings in areas. Fir is more abundant around the edges. Average of 100 BA. 100 70 120 100
	Sugar Maple	100	Pole/Sapling	7 51	Ва	Isam Fir	Medium	10 - 20 feet	Sapling	100 571. 100 10 120 100
					Iro	onwood	Medium	5 - 10 feet	Sapling	OPIC - FMD: M6M7 now, GOOD ACCESS. Cut with stand 10 in 2005 under permit # 008-01-01.
10	4112 - Maple, Asso	Beech, Ch	nerry F	Poletimber Well	23.2	51	51-80	N/A		Poorer quality sugar maple with a component of red maple. Fir understory is abundant across much of this stand. Average of 70 BA. 60
	Canopy Species	% Cover	Size Class	DBH Age	Cano	py Species	Density	Avg. Height	Size	60 90 60
	Red Maple	30	Pole	7	Ва	lsam Fir	High	10 - 20 feet	Sapling	OPIC - FMD: M6 M7 now, ONLY MED-POOR HDWD. Was cut in
	Sugar Maple	66	Pole	7 51						2005 with stand 9 under permit #008-01-01.
12		- Aspen		Sapling Well	54.7	17	Immature	N/A		Aspen sapling stand, fully stocked. Bermed landing road along south gedge. Wet bog retention in the southwest corner along main
	Canopy Species		Size Class	DBH Age		py Species	Density	Avg. Height	Size	road.OPIC - FMD: A3, 1/2 to 1" dbh, 5-10' tall, a few white pine and
	Quaking Aspen	94	Sapling	3 17	Ва	lsam Fir	Low	10 - 20 feet	Sapling	oak in stand. CUT SUMMER 2002 PERMIT # 009-01-01.
13	4136 - Aspen	, Mixed Co	nifer F	Poletimber Well	21.5	44	111-140	N/A		Aspen pole stand with mix of spruce/fir and a dense fir understory in areas.
	Canopy Species	% Cover	Size Class	DBH Age						arcas.
	Quaking Aspen	70	Pole	9 44						OPIC - FMD: A4F4 now, MIXTURE OF PINE, SPR. ASP. FIR.
	Jack Pine	10	Pole	8						
	Black Spruce	8	Pole/Sapling	6						
15	4130	- Aspen	F	Poletimber Well	5.7	37	81-110	N/A		Same stand as aspen in adjacent compartment. May have been retention for adjacent stand 12 that was cut in 2002. Aspen poles with scattered fir
	Canopy Species	% Cover	Size Class	DBH Age	Cano	py Species	Density	Avg. Height	Size	understory and dense hazel across mojority of the stand. OPIC -
	Quaking Aspen	97	Pole	7 37	Ва	Isam Fir	High	10 - 20 feet	Sapling	FMD: CUŤ 1982-015-81A INFO IN COMPŤ 38. TREAT THIS STAND WITH COMPT 38.
16	4130	- Aspen		Sapling Well	25.6	5	Immature	N/A		Aspen sling stand fully stocked. scattered conifers.OPIC - FMD: Cut
	Canopy Species	% Cover	Size Class	DBH Age						this treatment period. Save pine and oak, white spruce, and some large aspen. 2014-Treated by LaFleur under contract # 001-11-01.



Stand	d Level 4 C	over Type	;	Size Density	Acres	Stand Age	BA Range	Managed S	ite	General Comments
17	Canopy Species Quaking Aspen	- Aspen **Cover* 79	Size Class Sapling	apling Medium DBH Age 1 5	17.6	5	Immature	N/A		OPIC - FMD: B4A4M4, Cut with stand 16 this treatment period. 20 years ago when we did inventory, we decided to leave the stand uncut, for aesthetics along the Charlie Lakes Road, the white birch looked real nice. Now we should cut the stand, because a lot of the birch is dying, and looks bad. For residual after the cut, clumps of live white birch will be left, along with the black and white spruce, red and white pine. A buffer will be left around the V-type that is located within the birch stand. If the birch and aspen do not come back well after the harvest, then it wi be planted with white pine seedlings. 2014-Treated by LaFleur under contract # 001-11-01.
18	6121	Tamarack	Pol	letimber Medium	1 25.3	99	1-50	N/A		Lowland stand with sparse large diameter tamarack and black spruce.
	Canopy Species	% Cover	Size Class	DBH Age	Can	opy Species	Density	Avg. Height	Size	Very wet ground with alder cover across majority of area. A small 2 acre patch of tamarack was cut in the northeast corner in 1981 and is
	Black Spruce	35	Pole	8 89		Alder	Full		Tall Shrub	borderline merchantable. A small aspen/red maple island is in the middle
	Tamarack	50	Log/Pole	12 99					I.	of this stand. Too wet for any operations.OPIC - FMD: SAVE FOR
	Balsam Fir	10	Pole/Sapling	5						WILDLIFE COVER, ALONG TRAVEL INFLUENCE ZONE.
19	4130	- Aspen	Р	oletimber Well	55.8	47	81-110	N/A		Nice aspen pole stand. Fairly open understory with some hazel and fir saplings. Scattered patches of red maple and bigtooth clones. Paper
-	Canopy Species	% Cover	Size Class	DBH Age	Can	opy Species	Density	Avg. Height	Size	birch, red oak, and cherry poles scattered within. Small aspen sapling
	Quaking Aspen	53	Pole	8 47	Ва	alsam Fir	Low	10 - 20 feet	Sapling	patch in the northwest corner. Some larger diameter aspen along the
	Red Maple	15	Pole	7						east edge of this stand.
	Paper Birch	10	Pole	0						
	r aper bireir	10	Fole	8						
	Bigtooth Aspen	15	Pole	8						
20	Bigtooth Aspen 4110 - Sugar M	15 Maple Association	Pole ciation P	8 Poletimber Well	7.9	81	81-110	N/A		sugar maple . Hazel understory with no regen. Smaller diameters
20	Bigtooth Aspen 4110 - Sugar N Canopy Species	15 Maple Asso	Pole ciation P	Poletimber Well DBH Age	7.9	81	81-110	N/A		sugar maple . Hazel understory with no regen. Smaller diameters average slightly above 100 BA. Majority of poles are suppressed or have
20	Bigtooth Aspen 4110 - Sugar M	15 Maple Association	Pole ciation P	8 Poletimber Well	7.9	81	81-110	N/A		sugar maple . Hazel understory with no regen. Smaller diameters
20	A110 - Sugar M Canopy Species Red Maple Sugar Maple	15 Maple Associate Cover 15	Pole ciation P Size Class Log/Pole Pole/Log	Poletimber Well DBH Age 11 8 81 Sapling Well	7.9 59.7	81	81-110	N/A		sugar maple . Hazel understory with no regen. Smaller diameters average slightly above 100 BA. Majority of poles are suppressed or have crowded crowns.OPIC - FMD: M6M7, CUT UNDER PERMIT#007-01-01 Aspen sapling stand with remnant pines and red oak mixed on. More oak
	A110 - Sugar M Canopy Species Red Maple Sugar Maple	15 Maple Associate % Cover 15 85 - Aspen	Pole ciation P Size Class Log/Pole Pole/Log	Poletimber Well DBH Age 111 8 81	59.7				Size	sugar maple . Hazel understory with no regen. Smaller diameters average slightly above 100 BA. Majority of poles are suppressed or have crowded crowns.OPIC - FMD: M6M7, CUT UNDER PERMIT#007-01-01 Aspen sapling stand with remnant pines and red oak mixed on. More oall in the west with a slightly higher elevation, turning to a more solid aspen
	Bigtooth Aspen 4110 - Sugar M Canopy Species Red Maple Sugar Maple 4130	15 Maple Associate % Cover 15 85 - Aspen	Pole ciation P Size Class Log/Pole Pole/Log	Poletimber Well DBH Age 11 8 81 Sapling Well DBH Age 6	59.7 Can o	17	Immature	N/A	Size Sapling	sugar maple . Hazel understory with no regen. Smaller diameters average slightly above 100 BA. Majority of poles are suppressed or have crowded crowns.OPIC - FMD: M6M7, CUT UNDER PERMIT#007-01-01 Aspen sapling stand with remnant pines and red oak mixed on. More oal in the west with a slightly higher elevation, turning to a more solid aspen stand in the east and transitioning into lowland.
	Bigtooth Aspen 4110 - Sugar M Canopy Species Red Maple Sugar Maple 4130 Canopy Species	15 Maple Assoc % Cover 15 85 - Aspen % Cover	Pole ciation P Size Class Log/Pole Pole/Log Size Class	Poletimber Well DBH Age 11 8 81 Sapling Well DBH Age	59.7 Can o	17	Immature Density	N/A Avg. Height		sugar maple . Hazel understory with no regen. Smaller diameters average slightly above 100 BA. Majority of poles are suppressed or have crowded crowns.OPIC - FMD: M6M7, CUT UNDER PERMIT#007-01-01 Aspen sapling stand with remnant pines and red oak mixed on. More oall in the west with a slightly higher elevation, turning to a more solid aspen
	Bigtooth Aspen 4110 - Sugar M Canopy Species Red Maple Sugar Maple 4130 Canopy Species Red Oak Quaking Aspen	15 Maple Assoc % Cover 15 85 - Aspen % Cover 15	Pole ciation P Size Class Log/Pole Pole/Log Size Class Pole	Poletimber Well DBH Age 11 8 81 Sapling Well DBH Age 6	59.7 Can o	17	Immature Density	N/A Avg. Height		sugar maple . Hazel understory with no regen. Smaller diameters average slightly above 100 BA. Majority of poles are suppressed or have crowded crowns.OPIC - FMD: M6M7, CUT UNDER PERMIT#007-01-01 Aspen sapling stand with remnant pines and red oak mixed on. More oa in the west with a slightly higher elevation, turning to a more solid aspen stand in the east and transitioning into lowland. OPIC - FMD: A3, 1/2 to 1" dbh, 5-20 ft tall. CUT SUMMER 2002 PERMIT # 010-01-01. Bog with very spongy, floating ground around edges of water. Some
21	Bigtooth Aspen 4110 - Sugar M Canopy Species Red Maple Sugar Maple 4130 Canopy Species Red Oak Quaking Aspen	15 Maple Assoc % Cover	Pole ciation P Size Class Log/Pole Pole/Log Size Class Pole Sapling	Poletimber Well DBH Age 11 8 81 Sapling Well DBH Age 6 2 17	59.7 Can d Su	17 opy Species gar Maple	Immature Density	N/A Avg. Height 10 - 20 feet		sugar maple . Hazel understory with no regen. Smaller diameters average slightly above 100 BA. Majority of poles are suppressed or have crowded crowns.OPIC - FMD: M6M7, CUT UNDER PERMIT#007-01-01 Aspen sapling stand with remnant pines and red oak mixed on. More oa in the west with a slightly higher elevation, turning to a more solid aspensand in the east and transitioning into lowland. OPIC - FMD: A3, 1/2 to 1" dbh, 5-20 ft tall. CUT SUMMER 2002 PERMIT # 010-01-01. Bog with very spongy, floating ground around edges of water. Some lowland conifer may be able to be harvested around the far outer edges with adjoining future timber sales. This stand has a 50% canopy cover of pine logs, mainly white pine, with
21	Bigtooth Aspen 4110 - Sugar M Canopy Species Red Maple Sugar Maple 4130 Canopy Species Red Oak Quaking Aspen 6224 - 7	15 Maple Assoc % Cover	Pole ciation P Size Class Log/Pole Pole/Log Size Class Pole Sapling	Poletimber Well DBH Age 11 8 81 Sapling Well DBH Age 6 2 17 Nonstocked	59.7 Cano Su 51.8	17 opy Species gar Maple 0	Immature Density Medium	N/A Avg. Height 10 - 20 feet No		average slightly above 100 BA. Majority of poles are suppressed or have crowded crowns.OPIC - FMD: M6M7, CUT UNDER PERMIT#007-01-01 Aspen sapling stand with remnant pines and red oak mixed on. More oa in the west with a slightly higher elevation, turning to a more solid aspen stand in the east and transitioning into lowland. OPIC - FMD: A3, 1/2 to 1" dbh, 5-20 ft tall. CUT SUMMER 2002 PERMIT # 010-01-01. Bog with very spongy, floating ground around edges of water. Some lowland conifer may be able to be harvested around the far outer edges
21	Bigtooth Aspen 4110 - Sugar M Canopy Species Red Maple Sugar Maple 4130 Canopy Species Red Oak Quaking Aspen 4133 - Aspe	15 Maple Assoc % Cover	Pole ciation P Size Class Log/Pole Pole/Log Size Class Pole Sapling	Poletimber Well DBH Age 11 8 81 Sapling Well DBH Age 6 2 17 Nonstocked Sapling Medium	59.7 Cano Su 51.8	17 opy Species gar Maple 0	Immature Density Medium 1-50	N/A Avg. Height 10 - 20 feet No	Sapling	sugar maple . Hazel understory with no regen. Smaller diameters average slightly above 100 BA. Majority of poles are suppressed or have crowded crowns.OPIC - FMD: M6M7, CUT UNDER PERMIT#007-01-01 Aspen sapling stand with remnant pines and red oak mixed on. More oa in the west with a slightly higher elevation, turning to a more solid aspen stand in the east and transitioning into lowland. OPIC - FMD: A3, 1/2 to 1" dbh, 5-20 ft tall. CUT SUMMER 2002 PERMIT # 010-01-01. Bog with very spongy, floating ground around edges of water. Some lowland conifer may be able to be harvested around the far outer edges with adjoining future timber sales. This stand has a 50% canopy cover of pine logs, mainly white pine, with



Stand	d Level 4 Cover Type		Size Density		Acres	Stand Age	BA Range	Managed Site		General Comments	
25	42110 - Pla			Sawtimb		134.7	86	111-140	N/A		Large red pine log stand. Some patches are less dense with red pine and has more aspen saplings, especially in the west/southwest portion of this
	Canopy Species	% Cover	Size Class	DBH	Age	Cano	py Species	Density	Avg. Height	Size	stand. Fairly low density understory of fir, aspen, and some maple/mixed
	White Pine	15	Log/Pole	12		Asp	en (spp.)	Medium	10 - 20 feet	Sapling	hardwood saplings. Some younger age classes seemed to be mixed in
	Red Pine	80	Log/Pole/XLo	og 16	86	Ва	lsam Fir	Medium	10 - 20 feet	Pole	areas. Areas dense to pine had 150+ BA and lighter in the more open sapling patches. ORV bike trail cuts through stand. Open patches of old
						Sug	ar Maple	Low	10 - 20 feet	Sapling	roads and landings that have been disturbed and opened to sunlight had
											abundant red pine seedlings 12" tall.
											OPIC - FMD: Cut prmt. # 11-01-01.
26	4136 - Asper	n, Mixed Co	onifer	Sapling N	/ledium	16.2	18	1-50	N/A		Aspen sapling stand with a good component of larger diameter overstory pine. Patchy aspen regen with patches of dense fir and berry brush.
	Canopy Species	% Cover	Size Class	DBH	Age						pine. Fatchy aspen regen with patches of delise in and beny brush.
	Quaking Aspen	70	Sapling	1	18						Cut by Lafleur under contract # 001-11-01.
	Red Pine	13	Log/XLog	16	55						
	Balsam Fir	10	Sapling/Pole	e 3							
28	4130	- Aspen		Sapling	Well	8.6	18	Immature	N/A		Fully stocked aspen/maple sapling stand with scattered larger diameter
	Canopy Species	% Cover	Size Class	DBH	Age						pine.
	Quaking Aspen	64	Sapling	2	18						OPIC - FMD: Cut prmt. # 11-01-01. A3 is now 1/2 to 1 inch dbh, 5-15 ft.
	Sugar Maple	25	Sapling	2							tall, with some residual red and white pine.
29	4133 - Aspe	en, Mixed F	Pine	Poletimb		39.3	45	111-140	N/A		A small 4 acre patch in the southwest corner was cut in 2001 and is fully stocked with aspen saplings. There is a small patch of sugar maple in the
	Canopy Species	% Cover	Size Class	DBH	Age						northeast that is thinned with the adjoining stand. A lot of the aspen in
	White Pine	15	XLog/Log	18	76						this stand is smaller diameter yet. Dense understory of saplings across
	Quaking Aspen	52	Pole	6	45						most of stand. There are a lot of very large pine and large oak scattered across the stand. The slope along the south edge of the stand is very
	Red Pine	10	XLog/Log	18							dense to sugar maple saplings and does not have many aspen poles.
	Sugar Maple	15	Sapling	2							There is a solid road along the south edge, bordering the lowland conifer,
											that is partially grown in with saplings. OPIC - FMD: A4 F4 M4 R7, AREA WAS CUT IN 1974.
30		ack Spruce		Poletimb		29.8	85	111-140	N/A		Nice black spruce/tamarack stand. More diversity found in the transition to upland ground where white pine becomes abundant along the edge.
	Canopy Species		Size Class		Age						
	Black Spruce	50	Pole	8	85						OPIC - FMD: Check next treatment period. East side better than west.
	Tamarack	41	Log/Pole	10							
31	310 - Herbac	eous Oper	nland	Nonsto	cked	89.3	0	Unspecified	4211 - Planted Ro	ed Pine	Stand is stocked as of now. Dense grass cover may be a concern in areas where seedlings are topped.
											OPIC - FMD: R9 R4 W4, CUT PRMT. #16-91-1. 2015: Stand harvested as "Diplodia Pine" (unit 2) #018-13 Feb - March, 2014. Site trenched and sprayed by DNR resources. see FTP C32-825 for cost info. Site planted in spring of 2018 count coming in the fall of 2018. passed count in 2018 at 18% mortality rate.



Stand	Level 4 Cover Type			Size Density		Acres	Stand Age	BA Range	Managed Site		General Comments
33		I - Mixed Upland Deciduous with Conifer			Poletimber Well		82	2 81-110	N/A		Steeper slope transition to lake. Younger fir topped by declining paper birch and aspen. Most species are declining rapidly. Nearly this whole
	Canopy Species	% Cover	Size Class	DBH	Age	Cano	py Species	Density	Avg. Height	Size	stand is unavailable after applying the lake buffer and working with the slope in the south. Alder drainage on north border.
	Red Maple	15	Pole	8		Ва	ılsam Fir	Medium	10 - 20 feet	Sapling	stope in the south. Attack drainings on north border.
	Balsam Fir	35	Pole/Sapling	7	49		Alder	Trace	5 - 10 feet	Tall Shrub	
	Paper Birch	40	Log/Pole	12	82						land.
34	4 6124 - Lowland Spruce-Fir				Poletimber Poor		78	1-50	N/A		Lowland alder drainage with scattered conifer and aspen. Very wet area.
	Canopy Species	% Cover	Size Class	DBH	Age	Cano	py Species	Density	Avg. Height	Size	
	Quaking Aspen	35	Pole	8			Alder	High	5 - 10 feet	Tall Shrub	
	Balsam Fir	15	Pole/Sapling	5						,	
	Black Spruce	40	Pole	7	78						
35	6220 - A	Alder/willow		Nonsto	cked	5.7	0	Unspecified	No		Flooded drainage area with alder.
36	500 -	- Water		Nonsto	cked	4.0			No		Water
37		•		Sawtimber Well			A lot of the aspen in this stand is smaller diameter yet, some not merchantable depending on how dense the overstory is. Dense				
	Canopy Species		Size Class		Age		py Species	Density	Avg. Height	Size	understory of poles across most of this stand which includes the younger
	White Pine	30	Log/Pole	16	86		en (spp.)	Medium	>20 feet	Pole	aspen age class under the larger pine overstory. This stand should be left
	Quaking Aspen	30	Pole	6	45		ılsam Fir	Medium	>20 feet	Pole	to let the aspen mature for at least another inventory cycle.
	Red Pine	20	XLog/Log	18	L	Suç	gar Maple	Low	>20 feet	Sapling	OPIC - FMD: A4 F4 M4 R7, AREA WAS CUT IN 1974.
	Balsam Fir	15	Pole/Sapling	7							
42	4130 - Aspen		S	Sapling Medium		11.1	5	Immature	N/A		Fully stocked aspen sapling stand. A few small patchy openings taking
	Canopy Species	% Cover	Size Class	DBH	Age						longer to regenerate but do have scattered seedlings. Scattered remnant pine across the stand.
	Quaking Aspen	94	Sapling	1	5						pine across the stand.
44	6225 - Bog		Nonstocked		17.5			No		Bog	
											ODIC TMD DOC
											OPIC - FMD: BOG
45	6225	5 - Bog	Nor		Nonstocked			Unspecified	No		Bog
46	6121 -	Tamarack	Po	letimber	Medium	3.3	101	1-50	N/A		Treed bog.OPIC - FMD: BOG
	Canopy Species	% Cover	Size Class	DBH	Age						
	Tamarack	80	Pole/Sapling	6	101						
	Black Spruce	20	Pole/Sapling								
48	500 -	- Water		Nonsto	cked	5.2			No		Water



96	4404 14 1111			Size Density			Stand Age BA Range		Managed S	110	General Comments
	4191 - Mixed Upland Deciduous with Poletimber Mediur Conifer					16.6	46	81-110	N/A		Stand harvested in early 2000. Many age classes and very diverse mix of species from young seedlings to 45 year old conifers. This stand is the
C	Canopy Species	% Cover	Size Class	DBH	Age	Cano	py Species	Density	Avg. Height	Size	Bass Lake Campground area. A 1 acre patch of hardwoods in the southwest corner is only accessible through private land.
	Red Pine	20	Log/Pole	12	46	Sug	ar Maple	Medium	10 - 20 feet	Sapling	Southwest sorter to only accessible through private land.
Q	Quaking Aspen	15	Pole/Sapling	5		Ва	lsam Fir	Medium	>20 feet	Sapling	Stand was harvested by LaFleur 4 or 5 years ago. Residual red oak and
	Balsam Fir	15	Pole/Sapling	6							white birch over A1 or 2.
	Sugar Maple	15	Pole/Sapling	6							
	Paper Birch	10	Pole	8							
400	3102 - Grass		I	Nonstocked		1.5			No		Grass opening
401	3102 - Grass			Nonstocked		3.1		Unspecified	No		Grass opening
403	3102 - Grass			Nonstocked					Managed Op	pening	Large opening with very few saplings and pine along edges.
404	3102 - Grass		!	Nonstocked		2.3			No		Opening with very few aspen saplings and conifer/black cherry poles.
405	3102	- Grass	ļ	Nonstoo	ked	0.8			No		Grass opening.
	42220 - Nat Canopy Species Quaking Aspen Jack Pine		Size Class Pole/Sapling Sapling/Pole	Sapling DBH 5 4		9.3	25	Immature	N/A		Old patchy opening growing in with jack pine and aspen saplings/poles. Average jack pine is 24 years old and not quite merchantable pole size yet. Larger aspen and black spruce along the west edge transition into a lowland alder drainage.
407	3102	- Grass	1	Nonstoo	ked	2.5			No		Opening with patch of jack pine along edge. Also a patch of aspen saplings that look to be fairly young along the edge.
408	310 - Herbac	eous Open	land	Nonstoo	ked	2.5		Immature	No		Clean opening with very few conifer and black cherry scattered within.
409	310 - Herbac	eous Open	land	Nonstoo	ked	5.0		Immature	No		Opening with scattered hardwoods, including oak, and conifer poles.