

# **Compartment Review Presentation**

**Traverse City Forest Management Unit** 

Compartment 61162
Entry Year 2021
Acreage: 1,952
County Kalkaska

Management Area: Boardman Plains

Revision Date: 2019-06-11

Stand Examiner: Thomas Peterson III

**Legal Description:** 

T27N,R7W, Sec. 19 & T27N,R8W, Sec. 22, 23, 24

#### **Identified Planning Goals:**

Maintain timber types and age class diversity throughout the compartment. Protect Boardman River watershed.

## Soil and topography:

Grayling and Rubicon Sands

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

The city of Kalkaska is one mile north and east of compartment. The north part of section 19 is the Kalkaska Airport. There are a few private blocks of land within the compartment. There are several active oil wells in and around the compartment. Part of the south half of section 19 (63 acres) was acquired by the state about 8 years ago. There are no other desired acquisitions or disposals in this compartment.

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

Part of the North Branch of the Boardman River is in section 19. The Boardman River falls under the Scenic and Natural Rivers Act. Nothing listed in the Natural Features Inventory

## Archeological, Historical, and Cultural Features:

No known sites at this time.

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

No special management designations or considerations at this time.

## Watershed and Fisheries Considerations:

The North Branch of the Boardman River runs through this compartment. The Fisheries Division (FD) has a partnership with the Boardman River Restoration Committee. The North Branch of the Boardman River is a designated trout stream. Brown trout and brook trout are present in this stream. This river has suitable water quality, temperature and habitat conditions to support cold-water fish populations. Activities within the watershed should focus on preventing soil erosion, providing shade to keep water temperatures cool and leaving trees along the stream that will become a source for instream woody debris. All of these components are essential for maintaining and enhancing trout populations. In general, leaving 50 to 100 foot buffer strips of vegetation along both sides of the stream will help reduce erosion, provide shading and be a source of instream woody debris.

#### Wildlife Habitat Considerations:

The well drained soils of this compartment predominately support pine communities with some aspen and oak patches mixed in. Forest treatments should maintain a variety of age classes of jack pine and aspen types and promote natural mixtures of uneven-aged pine-aspen-oak, especially in stands on the west end of the compartment, through selective harvest practices. Along the N. Branch Boardman River and tributaries maintain mostly late-successional types but consider some regeneration patches along streams when not in conflict with other riparian objectives. Maintaining scattered grassy openings is also relevant here on this fire driven landscape.

Aspen harvests should retain snags and den trees, leave trees, and downed logs in order to replicate a wildfire-altered forest and increase wildlife use by species like grouse, woodcock, golden-winged warbler, and deer. Oak treatments should leave some mature mast-producing trees and protect of den/nest trees while maintaining tree species diversity.

Some species associated with pine-oak-aspen woodlands and/or brushy openings; include red and gray squirrels, wild turkey, white-tailed deer, pine warbler, northern red-bellied snake, northern hognose snake, cedar waxwing, and chipping sparrow.

Compartment 162 is found in the Boardman Plains Management Area (MA) of the Regional State Forest Management

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Plan. Featured wildlife species for this MA include bear, pileated woodpecker, ruffed grouse, turkey, and deer. Based on the natural disturbance history of the land type associations within the Boardman Plains MA, the MA plan calls for managing the amount of open/semi-open lands at or above the current level to provide habitat for species which use openings.

## Mineral Resource and Development Concerns and/or Restrictions

The state-owned Smith Lake sand & gravel pit is located just north of the compartment, and there appears to be some sand & gravel potential within the compartment. The compartment is within the Niagaran reef trend. Active oil production is occurring within the compartment and most of the state mineral rights are leased and held by production. There may be potential for additional reefs here. Oil & gas potential is considered high. There is also high potential for future underground gas storage in the reefs once the reservoirs have been depleted of hydrocarbons. There is active gas storage leasing in the area. There is no known metallic mineral potential in this part of the state.

#### **Vehicle Access:**

Several county roads and gas well roads give great access to this compartment. No new access needed at this time. No roads need to be closed at this time.

## **Survey Needs:**

None at this time.

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

The Boardman Valley Snowmobile Trail and the M.C.C.T. Cycle Trail, which use the same trail, run through this compartment.

## **Fire Protection:**

This compartment is located just west of the Village of Kalkaska and a large fire located in this area would be a serious threat to the residences located along Island Lake Road and West Kalkaska Street. There are also a number of well sites and facilities in this area as well.

Fuel breaks would be beneficial through site conversion along some of the trail or county roads within the area. Placement of these fuel breaks in key locations may allow responding departments to take suppression action by constructing additional fire line or suppression firing.

If and/or when a fire occurs in this area, Urban Interface will be our most serious loss. With the homes that are currently there, plus with new construction over the coming years we should plan ahead when possible. This is a good area with high hazard fuels and high risk. Possible loss is very high. Gate any proposed road closures.

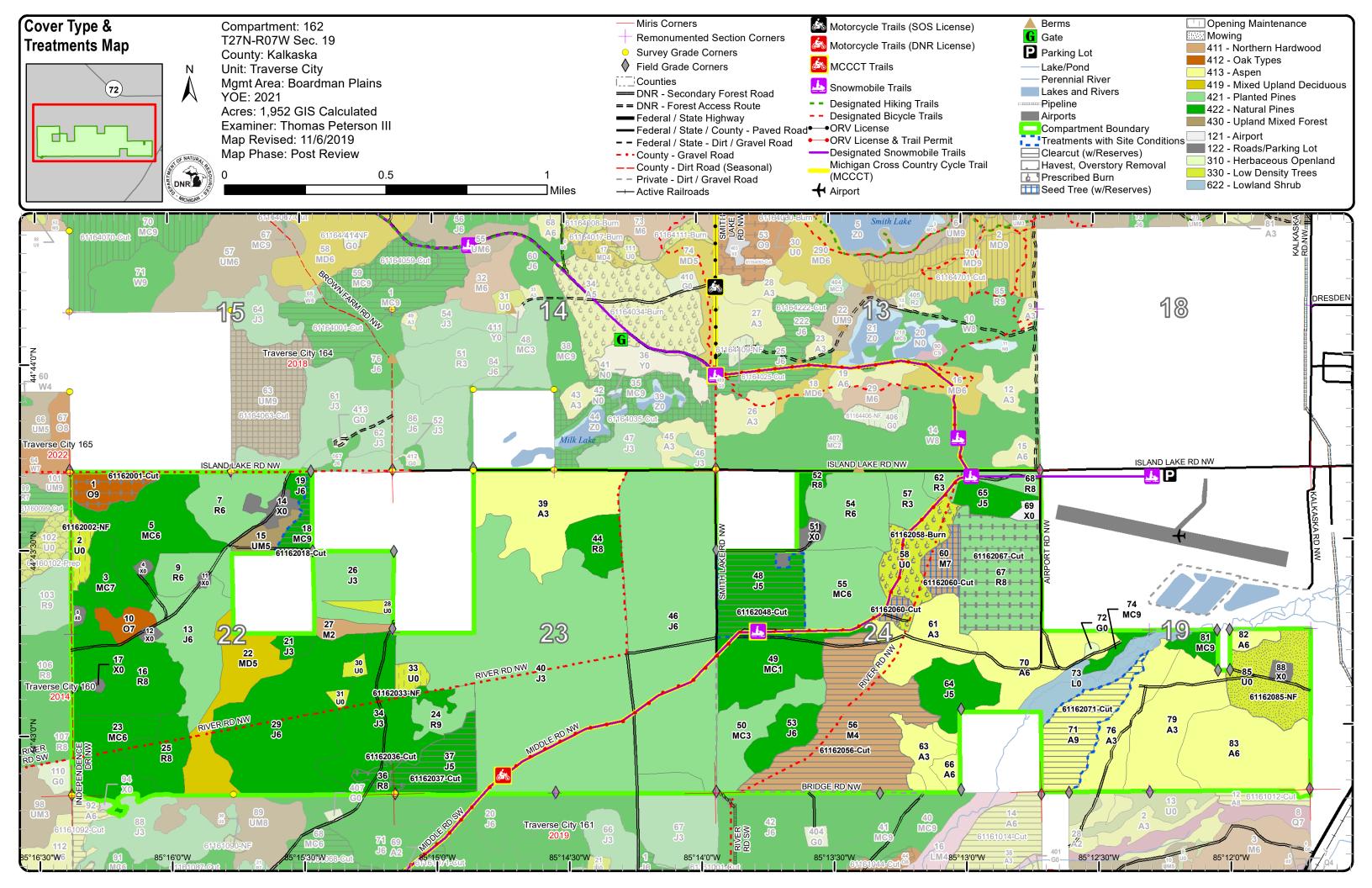
#### **Additional Compartment Information:**

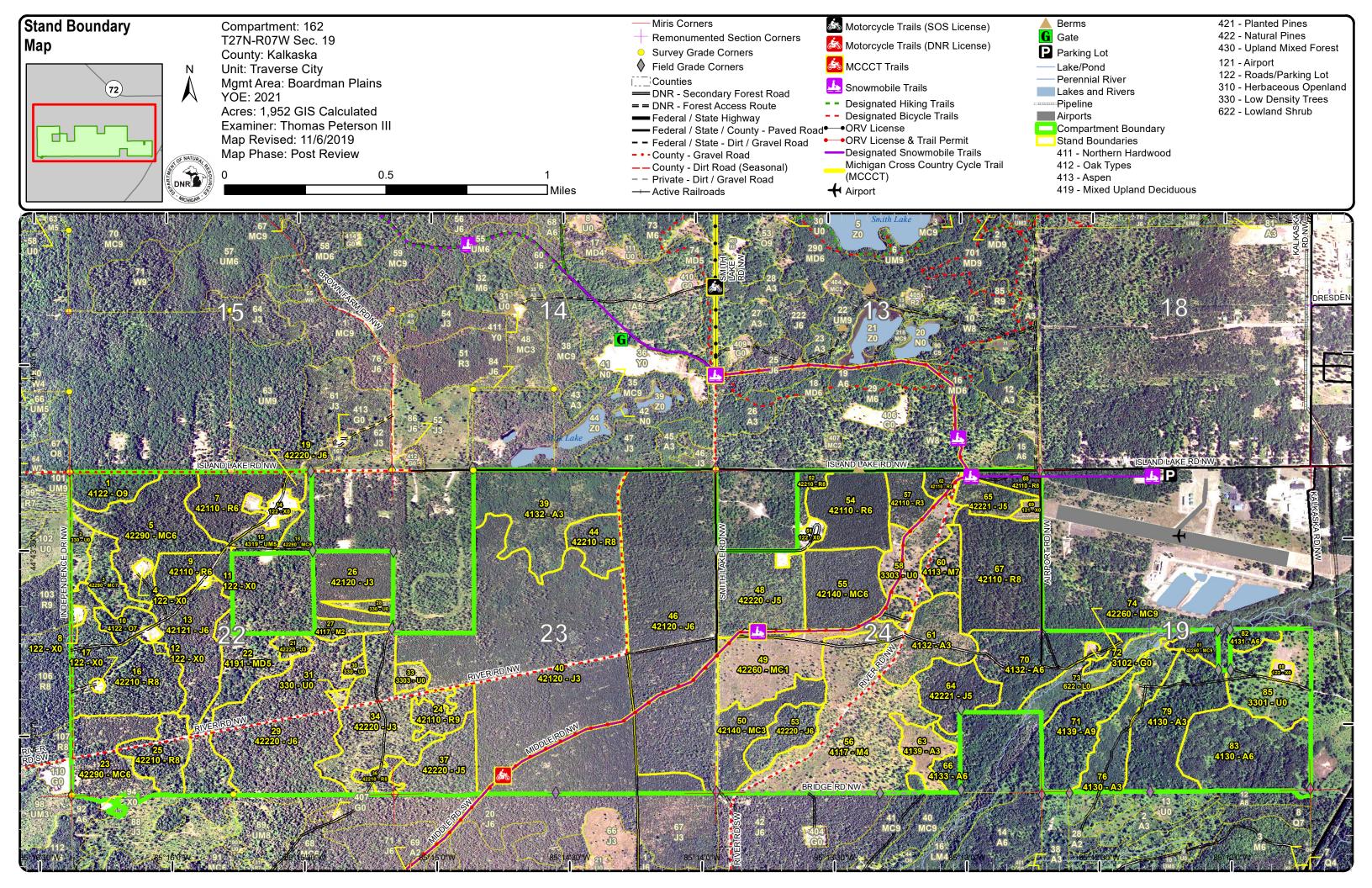
The following reports from the Inventory are attached:

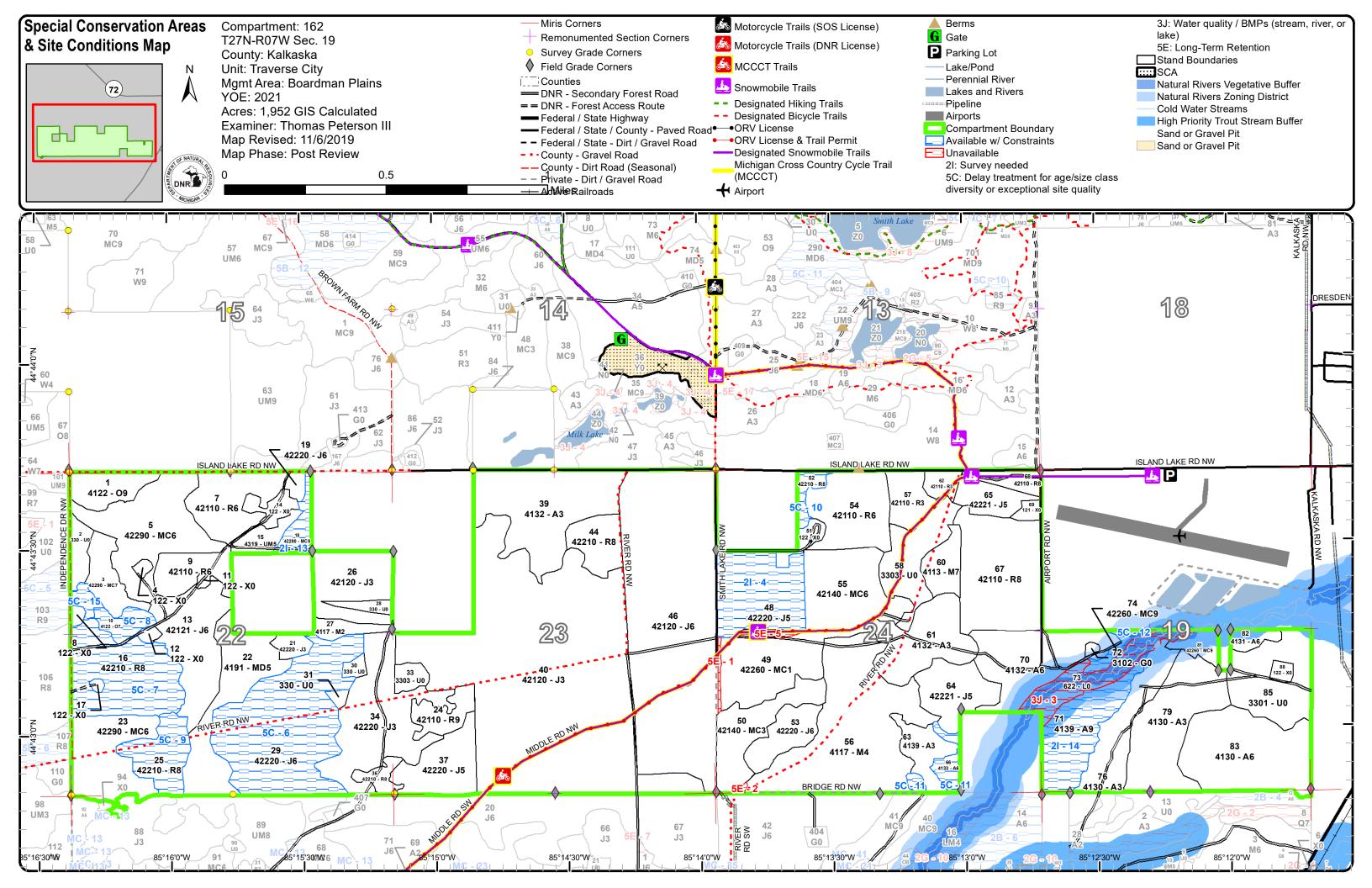
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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







Traverse City Mgt. Unit

**Thomas Peterson III: Examiner** 

Compartment 162 Year of Entry 2021



### Age Class

	¥oc	Sold C	3° / g		\$ \ \f	3 / 6	B B	3/8	8/8	\$ \&	8 8		10 10 10 10 10 10 10 10 10 10 10 10 10 1		N. S.		N. S.	St. Reg	LA LOND
Aspen	0	14	64	110	100	5	43	0	0	0	0	0	0	0	0	0	0	0	336
Herbaceous Openland	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Jack Pine	0	0	63	44	512	45	0	119	0	0	0	0	0	0	0	0	0	0	781
Low-Density Trees	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86
Lowland Shrub	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Mixed Upland Deciduous	0	0	0	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	41
Natural Mixed Pines	0	41	0	37	0	52	0	16	15	0	0	0	5	0	0	0	0	0	166
Northern Hardwood	0	0	7	0	0	0	95	16	0	0	0	0	0	0	0	0	0	0	118
Oak	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	15	23
Planted Mixed Pines	0	0	0	28	37	0	0	0	0	0	0	0	0	0	0	0	0	0	65
Red Pine	0	0	0	19	35	46	0	18	8	140	0	0	0	0	0	0	0	16	282
Upland Mixed Forest	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Urban	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Total	134	55	134	238	734	148	138	169	23	148	0	0	5	0	0	0	0	31	1954



## **Report 2 – Treatment Summary**

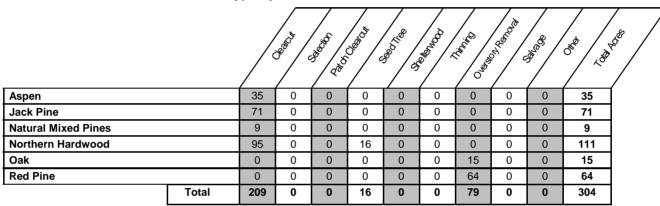
# Traverse City Mgt. Unit Year of Entry: 2021

#### **Acres of Harvest**

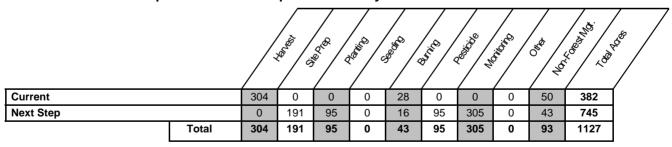
Compartment 162
Total Compartment Acres: 1,952

Commercial Harvest - 216 Harvests with Site Condition - 88 Next Step Harvest - 0 Habitat Cut - 0

## **Cover Type by Harvest Method**



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



Traverse City Mgt. Unit

Report 3 -- Treatments

Compartment: 162 Year of Entry: 2021

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**Treatment** Name

Acres

Stand CoverType

Size Density

Stand BA Age Range **Treatment** Type

**Treatment** Method

**Cover Type** Objective

Age Structure Habitat Cut

## **Approved Treatments:**

61162001-Cut 15.1 4122 - Oak, Pine Sawtimber 110 81-110 Harvest Overstory 42260 - Natural Even-Aged No Pine, Mixed Well Removal Deciduous

Specs:

Prescription Cut all trees 2 inches or greater. Except for red and white pine. Cut red and white down to 6 inches DBH using sub canopy as nurse crop trees for oak. Oak wilt spec will be used on this stand no exceptions due to nearby oak wilt site and oak being one of the main trees species we want back in this stand. No retention on this stand due to small size of stand and not wanting to leave any red oak that can be infected by oak wilt.

Next Step **Treatments:** 

Acceptable A fully stocked stand, with any component of oak, white pine, red, pine, aspen, red maple, or any other upland species.

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2020

61162002-NF 7.8 330 - Low-Density 3205 - Mixed Nonstocked NonForestMgt **Brush Cutting** No **Upland Shrub** Trees

Prescription Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs or Forest Certification approved forage, fertilizing, Specs:

burning, or removal of woody encroachment.

Next Step Treatments:

Acceptable

Regen:

**Other** Comment:

Site Condition

Proposed Start Date: 10/1 /2020

61162018-Cut 8.7 42290 - Natural Sawtimber 60 111-Harvest Clearcut 42221 - Natural Even-Aged No Mixed Pine Well 140 Jack Pine, Mixed

Deciduous

Prescription Clearcut without retention due to size of stand being under 10 acres. Cut all trees 2 inches or greater in DBH. Use spec to leave tree limbs Specs: for seed source and spec to promote scarification.

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

Acceptable Moderately to fully stocked stand of jack pine and any other component of pine or upland deciduous species.

Regen:

**Other** Comment:

Site Condition Survey Needed Proposed Start Date: 10/1 /2020

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 162 S Year of Entry: 2021 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age n Method Density Range Objective Structure Name CoverType Age Type d 33 61162033-NF 5.2 3303 - Mixed Low Nonstocked Unspec NonForestMgt **Brush Cutting** 3205 - Mixed **Density Trees Upland Shrub** ified Prescription Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs or Forest Certification approved forage, fertilizing, Specs: burning, or removal of woody encroachment.

Next Step **Treatments:** 

<u>Acceptable</u> Regen: Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2020

61162036-Cut 5.8 42210 - Natural Sawtimber 60 1-50 Harvest Overstory 4222 - Natural Even-Aged No Red Pine Medium Removal Jack Pine

Prescription Remove overstory, protect trees under 4 inches. No retention due to small size of stand. Specs:

Next Step

Treatments:

Acceptable Moderately to fully stocked of jack pine with any mixture of upland species.

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2020

61162037-Cut 26.4 42220 - Natural 42221 - Natural Poletimber 60 Unspec Harvest Clearcut with Even-Aged No Jack Pine Medium ified Retention Jack Pine, Mixed

Deciduous

Prescription Clearcut with retention. Cut all trees 2 inches or greater. Use spec to promote scarification, and spec to leave tree limbs to scatter seed

Specs: source throughout the stand.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Moderately to fully stocked stand of jack pine, with any component of upland species.

Regen:

Other Comment: Site Condition

Proposed Start Date: 10/1 /2020

Habitat

Cut

No

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Report 3 -- Treatments

Compartment: 162	OF NATURAL ARE
Year of Entry: 2021	DNR
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S t									Year of Entry	<b>/: 2021</b>	DNR DNR
a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habita Cut
48	61162048-Cut	t 44.5	42220 - Natural Jack Pine	Poletimbe Medium	er 47	1-50	Harvest	Clearcut with Retention	42121 - Planted Jack Pine, Mixed Deciduous	Even-Aged	No
Spe	cs: source	e on all jac	vith retention. Cut a k pine and use spec ıral Regen (Re-Inver	c to promote						ap. Leave top	s for seed
	atments:	, , , , , , , , , , , , , , , , , , ,	· · · · · · · · · · · · · · · · · · ·	,,,,							
Acce Reg		ately to ful	lly stocked jack pine	e stand with	any co	mponent	of mixed deciduo	us is acceptable.			
Othe Com	<u>er</u> nment:										
Site	Condition Su	rvey Need	ed								
Prop	oosed Start Date	<u>ə:</u> 10/1 /20	020								
56	61162056-Cut	t 95.3	4117 - Mixed N. Hardwood - Pine	Poletimbe Poor	er 53	1-50	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	No
Pres Spe			tention. Leave reten attered throughout t		s that t	here is go	ood aspen regene	ration, from previ	ous harvest. There	e are a few dif	ferent
	t Step Pestic atments: Monito		er - Site Prep; Site cial Regen(3yr)	Prep, Rolle	r Chopp	oing; Site	ePrep, Trenching;	Planting, Initial	Plant; Monitoring	g, Artificial Reg	gen(1yr);
Acce Reg	e <u>ptable</u> Fully S en:	Stocked sta	and of red pine.								
Othe Con	er This soment:	tand has fa	ailed monitoring trea	atment durir	ng re-inv	ventory cy	ycle. Stand will be	final harvested a	and planted to red	pine.	
Site	Condition										
Prop	oosed Start Date	<u>ə:</u> 10/1 /20	020								
58	61162058- Burn	27.5	3303 - Mixed Low Density Trees	Nonstocke	ed	Unspec ified	Burn	Opening	3105 - Mixed Upland Herbaceous		No
Pres Spe	cs: freque forbs.	ency of the Remove	onal basis. The goal burns will be based exotics as needed b nast bearing shrubs	l on current by herbicidi	s needs	of restor her metho	ation such as red ods. Maintain as	ucing woody enc needed with mo	roachment or prom	noting grasses	versus
	t Step NonFo atments:	orestMgt, N	<b>N</b> owing								

Acceptable Regen:

**Other** Comment: Mechanically treat woody encroachment in conjunction with controlled burning to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Some areas within the Fletcher Grasslands may be maintained in Forest Certification approved food plots.

Site Condition

Proposed Start Date: 10/1 /2020

Compartment: 162 S Year of Entry: 2021 t а **Treatment** Stand **Treatment Treatment Cover Type** Acres Stand Size BA Age Habitat n Method Name CoverType Density Age Range Type Objective Structure Cut d 60 61162060-Cut 15.8 4113 - R.Maple. Sawtimber 51-80 Harvest Seed Tree 330 - Low-Nο Conifer Poor **Density Trees** Prescription Leave scattered fire resistant trees throughout stand. This will mostly be cherry with some pine, but is not limited to these tree species. Specs: Stand then will be burnt to maintain brush / grassland opening. Next Step NonForestMgt, Mowing; Burn, Opening Treatments: This timber harvest is to remove trees that are not fire resistant. This stand will be burned after timber sale and maintained as a upland <u>Acceptable</u> Regen: brush/grassland community opening. Talk with wildlife and have them help green tree mark stand. Keep wildlife informed when timber sale is complete so that the burn can be **Other** Comment: performed. Site Condition Proposed Start Date: 10/1 /2020 61162067-Cut 57.9 42110 - Planted Sawtimber 82 81-110 Harvest Overstory 4310 - Pine. Even-Aged No Red Pine Medium Removal Oak Mix Prescription Cut all trees over 4 inches or more at DBH. Leave standard area retention along airport road. Protect all advanced regeneration during Specs: harvest. Use oak wilt spec with no restrictions as there is oak in understory and want to convert the stand with as much oak as possible. Next Step Treatments: Acceptable Moderately to fully stocked stand of any component of oak, pine and / or maple. Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2020 61162071-Cut 34.5 4139 - Aspen, 51-80 Clearcut with Sawtimber 50 Harvest 4139 - Aspen, Even-Aged No Mixed Deciduous Well Retention Mixed Deciduous **Prescription** Clearcut with retention. Leave retention as buffer for north branch of the Boardman river and adjacent wetland. Leave 300 foot buffer from high water edge and / or follow BMP book for Designated trout stream during timber prep. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable Fully stocked aspen stand with any component of upland deciduous or pine species in it. Regen: **Other** Comment: Site Condition Survey Needed Proposed Start Date: 10/1 /2020 61162085-NF 37.0 3301 - Low Density Nonstocked Unspec NonForestMat Mowing 3205 - Mixed No **Deciduous Trees** ified **Upland Shrub** Prescription Maintain as needed with mowing, native shrub planting, seeding of native grasses/forbs or Forest Certification approved forage, fertilizing, Specs: burning, or removal of woody encroachment. Next Step Treatments: <u>Acceptable</u> Regen: Other

Proposed Start Date: 10/1 /2020

Comment: Site Condition

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 162 Year of Entry: 2021 Cover Type Objective Age Structure **Treatment** Acres Stand Size Stand ВА Treatment **Treatment** Habitat Name CoverType Density Age Range Type Method Cut

Total Treatment 381.5 Acreage Proposed:

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Traverse City Mgt. Unit

**Thomas Peterson III: Examiner** 

Compartment: 162 Year of Entry: 2021

Availa Total Acres 336 1	Acres Available 293	Managemer Acres Avail With Condition  43	Acres Not Available
Acres 336	Available 293	With Condition	Not Available
336	293	43	0
1	1		
		0	_
790	0.40		0
700	643	134	3
85	85	0	0
22	0	0	22
41	41	0	0
165	150	14	1
118	117	0	0
24	15	8	0
65	65	0	0
282	199	83	0
8	8	0	0
25	25	0	0
1,952	1,643	282	27
	84%	14%	1%

\*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	able 5E: Long-Term Retention 1		Unspecified	Unspecified	Unspecified	Unspecified	
(	Comments:							
2	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified	
(	Comments:							
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	22	Unspecified	Unspecified	Unspecified	Unspecified	
	Comments:							

Traverse City Mgt. Unit

Thomas Peterson III: Examiner

4	Available	2I: Survey needed	42	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	93	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	52	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	22	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

## Report 4 - Site Conditions

Compartment: 162

**Traverse City Mgt. Unit** 

Year of Entry: 2021 Thomas Peterson III: Examiner Unspecified Unspecified Unspecified Unspecified 10 **Available** 5C: Delay treatment for 6 age/size class diversity or exceptional site quality Comments: Unspecified 5C: Delay treatment for 9 Unspecified Unspecified Unspecified 11 **Available** age/size class diversity or exceptional site quality Comments: Unspecified Unspecified Unspecified Unspecified 12 5C: Delay treatment for 5 **Available** age/size class diversity or exceptional site quality Comments: Unspecified Unspecified Unspecified Unspecified 13 **Available** 2I: Survey needed 9 Comments: **Available** 2I: Survey needed 35 Unspecified Unspecified Unspecified Unspecified 14 Comments: 15 5C: Delay treatment for Unspecified Unspecified Unspecified Unspecified 4 **Available** age/size class diversity or exceptional site quality Comments:

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Mgt. Unit

Compartment: #Type! Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Traverse City Mgt. Unit Compartment: 162





# Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

Conservation Area	n Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area						
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked 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	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 effective	sitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem nees the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian unities are ecologically and socially significant in their effects on water quality and quantity, as well ethetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.						
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						



Stan	d Level 4 C	over Type	Si	ize De	nsity	Acres	Stand Age B	A Range	Managed S	Site	General Comments
1	4122 -	Oak, Pine			er Well	15.1	110	81-110	N/A		Stand has a dominate oak overstory of logs. With a mix of various other upland tree species. The understory is thick and dominated by mostly
	Canopy Species	% Cove		_	Age		opy Species	Density	Avg. Height	Size	white pine and other mixed pine species. Stand is adjacent to known oak
	Red Oak	60	Log/Pole/XLog		110		oth Aspen	Low	Variable	Sapling	wilt site.
	White Pine	15	Pole/Log	9			ite Oak	Low	Variable	Sapling	
	Red Pine	10	Pole/Log	9			ite Pine	High	Variable	Sapling	
	Jack Pine	7	Pole	8		Jac	k Pine	Low	Variable	Sapling	
						Re	d Pine	Low	< 5 feet	Sapling	
2	2 330 - Low-Density Trees Nonstocked			7.8	0		4222 - Natural Jack Pine		Stand has some jack pine regeneration in it. Does not met the three fo tall spec to be considered forested. Stand failed re-inventory monitoring treatment. Stand should be poor to moderately stocked in 10.		
											Cut spring/summer 2014. Left scattered red pine and oak.
3	42290 - Nati			wtimb	er Poor	14.6	70	1-50	N/A		Stand had a harvest in 2014. Harvest Appears to be a shelter wood with scattered red pine and oak. Stand has some decent regeneration in
	Canopy Species		Size Class	_	Age		opy Species	Density	Avg. Height	Size	spots, but has deer browse issues at this time. With the overstory left
	White Pine	35	Log/Pole	10		Quaki	ng Aspen	Low	< 5 feet	Sapling	this stand is still considered forested at this time.
	Red Pine	40	Log/Pole/Sap	12	70						
	Red Oak	13	Log/XLog/Pole	14							
	White Oak	12	Log/XLog/Pole	14							
4	122 - Roa	d/Parking L	_ot ↑	Nonsto	cked	1.5			No		Stand is an oil well.
5	42290 - Nati	ural Mixed	Pine Po	letimb	er Well	51.6	40	51-80	N/A		Stand has large red and white pine scattered throughout it. Were there is a heavier canopy there is less regeneration. Were there was big gaps
	Canopy Species	% Cove	Size Class	DBH	Age						from previous harvest it has seeded in nicely with regeneration.
	Red Pine	25	Log/Pole	12	80						, , , ,
	Jack Pine	55	Pole/Sapling	5	40						
	White Pine	20	Log/Pole	12	80						
7	42110 - Pla	nted Red F	Pine Po	letimb	er Well	28.8	41	51-80	N/A		Planting records shows stand was planted in 1978. Stand is a planted rec pine stand. Stand has large red and white pine scattered throughout it.
	Canopy Species	% Cove	Size Class	DBH	Age						The stand is planted red pine, with jack pine out competing the red pine
	Red Pine	60	Pole/Sap/Log	7	41						in some areas and no red pine in other areas were the jack pine has
	Jack Pine	40	Pole/Sapling	5							dominated the red pine.
8	122 - Roa	d/Parking L	₋ot N	Nonsto	cked	1.6			No		Stand is an oil well site.
9	42110 - Pla				er Well	16.7	40	141-170	N/A		Stand is borderline on weather or not it should be third row thinned. Third row thin next year of entry.
	Canopy Species		Size Class		Age						To the state of th
	Red Pine	85	Pole/Log	8	40						
	Jack Pine	15	Pole	7							



Stand	l Level 4 Co	ver Typ	e S	Size Density	Acres	Stand Age B	A Range	Managed S	ite	General Comments
10	4122 - C	Dak, Pine	e S	awtimber Poor	8.4	80	1-50	N/A		A lot of white oak left in overstory along with pine component. Areas of
	Canopy Species	% Cove	er Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	stand have regenerated to a fully stocked stand, well other areas have came back poorly. Regen is advanced so going after remaining overstory
	White Oak	60	Log/Pole/XLog	12 80	Re	ed Maple	High	10 - 20 feet	Sapling	should not be done at this time.
	Red Pine	40	Log/Pole/XLog	10	Já	ack Pine	Medium	10 - 20 feet	Sapling	
					W	hite Oak	Low	Variable	Sapling	
					R	ted Oak	Low	Variable	Sapling	
					Qual	king Aspen	High	10 - 20 feet	Sapling	
11	122 - Road	/Parking	Lot	Nonstocked	1.2			No		Stand is a oil well site.
12	122 - Road	/Parking	Lot	Nonstocked	1.9			No		Stand is an oil well site.
13	42121 - Planted Decid	Jack Pin duous	e, Mixed P	oletimber Well	40.6	30	51-80	N/A		Stand does have a few pockets of J3 in it. more to the north, as were the farther south you go in this stand the larger and nicer timber you run into.
	Canopy Species	% Cove	er Size Class	DBH Age						
	Red Maple	10	Pole/Sapling	5						
	Jack Pine	60	Pole/Sap/Log	6 30						
	Black Cherry	20	Pole/Sapling	5						
14	122 - Road	/Parking	Lot	Nonstocked	6.7			No		Stand is an oil well site.
15	4319 - Mixed	Upland I	Forest Pol	etimber Mediur	m 8.5	30	1-50	N/A		
	Canopy Species	% Cove	er Size Class	DBH Age						
	Red Pine	10	Pole/Log	9						
	Jack Pine	40	Pole/Sapling	5 30						
	Black Cherry	30	Pole/Sapling	5						
	Red Maple	20	Pole/Sapling	5						
16	42210 - Natu	ural Red	Pine Sav	wtimber Mediur	n 55.4	80	51-80	N/A		Stand was marked in 2014. Stand still has a good canopy of red pine
	Canopy Species	% Cove	er Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	with open pockets were timber was removed have seeded in nicely at this time. Marked to cut in 2014, removed ~20 sf of mixed pine. Good
	Red Pine	80	Log/Pole/XLog			ack Pine	High	Variable	Sapling	advanced regeneration.
	White Oak	10	Log/XLog/Pole	14	W	hite Pine	Medium	Variable	Sapling	
	White Pine	10	Log/Pole/XLog		Re	ed Maple	Medium	Variable	Sapling	
17	122 - Road	/Parking	Lot	Nonstocked	0.9	0		No		Gas Well Site.



Stand	d Level 4 Co	over Type	3	ize De	пыц	Acres	Stand Age	BA Range	Managed Site	е	General Comments
18	42290 - Natu	ıral Mixed I	Pine Sa	awtimb	er Well	8.7	60	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Pine	20	Log/XLog	14	90						
	Jack Pine	50	Log/Pole/XLog	10	60						
	White Pine	20	Log/Pole	10							
19	42220 - Nat	ural Jack F	Pine Po	oletimb	er Well	3.1	30	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Pine	10	Pole/Log	9							
	Jack Pine	80	Pole/Sapling	5	30						
	White Pine	10	Pole/Log	8							
21	42220 - Nati	ural Jack F	Pine S	Sapling	Well	4.8	16	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Pine	10	Pole/Log	8							
				- 4							
	Jack Pine	70	Sapling	1	16						
	Jack Pine Black Cherry	70	Sapling Sapling	1	16						
22	Black Cherry  4191 - Mixed Upla	20 and Decidu	Sapling lous with Pole	1 etimber	Mediun		30	1-50	N/A		Stand appears to be a species removal, and two ages. Look like all the oak was left and everything else was final harvested. Stand has came back to moderately stocked at this time.
22	Black Cherry  4191 - Mixed Upla Co  Canopy Species	20 and Decidu	Sapling ous with Pole Size Class	1 etimber		Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
22	Black Cherry  4191 - Mixed Upla Co  Canopy Species  Red Maple	20 and Deciduonifer % Cover	Sapling ous with Pole Size Class Pole/Log	1 DBH	Mediun	Sub-Ca			Avg. Height	Size Sapling	oak was left and everything else was final harvested. Stand has came
22	Black Cherry  4191 - Mixed Upla Co  Canopy Species Red Maple White Oak	20 and Deciduonifer % Cover 20 25	Sapling  lous with Pole  Size Class  Pole/Log  Log/XLog/Pole	1 DBH 8 12	Medium Age	Sub-Ca	nopy Specie	es Density	Avg. Height		oak was left and everything else was final harvested. Stand has came
22	Black Cherry  4191 - Mixed Upla Co  Canopy Species  Red Maple	20 and Deciduonifer % Cover	Sapling ous with Pole Size Class Pole/Log	1 DBH	Mediun	Sub-Ca	nopy Specie	es Density	Avg. Height		oak was left and everything else was final harvested. Stand has came
22	Black Cherry  4191 - Mixed Upla Co  Canopy Species Red Maple White Oak	20 and Deciduonifer % Cover 20 25 35	Sapling  ous with Pole  Size Class  Pole/Log  Log/XLog/Pole  Pole	1	Medium Age	Sub-Ca	nopy Specie	es Density	Avg. Height		oak was left and everything else was final harvested. Stand has came back to moderately stocked at this time.  Southern part of stand 23 has a few open areas in it. The farther north
	Black Cherry  4191 - Mixed Upla Co  Canopy Species  Red Maple  White Oak  Jack Pine	20 and Deciduonifer  % Cover 20 25 35  ural Mixed I	Sapling  ous with Pole  Size Class  Pole/Log  Log/XLog/Pole  Pole	DBH 8 12 6	Age 80 30	Sub-Car Blac	nopy Specie	Density Low	Avg. Height 5 - 10 feet		oak was left and everything else was final harvested. Stand has came back to moderately stocked at this time.  Southern part of stand 23 has a few open areas in it. The farther north you go in this stand the more dense the timber gets. The southern part
	Black Cherry  4191 - Mixed Upla Co Canopy Species Red Maple White Oak Jack Pine  42290 - Nature	20 and Deciduonifer  % Cover 20 25 35  ural Mixed I	Sapling  lous with Pole  Size Class  Pole/Log  Log/XLog/Pole  Pole  Pine Po	DBH 8 12 6	Age 80 30 er Well	Sub-Car Blac	nopy Specie	Density Low	Avg. Height 5 - 10 feet		oak was left and everything else was final harvested. Stand has came back to moderately stocked at this time.  Southern part of stand 23 has a few open areas in it. The farther north you go in this stand the more dense the timber gets. The southern part of this stand is mostly jack pine as you move north in the stand you get into the mixed pine mixture with a lot more white pine mixed into the
	Black Cherry  4191 - Mixed Upla Co  Canopy Species  Red Maple  White Oak  Jack Pine  42290 - Natu  Canopy Species	and Deciduonifer  Cover  20 25 35  aral Mixed I	Sapling  rous with Pole  Size Class  Pole/Log  Log/XLog/Pole  Pole  Pine Pole  Size Class	DBH 8 12 6 Dletimb	Age 80 30 er Well	Sub-Car Blac	nopy Specie	Density Low	Avg. Height 5 - 10 feet		oak was left and everything else was final harvested. Stand has came back to moderately stocked at this time.  Southern part of stand 23 has a few open areas in it. The farther north you go in this stand the more dense the timber gets. The southern part of this stand is mostly jack pine as you move north in the stand you get
	Black Cherry  4191 - Mixed Upla Co  Canopy Species  Red Maple  White Oak  Jack Pine  42290 - Natu  Canopy Species  White Oak	20 and Deciduonifer  Cover 20 25 35  ural Mixed I  Cover 10	Sapling  rous with Pole  Size Class Pole/Log Log/XLog/Pole Pole  Pine Pole  Size Class Pole	DBH 8 12 6 Dletimb	Age 80 30 er Well	Sub-Car Blac	nopy Specie	Density Low	Avg. Height 5 - 10 feet		oak was left and everything else was final harvested. Stand has came back to moderately stocked at this time.  Southern part of stand 23 has a few open areas in it. The farther north you go in this stand the more dense the timber gets. The southern part of this stand is mostly jack pine as you move north in the stand you get into the mixed pine mixture with a lot more white pine mixed into the
	Black Cherry  4191 - Mixed Upla Co  Canopy Species  Red Maple  White Oak  Jack Pine  42290 - Natu  Canopy Species  White Oak  White Oak  White Pine	20 and Deciduonifer  % Cover 20 25 35  ural Mixed I  % Cover 10 24	Sapling  ous with Pole  Size Class Pole/Log Log/XLog/Pole Pole  Pine Po  Size Class Pole  Pole/Sapling	DBH  8 12 6 Dletimber	Age 80 30 er Well	Sub-Car Blac	nopy Specie	Density Low	Avg. Height 5 - 10 feet		oak was left and everything else was final harvested. Stand has came back to moderately stocked at this time.  Southern part of stand 23 has a few open areas in it. The farther north you go in this stand the more dense the timber gets. The southern part of this stand is mostly jack pine as you move north in the stand you get into the mixed pine mixture with a lot more white pine mixed into the
	Black Cherry  4191 - Mixed Upla Co  Canopy Species  Red Maple  White Oak  Jack Pine  42290 - Natu  Canopy Species  White Oak  White Pine  Red Pine	20 and Deciduonifer  % Cover 20 25 35  ural Mixed I  % Cover 10 24 8 55	Sapling  lous with Pole  Size Class Pole/Log Log/XLog/Pole Pole  Pine Pole  Size Class Pole  Pole/Sapling Log/Pole/XLog Pole/Sapling	1	Age 80 30 er Well Age	Sub-Car Blac	nopy Specie	Density Low	Avg. Height 5 - 10 feet		oak was left and everything else was final harvested. Stand has came back to moderately stocked at this time.  Southern part of stand 23 has a few open areas in it. The farther north you go in this stand the more dense the timber gets. The southern part of this stand is mostly jack pine as you move north in the stand you get into the mixed pine mixture with a lot more white pine mixed into the
23	Black Cherry  4191 - Mixed Upla Co Canopy Species Red Maple White Oak Jack Pine  42290 - Natu Canopy Species White Oak White Pine Red Pine Jack Pine	and Deciduonifer  Cover 20 25 35  ural Mixed I  Cover 10 24 8 55  nted Red F	Sapling  lous with Pole  Size Class Pole/Log Log/XLog/Pole Pole  Pine Pole  Size Class Pole  Pole/Sapling Log/Pole/XLog Pole/Sapling	DBH 8 12 6 Dletimb DBH 6 5 13 5	Medium Age 80 30 er Well Age	37.1	nopy Specie ck Cherry 22	1-50 81-110	Avg. Height 5 - 10 feet  N/A		Southern part of stand 23 has a few open areas in it. The farther north you go in this stand the more dense the timber gets. The southern part of this stand is mostly jack pine as you move north in the stand you get into the mixed pine mixture with a lot more white pine mixed into the stand.
23	Black Cherry  4191 - Mixed Upla Co  Canopy Species  Red Maple  White Oak  Jack Pine  42290 - Natu  Canopy Species  White Oak  White Oak  White Pine  Red Pine  Jack Pine  42110 - Plan	and Deciduonifer  Cover 20 25 35  ural Mixed I  Cover 10 24 8 55  nted Red F	Sapling  lous with Pole  Size Class Pole/Log Log/XLog/Pole Pole  Pine Pole  Size Class Pole Pole/Sapling Log/Pole/XLog Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling	DBH 8 12 6 Dletimb DBH 6 5 13 5	Medium Age 80 30 er Well Age 22	Sub-Car Blace 37.1 12.1 Sub-Car	nopy Specie ck Cherry 22	1-50 81-110	Avg. Height 5 - 10 feet  N/A	Sapling	Southern part of stand 23 has a few open areas in it. The farther north you go in this stand the more dense the timber gets. The southern part of this stand is mostly jack pine as you move north in the stand you get into the mixed pine mixture with a lot more white pine mixed into the stand.

Report 7 - Stands



Stand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
25	42210 - Natural Red Pine			Sawtimber Mediur		21.6	80	1-50	N/A		Stand has a super canopy of red pine. Stand appears to be a species
	Canopy Species	% Cover	Size Class	DBH Age		Sub-Ca	nopy Species	s Density	Avg. Height	Size	removal. Advanced regen is to high and abundant to go after the red pine. Allow advanced regeneration to become merchantable before going
	White Oak	10	Log/Pole/XLog	og 14		Jack Pine		High	5 - 10 feet	Sapling	after remaining red pine overstory.
	Red Pine	65	Log/Pole/XLog	g 14	80	Qual	king Aspen	Low	5 - 10 feet	Sapling	
	White Pine	25	Log/Pole/XLo	g 12		W	hite Pine	Low	5 - 10 feet	Sapling	
26	42120 - Pla	nted Jack F	Pine	Sapling	Well	30.5	25	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Jack Pine	90	Sapling/Pole	4	25						
	Black Cherry	10	Sapling	3							
27	4117 - Mixed N	. Hardwood	d - Pine S	Sapling N	/ledium	6.7	15	Immature	N/A		Stand is basically a poor quality cherry stand. There are some Jack pines that have seeded in at this time.
	Canopy Species	% Cover	Size Class	DBH	Age						pines that have seeded in at this time.
	Jack Pine	30	Sapling	3							
	Black Cherry	70	Sapling	3	15						
28	330 - Low-	Density Tre	ees	Nonsto	cked	3.7			No		
						Sub-Ca	nopy Species	s Density	Avg. Height	Size	
						Ja	ack Pine	Low	5 - 10 feet	Sapling	
						Bla	ck Cherry	Low	5 - 10 feet	Sapling	
29	42220 - Nat	tural Jack F	Pine F	Poletimb	er Well	92.7	60 l	Unspecified	N/A		Stand in a nice Jack pine stand with a good mix of other upland species
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Red Maple	10	Log/Pole	10		W	hite Oak	Medium	10 - 20 feet	Sapling	
	Red Pine	12	Log/Pole	10		W	hite Pine	Medium	10 - 20 feet	Sapling	
	Jack Pine	60	Pole/Log	9	60	Bigto	ooth Aspen	Low	10 - 20 feet	Sapling	
	Black Cherry	10	Pole/Log	9		Bla	ck Cherry	Low	10 - 20 feet	Sapling	
30	330 - Low-	Density Tre	ees	Nonsto	cked	2.5	ι	Unspecified	No		Grassy opening, with cherry and jack pine starting to seed into opening.
						Sub-Ca	nopy Species	s Density	Avg. Height	Size	
						Bla	ck Cherry	Low	Variable	Sapling	
						Ja	ack Pine	Low	Variable	Sapling	
31	330 - Low-	Density Tre	ees	Nonsto	cked	1.6	ι	Unspecified	No		Open grassy area. Trees are starting to seed into this area.
						Sub-Ca	nopy Species	s Density	Avg. Height	Size	
						Bla	ck Cherry	Low	Variable	Sapling	
						Ja	ack Pine	Low	Variable	Sapling	

DNR

Stand	Level 4 C	over Type		Size Der	Size Density	Acres	Stand Age I	BA Range	Managed S	Site	General Comments
33	3303 - Mixed L	ow Density	Trees	Nonstoo	ked	5.2	ι	Jnspecified	No		Grassy opening, with jack pine and black cherry starting to seed into the
						Sub-Ca	nopy Species	Density	Avg. Height Size	Size	opening.
						Blac	ck Cherry	Low	Variable	Tall Shrub	
						Ja	ck Pine	Low	Variable	Sapling	
34	42220 - Nat	tural Jack P	Pine	Sapling	Well	57.5	15	Immature	N/A		Stand is a fully stocked Jack pine stand at this time. Stand has a super
	Canopy Species	% Cover	Size Class	DBH	Age						canopy of red pine over it.
	Jack Pine	75	Sapling	1	15						
	Red Pine	15	Log/Pole	12	65						
	Black Cherry	10	Sapling	1							
36	42210 - Na	tural Red P	ine Sa	awtimber	Mediun	n 5.8	60	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Pine	97	Log/Pole	10	60		ck Pine	High	Variable	Sapling	
37	42220 - Nat	tural Jack P	Pine Po	oletimber	Mediun	n 26.4	60 L	Jnspecified	N/A		Stand has some die back in jack pine.
31	Canopy Species % Cover Size Cla								•	Size	Charle had being all back in jack pine.
	Red Pine			DBH	Age		nopy Species		Avg. Height		
		25	Log/Pole	10	60	Віас	ck Cherry	Medium	5 - 10 feet	Sapling	
	Jack Pine	60 10	Pole/Log	10	60						
	Red Maple	10	Log/Pole	10							
39	4132 - Asp	en, Jack Pi	ck Pine Sapling W		Well	60.6	27	Immature	N/A		Stand is fully stocked aspen stand. Stand has jack pine growing under
	Canopy Species	% Cover	Size Class	DBH	Age						the aspen at this time. Stand also has a super canopy of red pine that were left during the final harvest. Stand had retention of pine left along
	Quaking Aspen	60	Sapling	3	27						island lake road. Stand also has a few open areas scattered throughout
	Jack Pine	35	Sapling	4							it.
40	42120 - Plai	nted Jack F	Pine	Sapling	Well	257.7	30	Immature	N/A		Planting records shows this stand was planted in 1989. Stand has
	Canopy Species	% Cover	Size Class	DBH	Age						scattered large red pine throughout the stand. Stand has a few open areas in it. Stand is at the transition stage between sapling and pole with
	Quaking Aspen	10	Sapling	4							the majority of the trees being in the sapling size stage at this point.
	Red Pine	10	Log/Pole/XLo	og 13							
	Jack Pine	80	Sapling	3	30						
44	42210 - Na	tural Red P	ine Sa	awtimber	Mediun	n 16.1	80	81-110	N/A		Stand appears to be a red pine stand that had a species removal during
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	its last harvest The stand has a red pine canopy, with a sub canopy of advanced aspen. Advanced regen is to big at this time to go after the
	Red Pine		Log/Pole/XLo		80		d Maple	Low	10 - 20 feet	Sapling	rest of the red pine. Allow aspen to become merchantable and then clear
1			-			Ja	ck Pine	Medium	10 - 20 feet	Sapling	cut stand to allow stand to be fully stocked aspen stand.



Stand	tand Level 4 Cover Type			Size De	nsity	Acres	cres Stand Age BA Rang		Managed S	ite	General Comments		
46	42120 - Plar	nted Jack P	Pine Po	oletimb	er Well	169.4	35	1-50	N/A		Planting records show stand was planted in 1984. A super canopy of red pine was left in this stand before it was planted. This is a planted jack		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	pine was left in this stand before it was planted. This is a planted jack pine stand. In this stand there are rows of red pine planted with the jack		
	Red Pine	35	Pole/Sap/Log	8		Blac	ck Cherry	Low	Variable	Sapling	pine. There seems to be a few rows of planted jack pine a row of red		
	Jack Pine	60	Pole/Sapling	6	35						pine then a few more rows of jack pine. It seems to be this pattern throughout most of the stand.		
48		ural Jack Pine F			Medium	n 44.5	5 47	1-50	N/A		Stand has a lot of jack pine falling out at this time. Stand is past mature and needs to be cut.		
	Canopy Species		Size Class		Age								
	Quaking Aspen	15	Pole	6							Old OI stand origin 1937 old jack pine has fallen out of stand only scated		
	Red Pine	15	Log/Pole	11							trees remain		
	Jack Pine	60	Pole	8	47								
49	42260 - Natural Pi			Sapling		40.6	5	Immature	N/A		Stand has pockets of nice regeneration. Lots of snow during inventory, could see a bunch of jack pine seedlings sticking out of snow. Stand at		
	Red Pine	% Cover	Size Class	10	Age						this time is poorly stocked.		
	Jack Pine	50	Log/Pole Sapling	10	5						Final harvest in fall 2014. Left oak, white pine and scattered red pine		
	Black Cherry	20	Sapling	1	5						(mostly concentrated in a small cluster in SE part of stand.		
	Quaking Aspen	15	Sapling	1									
	Quaking Aspen	15	Sapility	ı									
50	42140 - Plan		Pine Size Class	Sapling	Well <b>Age</b>	28.2	27	Immature	N/A		Stand is a red pine stand that has been outcompeted by Jack Pine. There area good areas were the red pine has no competition, but there		
	Canopy Species Red Pine	50	Sapling	3	Age						area a lot of areas were it is just a wall of jack pine seedlings.		
	Jack Pine	50	Sapling	3	27								
	Jack I IIIe	30	Sapiling	3	21								
51	122 - Road	d/Parking L	ot	Nonsto	cked	5.4			No		Stand is an oil well site.		
52	42210 - Nat		-		Medium	n 5.5	85	81-110	N/A		Thinned fall 2014 by Lutke's own crew.		
	Canopy Species		Size Class		Age								
	White Pine	25	Log/Pole/XLog										
	Red Pine	60	Log/Pole/XLog		85								
	Jack Pine	10	Pole	6									
53	42220 - Nat	ural Jack P	ine Po	oletimb		16.9	33	51-80	N/A		A few of the larger jack pine that were left from previous harvest seem to be dead at this time. There is good advanced regeneration under the		
	Canopy Species		Size Class		Age		nopy Species		Avg. Height	Size	original harvest reaching pole size at this time.		
	Red Maple	15	Pole/Log	8		Wh	nite Pine	Low	>20 feet	Sapling			
	White Pine	10	Log	12									
	Red Pine	15	Log/Pole	12	72								
	Jack Pine	60	Pole	5	33								

Stand	and Level 4 Cover Type		;	Size De	nsity	Acres	Stand Age	BA Range	Managed Site		General Comments		
54	42110 - Pla  Canopy Species  Red Pine  Jack Pine  Black Cherry		size Class Pole Pole/Sapling Pole/Sapling	6 5	Age 32	35.1	32	51-80	N/A		Stand is in transition stage between sapling and pole with pole being the higher percentage at this time. There is some jack pine competition with red pine in this stand, and a few openings with cherry were the red pine did not take off. Planting records shows stand was planted in 1987		
55	Canopy Species% CovRed Pine47Jack Pine50		, ,	Poletimb  DBH	er Well Age	37.3	37	1-50	N/A		Stand was a planted red pine stand which was planted in 1982. Stand has a ton of jack pine competition in it at this time. There are places were the jack pine has defiantly out grown the red pine and the red pine is very stunted in these areas. There are also a few spots in the stand were the red pine is decent. Stand is in transition stage between pole and sapling with pole being the higher percentage at this time.		
56	4117 - Mixed N	. Hardwood	I - Pine P	oletimb	er Poor	95.3	53	1-50	N/A		Stand is basically a poor quality cherry stand at this time. There are a		
	Canopy Species	% Cover	Size Class	DRH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	few pockets of aspen regeneration scattered throughout the stand at this		
	Quaking Aspen	10	Pole	6	Age		ack Pine	Low	< 5 feet	Sapling	time. Stand has regenerated very poorly and has not past it re-inventory monitoring treatment at this time.		
	Black Cherry 70 Pole		6	53		ck Cherry	Low	< 5 feet	Sapling	, and the second			
	White Pine	10	Log/Pole	10			llow spp.	Low	< 5 feet	Sapling	Final harvested in fall 2014. Cut jack pine, aspen and red maple. Left all		
	Red Pine	10	Log/Pole	10			king Aspen	Low	< 5 feet	Sapling	cherry, which was probably too much, but adhered to original prescription.		
57	42110 - Planted Red Pine Sapling Well		ı Well	13.2	25	Immature	N/A		Stand has some decent jack pine competition.				
	Canopy Species	% Cover	Size Class	DBH	Age								
	Quaking Aspen	10	Sapling	2									
	Red Pine	60	Sapling	2	25								
	Jack Pine	25	Sapling	2									
58	3303 - Mixed L	ow Density	Trees	Nonsto	cked	27.5 Un		Unspecified	Managed Opening		Stand has some single stem jack pine. Stand also has some bigger		
						Sub-Ca	nopy Specie	s Density	Avg. Height	Size	pockets of jack pine. Stand is seedling in slowly but is still mostly grass at this time.		
						Ja	nck Pine	Low	Variable	Pole	at this time.		
						Bla	ck Cherry	Low	Variable	Tall Shrub			
60	4113 - R.M	laple, Conif	er S	Sawtimb	er Poor	15.8	60	51-80	N/A		Stand is pretty open not much understory. Stand has scattered big red		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	maple. Clear cut next year of entry and try to expand red maple and aspen in stand.		
	Red Maple	55	Log/Pole	10	60	Re	ed Maple	Low	5 - 10 feet	Sapling			
	Jack Pine	20	Pole/Log	8		Bla	ck Cherry	Medium	5 - 10 feet	Sapling			
	Black Cherry	20	Pole/Log	8									
61	4132 - Asp	en, Jack Pi	ne	Sapling	ı Well	34.5	16	Immature	N/A		Stand has nice aspen clones growing throughout it at this time, mixed		
	Canopy Species	% Cover	Size Class	DBH	Age						with mostly jack pine but does have other mixed upland species in it.		
	Red Maple	10	Sapling	2									
	Quaking Aspen	45	Sapling	2	16								
	Jack Pine	40	Sapling	2									



Stanc	l Level 4 Co	Level 4 Cover Type			ensity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
62	42110 - Plan			Sapling		5.7	25	1-50	N/A		Planted red pine with a red pine super canopy. Stand has some competition and open spots.
	Canopy Species		Size Class		l Age						
	Quaking Aspen	7	Sapling	1	0.5						
	Red Pine	70	Sapling	3	25						
	Red Pine	15	Log	12	75						
63	4139 - Aspen, N	lixed Deci	duous	Sapling Well		13.8	5	Immature	N/A		Harvested everything except oak, white pine and some red pine in fall 2014.
	Canopy Species	% Cover	Size Class	DBH	l Age						2014.
	Red Maple	15	Sapling	1							
	Quaking Aspen	50	Sapling	1	5						
	Jack Pine	10	Sapling	1	5						
	Black Cherry	15	Sapling	1							
64	42221 - Natural C Decid	Jack Pine, duous	Mixed Po	letimbe	r Medium	23.8	33	1-50	N/A		Stand is in transition stage between sapling and pole with the higher percentage of the trees being pole.
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Quaking Aspen	12	Pole/Sapling	5							
	Jack Pine	65	Pole/Sapling	5	33						
	Black Cherry	13	Pole/Sapling	5							
Bla	ck/Red (Hybrid) Oak	10	Pole/Sapling	6							
65			Mixed Po	letimbe	r Medium	12.6	25	1-50	N/A		Stand is in the size between sapling and pole. Stand trees are mostly in the pole size at this time.
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Jack Pine	67	Pole/Sapling	5	25						
	Black Cherry	25	Pole/Sapling	5							
66	4133 - Asper	n, Mixed P	ine F	Poletimb	er Well	8.6	53	51-80	N/A		Stand has timber trespass on east side of stand.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	15	Pole	7		W	hite Pine	Low	10 - 20 feet	Sapling	
	Quaking Aspen	60	Pole	8	53			•		•	-
	Red Pine	7	Log/Pole/XLo	g 12							
	Jack Pine	15	Pole	8							
67	42110 - Plan	ted Red P	ine Sa	wtimbe	r Medium	57.9	82	81-110	N/A		Stand is a good candidate for converting to oak / mixed pine. Planting
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	records show stand was planted in 1937.
	Red Pine	100	Log/Pole/XLo				ed Maple	Medium	Variable	Sapling	
				-	<del>'                                    </del>	Já	ack Pine	Medium	Variable	Sapling	
						Bla	ck Cherry	Medium	Variable	Sapling	
						W	hite Oak	Medium	Variable	Sapling	
						R	led Oak	Medium	Variable	Sapling	



Stan	d Level 4 C	S	Size Density		Acres S	Stand Age B	Managed S	Site	General Comments		
68	42110 - Pla	nted Red F	Pine Sav	vtimber M	ledium	8.0	75	81-110	N/A		Oak in understory consider overstory removal next year of entry
	Canopy Species	% Cover	Size Class	DBH A	\ge	Sub-Cand	py Species	Density	Avg. Height	Size	converting stand to an oak stand. look at stand 67 to see how successful this was in this area.
	Red Pine	95	Log/Pole/XLog	12	75	Red	Maple	Medium	10 - 20 feet	Sapling	and was in this area.
I						Jack	k Pine	Low	10 - 20 feet	Sapling	
						Bigtoot	h Aspen	Low	10 - 20 feet	Sapling	
						Red	d Oak	Medium	Variable	Sapling	
						Ве	ech	Medium	Variable	Sapling	
69	121 -	- Airport		Nonstock	ked	3.0			No		Stand is cleared and maintained by airport.
70	4132 - Asp	en, Jack P	ine Po	oletimber	Well	41.7	33	1-50	N/A		There was a buffer left against stand 73 with nice oak, and pine and
	Canopy Species	% Cover	Size Class	DBH A	\ge						some bigger aspen. Stand 73 is the North Branch of the Boardman River
	Quaking Aspen	60	Pole	6	33						
	Jack Pine	20	Pole	6							
	Black Cherry	10	Pole/Sapling	6							
71	4139 - Aspen, Mixed Deciduous Sawtimber W				Well	34.5	50	51-80	N/A		Stand is a good upland mix with a little higher percentage of aspen then
	Canopy Species	% Cover	Size Class	DBH A	\ge	Sub-Cand	py Species	Density	Avg. Height	Size	red maple. Stand has some nice pockets of maple regen in it.
	Red Maple	40	Log/Pole	12		Whit	e Oak	Low	Variable	Sapling	
	Quaking Aspen	50	Log/Pole	10	50	Red	Maple	Low	Variable	Sapling	
		1				Whit	e Pine	Low	Variable	Sapling	
72	3102	- Grass		Nonstock	ced	0.9			No		Old gas well site. No well on site anymore.
73	622 - Lov	vland Shrul	b	Nonstock	ked	22.2			No		North Branch of Boardman River runs through this stand.
74	42260 - Natural Pi	ne, Mixed I	Deciduous Sa	awtimber	Well	5.1	110	111-140	N/A		This stand is adjacent to Boardman river watershed. Allow aspen and jack pine to fall out of stand. Allowing long live species to grow along the
	Canopy Species	% Cover	Size Class	DBH A	Age	Sub-Cand	ppy Species	Density	Avg. Height	Size	river corridor.
	Red Maple	12	Pole	8		Whit	e Pine	Medium	Variable	Sapling	
	Red Oak	8	Log/Pole	12		Red	l Pine	Medium	Variable	Sapling	
	Quaking Aspen	15	Pole	9							
	White Pine	25	Log/Pole/XLog	13							
	Red Pine	30	Log/Pole/XLog	12 1	110						
	Jack Pine	10	Pole	7							



Stand	d Level 4 Co	over Type	S	Size Density		Acres	Stand Age E	BA Range	Managed Site		General Comments		
76	4130	- Aspen	;	Sapling		29.5	11	Immature	N/A		Fully stocked stand at this time.		
	Canopy Species	% Cover	Size Class	DBH	I Age								
	Bigtooth Aspen	60	Sapling	3	11								
	Red Maple	15	Sapling	2									
	Black Cherry	10	Sapling	3									
	Red Oak	10	Sapling	2									
79	4130 - Aspen		;	Sapling	g Well	49.6 23	23	1-50	N/A		Stand is about to pole size at this time. With about 60 % of the trees		
	Canopy Species	% Cover	Size Class	DBH	I Age						remaining in the sapling size.		
	Red Maple	25	Pole/Log/Sap	9									
	Quaking Aspen	65	Sapling/Pole	4	23								
81	42260 - Natural Pir	ne, Mixed [	Deciduous Sa		er Well	7.0	65	51-80	N/A		Stand is adjacent to Boardman River good cover at this time. Consider thinning stand in future keeping the natural long lived species in it.		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	thinning stand in luture recepting the flatural long lived species in it.		
	Red Maple	8	Pole	8		W	hite Pine	Low	5 - 10 feet	Sapling			
	Red Oak	10	Log	13		Bla	ck Cherry	Low	10 - 20 feet	Sapling			
	Quaking Aspen	15	Pole	8		W	hite Oak	Low	10 - 20 feet	Sapling			
	White Pine	55	Log/Pole	11	65	R	Red Oak	Medium	Variable	Sapling			
	Red Pine	10	Log	12							-		
82	4131 - Aspen, Oak				er Well	5.2	42	51-80	N/A		Stand is located just south of Boardman River. Stand is in good health at this time.		
	Canopy Species	% Cover			l Age		anopy Species		Avg. Height	Size			
	Red Maple	13	Log	12			ed Maple	Low	10 - 20 feet	Sapling			
	Red Oak	15	Log	12			hite Pine	Medium	10 - 20 feet	Sapling			
	White Oak	15	Log/Pole	11		Bla	ck Cherry	Low	5 - 10 feet	Sapling			
	Quaking Aspen	50	Pole	8	42	W	hite Oak	Low	Variable	Sapling			
	White Pine	7	Log	11									
83	4130 - Aspen			Poletimber Well			00				South end of stand is a lowland aspen stand. Stand has a few open spo		
г		•				58.1		Immature	N/A		· · · · · · · · · · · · · · · · · · ·		
	Canopy Species	% Cover	Size Class	DBF	I Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	South end of stand is a lowland aspen stand. Stand has a few open spots in it.		
	Canopy Species Quaking Aspen	<b>% Cover</b> 60	Size Class Pole/Sapling	<b>DB</b> F		Sub-Ca	anopy Species ed Maple	<b>Density</b> Low	Avg. Height 5 - 10 feet	Sapling	in it.		
	Canopy Species Quaking Aspen Black Cherry	% Cover 60 10	Size Class Pole/Sapling Pole/Sapling	<b>DBH</b> 6 6	I Age	Sub-Ca	anopy Species	Density	Avg. Height		in it.		
	Canopy Species Quaking Aspen Black Cherry White Pine	<b>% Cover</b> 60	Size Class Pole/Sapling Pole/Sapling Log/Pole	<b>DB</b> F	I Age	Sub-Ca	anopy Species ed Maple	<b>Density</b> Low	Avg. Height 5 - 10 feet	Sapling	in it.		
	Canopy Species Quaking Aspen Black Cherry	% Cover 60 10	Size Class Pole/Sapling Pole/Sapling Log/Pole Pole/Sapling	<b>DBH</b> 6 6	I Age	Sub-Ca	anopy Species ed Maple	<b>Density</b> Low	Avg. Height 5 - 10 feet	Sapling	in it.		
	Canopy Species Quaking Aspen Black Cherry White Pine	% Cover 60 10	Size Class Pole/Sapling Pole/Sapling Log/Pole	<b>DBH</b> 6 6 10	I Age	Sub-Ca	anopy Species ed Maple	<b>Density</b> Low	Avg. Height 5 - 10 feet	Sapling	in it.		
85	Canopy Species Quaking Aspen Black Cherry White Pine Red Maple	% Cover 60 10 10 10 7	Size Class Pole/Sapling Pole/Sapling Log/Pole Pole/Sapling Pole/Sapling	6 6 10 6	32	Sub-Ca	anopy Species ed Maple ag Alder	<b>Density</b> Low	Avg. Height 5 - 10 feet	Sapling	Site has gas well in the middle of it. Stand has scattered trees and is		
85	Canopy Species Quaking Aspen Black Cherry White Pine Red Maple White Oak	% Cover 60 10 10 10 7	Size Class Pole/Sapling Pole/Sapling Log/Pole Pole/Sapling Pole/Sapling	6 6 10 6 6	32	Sub-Ca Re To	anopy Species ed Maple ag Alder	Density Low Low Low	Avg. Height 5 - 10 feet 5 - 10 feet	Sapling	in it.		
85	Canopy Species Quaking Aspen Black Cherry White Pine Red Maple White Oak	% Cover 60 10 10 10 7	Size Class Pole/Sapling Pole/Sapling Log/Pole Pole/Sapling Pole/Sapling	6 6 10 6 6	32	Sub-Ca	anopy Species ed Maple ag Alder	Density Low Low Low	Avg. Height 5 - 10 feet 5 - 10 feet No	Sapling Tall Shrub	Site has gas well in the middle of it. Stand has scattered trees and is very open.		
85	Canopy Species Quaking Aspen Black Cherry White Pine Red Maple White Oak	% Cover 60 10 10 10 7	Size Class Pole/Sapling Pole/Sapling Log/Pole Pole/Sapling Pole/Sapling	6 6 10 6 6	32	Sub-Ca Re T:  37.0  Sub-Ca	anopy Species ed Maple ag Alder	Density Low Low Unspecified Density	Avg. Height 5 - 10 feet 5 - 10 feet No Avg. Height	Sapling Tall Shrub	Site has gas well in the middle of it. Stand has scattered trees and is very open.		

Traverse City Mgt. Unit Report 7 – Stands



Stand	Level 4 Cover Type	Size Density	Acres Stand Age BA Range	Managed Site		General Comments	MICHIGAN .
88	122 - Road/Parking Lot	Nonstocked	2.6	No	Gas Well Site.		