

## **Compartment Review Presentation**

**Traverse City Forest Management Unit** 

Compartment 61140 Entry Year 2023 Acreage: 1,598

County Kalkaska

Management Area: AuSable Outwash

Revision Date: 2021-05-20 Stand Examiner: Paul Roell

**Legal Description:** 

T25N, R5W, Sec. N1/2 of 13, 14 & 15

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

Vegetation management in the AuSable Outwash management area (MA) will provide forest products; maintain or enhance wildlife habitat; protect areas of unique character, threatened, endangered and special concern species; and provide for forest-based recreational uses. Timber management for this 10-year planning period will focus on improving the age-class structure of aspen, harvesting older jack pine and regeneration of red pine and oak to help balance age-classes. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation opportunity and management of the state wildlife management areas. Expected trends within this 10-year planning period are an increase in non-native exotic plants, especially Phragmites in the wetland areas and increased recreational pressure.

## Soil and topography:

: Roselawn, Rubicon & Grayling sands. Mostly flat to gently rolling.

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

The entire compartment is state owned land. There is no development other than the oil/gas activity. This compartment is leased to the military for training purposes under the terms of a lease agreement.

Land use in and around the compartment is primarily recreational in nature. Snowmobiling and hunting are the main activities. Military training maneuvers cause considerable traffic and activity in the forest and along the roadways for a few weeks during the traditional training period. There is daily traffic on the forest trails and county roads by service crews monitoring oil/gas facilities within the compartment.

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

There are unique natural features within the compartment. MNFI comments and considerations have been taken into account.

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

There are Archeological concerns within the area.

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

All of the compartment is in the 10 year military lease area for training purposes.

#### Watershed and Fisheries Considerations:

There is no surface water in this compartment.

#### Wildlife Habitat Considerations:

Compartment 140 is located in SE Kalkaska County and encompasses two different types of glacial land forms, a sandy outwash plain and parts of several ice contact ridges. This compartment is Military Board Land associated with Camp Grayling.

This sandy outwash plain supports a mixture of oak, aspen, and grassland/brush communities. Fire was a major disturbance on these dry soils and should be considered a valuable treatment tool in perpetuating these fire driven ecosystems. Timber harvests should be designed to mimic wildfires of various intensities, when possible. Sales can be designed to protect fruiting shrubs, leave various mast producing trees, and create dead and downed logs, while producing wood for consumer use and stimulating the regeneration of future forest habitats. Standing dead timber is usually left during harvest operations unless deemed a safety hazard. Species found in these early to mid-successional communities include white-tailed deer, ruffed grouse, eastern bluebird, smooth green snake, meadow vole, and red-tailed hawk.

An ice contact ridge extends into the central portion of the compartment from the north. These ridges once supported a variety of fire dependent communities, most notably, coniferous forests. As with the adjacent outwash plains, sales on the ridges should be designed to mimic natural disturbances such as fire, which probably originated on the outwash plains and continued up the dry soils of the ice contact ridges. Harvest prescriptions should be designed to leave white oak for mast production. Gray squirrel, wild turkey, red-eyed vireo, eastern screech owl, and northern brown snake are some of the many wildlife species one might find here.

## Mineral Resource and Development Concerns and/or Restrictions

The nearest active sand/gravel pit is four miles to the northeast. There appears to be some sand potential within the compartment. The compartment lies between two active oil & gas fields. All of Section 13 is currently leased and under production as part of the Beaver Creek Field. No wells have been drilled in sections 14 & 15. It is possible there could be additional potential for production from beneath the compartment. The Crawford County Road Commission operates a natural brine production well one mile southeast of the compartment. There is no known metallic mineral potential in this part of the state.

#### **Vehicle Access:**

Gravel and sand seasonal two-track county roads surround each section in the compartment. There are some interior state forest roads for oil and gas and general management access.

#### **Survey Needs:**

None at this time

## **Recreational Facilities and Opportunities:**

There are no recreational facilities within the compartment.

#### **Fire Protection:**

Fire coverage for this area is assigned to the MDNR Kalkaska Field Office with assistance available from the local township Volunteer Fire Departments. DNR wildfire equipment is also available from the Roscommon DNR and Grayling DNR offices. Lack of nearby water for use as a fire suppression source is a concern. Road access is limited in some areas in this compartment.

## **Additional Compartment Information:**

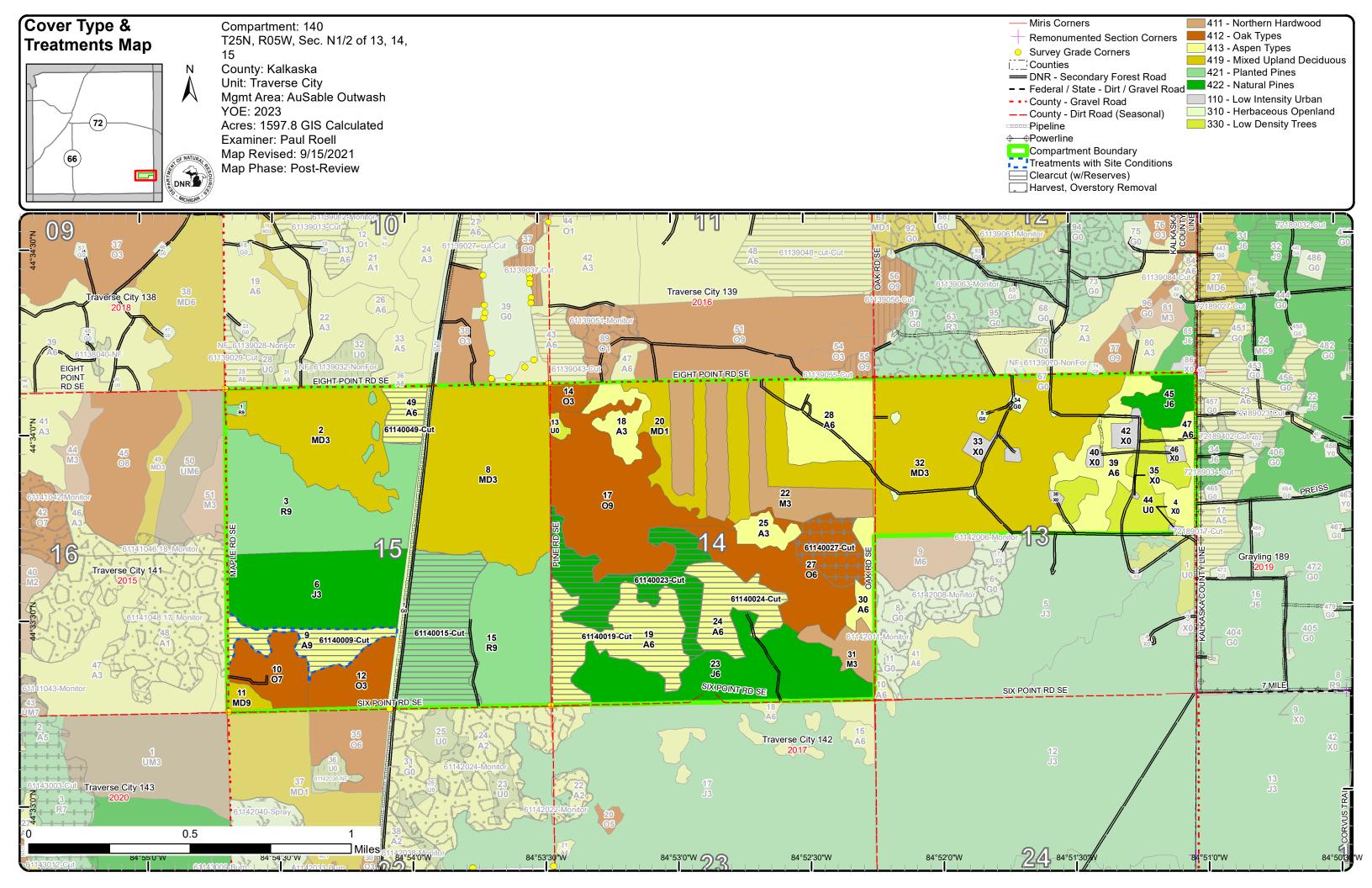
Details on the road access system

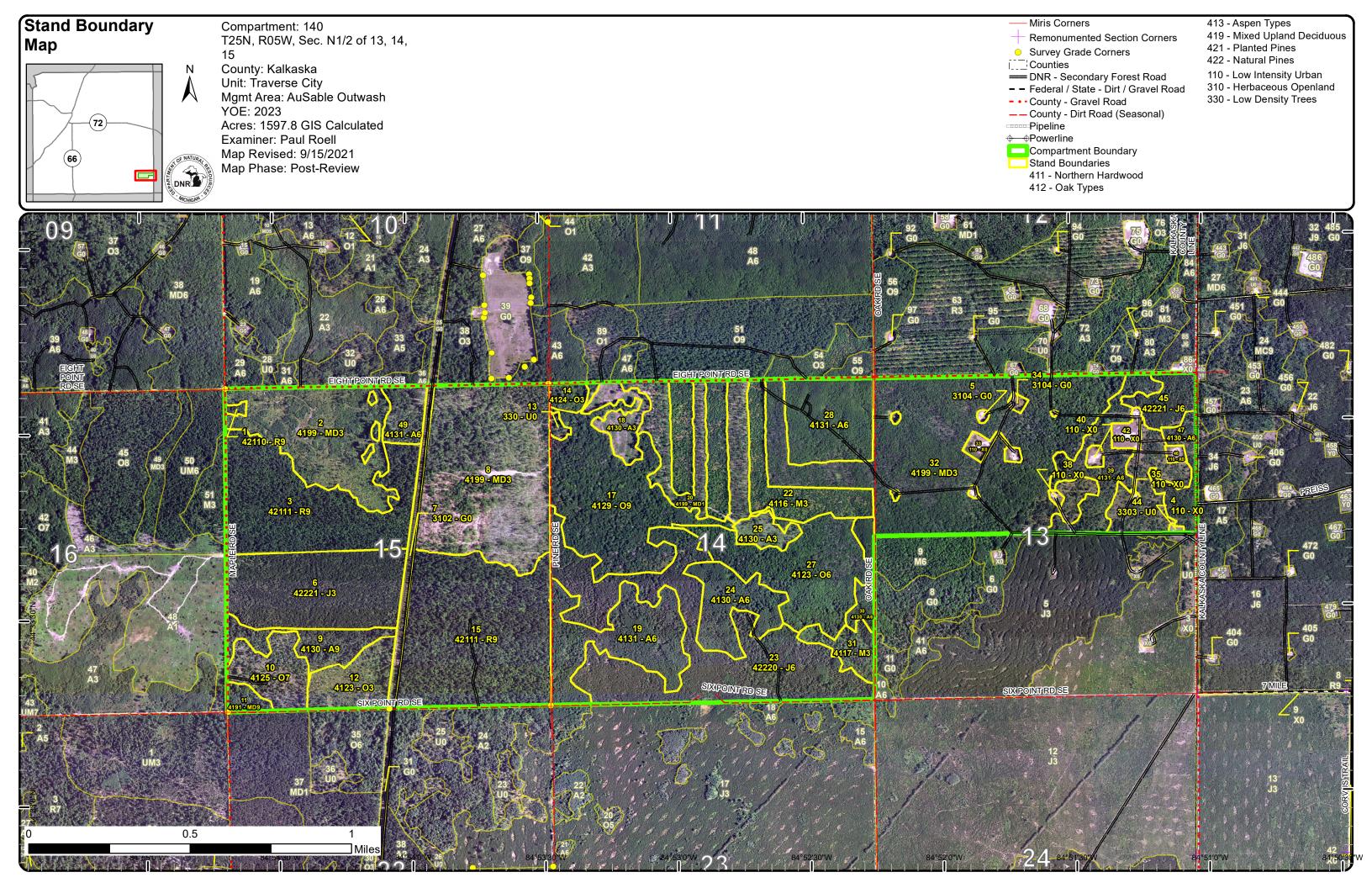
The following reports from the Inventory are attached:

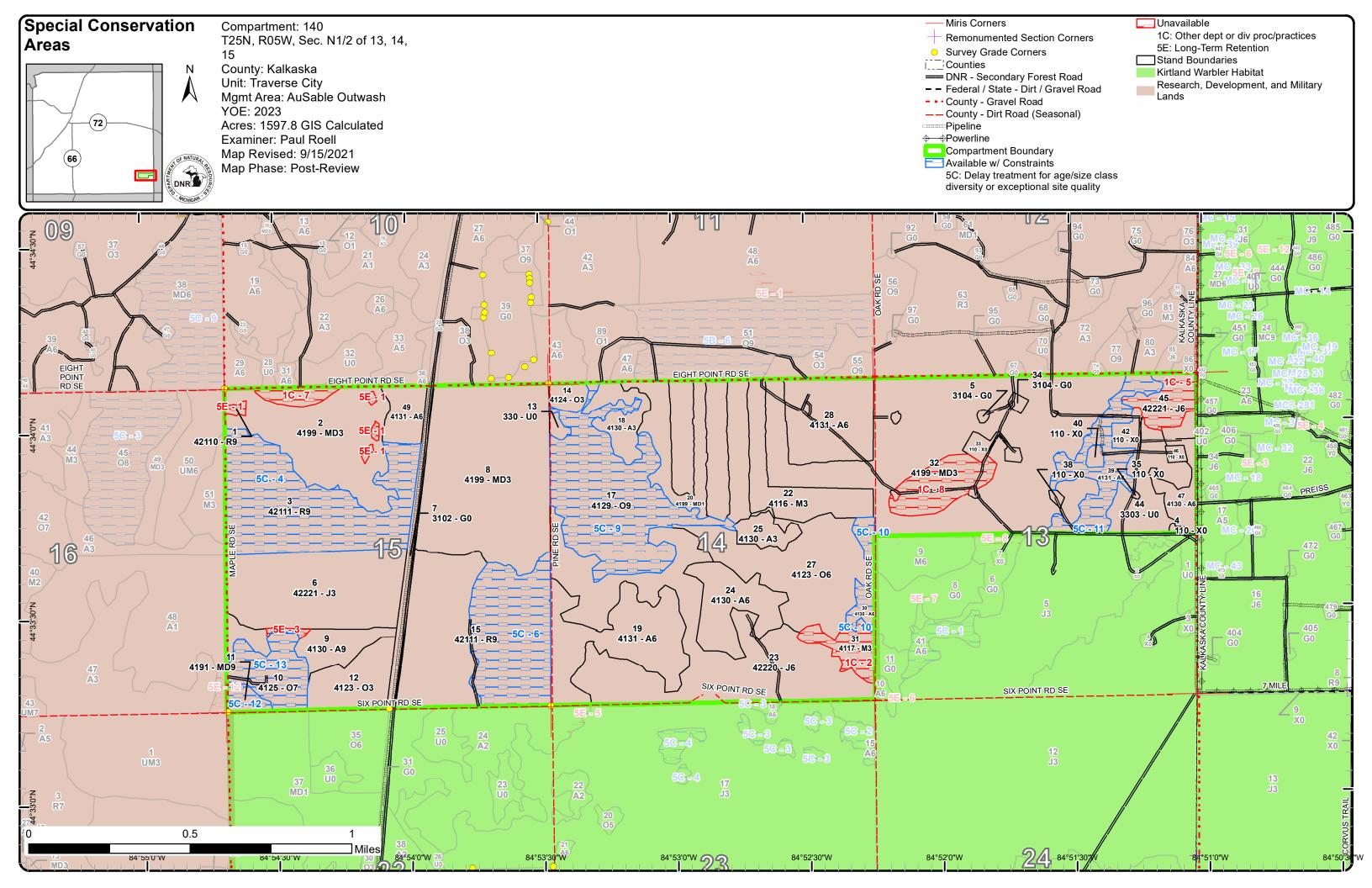
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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







Traverse City Mgt. Unit

Paul Roell: Examiner

Compartment 140 Year of Entry 2023



#### Age Class

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	<del>  4</del> 05		,	\$ / \$	- AS		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	/ &		5/8	\$	/ %	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\	\$ / *§	\$ \ \ \psi_{\text{lift}}	,			
Aspen	0	27	0	0	0	61	151	24	0	0	0	0	0	0	0	0	0	0	262	•
Herbaceous Openland	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	
Jack Pine	0	0	0	98	0	139	0	0	0	0	0	0	0	0	0	0	0	0	237	Ī
Low-Density Trees	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	
Mixed Upland Deciduous	0	397	79	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	482	Ī
Northern Hardwood	0	0	68	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	82	Ī
Oak	0	0	33	0	0	0	70	0	0	27	96	0	0	0	0	0	0	0	226	Ī
Red Pine	0	0	0	0	0	0	0	0	0	235	0	0	0	0	0	0	0	0	234	Ī
Urban	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	i
Total	75	424	180	98	14	200	221	24	0	262	96	6	0	0	0	0	0	0	1597	ı



## **Report 2 – Treatment Summary**

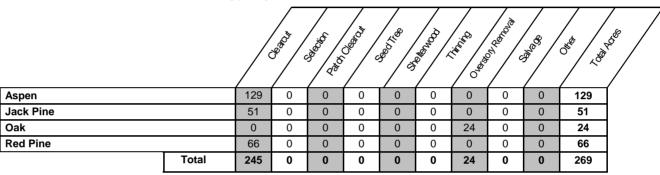
# Traverse City Mgt. Unit Year of Entry: 2023

#### **Acres of Harvest**

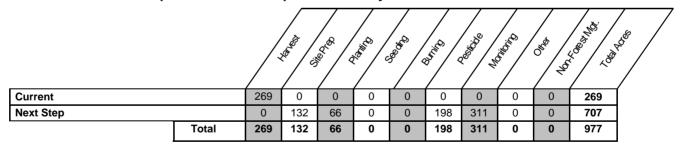
Compartment 140
Total Compartment Acres: 1,598

Commercial Harvest - 245 Harvests with Site Condition - 24 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: 140 Year of Entry: 2023

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> **Treatment** Name

Acres

Stand CoverType

Size Stand Density

BA Age

Range

**Treatment** Type

**Treatment** Method

**Cover Type** Objective

Age Structure Habitat Cut

## **Approved Treatments:**

61140009-Cut

24.1 4130 - Aspen Sawtimber 63 51-80 Well

Harvest

Clearcut with Retention

4139 - Aspen, Mixed Deciduous

Even-Aged

No

clear cut all trees two inches and greater. Possibly leave white oak or green mark some mixed species. Area retention has already been

Specs: designated.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen with a minor component of cherry maple oak and mixed pine.

Regen:

Other

Comment:

Site Condition Long-Term Retention

Proposed Start Date: 10/1 /2022

61140015-Cut

66.0 42111 - Planted Red Pine, Mixed

Deciduous

Sawtimber Well

86 111-140

Harvest

Clearcut with Retention

4211 - Planted Even-Aged

Red Pine

Nο

Prescription Cut all trees. Require low stumps and chipping to facilitate planting operations. Place retention on the north end of the treatment near stand

Specs:

15

SitePrep. Roller Chopping: Pesticide. Skidder - Site Prep: Pesticide. Aerial - Site Prep: SitePrep. Trenching: Planting. Initial Plant: Next Step

Treatments: Monitoring, Artificial Regen(1yr); Pesticide, Skidder - Release; Monitoring, Artificial Regen(3yr)

Acceptable red pine which fulfills management plan stocking levels.

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

61140019-Cut

58.1 4131 - Aspen, Oak Poletimber Well

51-80 Harvest Clearcut with Retention

4139 - Aspen. Mixed

Deciduous

Even-Aged

No

Specs:

Prescription Cut all trees two inches and larger. Possibly green mark some scattered white oak and or other large diameter desirable trees. Use minimal

area retention. Oak Wilt and KW considerations for timing of harvest.

Next Step

Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

Acceptable Aspen with a minor component of red maple oak and mixed pine

Regen:

Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2022

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 140 S Year of Entry: 2023 ŧ а **Treatment** Stand Stand BA **Treatment Treatment Cover Type** Acres Size Age Habitat n Objective Method Name CoverType Density Age Range Type Structure Cut d 23 61140023-Cut 50.9 42220 - Natural Poletimber 81-110 Harvest Clearcut with 4222 - Natural Even-Aged Nο Jack Pine Well Retention Jack Pine Prescription Cut all trees 2 inches and greater. Possibly leave some scattered white oak or other large diameter trees for structure. Minimal area Specs: retention. Oak Wilt and KW considerations for timing of harvest. Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable jack pine mixed with oak aspen and red maple Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2022 61140024-Cut 326 4130 - Aspen Poletimber 52 51-80 Harvest Clearcut with 4139 - Aspen, Even-Aged Nο Well Retention Mixed Deciduous Prescription Cut all trees two inches and larger. Possibly green mark some scattered white oak and or other large diameter desirable trees. Use minimal area retention. Oak Wilt and KW considerations for timing of harvest. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable Aspen with a minor component of red maple, oak and mixed pine. Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2022 23.8 4123 - Red Oak Poletimber 51-80 Harvest Overstory 4121 - Oak, Even-Aged No 61140027-Cut Removal Well Aspen Prescription Cut all trees 2 inches and larger except white oak and pine. Include oak wilt specs. Specs: Next Step **Treatments:** Acceptable oak, aspen and a minor component of red maple Regen: **Other** Must of the red oak has died and or is dying. The goal of this treatment is to Salvage the oak, regenerate the aspen and red maple and also release the advance white oak. Comment: Site Condition Proposed Start Date: 10/1 /2022 4139 - Aspen, 51-80 55 Harvest Clearcut Nο

13.7 4131 - Aspen, Oak Poletimber 61140049-Cut Even-Aged Mixed Deciduous

Prescription Cut all trees 2 inches and greater. No retention to maximize regeneration.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen with a minor component of rec maple, oak, and mixed pine

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 140 Year of Entry: 2023 Cover Type Objective Age Structure **Treatment** Acres Stand Size Stand BA Treatment **Treatment** Habitat Name CoverType Density Age Range Type Method Cut

Total Treatment Acreage Proposed: 269.2

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Compartment: 140

Traverse City Mgt. Unit

Paul Roell: Examiner Year of Entry: 2023

**Availability for Management** 

75%

21%

Total Acres Acres Avail Acres Dominant Site Conditions

Relative Percent

Acres	Available	With Condition	Not Available		5C	1C	5E
263	215	46	1	Aspen	46		1
19	19	0	0	Herbaceous Openland			
237	220	0	16	Jack Pine		16	
39	39	0	0	Low-Density Trees			
482	445	6	31	Mixed Upland Deciduous	6	31	
82	68	0	14	Northern Hardwood		14	
226	103	123	0	Oak	123		
234	66	165	3	Red Pine	165		3
16	16	0	0	Urban			
1,598	1,191	340	66	Total Forested Acres	340	62	4

4%

<sup>\*</sup>Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

Comments:  2 Unavailable 1C: Other dept or div proc/practices  Comments:  3 Unavailable 5E: Long-Term Retention 1 Unspecified	Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
2 Unavailable 1C: Other dept or div proc/practices  Comments:  3 Unavailable 5E: Long-Term Retention 1 Unspecified	1	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:  3 Unavailable 5E: Long-Term Retention 1 Unspecified Uns		Comments:						
3 <b>Unavailable 5E: Long-Term Retention</b> 1 Unspecified Unspecified Unspecified Unspecified Unspecified	2	Unavailable		14	Unspecified	Unspecified	Unspecified	Unspecified
	(	Comments:						
Comments	3	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments.	(	Comments:						

## **Report 4 – Site Conditions**

Traverse City Mgt. Unit
Paul Roell: Examiner

4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	99	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	1C: Other dept or div proc/practices	16	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	67	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	1C: Other dept or div proc/practices	7	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Unavailable	1C: Other dept or div proc/practices	24	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	96	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

## **Report 4 – Site Conditions**

Compartment: 140

Traverse City Mgt. Unit

Paul Roell: Examiner Year of Entry: 2023

10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10	Unspecified	Unspecified	Unspecified	Unspecified
Co	omments:						
11	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	36	Unspecified	Unspecified	Unspecified	Unspecified
Co	omments:						
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
Co	omments:						
13	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	27	Unspecified	Unspecified	Unspecified	Unspecified
Co	omments:						

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: 140





## 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 Type Description HCVA = High Conservation SCA = Special Conservation								
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for include the 5,847 acre Forest Fire Experiment Station, the 12,00 Area, the Beaver Islands Archipelago Wildlife Research Area (the High and Hog Islands, all state owned land on Beaver, South For Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research, and over 144,000 acres of Military Lands.	00 acre Houghton Lake Wildlife Research nat includes most of Garden Island, all of ox and North Fox Islands), the Cusino					
HCVA Designated Critical Habitat Critical Habitat U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by F 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.								



Stand	d Level 4 Co	over Type		Size De	nsity	Acres	Stand Age I	BA Range	Managed Si	ite	General Comments
1	42110 - Plar	nted Red P	ine S	Sawtimb	er Well	3.2	88	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Pine	100	XLog/Log	18	88	Re	d Maple	High	Variable	Sapling	
				·		R	ed Oak	Full	Variable	Sapling	
2	4199 - Other Mixed	d Upland D	eciduous	Sapling	Well	78.9	13	Immature	N/A		Thornapple Red RPP Sale #97-08. Oak and black cherry were left in
	Canopy Species	% Cover	Size Class	DBH	Age						sale.
	Red Maple	20	Sapling	2							
	Red Oak	50	Sapling/Pole	3	13						
	Bigtooth Aspen	20	Sapling	3							
	Red Pine	5	Sapling	3							
	White Oak	5	Sapling	2							
3	42111 - Planted Deci	Red Pine, iduous	Mixed S	Sawtimb	er Well	98.6	88	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Pine	60	Log/XLog	16	88	Re	d Maple	High	Variable	Sapling	
	Jack Pine	5	Pole/Log	8		R	ed Oak	Medium	Variable	Sapling	
	Red Maple	20	Pole/Sapling	9 6	54						
	Bigtooth Aspen	5	Pole	8							
Bla	ck/Red (Hybrid) Oak	10	Sapling/Pole	9 4							
4	110 - Low Ir	ntensity Urb	oan	Nonsto	cked	0.7					oil and gas facility
5	3104 - [	Degraded		Nonsto	cked	2.6	0				
6	42221 - Natural Deci	Jack Pine, iduous	Mixed	Sapling	Well	81.5	28	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Maple	5	Sapling	3							
	Red Oak	20	Sapling	3							
	Jack Pine	60	Sapling/Pole	9 4	28						
	Black Cherry	15	Sapling	3							
7	3102	- Grass		Nonsto	cked	14.5			No		Pipeline.

Traverse City Mgt. Unit

## Report 7 - Stands



tand	d Level 4 Co	over Type	\$	Size De	ensity	Acres	Stand Age B	A Range	Managed S	Site	General Comments
8	4199 - Other Mixed	d Upland D	Deciduous	Saplin	g Well	134.7	5 I	mmature	N/A		stand consists of two age classes
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Red Maple	40	Sapling/Pole	3	5						
	White Oak	15	Sapling/Pole	2							
Bla	ck/Red (Hybrid) Oak	25	Sapling/Pole	4							
	White Pine	5	Log/Pole	10							
	Red Pine	5	Pole/Log	8							
	Bigtooth Aspen	10	Pole	6							
9	4130	- Aspen	S	awtimb	er Well	24.1	63	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Red Oak	5	Pole/Sapling	6		Blac	k Cherry	Medium	Variable	Sapling	
	Bigtooth Aspen	60	Log/Pole	10	63	Hawth	norn (spp.)	Low	5 - 10 feet	Tall Shrub	
	Red Pine	5	XLog/Log	20							•
	Jack Pine	5	Pole	8							
	Red Maple	20	Pole	6							
	Black Cherry	5	Pole	8							
10	4125 - Blac	k, N. Pin C	Dak S	awtimb	er Poor	27.1	85	1-50	N/A		Heavy oak regeneration.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	Stand was harvested in 2015, Maple Road Jack 61-060-13-01.
Bla	ck/Red (Hybrid) Oak	70	Log/Pole/Sap	10	85	Servicebe	rry (Juneberry)	Full	10 - 20 feet	Tall Shrub	
	Red Pine	10	Log	12		Re	d Maple	Medium	5 - 10 feet	Sapling	
	White Pine	5	Log/Pole	10		Ja	ck Pine	Low	5 - 10 feet	Sapling	
	White Oak	15	Pole/Log	8		Blac	k Cherry	Medium	10 - 20 feet	Sapling	
11	4191 - Mixed Upla Co	and Decidu onifer	ious with S	awtimb	er Well	6.1	103	81-110	N/A		
	Canopy Species		Size Class		l Age		nopy Species	Density	Avg. Height	Size	
	Red Maple	25	Log/Pole	12			d Maple	High	Variable	Sapling	
Bla	ick/Red (Hybrid) Oak	50	Log/XLog	16	103	Black/Red	d (Hybrid) Oak	High	Variable	Sapling	
	White Oak	3	Log	12		Wh	nite Oak	Low	Variable	Sapling	
	Bigtooth Aspen	2	Log/Pole	13		Servicebe	rry (Juneberry)	Medium	Variable	Sapling	
	White Pine	20	Log/Pole	13							



Stan	d Level 4 C	over Type	\$	Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
12	4123 -	Red Oak		Sapling	y Well	26.6	13	Immature	N/A		Thornapple Red RPP Sale #97-08. Left oak
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Maple	20	Sapling	2							
	Red Oak	60	Sapling/Pole	3	13						
	Bigtooth Aspen	5	Sapling	3							
	Red Pine	5	Log/Pole/Sap								
	White Oak	5	Sapling	2							
	Black Cherry	5	Sapling	3							
13	330 - Low-I	Density Tre	ees	Nonsto	ocked	2.3			No		
14	4124 - Red v	with White	Oak	Sapling	g Well	6.2	17	Immature	N/A		Strip Oak Sale #022-00
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Red Maple	10	Sapling	3							
	Red Oak	5	XLog	20							
	Red Oak	50	Sapling	4	17						
	Bigtooth Aspen	5	Sapling	3							
	White Oak	30	Sapling/Pole	3	17						
15	42111 - Planted Dec	iduous		awtimb		l 132.7	86	111-140	N/A		Red pine planted in 1934. A cut was done in 1984, Sale #028-80, removing everything but the red pine.
	Canopy Species		Size Class		l Age		nopy Speci		Avg. Height	Size	
Bla	ck/Red (Hybrid) Oak		Pole/Sapling	6			d (Hybrid) C		Variable	Sapling	
	Red Pine	60	Log/XLog	16	86		nite Oak	Low	Variable	Sapling	
	White Oak	10	Sapling/Pole	4		Re	d Maple	Medium	10 - 20 feet	Sapling	
	Red Maple	20	Pole/Sapling	6							
17		Mixed Oak		awtimb			95	51-80	N/A		
	Canopy Species		Size Class		l Age		nopy Speci		Avg. Height	Size	
	Red Maple	30	Pole/Log	8			ed Oak	High	Variable	Sapling	
	Red Oak	30	Log/Pole	12		Wh	nite Oak	High	Variable	Sapling	
	White Oak	30	Log/Pole	12	95	Re	d Maple	High	Variable	Sapling	
	Bigtooth Aspen	10	Pole/Log	8							
18	4130	- Aspen		Sapling	g Well	16.8	6	Immature	N/A		Cut 2015. Left 10 sf/acre of oak.
	Canopy Species		Size Class	DBH	l Age						
	Red Maple	15	Sapling	1							
	Red Oak	5	Log/Pole/XLog								
	White Oak	5	Log/Pole/XLog	14							
	Bigtooth Aspen	3	Sapling	1 14	6						



Stand	d Level 4 C	over Type		Size De	ensity	Acres	Stand Age I	BA Range	Managed S	Site	General Comments	MICHIGAN
19	4131 - A	Aspen, Oak		Poletimb	er Well	58.1	52	51-80	N/A		Fletcher Fire went through this area - 1968.	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Species	Density	Avg. Height	Size		
	Red Oak	20	Pole/Log	8		R	Red Oak	Medium	Variable	Sapling		
	Bigtooth Aspen	45	Pole/Log	8	52	W	hite Oak	Low	10 - 20 feet	Sapling		
	Jack Pine	5	Pole	6							-	
	Quaking Aspen	20	Pole	8								
	White Oak	10	Pole	6								
20	4199 - Other Mixe	ed Upland D	eciduous	Sapling	Poor	45.9	4	Immature	N/A		over story was removed in 2017 due to oak mortality	
	Canopy Species	% Cover	Size Class	DBH	l Age							
	Red Oak	30	Sapling	1	4							
	Red Maple	40	Sapling	1	4							
	Bigtooth Aspen	20	Sapling	1								
	White Oak	10	Sapling	1								
22	4116 - Mixed N.	Hardwood	- Aspen	Sapling	g Well	67.8	17	Immature	N/A		Strip Oak Sale # 022-00	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Species	Density	Avg. Height	Size		
	Red Maple	70	Sapling	3	17	Wi	tch Hazel	Low	Variable	Tall Shrub		
	Red Oak	10	Sapling	2							-	
	Bigtooth Aspen	20	Sapling	2								
23	42220 - Nat	tural Jack P	ine	Poletimb	er Well	138.9	48	81-110	N/A		Fletcher Fire went through this area - 1968.	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Species	Density	Avg. Height	Size		
	Red Oak	2	Pole	6		R	Red Oak	Low	Variable	Sapling		
	Bigtooth Aspen	5	Pole	8								
	Jack Pine	93	Pole	8	48							
24	4130	- Aspen		Poletimb	er Well	32.6	52	51-80	N/A		Fletcher Fire went through this area - 1968.	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Species	Density	Avg. Height	Size		
	Red Oak	5	Pole/Saplin	g 6		R	Red Oak	Medium	Variable	Sapling		
	Bigtooth Aspen	50	Pole/Log	8	52	Re	ed Maple	Medium	5 - 10 feet	Sapling		
	Red Maple	10	Pole	6								
	Quaking Aspen	30	Pole	6								
	White Oak	5	Pole	6								
25	4130	- Aspen		Saplino	g Well	9.7	6	Immature	N/A		Cut fall 2015.	
	Canopy Species		Size Class		I Age							
	Red Maple	10	Sapling	1								
	Red Oak	7	Pole/Saplin	-								
	White Oak	3	Sapling/Pol	e 4								
	Bigtooth Aspen	80	Sapling	2	6							



Stand	d Level 4 Co	over Type	;	Size De	ensity	Acres	Stand Age I	3A Range	Managed S	Site	General Comments
27	4123 -	Red Oak	Р	Poletimb	er Well	70.3	52	51-80	N/A		Fletcher Fire went through this area - 1968.
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	25	Pole	6		Re	ed Maple	High	Variable	Sapling	
	Red Oak	50	Pole/Log	8	52	R	ed Oak	High	Variable	Sapling	
	White Oak	20	Pole/Sapling	7							
	Bigtooth Aspen	5	Pole/Log	8							
28	4131 - A	spen, Oak	Р	Poletimb	er Well	44.9	41	51-80	N/A		Clearcut in 1981. Sale #8-80A
	Canopy Species	% Cover	Size Class	DBI	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	15	Sapling	4		Hawt	horn (spp.)	Low	5 - 10 feet	Tall Shrub	
	Bigtooth Aspen	40	Pole/Log	8	41	Re	ed Maple	Low	< 5 feet	Sapling	
	White Oak	5	Sapling/Pole	4							•
Bla	ck/Red (Hybrid) Oak	40	Sapling/Pole	4							
30	4130 -	- Aspen	Р	Poletimb	er Well	10.4	52	81-110	N/A		Fletcher Fire went through this area - 1968.
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Red Maple	10	Pole	6							
	Red Oak	3	Pole/Sapling	6							
	White Oak	3	Pole/Sapling								
	Bigtooth Aspen	84	Pole/Log	8	52						
31	4117 - Mixed N.	Hardwood	- Pine	Saplin	g Well	14.4	30	Immature	N/A		Fletcher Fire went through this area - 1968.
	Canopy Species	% Cover	Size Class	DBI	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	10	Pole	6			ck Cherry	Medium	5 - 10 feet	Sapling	
	Red Oak	5	Pole	6	-						
	Quaking Aspen	10	Pole	6	52						
	Jack Pine	25	Pole	8							
	Black Cherry	50	Sapling/Pole	4	30						
32	4199 - Other Mixed	d Upland D	eciduous	Saplin	g Well	216.5	5	Immature	N/A		This stand was originally RX as a species removal harvest but after it was sold the contract was modified to a final harvest because of
	Canopy Species	% Cover	Size Class	DBH	H Age						extensive oak mortality.
Bla	ck/Red (Hybrid) Oak	40	Sapling	1	5						•
	Red Maple	25	Sapling	1							
	Bigtooth Aspen	25	Sapling	1							
	White Oak	10	Sapling	1							
33	110 - Low In	ntensity Urb	an	Nonst	ocked	5.1					Well site.
34	3104 - [	Degraded		Nonst	ocked	1.5					Well site.



Stand	Level 4 Co	over Type		Size De	nsity	Acres	Stand Age B	A Range	Managed S	iite	General Comments
35	110 - Low Ir	ntensity Urb	oan	Nonsto	cked	0.3					
38	110 - Low Ir	ntensity Urb	oan	Nonsto	cked	1.0					Well site.
39		spen, Oak		Poletimb			50	51-80	N/A		
	Canopy Species	% Cover			Age		nopy Species	Density	Avg. Height	Size	
Bla	ck/Red (Hybrid) Oak	15	Log/Pole				rry (Juneberry)		Variable	Sapling	
	Bigtooth Aspen	30	Pole	8	50		oth Aspen	Medium	Variable	Sapling	
	Jack Pine	15	Pole	6		Blac	ck Cherry	High	Variable	Sapling	
	Quaking Aspen	35	Pole	8	50						
	White Oak	5	Pole/Log	8							
40	110 - Low Ir	ntensity Urb	oan	Nonsto	cked	2.1					Well site.
42	110 - Low Ir	ntensity Urb	oan	Nonsto	cked	5.4					Well site.
44	3303 - Mixed Lo	ow Density	Trees	Nonsto	cked	36.5		mmature	No		
							nopy Species	Density	Avg. Height	Size	
							ck Cherry	Medium	>20 feet	Pole	
							ck Pine	Low	10 - 20 feet	Sapling	
						Black/Re	d (Hybrid) Oak	Low	10 - 20 feet	Sapling	
45	42221 - Natural Deci	Jack Pine, iduous	Mixed	Poletimb	er Well	16.3	29	1-50	N/A		County Line Sale #002-90. All merchantable jack pine, aspen and oak were cut.
	Canopy Species	% Cover	Size Class	s DBH	Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
Bla	ck/Red (Hybrid) Oak	20	Pole	8		Black/Red	d (Hybrid) Oak	Low	5 - 10 feet	Sapling	
	Bigtooth Aspen	10	Pole	6							
	Jack Pine	65	Pole	6	29						
	Black Cherry	5	Sapling	4							
46	110 - Low Ir	ntensity Urb	oan	Nonsto	cked	1.9					Well site.
47		- Aspen		Poletimb			45	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age		nopy Species	Density	Avg. Height	Size	
	Red Oak	10	Pole/Log				ed Oak	Low	Variable	Sapling	
	Quaking Aspen	80	Pole	8	45		ing Aspen	Medium	Variable	Sapling	
	Jack Pine	10	Pole	6		Servicebe	rry (Juneberry)	Medium	Variable	Sapling	



Stand Le	Level 4 Cover Type			Size Density			Stand Age BA Range		Managed Site		General Comments	
49 4	4131 - Aspen, Oak		Poletimber Well		13.7	55	51-80	N/A		Red pine planted in 1934. A cut was done in 1984, Sale #028-80,		
Canopy Spe	ecies	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	removing everything but the red pine.	
Black/Red (Hybri	id) Oak	25	Pole	8		R	ed Oak	Full	Variable	Sapling		
Red Pine		5	Pole	8	86	W	hite Oak	Low	Variable	Sapling		
Bigtooth Asp	pen	60	Pole	8	55	Re	ed Maple	Medium	5 - 10 feet	Sapling		
White Pine	е	5	Pole/Log	8	<u> </u>			'	1		_	
Red Maple	Э	5	Pole	8								