

Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61137
Entry Year: 2021
Acreage: 2,454
County: Kalkaska

Management Area: High Sand Plains

Stand Examiner: Paul Roell

Legal Description:

T25N R6W, Sections 12,13,14 &15

Identified Planning Goals:

This compartment is part of the Kirtland's Warbler Management Area and is managed to create habitat for the federally endangered Kirtland's Warbler (KW). Management is guided by the KW Breeding Range Conservation Plan and the Operational Plan for KW Habitat Management on Michigan State Forests. Some of the stands in this management area have been identified as essential habitat for the KW. Management on the stands that are not identified as essential habitat is guided by the Regional State Forest Management Plan and will emphasize balancing the age classes of aspen and red pine and regenerating the aging oak resource. Management activities may be constrained or modified based on the management recommendations described in the Conservation Plan. Expected challenges within this 10-year planning period include introduced pests and diseases and ensuring adequate jack pine regeneration on KW sites.

Soil and topography:

Mostly Grayling, Saugatuck, and Rubicon Sands. Mostly flat ground with some hills and ridges and wet areas along the Big Devil Creek corridor.

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

Solid state ownership except for a 120 acres in Section 13. There is a 40 acre parcel that was acquired in Section 12 which has a cabin to dispose of. The entire perimeter of this compartment is bounded by other state owned land. The state land on the south, east and north sides is under a 20 year lease to the Military at Camp Grayling.

Unique Natural Features:

Headwaters of the Big Devil Creek and Kirtland's Warbler MA.

Archeological, Historical, and Cultural Features:

There are some archeological sites identified within the compartment.

Special Management Designations or Considerations:

Kirtland's Warbler

Watershed and Fisheries Considerations:

Big Devil Creek flows through the compartment and it is a tributary of the Manistee River. It is protected by the Manistee River Natural River Designation.

Wildlife Habitat Considerations:

This compartment falls within the Sharon Kirtland's Warbler Management Unit. The Kirtland's Warbler Management Plan outlines harvest and planting regimes for KW habitat. However, forest treatments should maintain a variety of successional stages of pine-oak-aspen forest and grass-shrub openings, with some mid to late successional forest in places, which is typical of a fire driven landscape. Big Devil Creek begins in this compartment and several scattered lowland communities can be found within this compartment.

Aspen harvests should be designed to mimic wildfires of various intensities. This creates a mosaic of age classes and increases structural diversity within an area. The creation of dead and downed logs should be incorporated into timber prescriptions to provide habitat for various wildlife species. Standing dead timber is usually left during harvest operations unless deemed a safety hazard. Species associated with pine, oak and aspen mixed upland forests and openland habitats, such as deer, badger, wild turkey, scarlet tanager, hog-nosed snake, ruffed grouse, Cooper's hawk, red-backed salamander, Kirtland's warbler, and gray squirrel will benefit from management here.

Compartment 137 falls within the Kirtland's Warbler Management Area of the Regional State Forest Management Plan. Featured wildlife species for this MA include KW, pileated woodpecker, ruffed grouse, snowshoe hare, turkey, and deer.

Mineral Resource and Development Concerns and/or Restrictions

The nearest active sand/gravel production is occurring roughly 2.5 miles to the south. There appears to be some sand potential within the compartment, but the water table is shallow here on the outwash plain, which could limit development. There is some active oil & gas production occurring within the compartment, from multiple formations. Most of the state mineral rights are currently leased and held by production; some of the parcels are included in the State Garfield Unitized Area. Oil & gas potential is considered high. There is no known metallic mineral potential in this part of the state. The state does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights.

Vehicle Access:

Good access in most areas.

Survey Needs:

Around the private in Section 12.

Recreational Facilities and Opportunities:

This compartment is primarily used for hunting and ORV's. Cranberry Lake Snowmobile Trail is located in Sections 12 and 14 it uses Devil Creek road and Township road which are county roads.

Fire Protection:

Fire protection in this compartment is provided by Garfield Township and the DNR Kalkaska Field Office. The compartment is within Zone 5, meaning additional resources will be dispatched from nearby offices for fires on High and above days.

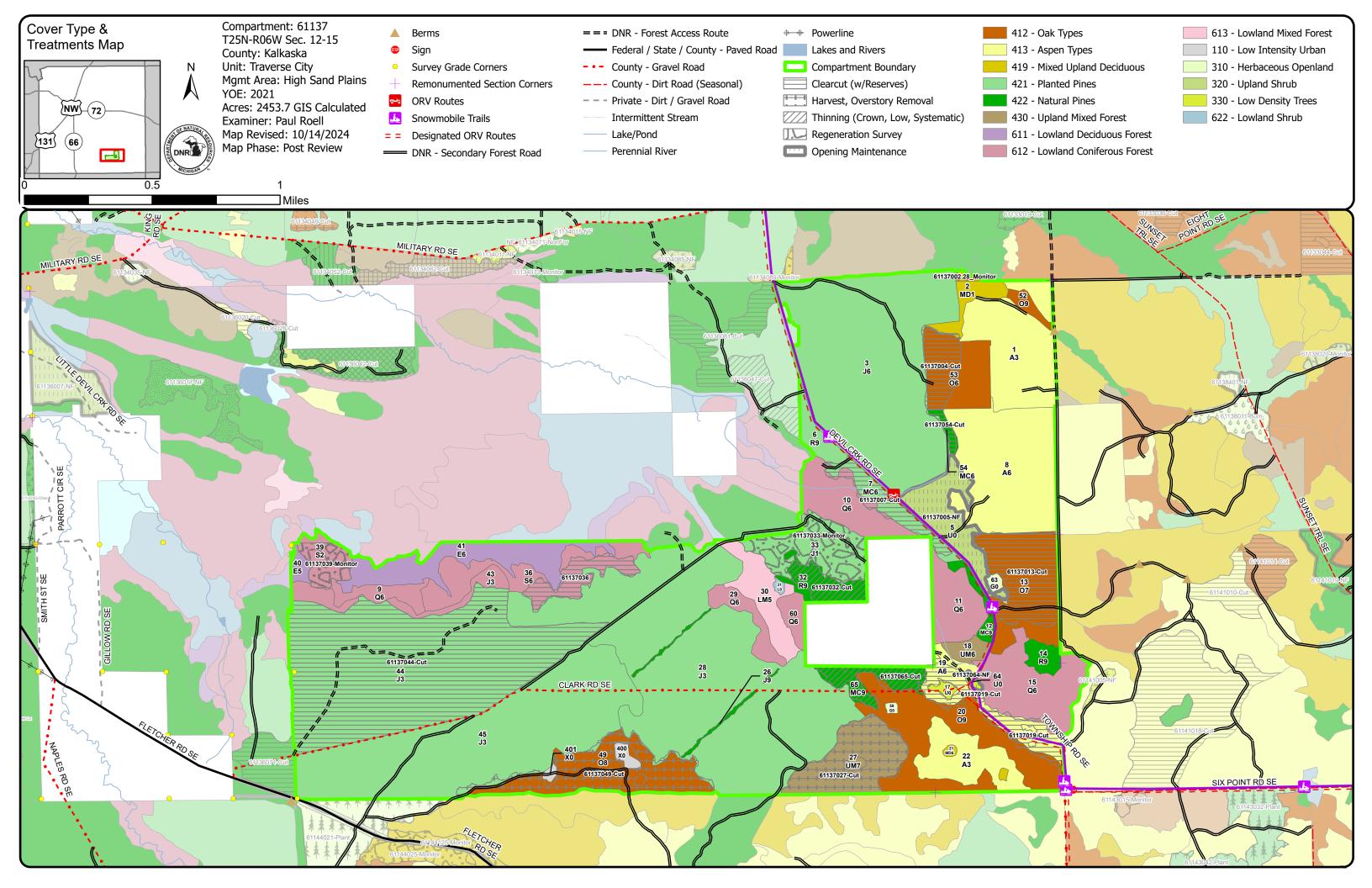
Additional Compartment Information:

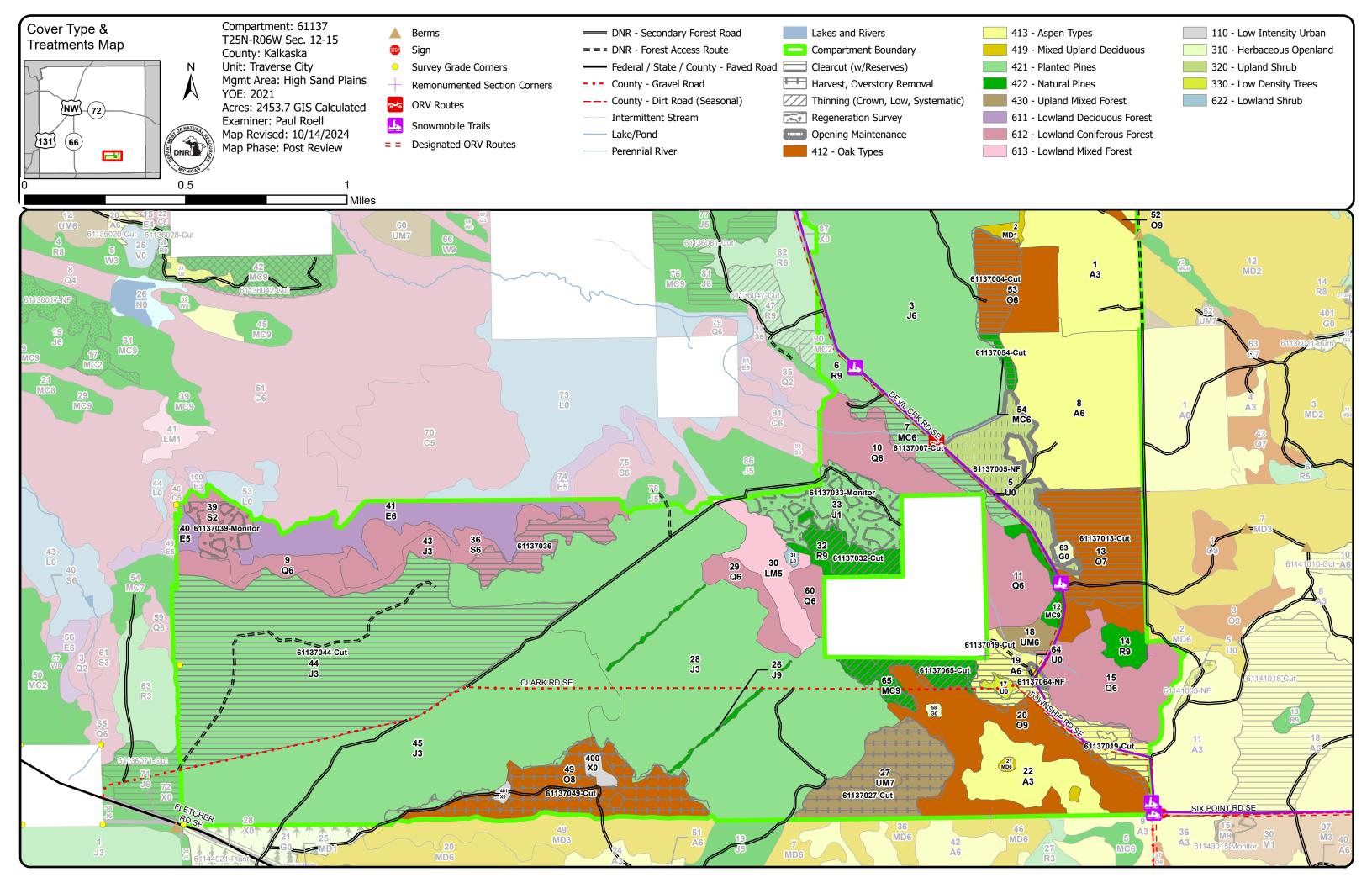
The following reports from the Inventory are attached:

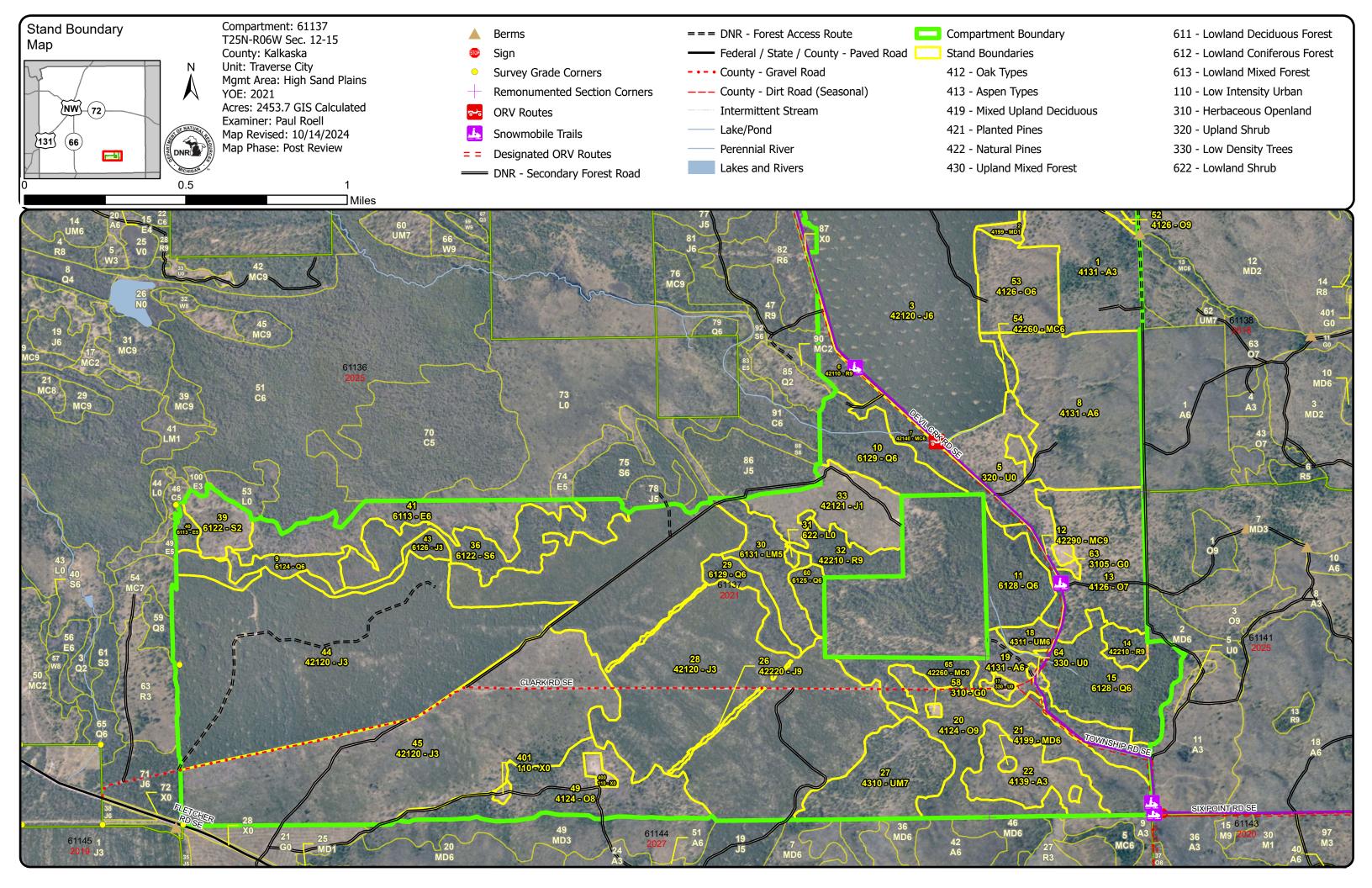
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

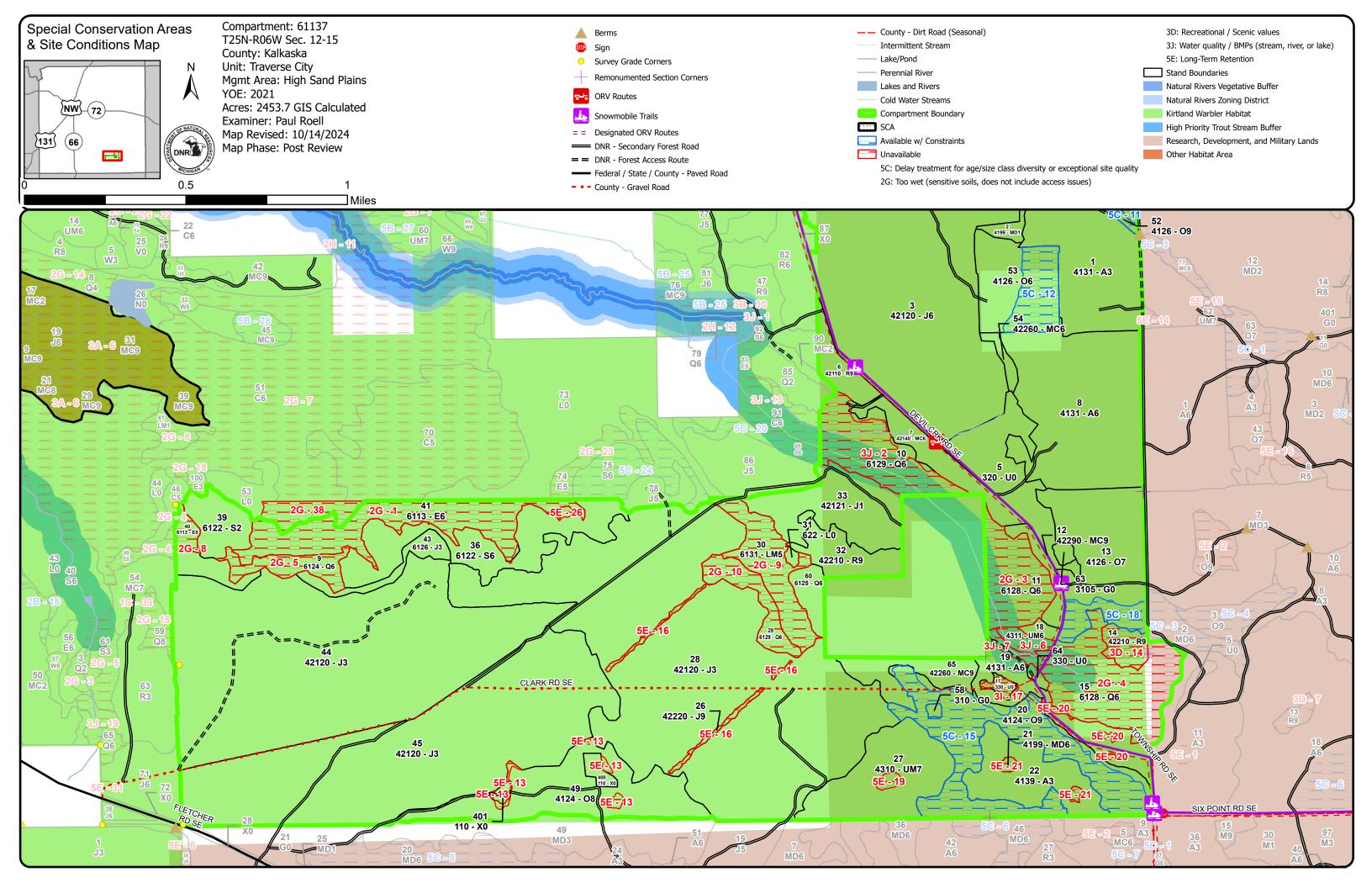
The following information is displayed, where pertinent, on the attached compartment maps:

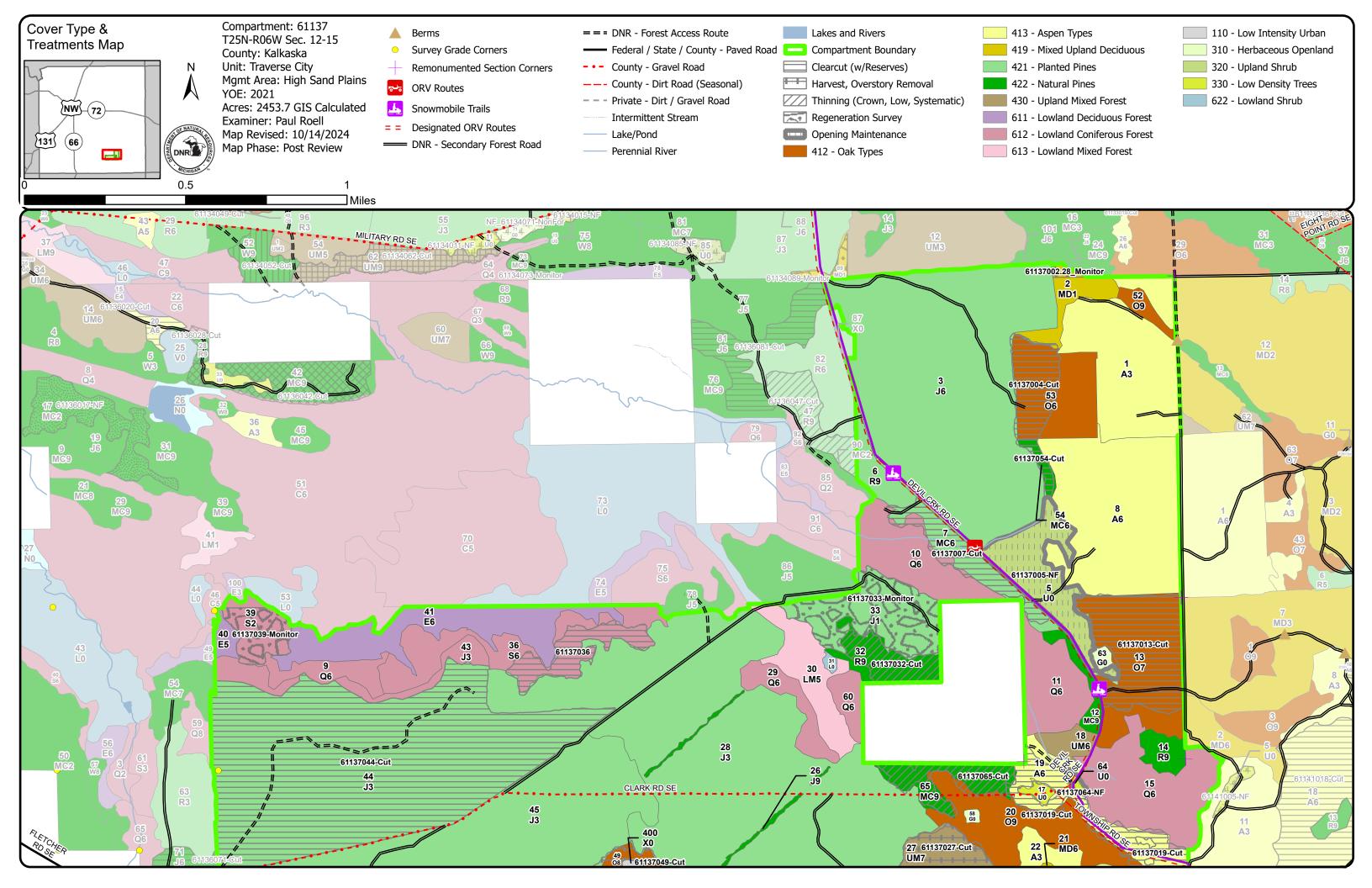
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

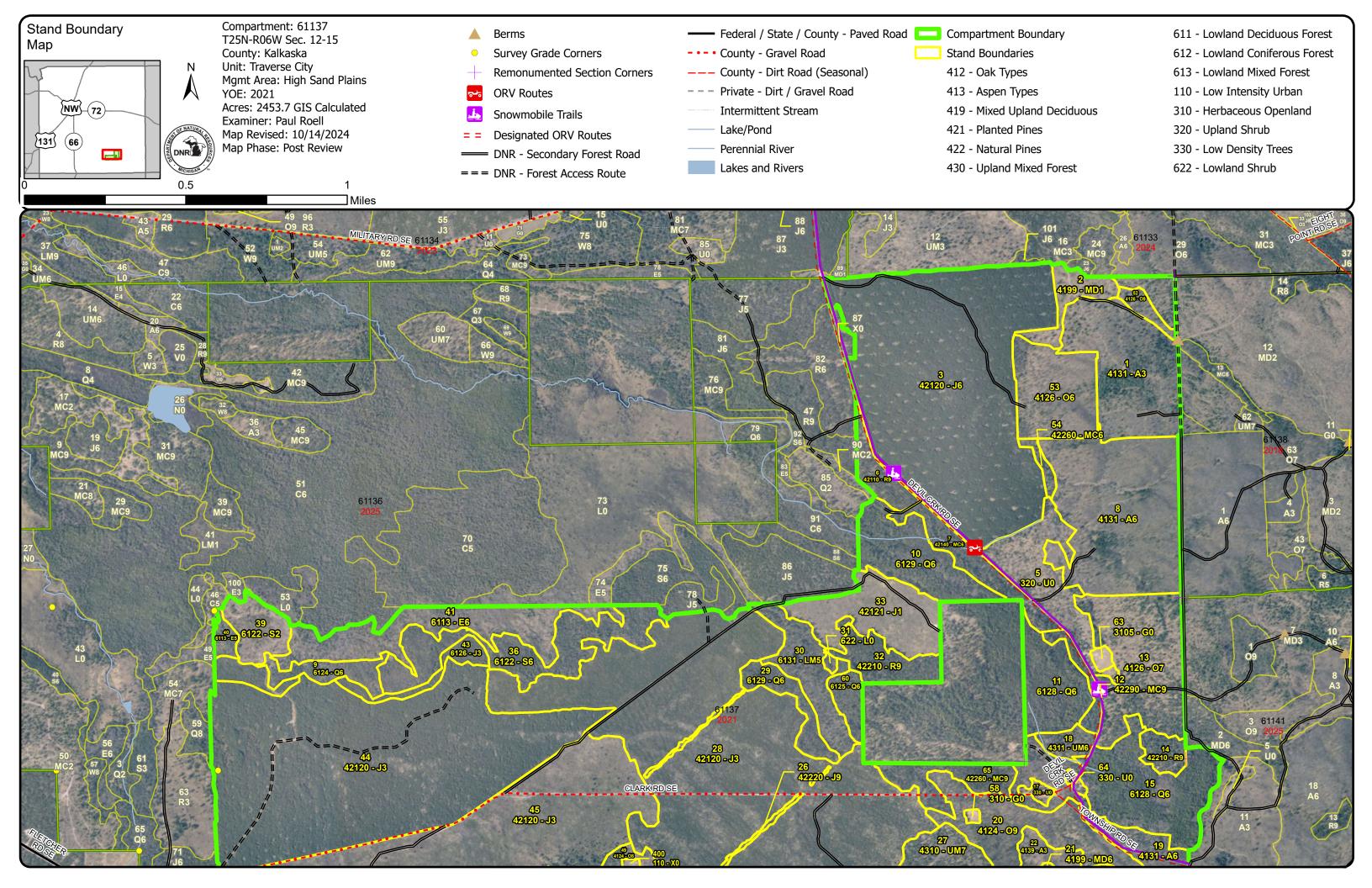


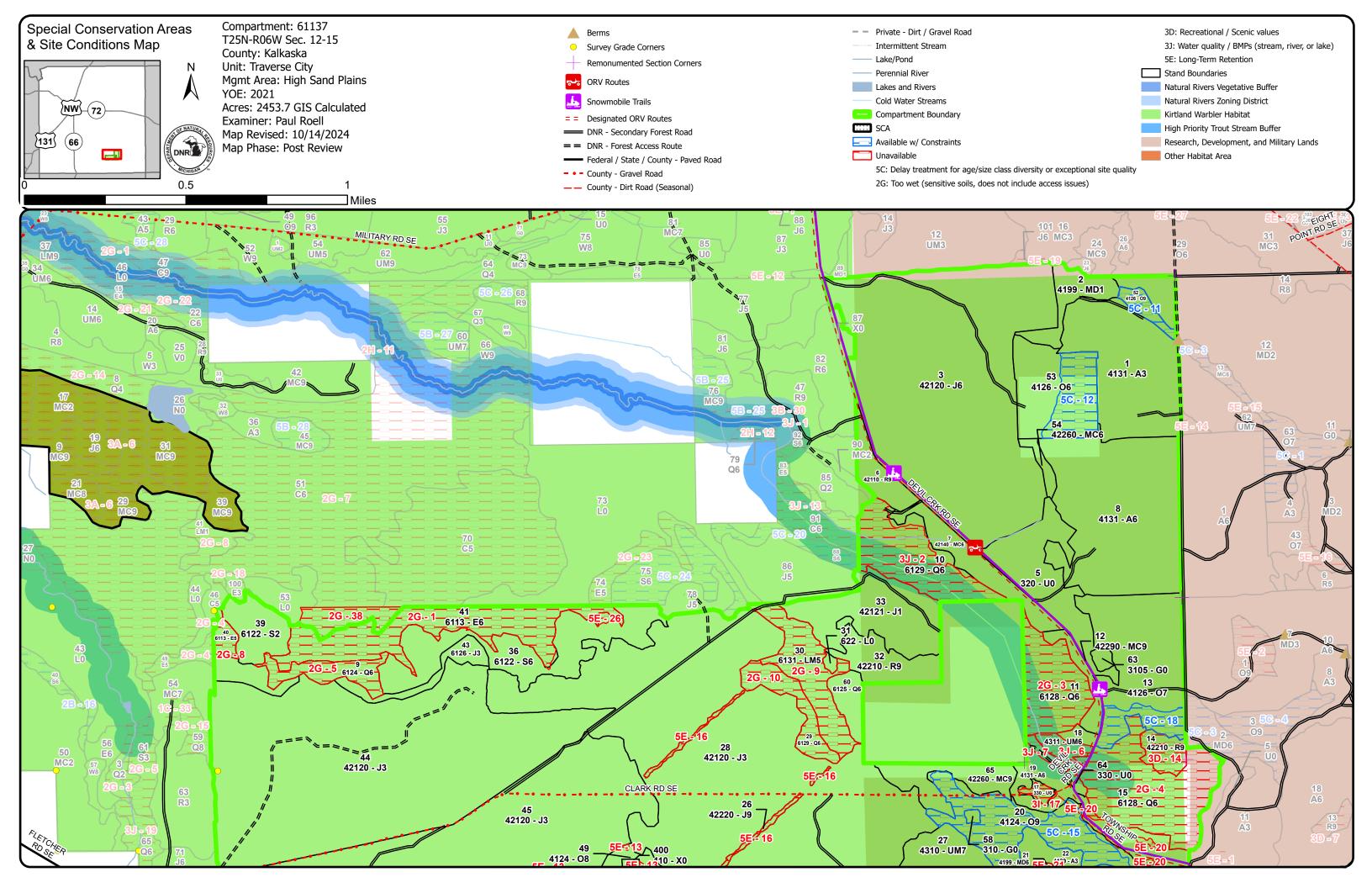












Report 1 – Total Acres by Cover Type and Age Class

Traverse City Mgt. Unit

Paul Roell: Examiner

Compartment 137 Year of Entry 2021



Age Class

	* Age	Kor C	3 / 2	2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 /		3 /12	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	3/8	8/8				Sa Za		N. S.	S. B.	LE S	r grot	L'O'S
Aspen	0	0	0	123	0	118	0	36	0	0	0	0	0	0	0	0	0	0	277
Herbaceous Openland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Jack Pine	0	0	694	0	573	21	0	0	5	0	0	0	0	0	0	0	0	0	1293
Low-Density Trees	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Lowland Conifers	0	0	0	0	0	0	0	15	10	0	80	0	0	0	78	0	0	0	183
Lowland Deciduous	0	0	0	0	0	0	0	0	0	64	0	0	0	0	0	0	0	0	64
Lowland Mixed Forest	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	0	0	32
Lowland Shrub	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lowland Spruce/Fir	0	0	0	20	0	0	0	0	0	58	0	0	0	0	0	0	0	0	78
Mixed Upland Deciduous	0	16	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	18
Natural Mixed Pines	0	0	0	0	0	0	4	0	0	22	8	0	0	0	0	0	0	0	34
Oak	0	0	0	0	0	0	0	0	0	0	95	70	73	46	0	0	0	0	284
Planted Mixed Pines	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	23
Red Pine	0	0	0	0	0	0	0	14	0	0	0	22	10	0	0	0	0	0	46
Upland Mixed Forest	0	0	0	0	0	0	9	0	0	0	57	0	0	0	0	0	0	0	65
Upland Shrub	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Urban	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	58	16	694	143	573	139	13	88	47	144	242	92	83	46	78	0	0	0	2454



Report 2 – Treatment Summary

Traverse CityMgt. Unit Year of Entry: 2021

Acres of Harvest

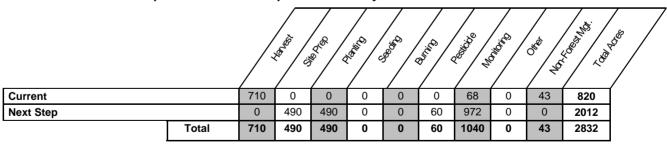
Compartment 137
Total Compartment Acres: 2,454

Commercial Harvest - 710
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

				The state of the s		\$ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	TO THE PERSON OF	in one of the second	Rough To	**************************************	No. No. No.
Aspen		35	0	0	0	0	0	0	0	0	35
Jack Pine		371	0	0	0	0	0	0	0	0	371
Lowland Spruce/Fir		22	0	0	0	0	0	0	0	0	22
Natural Mixed Pines		4	0	0	0	0	21	0	0	0	26
Oak		84	0	0	0	0	0	73	0	0	157
Planted Mixed Pines		25	0	0	0	0	0	0	0	0	25
Red Pine		0	0	0	0	0	18	0	0	0	18
Upland Mixed Forest		0	0	0	0	0	0	56	0	0	56
	Total	542	0	0	0	0	40	129	0	0	710

Proposed and Next Step Treatments by Method



Traverse City Mgt. Unit

Stand

CoverType

Report 3 -- Treatments

Treatment

Type

Treatment

Method

Compartment: 137 Year of Entry: 2021

Age

Structure

Cover Type

Objective

Habitat

Cut

Proposed Treatments:

Treatment

Name

28 61137028-Cut 42120 - Planted 4212 - Planted 64.4 Sapling Immatu Harvest Clearcut Even-Aged No Jack Pine Well Jack Pine

BA

Range

Prescription Cut all trees 2 inches and larger. Require chipping and low stumps to facilitate planting operations.

Size

Density

Specs:

S

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n

d

SitePrep, Trenching; Planting, KW Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr) Next Step

Stand

Age

Treatments:

Acceptable Planted jack pine KW management

Acres

Regen:

Other Comment:

Site Condition:

Proposed Start Date: 10/1 /2027

Approved Treatments:

61137002.28 1.9 4199 - Other Mixed Sapling Immatu Natural Regen 4122 - Oak, Pine Two-Aged No Monitoring Monitor **Upland Deciduous** Poor re (Re-Inventory)

Prescription Specs:

Next Step Treatments:

Acceptable oak and pine

Regen:

Other Percent to Treat = 100%

Comment:

Site Condition:

Proposed Start Date: 12/21/2016

61137004-Cut 24.44126 - White, Black, Poletimber 123 Harvest 4121 - Oak, Even-Aged 111-Clearcut with Nο Well 140 Retention Aspen

N. Pin Oak

Prescription Cut all trees 2 inches in larger in diameter in addition only cut the red and white pine 6 inches and larger in diameter. Mark some scattered

white oak to leave. Retention is a small portion of the parent stand. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Oak, aspen, red maple, jack pine and a minor component of red and white pine.

Regen:

Other Comment:

Site Condition:

Proposed Start Date: 10/1 /2020

Compartment: 137

Year of Entry: 2021

Upland Shrub

S ŧ а

Treatment Stand Size Stand BA **Treatment Treatment** Cover Type Age Habitat n Method Name CoverType Density Age Range Type Objective Structure Cut d 5 61137005-NF 41.0 320 - Upland Shrub Nonstocked Unspec NonForestMgt **Brush Cutting** 3205 - Mixed No

ified

Specs:

Prescription Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. May need to fertilize plantings and protect with wire cages or tubex.

Next Step Treatments:

Acceptable Regen:

Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. Other

Comment:

Site Condition:

Proposed Start Date: 10/1 /2020

61137007-Cut 42140 - Planted 25.1 Poletimber 51-80 4222 - Natural Nο 63 Harvest Clearcut Even-Aged Mixed Pine Well Jack Pine

<u>Prescription</u> Cut all trees two inches and larger. No retention because of small stand size and spruce bud worm.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Jack pine, aspen, balsam, spruce and red maple.

Regen:

Other Comment:

Site Condition:

Proposed Start Date: 10/1 /2020

4211 - Planted 61137013-Cut 59.8 4126 - White, Black, Sawtimber 113 1-50 Harvest Clearcut with Even-Aged No N. Pin Oak Retention Red Pine

<u>Prescription</u> Harvest all trees two inches and larger. Low stumps and chip tops to facilitate planting operations. Protect snowmobile trail during harvest. Retention will be a portion of the uncut stand south of the two track. Specs:

Pesticide, Aerial - Site Prep; SitePrep, Trenching; SitePrep, Roller Chopping; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Next Step Treatments: Monitoring, Artificial Regen(3yr); Planting, Replant

Acceptable Fully stocked stand of red pine

Regen:

Other Comment:

Site Condition:

Proposed Start Date: 10/1 /2020

61137019-Cut 35.3 4131 - Aspen, Oak Poletimber 61 81-110 Harvest Clearcut with 4131 - Aspen, Even-Aged No Well Retention Oak

Prescription Cut all trees two inches and larger in diameter. Leave minimal area retention. Mark a few white oak to leave.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, oak, red maple and some mixed conifer.

Regen:

Other Comment:

Site Condition:

Proposed Start Date: 10/1 /2020

Compartment: 137 Year of Entry: 2021

а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Habitat n Method Objective Name CoverType Density Age Range Type Structure Cut d 61137027-Cut 55.8 4310 - Pine, Oak Mix Sawtimber 51-80 Harvest Overstory 4130 - Aspen Even-Aged No Poor Removal Prescription Cut all trees 4 inches in larger in diameter in addition only cut the pine 6 inches and larger in diameter Leave minimal area retention and mark some scattered white oak and white pine to leave. Specs: Next Step **Treatments:** Acceptable Aspen, red maple, oak and mixed pine. Regen: Other Comment: Site Condition: Proposed Start Date: 10/1 /2020 61137032-Cut 18.2 42210 - Natural Red Sawtimber 102 171-Harvest Crown Thinning 4221 - Natural Even-Aged No Pine Well 200 Red Pine Prescription mark stand to a residual of 100-120 sqft by removing mature and poor quality trees. Specs: Next Step Treatments: **Acceptable** Regen: Other Comment: Site Condition: Proposed Start Date: 10/1 /2020 61137033-48.4 42121 - Planted Sapling Artificial 4212 - Planted 33 10 Immatu Monitoring Even-Aged No Jack Pine, Mixed Poor Regen(3yr) Jack Pine **Monitor** re Deciduous Prescription Monitor regen Specs: Next Step Treatments: Acceptable Jack Pine with some red pine aspen and red maple Regen: **Other** Comment: Site Condition: Proposed Start Date: 10/1 /2020 36 61137036 22.2 6122 - Black Spruce Poletimber 51-80 Clearcut with 6122 - Black Even-Aged No Harvest Well Retention Spruce Prescription Cut all tree two inches in diameter. Retention is a portion of the stand 36 that wasn't harvested. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable moderately to fully stocked stand of spruce, balsam red maple and mixed pine. Regen: Other Comment: Site Condition: Proposed Start Date: 10/1 /2020

Site Condition:

Proposed Start Date: 10/1 /2020

54 61137054-Cut 4.2 4226 - Natural Poletimber 54 81-110 Harvest Clearcut 4222 - Natural Even-Aged No Pine, Mixed Well Jack Pine

Deciduous

Prescription Cut all trees two inches and larger. No retention because of small stand size.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Jack pine, oak and aspen.

Regen: Other

Comment:

Site Condition:

Proposed Start Date: 10/1 /2020

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 137 S Year of Entry: 2021 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Habitat n Method Structure Density Objective Name CoverType Age Range Type Cut d 64 61137064-NF 1.5 330 - Low-Density Nonstocked Immatu NonForestMat **Brush Cutting** 3205 - Mixed No **Upland Shrub** Trees re Prescription Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. May Specs: need to fertilize plantings and protect with wire cages or tubex. Next Step Treatments: <u>Acceptable</u> Regen: Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. **Other** Comment: Site Condition: Proposed Start Date: 10/1 /2020 61137065-Cut 42260 - Natural Sawtimber 141-4221 - Natural No 65 21 4 84 Harvest Crown Thinning Even-Aged Pine, Mixed Well 170 Red Pine Deciduous Prescription mark stand to a residual of 100-120 sqft by removing the poorest quality trees. Specs: Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Site Condition:

Proposed Start Date: 10/1 /2020

Total Treatment 819.9 Acreage Proposed:

Traverse City Mgt. Unit

Paul Roell: Examiner

Compartment: 137
Year of Entry: 2021



Availability for Management Total Acres Avail **Dominant Site Conditions** Acres Acres With Condition Not Available 5C 2G 3D 3J 5E Acres Available Aspen Herbaceous Openland Jack Pine **Low-Density Trees Lowland Conifers Lowland Deciduous** Lowland Mixed Forest Lowland Shrub Lowland Spruce/Fir **Mixed Upland Deciduous Natural Mixed Pines** Oak **Planted Mixed Pines** Red Pine **Upland Mixed Forest Upland Shrub** Urban 2,454 2,032 **Total Forested Acres** 83% 5% 12% 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.

No.	Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	59	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						

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Traverse City Mgt. Unit Paul Roell: Examiner



2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	39	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	34	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	63	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	15	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Traverse City Mgt. Unit Paul Roell: Examiner



8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	32	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	17	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
11	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	22	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
13	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
10/4 4/0	004 4 40 00 DM D						_

Traverse City Mgt. Unit

Paul Roell: Examiner



able 5C: Delay treatment for age/size class diversity or exceptional site quality ilable 5E: Long-Term Retention ilable (Inactive)3I: Historical /	5	Unspecified Unspecified	Unspecified	Unspecified Unspecified	Unspecified Unspecified
age/size class diversity or exceptional site quality ilable 5E: Long-Term Retention ilable (Inactive)3I: Historical /	. 5				
ilable 5E: Long-Term Retention s: ilable (Inactive)3I: Historical /		Unspecified	Unspecified	Unspecified	Unspecified
ilable (Inactive)3I: Historical /		Unspecified	Unspecified	Unspecified	Unspecified
ilable (Inactive)3I: Historical /	-				
,	0				
archeological (add locked comments)	2 I	Unspecified	Unspecified	Unspecified	Unspecified
: :					
able 5C: Delay treatment for age/size class diversity or exceptional site quality	. 14	Unspecified	Unspecified	Unspecified	Unspecified
: :					
ilable 5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
:					
i	able 5C: Delay treatment for age/size class diversity or exceptional site quality:	able 5C: Delay treatment for age/size class diversity or exceptional site quality: Second Content	able 5C: Delay treatment for 14 Unspecified age/size class diversity or exceptional site quality: Iable 5E: Long-Term Retention 2 Unspecified	able 5C: Delay treatment for age/size class diversity or exceptional site quality Iable 5E: Long-Term Retention 2 Unspecified Unspecified Unspecified Unspecified Unspecified	able 5C: Delay treatment for age/size class diversity or exceptional site quality Iable 5E: Long-Term Retention 2 Unspecified

Traverse City Mgt. Unit

Paul Roell: Examiner



20	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
21	Unavailable	FE. Lang Tarm Datastion	2	Unappoifind	Unapposition	Upoposified	Unapposition
	Comments:	5E: Long-Term Retention		Unspecified	Unspecified	Unspecified	Unspecified
26	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
38	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
-	Comments:						

Mgt. Unit

Compartment: #Type! Year of Entry:

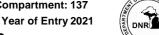


Report 5 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Traverse City Mgt. Unit Compartment: 137



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.

Conservati 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 spectonditions 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	cies 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 spector year. Coldwater streams in Michigan typically provide these configuration of groundwater to their stream flows. Such streams are establish trout resources by Fisheries Order 210.	cies (e.g., slimy sculpin) to persist from year conditions due to substantial contributions
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 Renursery, 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
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high communities are ecologically and socially significant in their effects as aesthetics, habitat, bank stability, timber production, and their	ne unique conditions adjacent to lakes, diversity of plants and wildlife. Riparian ects on water quality and quantity, as well
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and coor U.S. Fish and Wildlife service for the recovery of threatened and 365, Endangered Species Protection, of the Natural Resources PA 451, and the Federal Endangered Species Act of 1973. This species plans in various stages of review. As of now only two e Plover Habitat.	d endangered species, as governed by Part and Environmental Protection Act, 1994 is an active program, with proposed
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spapproved distance from the river centerlines. The Natural River most Natural Rivers. The Vegetative Buffer ranges from 25 to 1	s Zoning District is a 400 foot buffer for



Stan	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments	
1	4131 - A	spen, Oak		Sapling	y Well	82.4	20	Immature	N/A		Stand was cut in Summer of 2003. Sale #054-01-1 Bear Bones Oak.	
	Canopy Species	% Cover	Size Class	DBH	Age						Stand was not marked - leave trees were to be spaced at 50 feet. Less than 10 sqft of over story oak left	
	Red Maple	20	Sapling	3							and to out or	
	White Oak	10	Sapling/Pole	3								
	Bigtooth Aspen	40	Sapling	4	20							
	White Pine	10	Pole/Sapling	6								
	Red Oak	20	Sapling/Pole/Lo	og 3	20							
2	4199 - Other Mixe	d Upland D	Deciduous	Sapling	Poor	15.6	8	Immature	N/A		data from 11/14/2018.	
	Canopy Species	% Cover	Size Class	DBH	Age							
	Red Oak	30	Sapling	1	8							
	Red Maple	40	Sapling	1	8							
	White Oak	20	Pole/Sap/Log	9 6								
	Bigtooth Aspen	10	Sapling	1								
3	42120 - Plai	nted Jack F	Pine F	Poletimb	er Well	266.8	35	51-80	N/A		Kirtland's Warbler Habitat. Clear-cut in 1985 (Sale #46-84) and replanted with 2-0 Jack Pine in 1991 in the KW weave pattern of 1200 trees per	
	Canopy Species	% Cover	Size Class	DBH	Age						acre.	
	Jack Pine	98	Pole/Sapling	5	35							
Bla	ack/Red (Hybrid) Oak	2	Sapling	4								
5	320 - Up	land Shrub)	Nonsto	ocked	42.0	50	Unspecified	No		Burned in the past. Ground cover is grass and blueberry. Stand is regenerating from stump sprouts. Mostly cherry with a few scattered maple, oak, white pine and aspen.	
6	42110 - Pla	nted Red P	Pine S	Sawtimb	er Well	13.8	63	81-110	N/A		OPIC - Stand planted in 1963, 6 acres, 7.5'x7.5' spacing. Stand was row	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	thinned in 2015 61-051-11-01.	
	Red Pine	98	Log/Pole	10	63	Pir	n Cherry	Low	Variable	Sapling		
	Red Maple	2	Pole/Log	8				<u> </u>	1	1		
7	42140 - Plan	ted Mixed	Pine F	Poletimb	er Well	23.1	63	51-80	N/A		OPIC - Stand was planted in 1963, 7.6 acres of spruce. A lot of variablity	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	occurs with a wide mixture of species. The one constant is the Sprucomponent. The South end has some big White Pine and a couple	
	Red Maple	5	Pole/Log	8		WI	nite Pine	Low	5 - 10 feet	Sapling	wet pockets. The north end is more upland with small conifers. Some	
	Red Pine	10	Pole/Log	8				1	1		areas heavy to jack pine.	
	White Spruce	30	Pole/Log	8	63							
	White Pine	15	Log/Pole	12								
	Jack Pine	40	Pole/Log	8	63							



Stan	d Level 4 Co	ver Type	Si	ze De	nsity	Acres	Stand Age B	A Range	Managed S	Site	General Comments
8	4131 - As	spen, Oak	Ро	letimb	er Well	118.3	44	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
Bla	ack/Red (Hybrid) Oak	15	Pole	6							
	Red Maple	20	Pole	6							
	White Pine	5	Pole	6							
	Red Pine	5	Pole/Log	8							
	Bigtooth Aspen	50	Pole/Log	8	44						
	White Oak	5	Pole	6							
9	6124 - Lowla	nd Spruce	-Fir Po	letimb	er Well	15.4	64	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Maple	15	Pole	6		Ва	lsam Fir	Medium	10 - 20 feet	Sapling	
	White Pine	20	Pole	6							•
	Black Spruce	35	Pole/Log	8	64						
	Balsam Fir	30	Pole	6							
10	6129 - Mixed Conife Canopy Species		Size Class		er Well	43.1 Sub-Ca	132 nopy Species	141-170 Density	N/A Avg. Height	Size	OPIC - Stream bisects the stand. Typical cedar stand with wet soils and small areas of windthrow. Very little hardwood component. More spruce
	Red Maple	5	Pole	8	7.90		Isam Fir			00	in the northwest part of stand.
	White Pine					ва	isaiii Fii	Low	Variable	Sapling	•
		10	Log/Pole/XLog	12				Low	Variable 5 - 10 feet	Sapling Tall Shrub	·
	Black Spruce	35					ng Alder				·
	Black Spruce Balsam Fir		Log/Pole/XLog	12							·
	<u> </u>	35	Log/Pole/XLog Pole	12							·
No	Balsam Fir	35 10	Log/Pole/XLog Pole Pole	12 8 6	132						·
11	Balsam Fir Red Pine orthern White Cedar 6128 - Lowland 0	35 10 5 35	Pole Pole Log/Pole Pole/Log	12 8 6 12 8	132 er Well		ag Alder				·
	Balsam Fir Red Pine orthern White Cedar 6128 - Lowland 0	35 10 5 35 Coniferous,	Pole Pole Log/Pole Pole/Log	12 8 6 12 8		34.4	ag Alder	Low	5 - 10 feet		
	Balsam Fir Red Pine orthern White Cedar 6128 - Lowland C	35 10 5 35 Coniferous,	Pole Pole Log/Pole Pole Pole/Log Mixed Po	12 8 6 12 8	er Well	34.4 Sub-Ca	ag Alder	171-200	5 - 10 feet N/A	Tall Shrub	
	Balsam Fir Red Pine orthern White Cedar 6128 - Lowland C Deci	35 10 5 35 Coniferous, duous	Pole/Log Pole Pole Log/Pole Pole/Log Mixed Po Size Class Pole Pole/Log	12 8 6 12 8	er Well	34.4 Sub-Ca	ag Alder 132 nopy Species	171-200 Density	5 - 10 feet N/A Avg. Height	Tall Shrub	Soil is wet but not as saturated as is commonly found in cedar areas.
	Balsam Fir Red Pine orthern White Cedar 6128 - Lowland C Deci Canopy Species Red Maple	35 10 5 35 Coniferous, duous **Cover 5	Pole/Log/Pole/XLog Pole Pole Log/Pole Pole/Log Mixed Po Size Class Pole	12 8 6 12 8 letimb	er Well	34.4 Sub-Ca	132 nopy Species Isam Fir	171-200 Density Low	N/A Avg. Height 5 - 10 feet	Size Sapling	Soil is wet but not as saturated as is commonly found in cedar areas.
	Balsam Fir Red Pine orthern White Cedar 6128 - Lowland C Deci Canopy Species Red Maple Paper Birch Black Spruce Red Pine	35 10 5 35 Coniferous, duous 5 5 5 25 5 5	Pole Pole/Log Mixed Po Size Class Pole Pole/Log Mixed Po Log/Pole/Log Pole Pole/Log Pole Pole/Log Pole Pole/Log	12 8 6 12 8 letimb	er Well	34.4 Sub-Ca	132 nopy Species Isam Fir	171-200 Density Low	N/A Avg. Height 5 - 10 feet	Size Sapling	Soil is wet but not as saturated as is commonly found in cedar areas.
	Balsam Fir Red Pine orthern White Cedar 6128 - Lowland C Deci Canopy Species Red Maple Paper Birch Black Spruce	35 10 5 35 Coniferous, duous 5 5 5 25 5 5	Pole/XLog Pole Pole Log/Pole Pole/Log Mixed Pole Size Class Pole Pole/Log Pole/Log	12 8 6 12 8 letimb	er Well	34.4 Sub-Ca	132 nopy Species Isam Fir	171-200 Density Low	N/A Avg. Height 5 - 10 feet	Size Sapling	Soil is wet but not as saturated as is commonly found in cedar areas.
	Balsam Fir Red Pine orthern White Cedar 6128 - Lowland C Deci Canopy Species Red Maple Paper Birch Black Spruce Red Pine	35 10 5 35 Coniferous, duous 5 5 5 25 5	Pole Pole/Log Mixed Po Size Class Pole Pole/Log Mixed Po Log/Pole/Log Pole Pole/Log Pole Pole/Log Pole Pole/Log	12 8 6 12 8 letimb	er Well	34.4 Sub-Ca	132 nopy Species Isam Fir	171-200 Density Low	N/A Avg. Height 5 - 10 feet	Size Sapling	Soil is wet but not as saturated as is commonly found in cedar areas.
	Balsam Fir Red Pine orthern White Cedar 6128 - Lowland C Deci Canopy Species Red Maple Paper Birch Black Spruce Red Pine White Pine	35 10 5 35 Coniferous, duous % Cover 5 5 25 5 10	Pole/Log Pole Pole/Log Mixed Pole Size Class Pole Pole/Log Pole/Log Log/Pole/XLog Log/XLog/Pole	12 8 6 12 8 letimb	er Well	34.4 Sub-Ca	132 nopy Species Isam Fir	171-200 Density Low	N/A Avg. Height 5 - 10 feet	Size Sapling	Soil is wet but not as saturated as is commonly found in cedar areas.
11	Balsam Fir Red Pine Orthern White Cedar 6128 - Lowland C Deci Canopy Species Red Maple Paper Birch Black Spruce Red Pine White Pine Balsam Fir	35 10 5 35 Coniferous, duous % Cover 5 5 25 5 10 5	Pole/Log Pole Pole/Log Mixed Pole Size Class Pole Pole/Log Pole/Log Pole Log/Pole/XLog Log/XLog/Pole Pole/Log	12 8 6 12 8 DBH 8 8 6 12 12 12 8	er Well	34.4 Sub-Ca	132 nopy Species Isam Fir	171-200 Density Low	N/A Avg. Height 5 - 10 feet	Size Sapling	Soil is wet but not as saturated as is commonly found in cedar areas.



Stand	Level 4 C	over Type		Size Density	Acres	Stand Age B	A Range	Managed S	ite	General Comments
12	42290 - Natu	ıral Mixed F	Pine	Sawtimber Well	8.4	95	81-110	N/A		
С	anopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Pine	15	Log/Pole	10	WI	nite Pine	Low	5 - 10 feet	Sapling	
Bi	igtooth Aspen	10	Log/Pole	10	Whi	te Spruce	Low	10 - 20 feet	Sapling	
	Red Maple	15	Pole	8	Ва	lsam Fir	Low	Variable	Sapling	
	Jack Pine	10	Pole	8						-
V	White Spruce	5	Pole	6						
	White Pine	40	Log/Pole	12 95						
	Balsam Fir	5	Pole	6						
13	4126 - White, E	Black, N. Pi	n Oak	Sawtimber Poor	73.2	113	1-50	N/A		2011 - DAH - Sale # 81-05 was completed in 8/10.
С	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
No	rthern Pin Oak	60	Log/Pole	10 113	North	ern Pin Oak	Medium	10 - 20 feet	Sapling	
	White Oak	20	Pole/Log	9	Re	ed Maple	Medium	5 - 10 feet	Sapling	
	White Pine	20	Pole/Log	8	Bigto	oth Aspen	Low	5 - 10 feet	Sapling	
14	42210 - Nat	tural Red Pi	ine	Sawtimber Well	9.6	111	51-80	N/A		
C	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	White Pine	30	Log/Pole	10	WI	nite Pine	Medium	Variable	Sapling	
	Red Pine	60	Log/Pole	12 111						-
No	rthern Pin Oak	10	Log/Pole	12						
15	6128 - Lowland Dec	Coniferous, iduous	Mixed	Poletimber Well	63.1	91	81-110	N/A		
С	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	White Pine	25	Log/Pole	10	Ва	lsam Fir	Medium	Variable	Sapling	
	Balsam Fir	20	Pole	5						-
North	nern White Cedar	30	Pole	6 91						
	Red Maple	20	Pole	6						
Q	uaking Aspen	5	Log/Pole	10						
17	330 - Low-I	Density Tre	es	Nonstocked	2.9	I	mmature	No		OPIC - FMD: Stand is pretty well dominated by quaking aspen regeneration. May have been a cut here in the past or a fire. A lot of other species mixed in, much of it is merchantable now. Various pockets of timber such as hardwood, jack pine, oak, red maple all sizes and concentrations. Wait for aspen to mature and deal with other species at that time. A fair amount of white pine gives the stand some diversity and provides escape cover for wildlife. Stand is mostly upland and rolling terrain. Some good white oak mast producers and some red pine sawlog size trees.



Stand Level 4 0		over Type		Size De	nsity	Acres	Stand Age E	BA Range	Managed Site		General Comments
18	4311 - Pin	ne, Aspen M	1lix l	Poletimb	er Well	8.5	59	81-110	N/A		
(Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Jack Pine	10	Pole	6		WI	nite Pine	Medium	Variable	Sapling	
В	Bigtooth Aspen	20	Pole/Log	8	59						_
	White Pine	40	Pole/Log	8	59						
	Red Maple	20	Pole/Log	8							
No	orthern Pin Oak	10	Log/Pole	12							
19	4131 - A	Aspen, Oak	. 1	Poletimb	er Well	36.3	61	81-110	N/A		A vernal pond is located in the stand just northeast of the center of the
(Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	SE1/4 of the section. An old railroad grade is located in the south part of the stand.
	White Pine	5	Log/Pole	10		WI	nite Pine	Trace	5 - 10 feet	Sapling	and stand.
	Red Maple	20	Pole	8				-			-
No	orthern Pin Oak	10	Log/Pole	10							
	White Oak	10	Log/Pole	10							
В	Bigtooth Aspen	50	Pole/Log	8	61						
C	Quaking Aspen	5	Pole	7							
20	4124 - Red	with White	Oak	Sawtimb	er Well	88.8	93	81-110	N/A		
(Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	White Oak	20	Pole/Log	9		Re	ed Maple	Medium	10 - 20 feet	Sapling	
	Red Pine	15	Log/Pole	12		W	hite Oak	Low	5 - 10 feet	Sapling	
	Red Oak	40	Log/Pole	10	93	R	ed Pine	Medium	10 - 20 feet	Sapling	
	Jack Pine	2	Pole	8		WI	nite Pine	Full	Variable	Sapling	
	Red Maple	10	Pole/Log	9							
В	Bigtooth Aspen	10	Log/Pole	10							
	White Pine	3	Log/Pole/XLo	ng 10							
21	4199 - Other Mixe	ed Upland D	Deciduous I	Poletimb	er Well	2.2	95	111-140	N/A		Residual islands left within a clearcut before retention was required.
(Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
В	Bigtooth Aspen	20	Log/Pole	10	95	WI	nite Pine	Medium	Variable	Sapling	
No	orthern Pin Oak	35	Log/Pole	10	95	-					
	White Pine	10	Log/Pole	10							
	Red Maple	35	Pole/Log	8							
22	4139 - Aspen,	Mixed Dec	iduous	Sapling	y Well	40.3	21	Immature	N/A		Stand was clearcut in the summer of 2002. Sale #047-01-1, 43 acres.
	Canopy Species	% Cover			Age						
В	Bigtooth Aspen	50	Sapling/Pole	_	21						
	Red Oak	10	Sapling	3							
	White Pine	10	Sapling	3							
	Red Maple	30	Sapling	3							

Compartment: 137 Year of Entry: 2021



Stand	d Level 4 C	over Type		Size Der	sity	Acres	Stand Age B	A Range	Managed S	Site	General Comments	
26	42220 - Natural Jack Pine			Sawtimber Well		5.1	70	51-80	N/A		retention for stand 28	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	White Pine	5	Log/Pole	12		WI	nite Pine	Low	5 - 10 feet	Sapling		
	Red Pine	10	Log/Pole	12						•	-	
	Jack Pine	80	Log/Pole	10	70							
	Red Oak	5	Log/Pole	10								
27	4310 - Piı	ne, Oak Mi	x S	Sawtimbe	r Poor	57.3	95	51-80	N/A		Stand was cut in winter of 2002-2003. Sale #61-01 - Headache Oak.	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Harvest was accomplished without marking the stand. Shelterwood cut to 40-50% crown cover.	
	Red Oak	40	Log/Pole	10	95	Re	d Maple	Medium	10 - 20 feet	Sapling	10 10 00% oromi covol.	
	White Oak	10	Pole/Log	8		WI	nite Pine	Medium	Variable	Sapling		
	White Pine	35	Log/Pole	10		Bigto	oth Aspen	Medium	10 - 20 feet	Sapling		
	Red Pine	15	Pole/Log	8		R	ed Oak	Low	10 - 20 feet	Sapling		
28	3 42120 - Planted Jack Pine			Sapling	Well	396.8	19	Immature	N/A		Stand has been planted to jack pine. Stand was clearcut/harvested in winter of 2004 as part of sale # 046-01-01, Clark Road Warbler.	
	Canopy Species	% Cover	Size Class	DBH	Age						KIRKLAND WARBLER MANAGEMENT BLOCK.	
	Pin Cherry	2	Sapling	2								
	Red Oak	5	Sapling	2								
	Red Maple	2	Sapling	2								
	Jack Pine	91	Sapling	3	19							
29	6129 - Mixed Conife	erous Lowl	and Forest F	Poletimbe	r Well	16.5	94	81-110	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age							
	Balsam Fir	10	Pole	6								
	Jack Pine	10	Pole/Log	8								
	Black Spruce	28	Pole	6	94							
	White Oak	2	Pole/Log	8								
	White Pine	20	Log/XLog/Pol	e 14								
	Red Pine	15	Log/Pole/XLog	g 14								
	Red Maple	15	Pole	8								
30	6131 - Hemlock, B	White Pine irch	, Maple, Po	letimber	Mediun	n 31.6	74	81-110	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Red Pine	5	Log/Pole	10			ag Alder	Low	5 - 10 feet	Tall Shrub		
	Tamarack	5	Pole	6		WI	nite Pine	Medium	Variable	Sapling		
	Black Spruce	15	Pole	6		Re	d Maple	High	Variable	Sapling		
	Red Maple	45	Pole/Log	8	74							
	White Pine	30	Log/XLog/Pol	e 14								

No

1.3

Nonstocked

622 - Lowland Shrub

31



Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed \$	Site	General Comments
32	42210 - Na	tural Red P	ine	Sawtimb	er Well	22.3	102	171-200	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Oak	5	Log/Pole	10		W	hite Pine	Medium	5 - 10 feet	Sapling	
	Red Pine	60	Log/Pole/XLo	og 12	102	Ва	ılsam Fir	Low	Variable	Sapling	
	Bigtooth Aspen	10	Log/Pole	10							•
	White Pine	15	Log/Pole	10							
	White Spruce	10	Pole	6							
33	42121 - Planted Dec	d Jack Pine, ciduous	Mixed	Sapling	Poor	49.1	10	Immature	N/A		FTP C62-837. Planted 3-0 jack pine 5/8/2016.
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Pine	10	Sapling	1							
	Red Maple	15	Sapling	1							
	Pin Cherry	5	Sapling	1							
	Jack Pine	70	Sapling	1	10						
36	6122 - B	lack Spruce)	Poletimb	er Well	57.9	81	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Black Spruce	60	Pole	6	81	Bla	ck Spruce	Medium	Variable	Sapling	
	Red Maple	20	Pole	6		Ta	ag Alder	Low	5 - 10 feet	Tall Shrub	
	White Pine	5	Log/Pole	10							
	Red Pine	5	Log/Pole	10							
	Jack Pine	10	Pole	8							
39	6122 - B	lack Spruce)	Sapling I	/ledium	19.9	22	Immature	N/A		Stand was harvested in the fall of 2017 'Bear Tracks mix' 61-125-15-01
	Canopy Species	% Cover	Size Class	DBH	Age						Stand was a seed tree cut leaving some larger spruce for seed and leaving all spruce and fir less than 4". Ground was scarified very well so
	Black Spruce	70	Sapling	2	22						hopefully it will seed in. The ridge had a lot of jack pine on it and
	Balsam Fir	20	Sapling	2							hopefully it will regenerate.
	Red Maple	10	Sapling	2							
40	6113 - Lo	wland Mapl	e Po	oletimbei	Medium	n 5.2	82	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Jack Pine	10	Pole	8		W	hite Pine	Low	5 - 10 feet	Sapling	
	Balsam Fir	10	Pole	6		Re	ed Maple	Medium	Variable	Sapling	
	Black Spruce	15	Pole	8							-
	White Pine	5	Log/XLog	13							
	Red Maple	60	Pole	6	82						



Stand	d Level 4 C	over Type		Size Density		Acres	Stand Age E	BA Range	Managed S	Site	General Comments
41	6113 - Lo	wland Mapl	e	Poletimb	er Well	58.8	87	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
No	orthern White Cedar	5	Pole/Log	8		W	hite Pine	Low	Variable	Sapling	
	Black Spruce	20	Pole	6		T	ag Alder	Medium	5 - 10 feet	Tall Shrub	
	White Pine	5	Pole	6							•
	Paper Birch	5	Pole	8							
	Red Maple	65	Pole/Log	8	87						
43	6126 - Lowl	and Jack P	ine	Sapling	g Well	20.7	44	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Black Spruce	15	Sapling	3							
	Jack Pine	75	Sapling/Po	le 3	44						
	White Pine	10	Sapling	3							
44	42120 - Plar	nted Jack P	ine	Saplin	g Well	306.1	34	Immature	N/A		Kirtland's Warbler Habitat. Stand was clearcut in 1986 as part of a 367 acre timber sale. The site was then roller chopped at some point shortly
	Canopy Species	% Cover	Size Class		l Age						thereafter. Jack Pine planted by Wildlife Division - no FTP was
	Pin Cherry	1	Sapling	2							completed regarding the planting. The North edges of the stand contain
	Red Maple	2	Sapling/Po								lots of leatherleaf where soil is more wet than other parts of the stand.
	Red Oak	2	Sapling	3							
	Jack Pine	95	Sapling/Po	le 4	34						
45	42120 - Plar	nted Jack P	ine	Sapling	g Well	247.8	12	Immature	N/A		Windswept Jack #005-2011 KIRTLAND WARBLER HABITAT.
	Canopy Species	% Cover	Size Class	DBH	H Age						
	Jack Pine	80	Sapling	2	12						
	Red Oak	5	Sapling	1							
	Pin Cherry	5	Sapling	1							
	White Pine	5	Pole/Log								
	White Oak	5	Pole	6							
49	4124 - Red v	with White (Oak S	Sawtimbe		n 70.2	103	51-80	N/A		Stand was cut in winter of 2002 (Sale # 056-01-1 Connector Oak).
	Canopy Species	% Cover			l Age		nopy Species	Density	Avg. Height	Size	
	Red Oak	50	Log/Pole		103	Bigto	ooth Aspen	Medium	10 - 20 feet	Sapling	
	White Oak	25	Log	12		Re	ed Maple	Medium	10 - 20 feet	Sapling	
	White Pine	15	Pole/Log				hite Oak	Medium	5 - 10 feet	Sapling	
	Red Pine	10	Pole/Log	8			Red Oak	Low	5 - 10 feet	Sapling	
						W	hite Pine	Low	10 - 20 feet	Sapling	



Stand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age E	BA Range	Managed S	Site	General Comments
52	4126 - White, I	Black, N. Pi	n Oak	Sawtimb	er Well	6.0	92	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	White Oak	20	Pole/Log	8		Wh	ite Pine	Low	5 - 10 feet	Sapling	
Ν	lorthern Pin Oak	50	Log/Pole	10	92						
	Bigtooth Aspen	10	Log/Pole	10							
	White Pine	10	Log/Pole	10							
	Red Maple	10	Pole	8							
53	4126 - White, I	Black, N. Pi	n Oak	Poletimb	er Well	45.6	123	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Jack Pine	10	Pole/Log	8		Wh	ite Pine	Trace	5 - 10 feet	Sapling	
	Red Pine	10	Pole/Log	8		Re	ed Pine	Trace	10 - 20 feet	Sapling	
	White Oak	25	Pole/Log	8		Red	d Maple	Medium	10 - 20 feet	Sapling	
N	lorthern Pin Oak	50	Pole/Log	8	123				I		
	White Pine	5	Pole/Log	8							
54	42260 - Natural Pi	ne, Mixed D	Deciduous	Poletimb	er Well	4.1	54	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	White Pine	20	Pole/Log	8		Wh	ite Oak	Trace	5 - 10 feet	Sapling	
N	lorthern Pin Oak	15	Pole/Log	8		Wh	ite Pine	Low	5 - 10 feet	Sapling	
	Bigtooth Aspen	20	Pole	6						•	-
	White Oak	5	Pole/Log	8							
	Jack Pine	40	Pole	8	54						
58	310 - Herbac	eous Open	land	Nonsto	ocked	1.2	0		No		OPIC - FMD: Generally poor quality oak logs with some white pine understory. Most of the oak logs have serious defects. Some scattered pine logs and poles. Some small dbh aspen coming into a few areas.
60	6125 - Lowland Bla	ack Spruce,	Jack Pine	Poletimb	er Well	10.2	73	141-170	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Red Maple	5	Pole	6		Wh	ite Pine	Medium	5 - 10 feet	Sapling	
	White Pine	20	Pole/Log	8		Та	g Alder	Low	5 - 10 feet	Tall Shruk	
	Jack Pine	25	Pole	6	73	Red	d Maple	Medium	5 - 10 feet	Sapling	
	Black Spruce	25	Pole	6							_
	Red Pine	25	Log/Pole/XL	og 12							
63	3105 - Mixed U	pland Herba	aceous	Nonsto	ocked	2.5	49 U	Inspecified	Managed Op	pening	OPIC - FMD: Semi open in places. Burned in the past. Ground cover grass and blueberry. Stand is regenerating from stump sprouts. Mos cherry with a few scattered maple, oak and aspen. Site Index is from inventory information.
64	330 - Low-	Density Tre	es	Nonsto	ocked	1.8		Immature	No		

Traverse City Mgt. Unit

Report 7 - Stands



Stand	Level 4 Cover Type			Size Density		Acres	Stand Age B	A Range	Managed Site			General Comments	MICHIGAN .
65	42260 - Natural Pir	ne, Mixed	Deciduous Sa	awtimb	er Well	22.2	84	141-170	N/A				
	Canopy Species	% Cove	r Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size			
	Red Oak	15	Log/Pole	12		Wh	nite Pine	Low	5 - 10 feet	Sapling			
	Red Pine	55	Log/Pole/XLog	14	84	Re	ed Maple	Low	5 - 10 feet	Sapling			
	Bigtooth Aspen	5	Log/Pole	10	74						_		
	Red Maple	10	Pole/Log	8									
	White Pine	15	Log/Pole	10									
400	110 - Low Ir	ntensity Ur	ban	Nonsto	ocked	4.0	103		No		Well site.		
401	110 - Low Intensity Urban Nonstocker			ocked	1.6	103		No		Well site.			