

Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61166
Entry Year 2025
Acreage: 1,346
County Kalkaska

Management Area: Kalkaska Sandy Moraines

Stand Examiner: Paul Roell

Legal Description:

T27N, R8W, Sec. 4 & 5. T28N, R8W, S1/2 of Sec. 32 & 34.

Identified Planning Goals:

Management in the Kalkaska Sandy Moraines area will emphasize continuing to balance the age class of aspen on suitable sites and thinning the northern hardwoods, balancing age classes of red pine and jack pine and regenerating the aging oak resource. Management will strive to sustainably produce various forest products; enhance game and non-game wildlife habitat; protect areas of unique character, and provide for forest-based recreational uses. Expected trends within this 10-year planning period are increased recreational pressure, managing oil and gas development, introduced pests and diseases and the difficulty in regenerating oak.

Soil and topography:

Kalkaska, Rubicon and Island Lake sandy soils. The terrain is steep to rolling hills, anywhere between 6-18% slope.

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

State Land is intermixed with private property throughout this compartment and also the neighboring compartments. Skegemog Lake Wildlife Area is just to the north and there is some commercial development to the north along M-72. Land use in this area is primarily hunting, ORV's and some hiking.

Unique Natural Features:

none listed at this time

Archeological, Historical, and Cultural Features:

There are known locations within the compartment to protect.

Special Management Designations or Considerations:

Skegemog Lake Wildlife Area is the compartment to the north.

Watershed and Fisheries Considerations:

No water within compartment.

Wildlife Habitat Considerations:

Compartment 166 is situated on a series of steep moraine ridges with well drained soils. This type of geology typically supported beech/maple forests. Much of the current cover types consist of northern hardwoods, which is consistent with presettlement records. Hardwood treatments should be designed to save mature beech (if any are left living) and oaks for denning, nesting, and mast producing trees. Many species of wildlife utilize mature northern hardwoods, such as scarlet tanagers, gray fox, four toed salamanders, white-tail deer, and wild turkeys.

Wildfires occasionally made there way into this community from adjacent outwash plains potentially creating pockets of early successional communities. Little bluestem is found in most openings and is a major component of several larger openings, which are proposed for burning to promote the native grasses. Most of the openings found in this compartment are the results of frost pockets, some showing signs of vernal wetlands at the bottom. Several other openings are the result of homesteads, gaps between pine plantations, or a combination of the two. Most of the openings are self maintaining and need no attention. Many wildlife species take advantage of these natural and man-made openings, including white-tail deer, red fox, cottontails, Eastern garter snakes, and broad-winged hawks.

Mineral Resource and Development Concerns and/or Restrictions

There is no known metallic mineral potential in this part of the state. An active sand/gravel operation is just north of the compartment, in Sec 33, on the north side of M-72. There is good potential for sand & gravel within the compartment. Active hydrocarbon production is occurring one mile to the southeast. The compartment is on the edge of both the Antrim Shale gas play and the northern Silurian reef trend. There may be potential for hydrocarbons from both formations beneath the compartment. However, future additional development of Antrim gas wells is unlikely. There may be potential for

additional reef discoveries beneath the compartment, but due to the location relative to the main reef trend, potential is considered to be diminished. Two wells were previously drilled within the compartment to test the Silurian Guelph (Niagaran) Formation, but they were both dry holes. No active State mineral leases exist in the compartment, and there has been no recent well permit activity in the compartment. The state does not own much of 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:

Vehicle access is good with some two-track roads having erosion problems due to the steep terrain.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

There are no developed recreation facilities within this compartment.

Fire Protection:

Fire protection is provided by the Michigan DNR Kalkaska Field Office and Rapid City Fire Department. Due to the cover types in the compartment, fire danger is relatively low, but some areas have more public interface than others, which could increase potential.

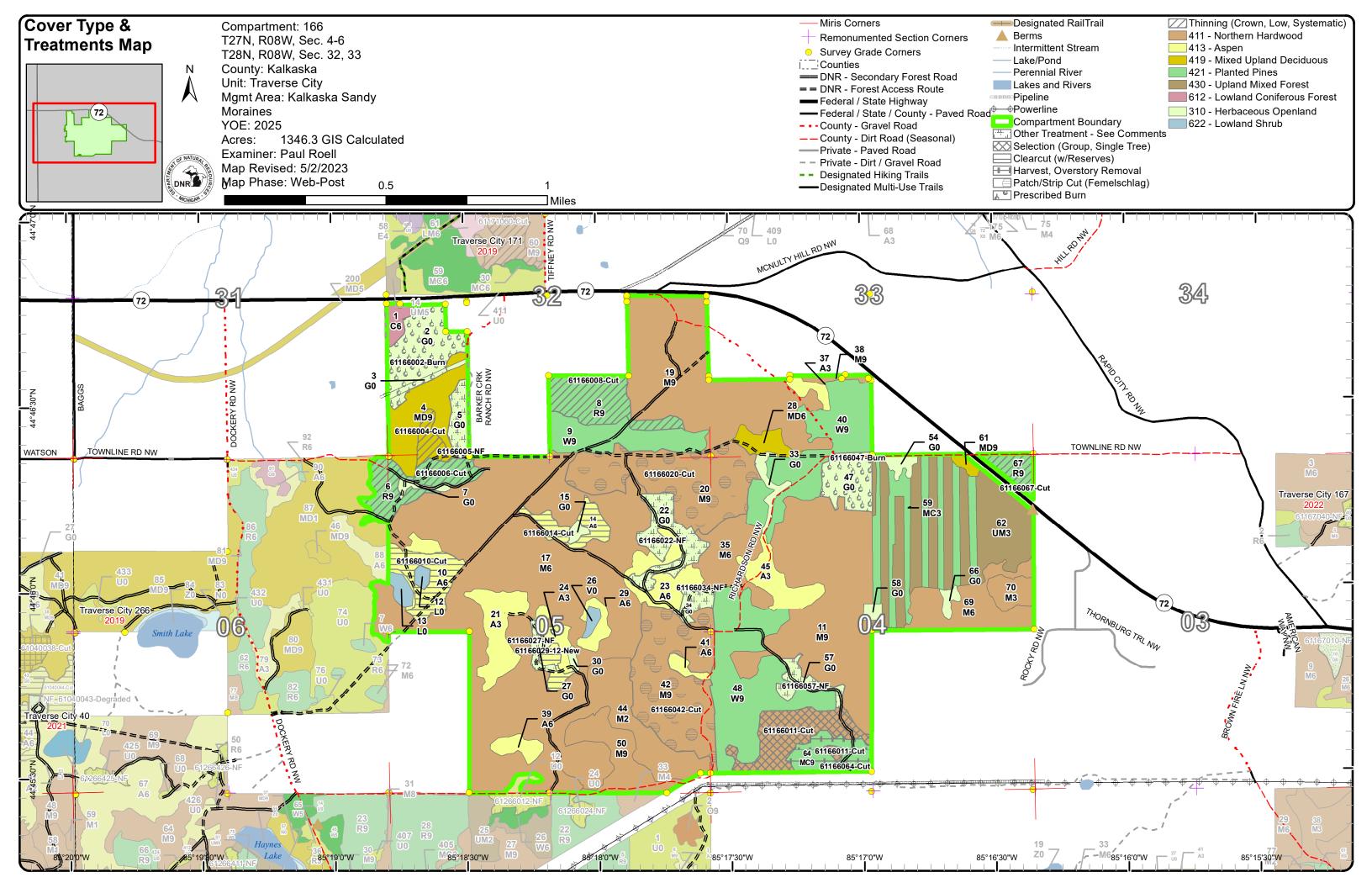
Additional Compartment Information:

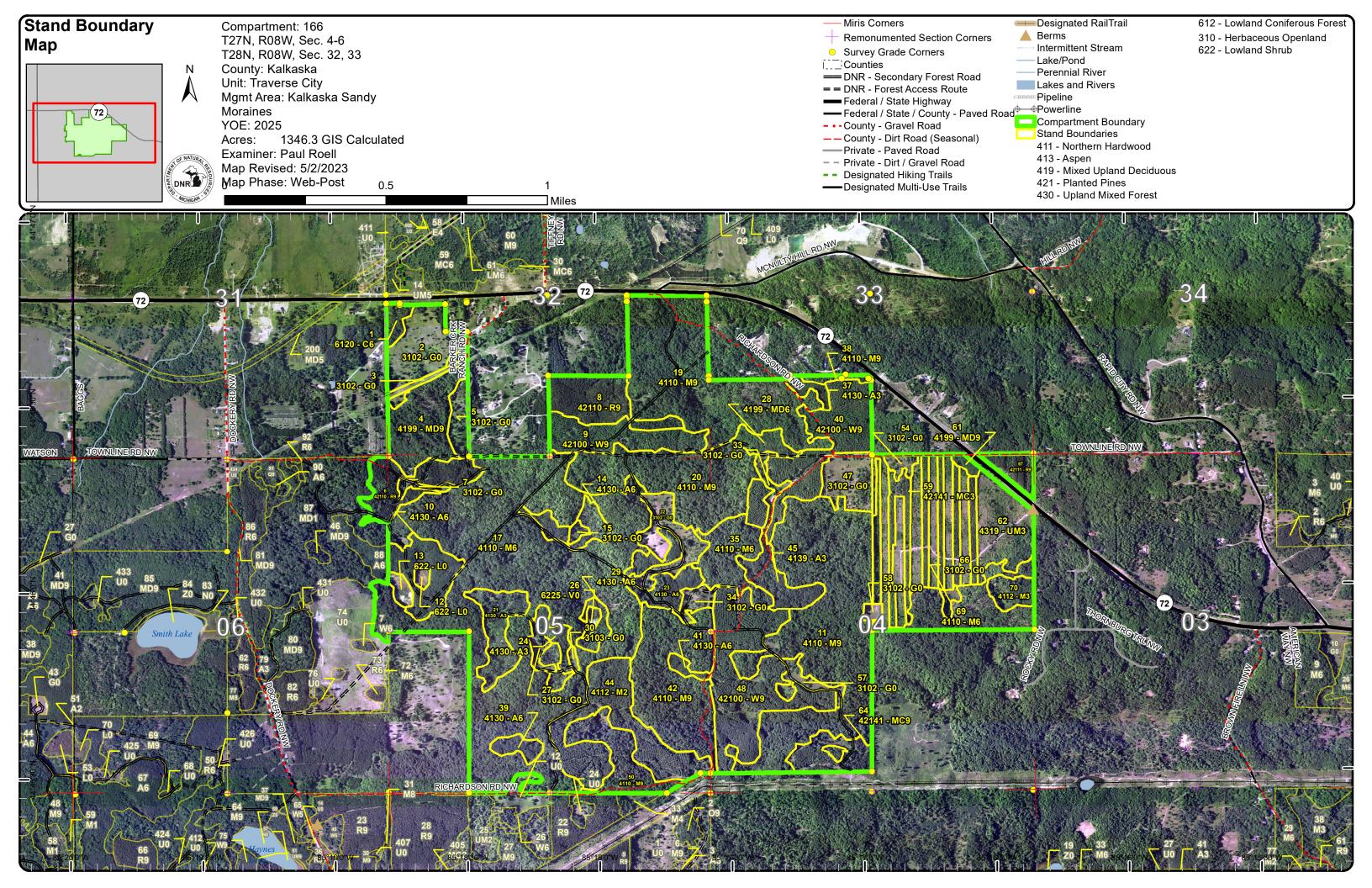
The following reports from the Inventory are attached:

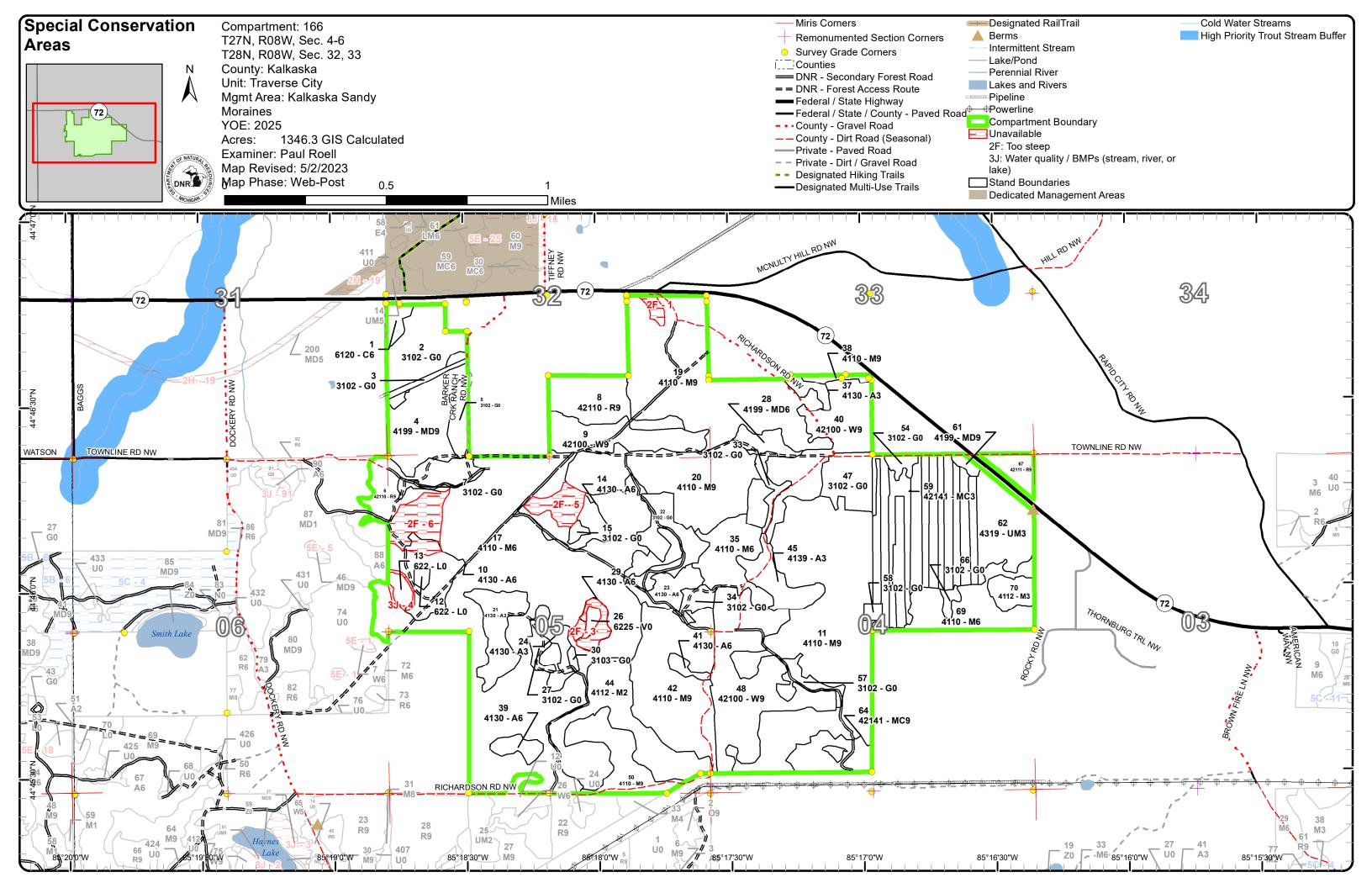
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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

Paul Roell: Examiner

Compartment 166 Year of Entry 2025



Age Class

	Į soci	Kog /	3 / 5			3 / \$		/ 8 / &	/ 8 / k									St Reg	A LONG
Aspen	0	14	19	10	20	36	11	0	0	0	0	0	0	0	0	0	0	0	109
Bog	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Cedar	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
Herbaceous Openland	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106
Lowland Shrub	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Mixed Upland Deciduous	0	0	0	0	0	7	0	0	0	2	0	0	0	0	0	0	0	32	41
Northern Hardwood	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	702	758
Planted Mixed Pines	0	0	0	39	0	0	0	15	0	0	0	0	0	0	0	0	0	0	54
Red Pine	0	0	0	0	0	0	0	48	8	0	0	0	0	0	0	0	0	0	56
Upland Mixed Forest	0	0	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76
White Pine	0	0	0	0	0	0	0	133	0	0	0	0	0	0	0	0	0	0	132
Total	113	14	151	49	20	43	11	196	8	2	5	0	0	0	0	0	0	734	1344



Report 2 – Treatment Summary

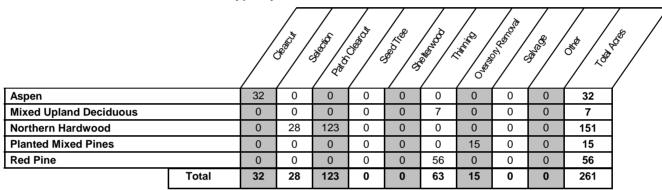
Traverse City Mgt. Unit Year of Entry: 2025

Acres of Harvest

Compartment 166
Total Compartment Acres: 1,346

Commercial Harvest - 261 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method

		/.		\$ \\ \delta \\ \			Signal (1 26 × 10 × 10 × 10 × 10 × 10 × 10 × 10 × 1	<i>ላ</i> ር / እ	
Current		261	0	0	0	45	0	0	0	43	350	
Next Step		0	0	0	0	0	0	183	0	45	228	
	Total	261	0	0	0	45	0	183	0	88	578	

Traverse City Mgt. Unit

Report 3 -- Treatments

Compartment: 166 Year of Entry: 2025

S t а n

2

Treatment Name d

Acres Stand CoverType

Size Density

Stand BA Age Range

ified

Treatment Type

Treatment Method

Cover Type Objective

Age Structure Habitat Cut

Proposed Treatments:

61166002-Burn

29.2 3102 - Grass Nonstocked

Unspec Burn Opening

31022 - Warm Season Grass No

Specs:

Prescription Burn at least once per entry cycle. The goal of prescribed burning is to restore and/or maintain a grassland/barrens ecosystem. The timing and frequency of the burns will be based on currents needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, planting native mast bearing shrubs or trees, burning, or removal of woody encroachment.

Next Step Treatments: NonForestMat, Other - Specify

Acceptable Regen:

Other Comment: Maintain as needed with mowing, seeding of native grasses and forbs, burning, or removal of woody encroachment. May need to seed additional native grasses and forbs first to establish a diverse grass stand that will score high enough to burn. Burn line should exclude planted red pine and the several clumps of hardwoods along the north line and at the SW corner. Burn prescription also includes the part of stand 2 south of utility ROW.

Site Condition

Proposed Start Date: 10/1 /2024

61166004-Cut

6.8 4199 - Other Mixed Sawtimber **Upland Deciduous**

87 Well

Harvest

Crown Thinning 4116 - Mixed N. Hardwood -

Uneven-Aged

No

Specs:

Prescription area of heavy storm damage, the topography allows harvest to clean up down timber and release established regen. Mark stand to a residual BA of 60-70 square feet per acre remove, down trees, poorer formed trees and trees suppressing established regeneration.

81-110

Include oak wilt spec during timber sale.

Next Step

Treatments:

<u>Acceptable</u>

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2024

61166005-NF

8.1 3102 - Grass Nonstocked

NonForestMgt Fruit Tree/Shrub **Planting**

3204 - Mast Producing Shrub

Aspen

No

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: **Other**

Could augment herbaceous vegetation with low maintenance native spp via overseeding.

Comment:

Site Condition

S t

а **Treatment** Size Stand BA **Treatment Treatment Cover Type** Acres Stand Age Habitat n Method Name CoverType Density Age Range Type Objective Structure Cut d 6 61166006-Cut 23.0 42110 - Planted Sawtimber 141-Harvest Crown Thinning 4211 - Planted Even-Aged Nο Red Pine Red Pine Well 170 Prescription reduce stand BA to an average of 120 square feet per acre. Possible include oak wilt spec as well as bark slippage Specs: Next Step Treatments: <u>Acceptable</u> Regen: **Other** Comment: Site Condition Proposed Start Date: 10/1 /2024 61166008-Cut 25.3 42110 - Planted Sawtimber 62 171-Harvest Crown Thinning 4211 - Planted Even-Aged No Red Pine Well 200 Red Pine Prescription reduce stand BA to an average of 120 square feet per acre. Possible include oak wilt spec as well as bark slippage Specs: Next Step Treatments: **Acceptable** Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2024 10 61166010-Cut 17.3 4130 - Aspen Poletimber 48 81-110 Clearcut with Even-Aged No Harvest 413 - Aspen Retention Well Prescription Cut all trees 2 inches or larger in diameter. Buffer the bog stands according to BMP this will also serve as retention. Specs: Include grouse spec and oak wilt spec during timber sale. Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable Aspen with a minor component of oak and mixed hardwood which meet minimum stocking requirements. Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2024 61166011-Cut 27.6 4110 - Sugar Maple Sawtimber 89 81-110 Harvest Single Tree 411 - Northern Even-Aged No Well Selection Hardwood Association Prescription Mark stand to a residual BA of 80 square feet per acre by way of the states compleat marker guidelines. Put in 5-6 1 acre regen gaps. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable sugar maple, red maple, basswood, oak Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2024

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 166 Year of Entry: 2025 S t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age Habitat n Method **Density** Range Objective Structure Name CoverType Age Type Cut d 14 61166014-Cut 10.5 4130 - Aspen Poletimber 81-110 Harvest Clearcut 413 - Aspen Even-Aged Well Prescription cut all trees 2 inches or larger in diameter no retention to maximize regeneration. Specs: Include grouse spec and oak wilt specs for the harvest Monitoring, Natural Regen (Re-Inventory) Next Step Treatments: Acceptable aspen with a minor component of oak and hardwood which meet minimal stocking requirements. Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2024 61.2 4110 - Sugar Maple Sawtimber 111-Harvest Strip/Patch/Gap 411 - Northern No 61166020-Cut 88 Uneven-Association 140 Cut Hardwood Aged (Femelschlag) Prescription systematically establish regeneration gaps of 1-1.5 acres in size throughout the stand. Treat 20 percent of the stand roughly 10-12 gaps. Establish the skid trail to connect the gaps. Do not thin the stand between gaps. Cut all trees within the gap move brush to the outside Specs: Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable sugar maple and oak with a minor component of beech, red maple, basswood. Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2024 61166022-NF 18.9 3102 - Grass Nonstocked NonForestMqt Fruit Tree/Shrub 3204 - Mast No **Planting Producing Shrub** 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 Specs:

cover. May need to fertilize plantings and protect with wire cages or tubex.

Next Step Treatments:

<u>Acceptable</u> Regen:

Could augment herbaceous vegetation with low maintenance native spp via overseeding.

Comment:

Other

Site Condition

Traverse City Mgt. Unit

Report 3 -- Treatments

Compartment: 166 Year of Entry: 2025

S t а

n

d

Treatment Stand Size Stand BA **Treatment Treatment Cover Type** Age Habitat Method Density Objective Structure Name CoverType Age Range Type Cut

27 61166027-NF 4 0 3102 - Grass Nonstocked

NonForestMgt Fruit Tree/Shrub

Planting

3204 - Mast

Producing Shrub

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: Other

Could augment herbaceous vegetation with low maintenance native spp via overseeding.

Comment:

Site Condition

Proposed Start Date: 10/1 /2024

61166029-12-4130 - Aspen Poletimber 51-80 Harvest Clearcut with No 4 4 47 413 - Aspen Even-Aged 29

Retention

Prescription Cut all trees 2 inches or more in diameter. A large portion of this stand is on a very steep hill that hill side will serve as retention.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen with a minor component of oak and mixed hardwood

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2024

61166034-NF 3102 - Grass Nonstocked NonForestMgt Fruit Tree/Shrub 3204 - Mast No 5.4 Planting Producing Shrub

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 Specs:

cover. May need to fertilize plantings and protect with wire cages or tubex.

Next Step

Treatments:

Acceptable

Regen: <u>Other</u>

Could augment herbaceous vegetation with low maintenance native spp via overseeding.

Comment:

Site Condition

Traverse City Mat. Unit

Report 3 -- Treatments

Compartment: 166 Year of Entry: 2025

Hardwood

Cut (Femelschlag)

S t

а **Treatment** Size Stand BA **Treatment Treatment Cover Type** Acres Stand Age Habitat n Density CoverType Method Objective Structure Name Age Range Type Cut d 42 61166042-Cut 62.0 4110 - Sugar Maple Sawtimber 111-Harvest Strip/Patch/Gap 411 - Northern Even-Aged

Prescription systematically establish regeneration gaps of 1-1.5 acres in size throughout the stand. Treat 20 percent of the stand roughly 10-12 gaps. Establish the skid trail to connect the gaps. Do not thin the stand between gaps. Cut all trees within the gap move brush to the outside Specs:

140

perimeter. Work with the road commission to establish and cut the ROW.

Association

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable Sugar maple, aspen, oak with a minor component of beech, basswood, iron wood and cherry.

Well

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2024

47 61166047-16.1 3102 - Grass Nonstocked Burn Opening 31022 - Warm No Season Grass Burn

Prescription Burn at least once per entry cycle. The goal of prescribed burning is to restore and/or maintain a grassland/barrens ecosystem. The timing and frequency of the burns will be based on currents needs of restoration such as reducing woody encroachment or promoting grasses Specs: versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, planting native mast bearing shrubs or trees, burning, or removal of woody encroachment.

NonForestMat, Other - Specify Next Step

Treatments:

Acceptable Regen:

Remove some woody vegetation to support establishment of diverse grass stand. May need to seed additional native grasses and forbs first Other to establish a diverse grass stand that will score high enough to burn. Would FRD include merchantable timber in a nearby sale? Comment:

Site Condition

Proposed Start Date: 10/1 /2024

61166057-NF 6.6 3102 - Grass NonForestMgt Fruit Tree/Shrub 3204 - Mast No Nonstocked **Planting** Producing Shrub

Prescription Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and Specs: 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:

Other Could augment herbaceous vegetation with low maintenance native spp via overseeding.

Comment:

Site Condition

S		Tra	verse Ci	ty Mgt. Unit		Repor	rt 3 '	Treatments		Compartmen		DNR DNR
t a n d	Treatme Name		Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
64	4 6116606	34-Cut	15.2	42141 - Planted Mixed Pine, Mixed Deciduous	Sawtimbe Well	r 61	51-80	Harvest	Overstory Removal	4199 - Other Mixed Upland Deciduous	Even-Aged	No
				ches and larger to R naximize regeneration		existing	g stand o	verstory releasin	ig established rege	neration and prom	ote more. Tr	eat the
Ac Re Ot Cc	ext Step eatments: cceptable pegen: her omment: te Condition oposed Star	pines, ł	nardwood	,	ale							
67	7 6116606	7-Cut	7.9	42111 - Planted Red Pine, Mixed Deciduous	Sawtimbe Well	r 71	171- 200	Harvest	Crown Thinning	42111 - Planted Red Pine, Mixed Deciduous	Even-Aged	No
Sp Ne				nin the red pine strip sidual stems to beco								noting

Total Treatment Acreage Proposed: 349.5

Proposed Start Date: 10/1 /2024

Acceptable Regen:

Other Comment:

Site Condition

Traverse City Mgt. Unit

Paul Roell: Examiner

Compartment: 166
Year of Entry: 2025

Availa	ability for	Managemer	nt				
Total	Acres	Acres Avail	Acres		Domina	nt Site	Conditions
Acres	Available	With Condition	Not Available		2F	3J	
110	101	0	9	Aspen	8	1	
2	2	0	0	Bog	0		
5	5	0	0	Cedar			
107	107	0	0	Herbaceous Openland			
5	5	0	0	Lowland Shrub			
42	42	0	0	Mixed Upland Deciduous			
758	731	0	27	Northern Hardwood	26	1	
54	54	0	0	Planted Mixed Pines			
56	56	0	0	Red Pine			
76	76	0	0	Upland Mixed Forest			
133	133	0	0	White Pine			
1,347	1,311		36	Total Forested Acres	34	1	
	97%		3%	Relative Percent			-

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

Site No	e Dominant Site . Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	2F: Too steep	2	3D: Recreational / Scenic values	Unspecified	Unspecified	Unspecified
	Comments: Steep hill above MD	OT Lake Skegemog scenic c	verlook.	This is the approximate ar	ea that could not be cut as	part of Badger Pass Hard	woods.
3	Unavailable	2F: Too steep	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
- 12120	122 1:11:56 PM - Page 1	-4.2					DOI EV

Report 4 – Site Conditions

Compartment: 166

Traverse City Mgt. Unit

Paul Roell: Examiner Year of Entry: 2025

5	Unavailable	2F: Too steep	9	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	2F: Too steep	17	Unspecified	Unspecified	Unspecified	Unspecified
	Unavailable Comments:	2F: Too steep	17	Unspecified	Unspecified	Unspecified	Unspecified

5/2/2023 1:11:57 PM - Page 2 of 2

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: 166





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	Туре	Description	HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxyger stocked trout populations and those of other coldwater fish year to year. Coldwater streams in Michigan typically provi contributions of groundwater to their stream flows. Such st designated as trout resources by Fisheries Order 210.	n species (e.g., slimy sculpin) to persist from de these conditions due to substantial
HCVA	Dedicated Management Areas	Such areas are dedicated by the DNR Director for specific rules, as governed by Part 5, Department of Natural Resou 324.504). Section 38 of the Administrative Procedures Act the promulgation of rules. This is an active program, with c DNR.	urces, of the NREPA (MCL 324.502(2) and (MCL 24.238) provides for public requests for



Stand	Level 4 C	over Type		Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
1	6120 - Lov	wland Ceda	ar	Poletimb	er Well	4.7	90		N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Quaking Aspen	10	Log/Pole	10							
No	rthern White Cedar	65	Pole/Log	8	90						
	White Pine	10	Log/Pole	12							
	Red Maple	5	Pole/Log	8							
	Red Oak	5	Log/Pole	10							
	Paper Birch	5	Log/Pole	12							
2	3102	- Grass		Nonsto	ocked	27.1		Unspecified	No		few scattered white pine, aspen, cherry, sugar maple, red pine and apple trees WLD 4/6/23 - Little bluestem, skw, poverty grass, cladonia, cherry, rubus spp, goldenrod, apple. Little bluestem field would make a good burn. Next to M-72
3	3102	- Grass		Nonsto	ocked	2.7			Managed Op	pening	Electric line.
4	4199 - Other Mixe	d Upland D	Deciduous	Sawtimb	er Well	32.4	87	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Ironwood	3	Sapling/Pole				Beech	High	Variable	Sapling	
	Red Maple	10	Pole/Log	8		Ire	onwood	Medium	Variable	Sapling	
	Red Oak	40	Log/Pole	12	87	Bla	ck Cherry	Low	Variable	Sapling	
	Beech	20	Log/Pole	12		Sug	gar Maple	Low	Variable	Sapling	
	Sugar Maple	10	Pole/Log	8							
	Bigtooth Aspen	7	Log/Pole	12							
	Basswood	10	Log/Pole	10							
5	3102	- Grass		Nonsto	ocked	8.1			No		
6	42110 - Pla	nted Red P	Pine	Sawtimb	er Well	23.0	61	141-170	N/A		3rd row thinned with adjacent compartment in 2007. Sale #077-05.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Pine	100	Log/Pole	10	61		Beech	High	5 - 10 feet	Sapling	
7	3102	- Grass		Nonsto	ocked	2.5			No		
8	42110 - Pla			Sawtimb		25.3	62	171-200	N/A		Thinned in 2002. Sale #53-99.
	Canopy Species		Size Class		l Age		nopy Specie		Avg. Height	Size	
	Red Pine	100	Log/Pole	12	62		Beech	Medium	Variable	Sapling	



Stand	Level 4 C	over Type		Size Density	/	Acres	Stand Age B	A Range	Managed S	ite	General Comments
9	42100 - Plan	ited White F	Pine	Sawtimber W	ell	25.1	62	51-80	N/A		-Thinned in 2002. Sale #53-99 Row thinned in 2019, take 2 rows and
	Canopy Species	% Cover	Size Class	DBH Age	е	Sub-Ca	nopy Species	Density	Avg. Height	Size	leave 2. Quite a bit of maple in the understory.
	Quaking Aspen	2	Pole	8		Sug	ar Maple	Medium	Variable	Sapling	
	White Pine	98	Log/Pole	12 62		E	Beech	Medium	5 - 10 feet	Sapling	
						Oa	ık (spp.)	Low	< 5 feet	Sapling	
10	4130	- Aspen		Poletimber W	'ell	21.1	48	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH Age	е	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Black Cherry	5	Pole/Saplin	ig 6		Sug	ar Maple	Low	10 - 20 feet	Sapling	
	Red Maple	10	Pole/Log	8		Iro	onwood	Medium	Variable	Sapling	
	Bigtooth Aspen	85	Pole/Log	8 48							
11	4110 - Sugar M	Maple Asso	ciation	Sawtimber W	ell	134.3	89	81-110	N/A		Thinned in 2009. Sale #61-001-05-01 Townline Road Hardwood. Several
	Canopy Species	% Cover	Size Class	DBH Age	е	Sub-Ca	nopy Species	Density	Avg. Height	Size	large areas of blow down from storms throughout 2015-2018.
	Black Cherry	5	Pole/Log	8		Iro	onwood	High	Variable	Sapling	
	Sugar Maple	80	Log/Pole	12 89		Sug	ar Maple	Medium	Variable	Sapling	
	Basswood	5	Log/Pole	12		E	Beech	High	Variable	Sapling	
	Red Oak	5	Log	14				,			•
	Beech	5	Log/Pole	14							
12	622 - Lov	vland Shrub	o	Nonstocked	d	1.8	I	mmature	No		
13	622 - Lov	vland Shrub	0	Nonstocked	d	3.5			No		
14	4130	- Aspen		Poletimber W	'ell	10.5	50	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH Age	е		nopy Species	Density	Avg. Height	Size	
	White Pine	5	Pole/Log	8		Oa	ık (spp.)	Medium	5 - 10 feet	Sapling	
	Quaking Aspen	25	Pole/Log	8 45		E	Beech	Medium	5 - 10 feet	Sapling	
	Red Oak	10	Pole/Log	8							
	Red Maple	10	Pole	6							
	Bigtooth Aspen	50	Pole/Log	8 50							
15	3102	- Grass		Nonstocked	d	1.7			No		Steep hill

Stand	Level 4 C	over Type		Size Den	sity	Acres	Stand Age B	A Range	Managed S	ite	General Comments
17	4110 - Sugar N			Poletimbe	r Well	265.7	86	51-80	N/A		Stand was cut under 8 Wide Hardwoods 61-133-15-01 between 2017 and 2020. Stand has been opened up by recent harvest and all of the storm
	Canopy Species		Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	damage. Understory is full of iron wood and beech
	Red Oak	10	Log/XLog/Pol	e 12			Beech	Full	5 - 10 feet	Sapling	
	Ironwood	5	Pole/Sapling			Ire	onwood	Full	< 5 feet	Sapling	
	Sugar Maple	70	Pole/Log	8	86						
	Beech	5	Pole/Log	8							
	Basswood	10	Log/Pole	12							
19	4110 - Sugar N	/laple Asso	ciation S	Sawtimbe	r Well	99.8	86	51-80	N/A		Thinned as part of Badger Pass Hardwoods, 61-148-15, in 2015-2018.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Also suffered severe wind damage from storm in August 2015 after marking. Contract was modified to include damaged trees so BAs will be
	Sugar Maple	83	Log/Pole	10	86		Beech	High	Variable	Sapling	lower in some areas. Excluded one hillside south of scenic overlook
	Basswood	10	Log/Pole	12		Ire	onwood	High	Variable	Sapling	because it was too steep. Dense beech and ironwood regeneration
	Beech	2	Log/Pole	12						, ,	issues.
	Red Oak	5	XLog/Log	18							
20	4110 - Sugar N	/laple Asso	ciation S	Sawtimbe	r Well	61.2	88	111-140	N/A		Thinned in 2001. Sale #58-99.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Oak	5	Log/XLog	16		Sug	gar Maple	High	Variable	Sapling	
	Black Cherry	5	Pole/Log	8			Beech	Medium	Variable	Sapling	
	Beech	5	Log/Pole	10		Ire	onwood	Medium	Variable	Sapling	
	Sugar Maple	70	Log/Pole	12	88						
	Basswood	15	Log/Pole	12							
21	4130	- Aspen		Sapling	Well	18.7	13 I	mmature	N/A		Cut as Richardson Rd Aspen 61-075-05-01 some oak were left
	Canopy Species	% Cover	Size Class	DBH	Age						
	Beech	10	Sapling	2							
	Black Cherry	5	Sapling	2							
	Ironwood	10	Sapling	2							
	Bigtooth Aspen	70	Sapling	3	13						
	Red Oak	5	Pole/Sapling	6							
22	3102	- Grass		Nonstoo	ked	18.9			No		
23	4130	- Aspen	F	Poletimbe	r Well	16.9	32	51-80	N/A		Cut in 1990. Sale #12-89. Small finger of a hardwood on north tip.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	Should hold ten more years expand where possible into the adjacent hardwood
	Sugar Maple	3	Pole/Sapling	6		Bla	ck Cherry	Low	Variable	Sapling	Talanood
	Black Cherry	2	Sapling/Pole	4		Sug	gar Maple	Low	Variable	Sapling	
	Bigtooth Aspen	95	Pole	6	32						

Compartment: 166 Year of Entry: 2025 DNR DNR

Stand	I Level 4 C	over Type		Size De	nsity	Acres	Stand Age I	BA Range	Managed S	ite	General Comments
24	4130	- Aspen		Sapling	Well	6.1	22	Immature	N/A		Sale #44-99
	Canopy Species	% Cover	Size Class	DBH	Age						
	Sugar Maple	5	Sapling	3							
	Red Oak	10	Sapling	3							
	Bigtooth Aspen	60	Sapling	4	22						
	Beech	10	Sapling	2							
	Black Cherry	5	Sapling	3							
-	Ironwood	10	Sapling	2							
26	6225	5 - Bog		Nonsto	cked	2.0			No		
27	3102	- Grass		Nonsto	cked	4.0			No		
28	4199 - Other Mixe			Poletimbe		7.1	47	81-110	N/A		
	Canopy Species		Size Class	DBH	Age						
	Ironwood	25	Sapling	4							
	Red Oak	30	Pole/Log/Sa	-							
	Sugar Maple	40	Pole/Sapling	g 6	47						
	Bigtooth Aspen	5	Pole	8							
29	4130	- Aspen	1	Poletimbe	er Well	9.5	47	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Black Cherry	10	Pole/Sapling	g 6			Beech	Low	Variable	Sapling	
	Red Oak	10	Pole/Log	8				'			
	Bigtooth Aspen	75	Pole	8	47						
	Ironwood	5	Sapling	4							
30	3103 - F	ubus-Fern		Nonsto	cked	1.1			No		
33	3102	- Grass		Nonsto	cked	4.6			No		
34	3102	- Grass		Nonsto	cked	5.4			No		
35	4110 - Sugar N	laple Asso	ciation	Poletimbe	er Well	23.2	90	51-80	N/A		Stand thinned in 2020 as a part of '8 Wide Hardwoods' Some rolling to
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	steep terrain. Pretty good quality sugar maple. Concerns of beech and ironwood taking over the understory.
	Red Maple	3	Log	12		Ir	onwood	Medium	Variable	Sapling	, J
	Sugar Maple	90	Pole/Log	8	90		Beech	Medium	Variable	Sapling	
	Basswood	7	Log/Pole	14							.



Stand	d Level 4 C	;	Size Density		Acres	Stand Age B	A Range	Managed Site		General Comments	
37	4130	- Aspen		Sapling Well		4.0	21 I	mmature	N/A		Sale #44-99
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Bigtooth Aspen	100	Sapling/Pole	4	21	R	ed Oak	Low	5 - 10 feet	Sapling	
						I	Beech	Low	5 - 10 feet	Sapling	
						Sug	gar Maple	Low	5 - 10 feet	Sapling	
38	4110 - Sugar N	Maple Asso	ciation S	awtimb	er Well	2.6	70	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Sugar Maple	83	Log/Pole	14	70	Sug	gar Maple	High	Variable	Sapling	
	Basswood	10	Log/Pole	16		Ire	onwood	Medium	Variable	Sapling	
	Red Oak	5	XLog/Log	18		l	Beech	Medium	Variable	Sapling	
	Beech	2	Log/Pole	12							
39	4130	- Aspen	Р	oletimb	er Well	5.6	45	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Red Oak	5	Log/Pole	12		l	Beech	Low	Variable	Sapling	
	Beech	5	Sapling	3							
	Bigtooth Aspen	70	Pole/Log	8	45						
	Ironwood	10	Sapling	3							
	Black Cherry	10	Sapling	3							
40	42100 - Planted White Pine			Sawtimber Well		45.1	61	51-80	N/A		- Stand thinned for a second time 2019. Used a cut 2 rows leave 2 pattern. Some maple regen present. The cut rows are mostly raspberry
	Canopy Species		Size Class		I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	and beech hopefully more desirable regeneration starts to establish itself
	White Pine	100	Log/Pole	10	61		Beech	Medium	Variable	Sapling	look at in ten years might have to restart to red pine
						Oa	ak (spp.)	Low	Variable	Sapling	
						Sug	gar Maple	Low	Variable	Sapling	
41	4130	- Aspen			er Well	2.9	34	81-110	N/A		
	Canopy Species		Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Bigtooth Aspen	75	Pole	7	34		Beech	Low	< 5 feet	Sapling	
	Red Oak	5	Pole	6		Ire	onwood	High	10 - 20 feet	Sapling	
	Black Cherry	5	Sapling	3							
	White Ash	2	Pole	6							
	Ironwood	13	Pole/Sapling	5							



Stand	Level 4 C	over Type		Size Density		Acres	Stand Age	BA Range	Managed Site		General Comments
42	4110 - Sugar Maple Association		Sawtimber Well		62.0	86	111-140	N/A		Thinned in 91 and then Thinned in 2010. Sale #030-09.	
	Canopy Species	% Cover	Size Class	DBH A	Age	e Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Sugar Maple	75	Log/Pole	10	86	Iro	onwood	High	5 - 10 feet	Sapling	
	Red Oak	5	Log/Pole	12		E	Beech	High	5 - 10 feet	Sapling	
	Basswood	10	Log/Pole	12							_
	Black Cherry	5	Pole/Log	9							
	Beech	5	Log	12							
44	4112 - Maple, Beed	ch, Cherry A	ssociation	Sapling Me	edium	48.3	13	Immature	N/A		- First thinning in 2009. Sale #076-05 Overstory removal in 2021,
	Canopy Species	% Cover	Size Class	DBH /	Age						loggers did a pretty good job saving the maple understory Hilly terrain.
	Black Cherry	25	Sapling	1	3						terrain.
	Ironwood	20	Sapling	1							
	Sugar Maple	35	Sapling	1	13						
	Beech	20	Sapling	1							
45	4139 - Aspen, Mixed Deciduous			Sapling V	Vell	14.3	3	Immature	N/A		Stand had heavy wind damage from a wind storm in 2015. Stand was
	Canopy Species	% Cover	Size Class	DBH A	Age						final harvested in 2020 '8 wide Hardwoods'. We tried to save as much of the advanced maple regen as possible.
	Red Maple	15	Sapling	2							the advanced maple regen as possible.
	Sugar Maple	35	Sapling	2	18						
	Bigtooth Aspen	45	Sapling	1	3						
	Black Cherry	5	Sapling	2							
47	3102	- Grass		Nonstocl	ked	16.1			No		
48	42100 - Plar	nted White F	Pine	Sawtimber	Well	62.3	61	51-80	N/A		- Stand was thinned for a second time in 2019. Used a cut 2 row leave 2
	Canopy Species % Cover Size Class		Size Class	s DBH Age		Sub-Ca	nopy Species	Density	Avg. Height	Size	pattern. Quite a bit of maple in the understory. Fairly hilly terrain.
	White Pine	100	Log/Pole		61		ar Maple	Medium	Variable	Sapling	
						-	Beech	High	Variable	Sapling	
						R	ed Oak	Trace	< 5 feet	Sapling	
50	4110 - Sugar N	/laple Asso	ciation	Sawtimber	· Well	22.9	84	81-110	N/A		Thinned in 2011. Sale #030-09.
	Canopy Species % Cover Size Clas		Size Class	s DBH Age		Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Sugar Maple	85	Log/Pole		84		Beech	High	Variable	Sapling	
	Basswood	10	Log/Pole			Iro	onwood	Medium	5 - 10 feet		
	Beech	5	Log	12						1 0	
54	3102	- Grass		Nonstocl	ked	3.5		Immature	No		
<u></u>	3102	- Grass		Nonstocl	ked	6.6			No		



Stand	Level 4 Co	over Type		Size Density	Acres	Stand Age	BA Range	Managed Site		General Comments	
58	3102	- Grass		Nonstocked	1.9	l	Unspecified	No		Dry hole well site. Abandon fall 2001.	
59	42141 - Planted Deci	Mixed Pine	, Mixed	Sapling Well	38.9	28	Immature	N/A		Red pine was planted in 1994. Jack pine seeded in and dominates the stand.	
	Canopy Species	% Cover	Size Class	DBH Age							
	Red Oak	5	Sapling/Pole	. 4							
	Jack Pine	45	Sapling/Pole	4 28							
	Black Cherry	15	Sapling	3							
	Black Cherry	5	Sapling/Pole	4							
	Red Pine	30	Sapling	3							
61	4199 - Other Mixe	4199 - Other Mixed Upland Deciduous		Sawtimber Well	2.2	81	111-140	N/A		Along M-72.	
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Black Cherry	2	Pole	8	Sug	ar Maple	High	Variable	Sapling		
	Sugar Maple	3	XLog/Log	18				I			
	Black Locust	95	Log/Pole	12 81							
62	4319 - Mixed Upland Forest			Sapling Well	76.0	14	Immature	N/A		cut in 2006-2007 Townline Red Pine and Planted in 2008 & 2010.	
	Canopy Species	% Cover	Size Class	DBH Age							
	Jack Pine	5	Sapling	1							
	Ironwood	5	Sapling	1							
	Sugar Maple	5	Sapling	1							
	Beech	30	Sapling	1							
	Black Cherry	10	Sapling	1							
	Red Pine	45	Sapling	2 14							
64	42141 - Planted Deci	Mixed Pine iduous	, Mixed	Sawtimber Well	15.2	61	51-80	N/A		- Very hilly terrain Stand was thinned for a second time in 2019. Used a cut 2 rows leave	
		% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	2 pattern.	
	Canopy Species				Suc	ar Maple	Medium	Variable	Sapling		
	Black Cherry	15	Pole	8	Jug	,aap.o					
		15 5	Pole XLog/Log	18		Beech	Low	< 5 feet	Sapling		
	Black Cherry				I	•	Low	< 5 feet Variable	Sapling Sapling		
	Black Cherry Sugar Maple	5	XLog/Log	18	I	Beech					



Stand	Level 4 Cover Type			Size De	nsity	Acres	Stand Age E	BA Range	Managed Site		General Comments
67	42111 - Planted Red Pine, Mixed Deciduous		Sawtimber Well		7.9	71	171-200	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Jack Pine	10	Pole/Log	8			Beech	Medium	Variable	Sapling	
	Sugar Maple	5	Log/Pole	10		Su	gar Maple	Medium	Variable	Sapling	
	Red Pine	65	Log/Pole	12	71						•
	Black Locust	20	Pole/Log	8							
69	4110 - Sugar Maple Association		Poletimb	er Well	29.8	86	81-110	N/A		Thinned with Badger Pass, 61-148-15-01. Spring 2016. Significant wind	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	damage from storm in August 2015.
	Sugar Maple	80	Pole/Log	8	86	Ir	onwood	High	Variable	Sapling	
	Basswood	10	Pole/Log	8			Beech	High	Variable	Sapling	
	Beech	5	Pole/Log	8							•
	Black Cherry	5	Pole/Log	8							
70	4112 - Maple, Beed	h, Cherry A	Association	Sapling		8.0	15	Immature	N/A		Red pine was removed in 2007, Sale#18-05.
	Canopy Species	% Cover	Size Class	DBH	Age						
	Black Cherry	20	Sapling	2							
	Beech	30	Sapling	3							
	Ironwood	15	Sapling	1							
	Sugar Maple	35	Sapling/Pol	e 2	15						