

### **Compartment Review Presentation**

**Traverse City Forest Management Unit** 

Compartment 61022 Entry Year 2024 Acreage: 1,647

Management Area: Benzie Outwash

County Benzie

Stand Examiner: Craig Allen

**Legal Description:** 

Colfax Township T25N- R13W; Sections 4, 5, 6, 7, 8, 9, 16, 17, 18 in Benzie County.

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

Compartment 22 is a part of the Benzie Outwash management area (MA). Vegetation management in this MA will provide forest products; maintain or enhance wildlife habitat; protect areas of unique character, including the Betsie River which is a designated natural river; and threatened, endangered and special concern species and provide for forest-based recreational uses and Native American non-commercial uses of forest products. Timber management for the next 10 years includes improving the age-class distribution of aspen and red pine. Northern hardwoods management includes continued selective or regeneration harvesting of northern hardwoods to achieve an uneven age-class structure or improve timber quality. Wildlife management objectives include increasing the structural complexity of northern hardwood communities for interior forest species and perpetuating early-successional communities for species adapted to young forests. Expected trends in this 10-year planning period are increased recreational pressure on recreational trails and introduced insect and disease concerns, especially emerald ash borer and beech bark disease.

#### Soil and topography:

The topography is mostly level with some rolling hills in sections 4, 5, and 8. the upland soils consist of Leelanau, Emmet, and Kalkaska. The lowlands consist of Roscommon, AuGres, and Coswell soils.

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

The compartment is broken into four main blocks of State land. The surrounding private lands contain some residences, but the land is mostly undeveloped. The land surrounding the compartment is mostly solid blocks of State ownership, consisting of upland types except to the south where there are some areas of lowland hardwoods.

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

The Betsie River is a "Michigan Natural River" that flows through sections 9, 16 and 17 of this compartment.

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

There are no known Archeological/cultural sites within the compartment, although there are a few old homestead sites in this area.

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

Protecting the vegetative cover on the banks of the Betsie River, and the encouragement of long lived species near the river will be a priority. Visual management will be important along snowmobile trails.

#### **Watershed and Fisheries Considerations:**

The Betsie River flows through Compartment 22. The Betsie River is a Designated Trout Stream, and is a designated "Natural River". This river has excellent fishing for chinook salmon, coho salmon, steelhead, and brown trout.

#### Wildlife Habitat Considerations:

This compartment lies entirely within a broad, flat outwash plain which covers almost ½ of Benzie County. This is a particularly wildfire prone and fire driven landscape, occupied in presettlement times by jack pine forests, oak and pine barrens, mixed pine forests, and beech-maple in more successionally advanced areas. As there are few natural fire breaks (ridges, floodplains) upwind, this compartment must have been particularly subject to relatively frequent, intense burns, especially north of the Betsie River. An exception is the small moraine area in the northeast corner of the compartment, which probably was and still is dominated by northern hardwood forest.

Consequently, wildlife adapted to this dynamic landscape will benefit from maintenance of early successional forest via timber harvesting which mimics the effects of wildlife. Harvesting small to medium stands of jack pine and aspen, and small patches within hardwood stands, will produce suitable habitat for chestnut-sided warbler, ruffed grouse, brown thrasher, deer, red fox, red-tailed hawk, and brown snake. Such cutting should incorporate a variety of leave trees (especially adjacent to wetlands), snags, and down logs for within-stand habitat diversity. Grass and brush openings should be maintained, preferably with fire, for species such as badger, wild turkey, eastern bluebird, meadow vole, cedar waxwing, American kestrel, and green snake. Larger openings in section 16 could be rotationally burned or enhanced by

reducing the bracken and planting herbaceous ground cover.

The hardwood stands on the small moraine in section 4 should be maintained in hardwoods. Treatments should be planned to maintain tree species and size diversity, cavity trees, vertical structure, and a steady supply of down logs. Species such as wood frog, white-breasted nuthatch, red-bellied woodpecker, and gray squirrel will benefit. There is also a history of nesting raptors in these hardwood ridges.

Poorly drained areas just southeast of the moraine have been harvested in small blocks in the past to create grouse habitat. Some of these have not regenerated well. Cuttings in the lowland deciduous forest should be limited to small patch cuts mimicking wind throws.

Red pine and spruce plantations throughout the compartment can be improved for wildlife through thinning, which will allow more species and structural diversity. Forest along the Betsie River should be managed for long lived species including a conifer component to provide habitat for riparian wildlife and protect the water quality and scenic values along the river.

Compartment 22 in section 16 east of Long Road is part the Little Betsie River Grouse Enhanced Management Site (GEMS). GEMS are designated areas that are intensively managed for upland gamebirds like grouse and woodcock, predominately walk-in access, and located across the northern Lower and Upper Peninsulas. The areas are called GEMS - Grouse Enhanced Management System, and are managed for young forests, primarily aspen. Primary management is for aspen with a shortened rotation age (40 years versus 60 years). Most old logging roads are gated and maintained to provide well managed grouse habitat with walk-in access for hunters.

#### Mineral Resource and Development Concerns and/or Restrictions

The nearest active sand/gravel pit is just over one mile from the compartment. Most of the active aggregate mining in this area is on the upland moraine deposits to the northwest, but there is some good potential for sand and gravel from the outwash deposits within the compartment. There is good potential for natural gas production from the Antrim Shale in this area, and a number of wells have been completed in the area. However, the wells were awaiting pipeline infrastructure to go into production, and due to the decline in gas prices in recent years, these wells were deemed uneconomical and pipelines were never constructed. The wells were shut in and have since been orphaned. If gas prices were to rise significantly, it is possible these wells could become economical again. There is no other known potential for oil & gas beneath the compartment. There is no known metallic mineral potential in this part of the state. (Peter Rose, DNR Geologist, 2/14/22).

#### **Vehicle Access:**

There are good gravel and paved county roads throughout this compartment, offering very good and easy access to State lands. There are also many forest "2-track" roads in various areas of the compartment that are in good condition and are used for public and land management accessibility.

#### **Survey Needs:**

There may be survey needs in section 4 to help establish private corners for timber sale operations.

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

The state snowmobile trail meanders through section 16. The Betsie River provides fishing and kayaking opportunities. Hunting, trapping, and dispersed camping are popular recreational activities throughout the compartment.

#### **Fire Protection:**

This area has wildfire protection through coordinated efforts of DNR and local Fire Departments.

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

The following reports from the Inventory are attached:

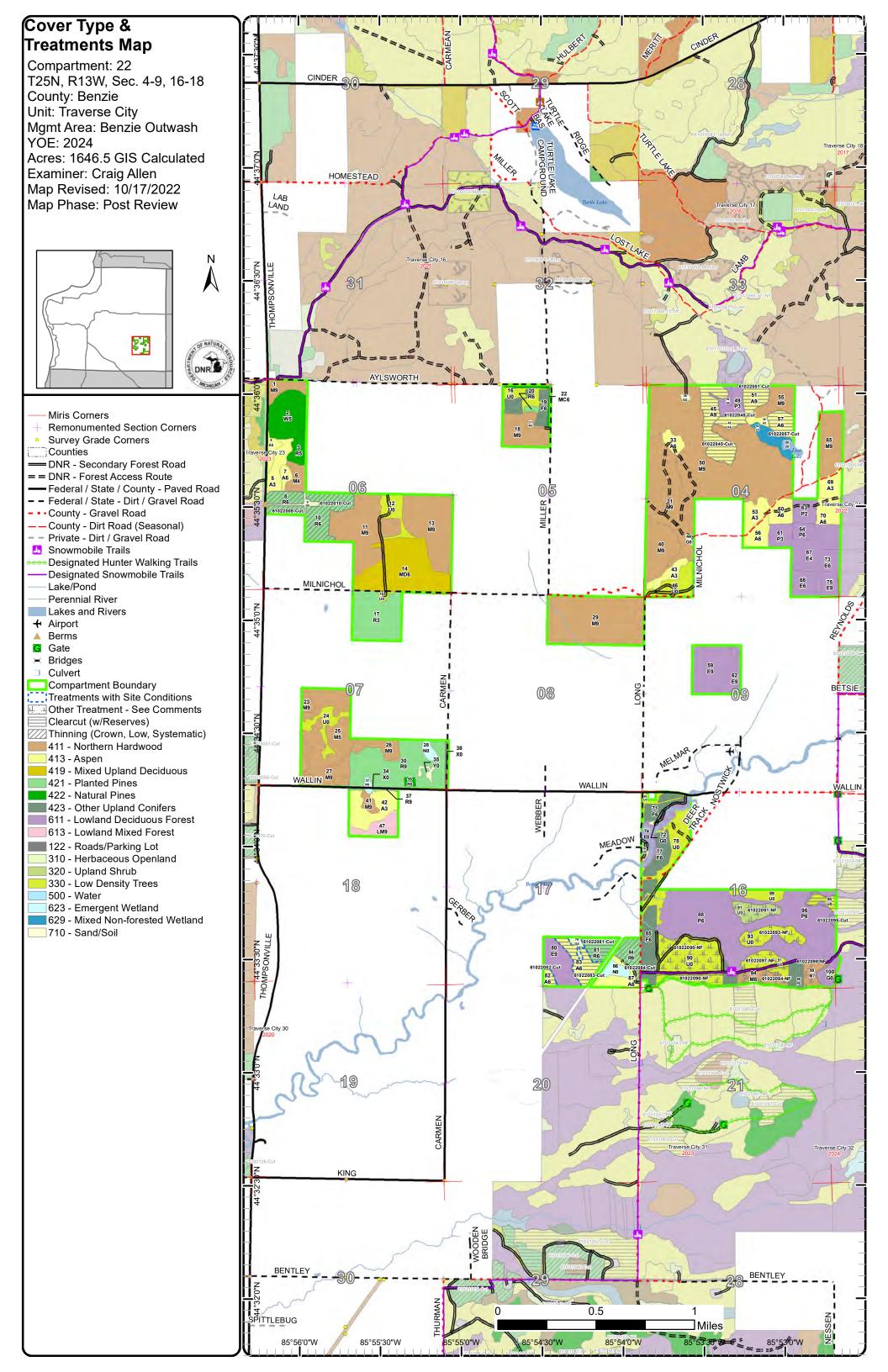
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

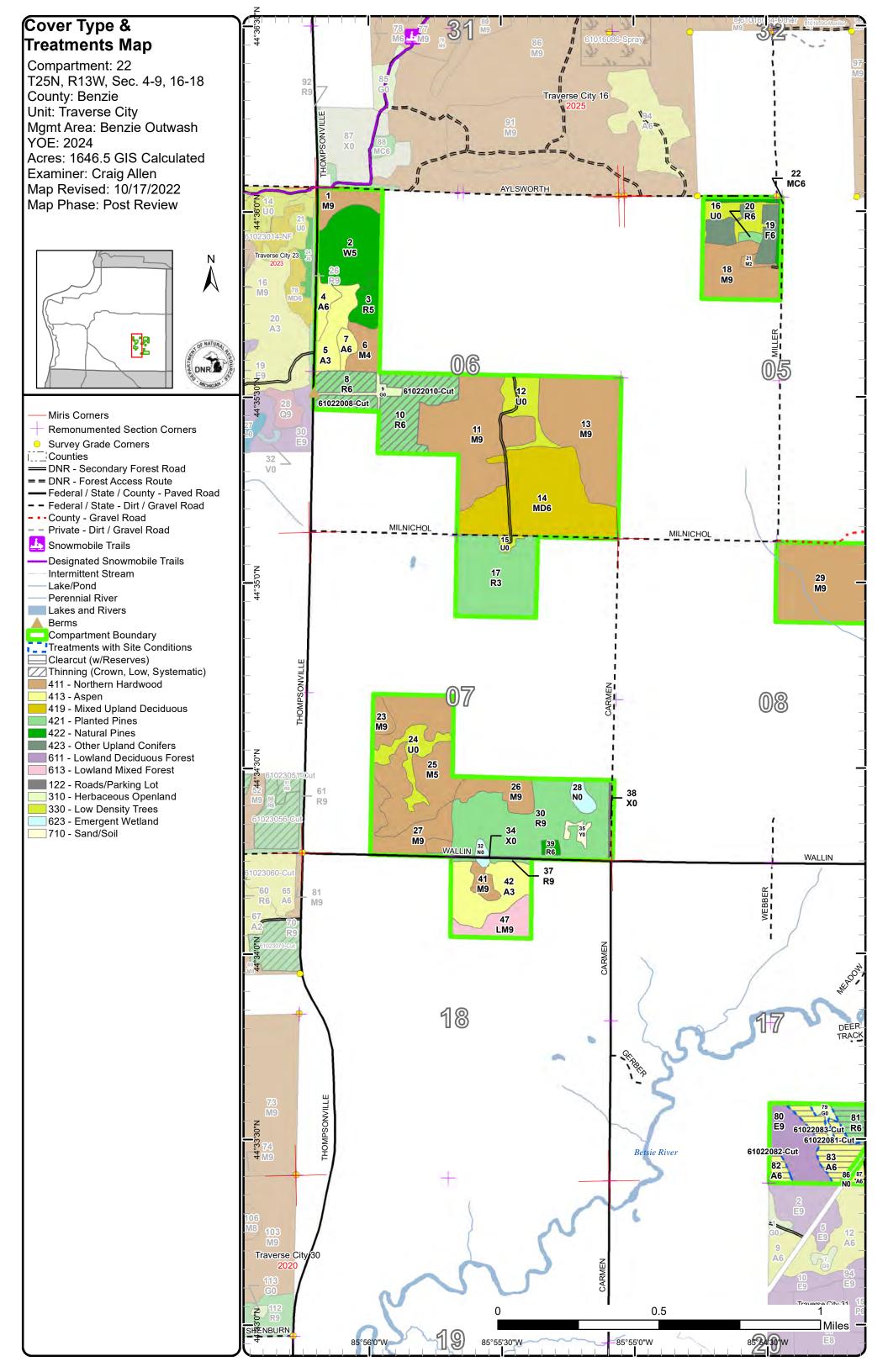
The following information is displayed, where pertinent, on the attached compartment maps:

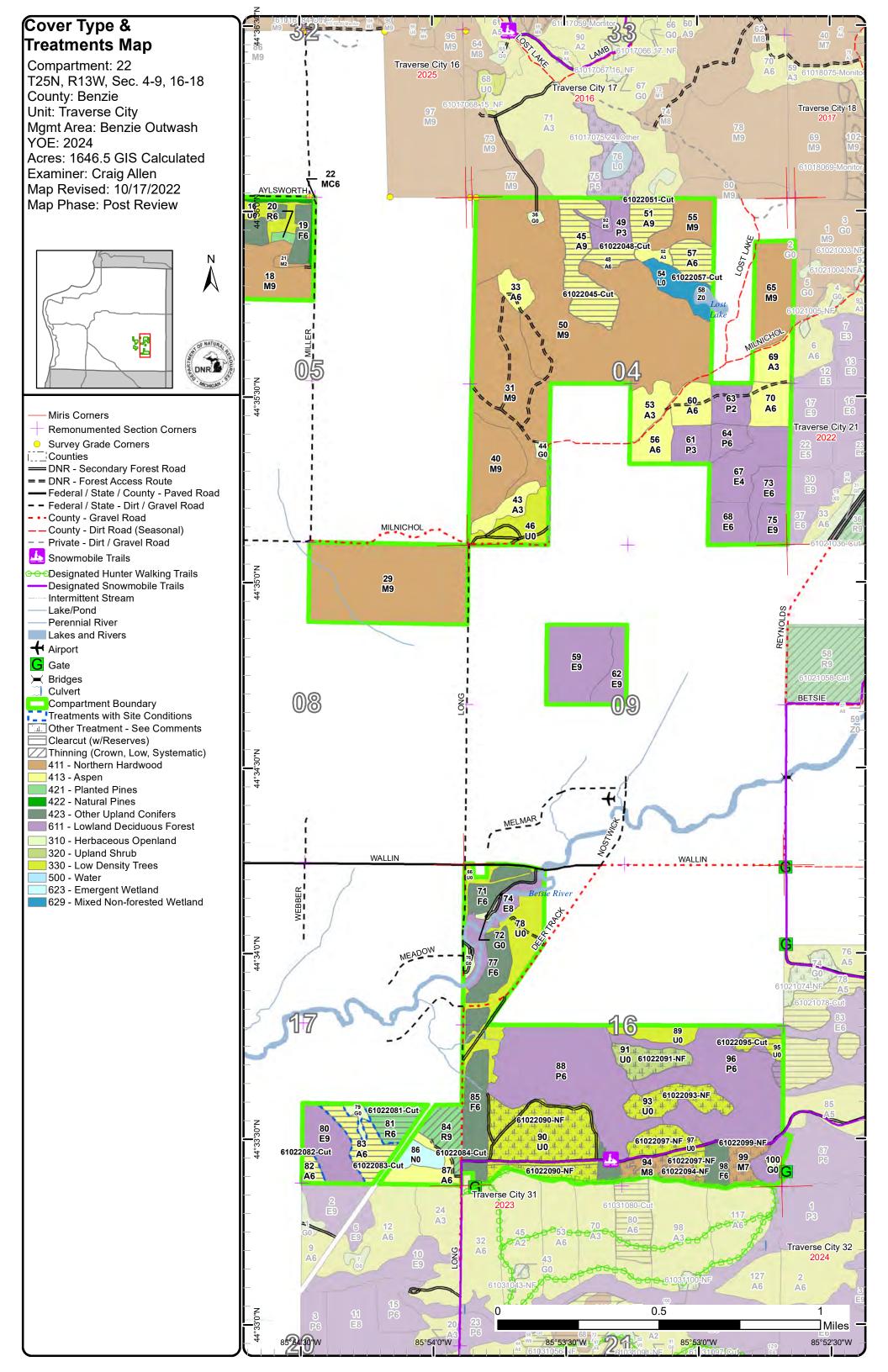
Base feature information, stand boundaries, cover types, and numbers

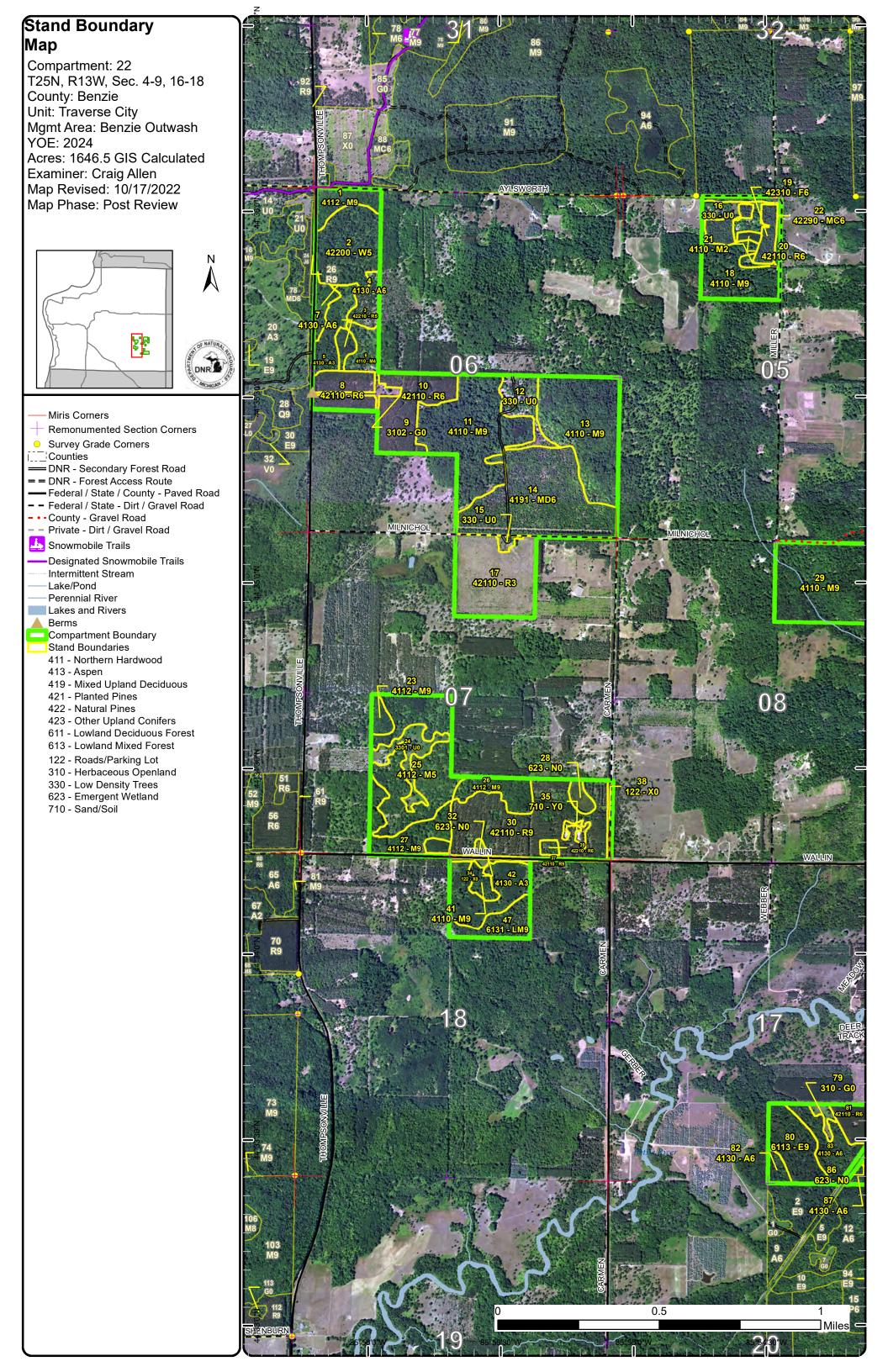
Proposed treatments
Site condition boundaries

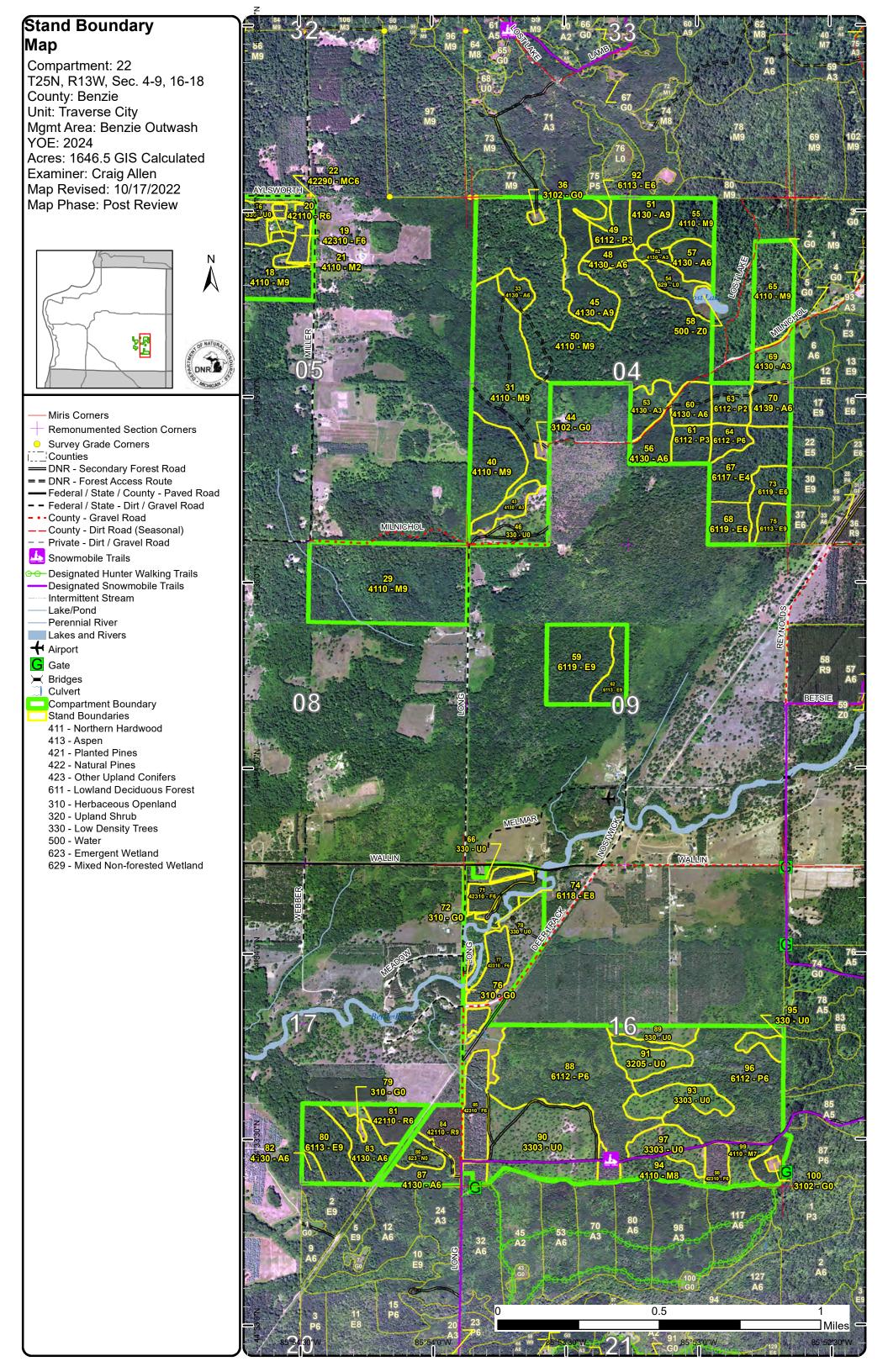
Details on the road access system

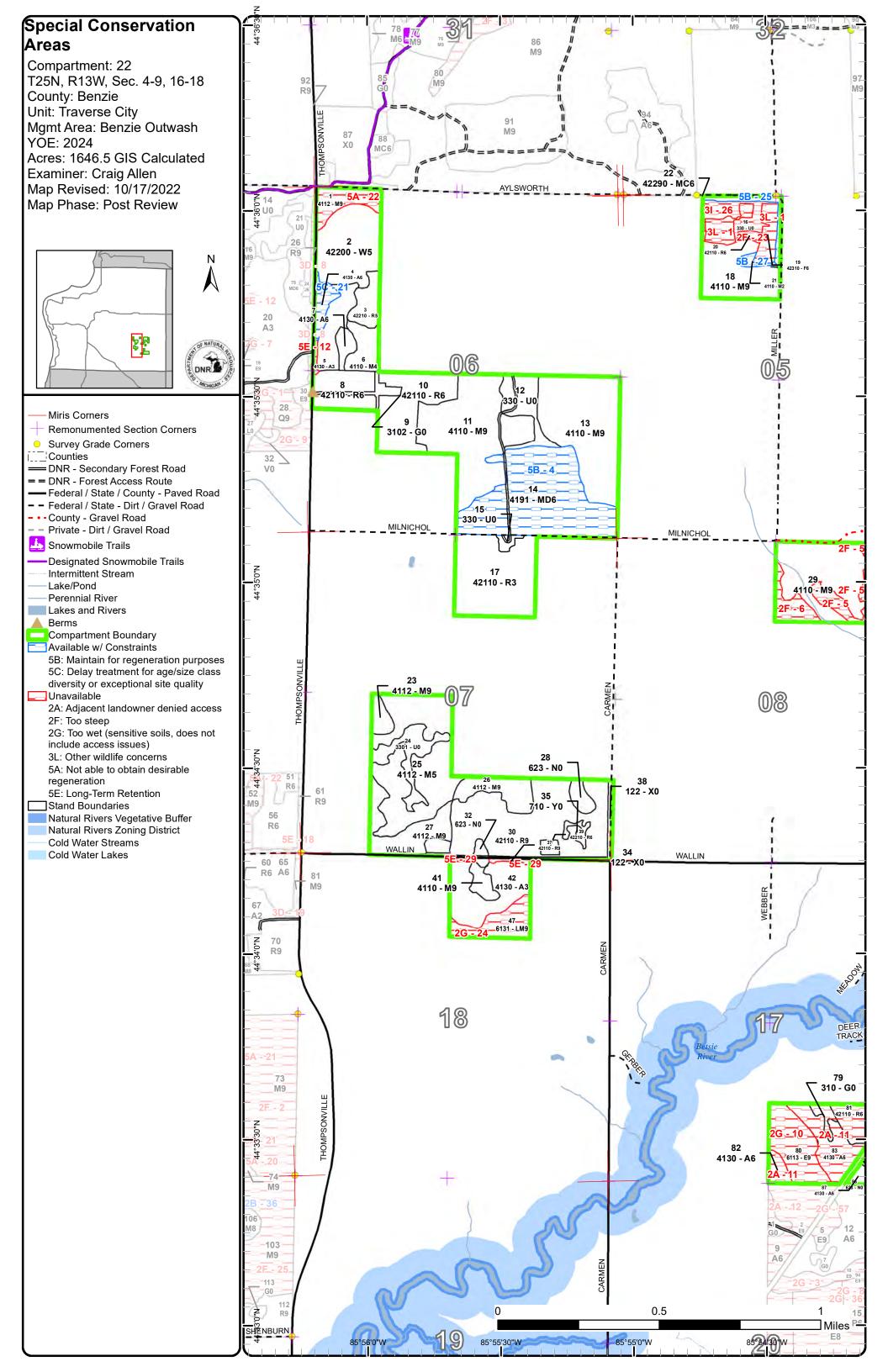


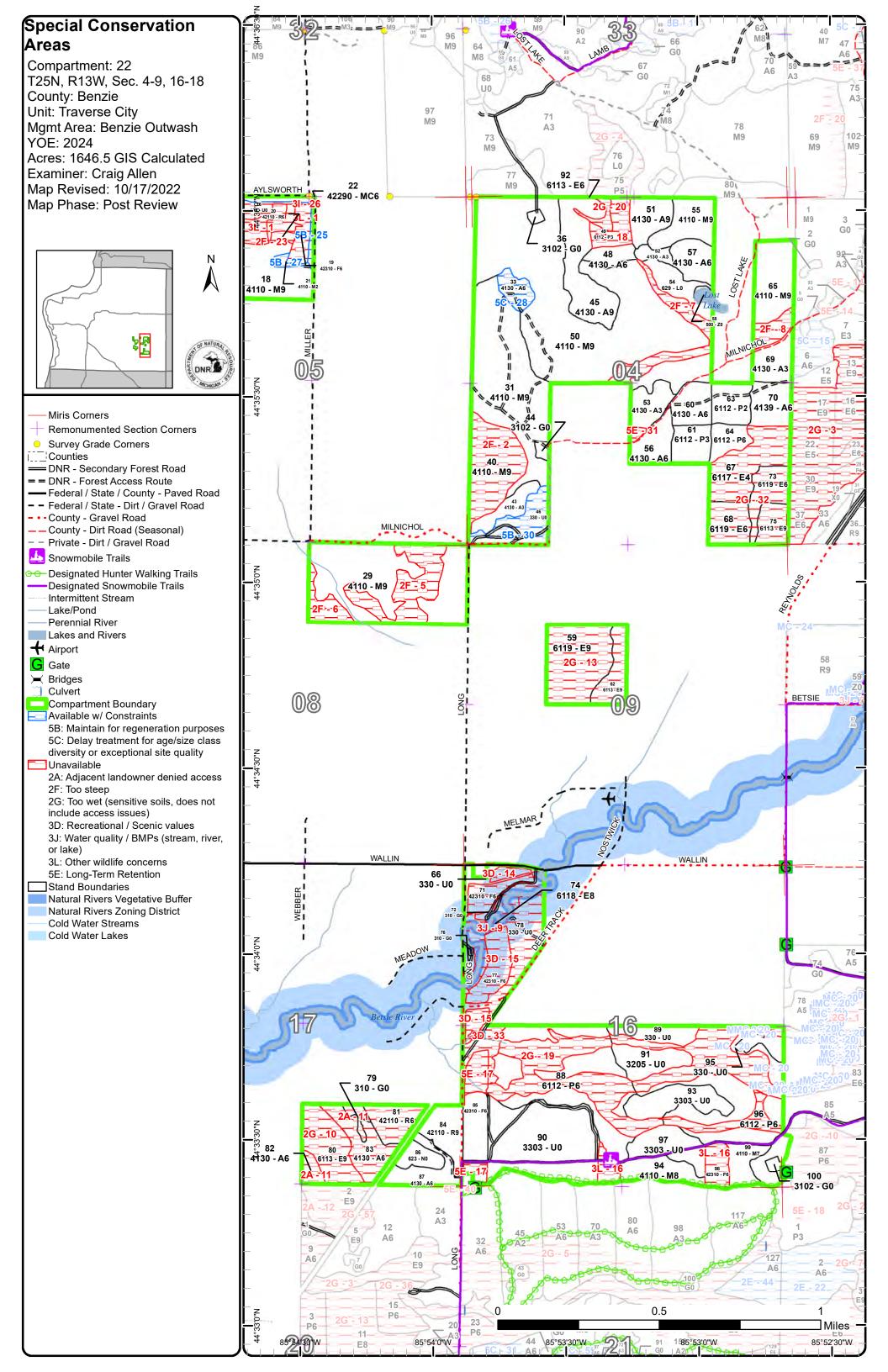












Compartment 22 Year of Entry 2024

# Traverse City Mgt. Unit Craig Allen: Examiner



#### Age Class

	¥oc	Kor /	\$ \ <u>\$</u>	Ø / &	g kg	3 / 12		3/8	<b>8</b> / R	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Za, Za,		R S	Si Si	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$ Jue	A A A A A A A A A A A A A A A A A A A
Aspen	0	10	51	3	14	56	32	9	14	0	0	0	0	0	0	0	0	0	189
Herbaceous Openland	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Low-Density Trees	171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	171
Lowland Aspen/Balsam Poplar	0	0	0	27	73	82	0	0	0	0	0	0	0	0	0	0	0	0	182
Lowland Deciduous	0	0	0	0	21	0	3	0	0	62	14	26	0	0	0	0	0	0	125
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	12
Lowland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Marsh	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	60
Natural Mixed Pines	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
Northern Hardwood	0	0	0	0	58	0	0	0	18	10	171	261	75	0	0	0	0	0	593
Red Pine	0	0	39	0	2	7	1	61	57	0	0	0	0	0	0	0	0	0	167
Sand, Soil	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Upland Shrub	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Upland Spruce/Fir	0	0	0	0	0	0	12	51	0	0	0	0	0	0	0	0	0	0	63
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
White Pine	0	0	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	28
Total	226	10	90	30	168	145	48	125	177	72	185	299	75	0	0	0	0	0	1649



# **Report 2 - Treatment Summary**

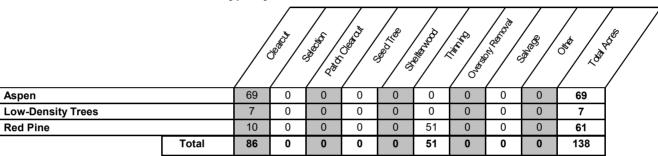
# Traverse City Mgt. Unit Year of Entry: 2024

Acres of Harvest

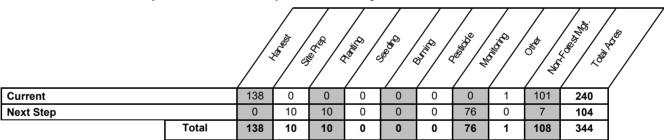
Compartment 22
Total Compartment Acres: 1,647

Commercial Harvest - 110 Harvests with Site Condition - 28 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: 22 Year of Entry: 2024 OF NATURAL OF NATURA OF

S t a n

d

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

#### **Approved Treatments:**

8 61022008-Cut 13.8 42110 - Planted Poletimber 66 141- Harvest Crown Thinning 4211 - Planted Even-Aged No Red Pine Well 170 Red Pine

Prescription Specs: Lightly thin stand by select marking individual trees to harvest. Goal for residual basal area of 120 to no less than 110 (which is less than 1/3 of current basal area). Primarily focus on marking poor form, suppressed, defect trees then mark others allowing to thin to target BA and keep even spacing throughout plantation as much as possible.

Next Step Treatments:

Acceptable

Regen: Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2023

10 61022010-Cut 25.9 42110 - Planted Poletimber 66 141- Harvest Crown Thinning 4211 - Planted Even-Aged No Red Pine Well 170 Red Pine

Prescription Specs: Lightly thin stand by select marking individual trees to harvest. Goal for residual basal area of 120 to no less than 110 (which is less than 1/3 of current basal area). Primarily focus on marking poor form, suppressed, defect trees then mark others allowing to thin to target BA and keep even spacing throughout plantation as much as possible.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

45 61022045-Cut 25.9 4130 - Aspen Sawtimber 50 Unspec Harvest Clearcut with 413 - Aspen Even-Aged No Well ified Retention

<u>Prescription</u> Harvest all aspen, red maple, cherry, beech, ironwood to regenerate and expand aspen. Leave any oak, sugar maple and conifers. Mark to <u>Specs:</u> leave any large unique maple or other tree for diversity. Possible leave retention around low, wet area(s).

Use drumming log spec in sale.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, maple, cherry,

Regen:

Other Road leading in to stand will need repair due to many mudholes. Re-install road block that was breached near opening (stand #36) after

Comment: harvest complete.

Site Condition

Compartment: 22

Year of Entry: 2024

S t

а Treatment Acres Stand Size Stand RΔ **Treatment** Treatment **Cover Type** Age Habitat n Method Objective Name CoverType Density Age Range Type Structure Cut d 61022048-Cut 48 5 4 4130 - Aspen Poletimber 41 Unspec Harvest Clearcut with 413 - Aspen Even-Aged Nο Retention Well ified

Prescription Cut all hardwoods to regen and expand aspen. Leave all oak, sugar maple and conifers. Mark some scattered large red maple to leave (if available). No other retention due to small size. Apply drumming log spec to sale. Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

**Treatments:** 

Acceptable aspen, red maple, cherry, sugar maple

Regen: Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2023

61022051-Cut 10.2 4130 - Aspen Sawtimber Unspec Harvest Clearcut with 413 - Aspen Even-Aged No Well ified Retention

Prescription Harvest all hardwoods to regen and expand aspen. Leave any oak and conifers. possible mark a few leave maple if big and unique.

Specs: Otherwise, no other retention due to small size. Apply drumming log spec to sale.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, maple, cherry, oak,

Regen:

**Other** Road leading in to stand will need repair due to many mudholes

Comment:

Site Condition

Proposed Start Date: 10/1 /2023

61022057-Cut 9.8 4130 - Aspen Poletimber 41 Unspec Harvest Clearcut with 413 - Aspen Even-Aged No ified Well Retention

Prescription Harvest all hardwoods to regen and expand aspen. Leave all conifers and oak. Mark some leave trees of large/unique maple for diversity. Also, possible retention can be left along edge of L-type stand 54 to south. Apply drumming log spec to sale. Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

**Treatments:** 

Acceptable aspen, maple, cherry, oak.

Regen:

Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2023

61022081-Cut 42110 - Planted 4211 - Planted Poletimber 171-10.1 66 Harvest Clearcut Even-Aged Nο Red Pine Well 200 Red Pine

Prescription Due to lack of access pine stand has not been able to be thinned at proper intervals to maintain healthy stand. So now need to Final harvest

all red pine. Trench and Re-plant to red pine. Specs:

Next Step **Treatments:** 

SitePrep, Trenching; Planting, Initial Plant

Acceptable red pine.

Regen:

If gain access to stand then can apply treatements.

<u>Other</u> Comment:

Site Condition Denied Access Proposed Start Date: 10/1 /2023

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 22 s Year of Entry: 2024 t а Treatment Size RΔ **Treatment Treatment Cover Type** Acres Stand Stand Age Habitat n Name Method Objective Structure CoverType Density Age Range Type Cut d 61022082-Cut Poletimber 82 3.5 4130 - Aspen 62 Unspec Harvest Clearcut 413 - Aspen Even-Aged Nο Well ified Prescription Harvest all hardwoods to regenerate and expand aspen. No retention due to small size of stand. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step Treatments: Acceptable aspen, maple, cherry. oak Regen: Other Can harvest if ever get access to stand. Comment: Site Condition Denied Access Proposed Start Date: 10/1 /2023 61022083-Cut 14.2 4130 - Aspen Poletimber 72 Unspec Harvest Clearcut with 413 - Aspen Even-Aged No Well ified Retention Prescription Harvest all hardwoods to regenerate and expand aspen. Retain any oak, sugar maple or conifer. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step Treatments: Acceptable aspen, maple, cherry, oak Regen: **Other** Harvest if get access Comment: Site Condition Denied Access Proposed Start Date: 10/1 /2023

84 61022084-Cut 11.6 42110 - Planted Sawtimber 66 141- Harvest Crown Thinning 4211 - Planted Even-Aged No Red Pine Well 170 Red Pine

Prescription Specs: Lightly thin stand by select marking individual trees to harvest. Goal for residual basal area of 120 to no less than 110 (which is less than 1/3 of current basal area). Primarily focus on marking poor form, suppressed, defect trees then mark others allowing to thin to target BA and keep even spacing throughout plantation as much as possible.

Next Step

Treatments:

<u>Acceptable</u>

Regen:

Other

Comment:

Site Condition

Traverse City Mgt. Unit

Report 3 -- Treatments

Compartment: 22 Year of Entry: 2024

t а Treatment Stand RΔ Treatment **Cover Type** Acres Stand Size Treatment Age Habitat n Method Objective Name CoverType Density Age Range Type Structure Cut d

NonForestMgt Fruit Tree/Shrub 61022090-NE 3204 - Mast 90 47.1 3303 - Mixed Low Nonstocked Unspec Nο Producing Shrub **Density Trees** ified **Planting** 

Specs:

S

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. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Could also work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. Concentrate some of the shrub and tree planting along the north side of the hunting trail and both sides of the snowmobile trail for a living hedge, to prevent vehicle access into the GEMS, and snow retention on the snowmobile trail.

Next Step **Treatments:** 

<u>Acceptable</u> Regen:

**Other** Comment:

Site Condition

Proposed Start Date: 10/1 /2023

61022091-NF 11.5 3205 - Mixed Nonstocked Unspec NonForestMqt Fruit Tree/Shrub 3204 - Mast No Upland Shrub ified Planting **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. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Could also work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Concentrate some of the shrub and tree planting around herbaceous plantings and access trails.

Next Step Treatments:

<u>Acceptable</u> Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

61022093-NF 14.8 3303 - Mixed Low Nonstocked Unspec NonForestMgt Fruit Tree/Shrub 3204 - Mast No **Density Trees** ified Planting 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. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Could also work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Concentrate some of the shrub and tree planting around herbaceous plantings and access trails.

Next Step **Treatments:** 

Acceptable Regen:

Other Comment:

Site Condition

Traverse City Mgt. Unit

Report 3 -- Treatments

Compartment: 22 Year of Entry: 2024

а Treatment RΔ Treatment **Cover Type** Acres Stand Size Stand Treatment Age Habitat n Method Objective Name CoverType Density Age Range Type Structure Cut d NonForestMgt Fruit Tree/Shrub 61022094-NF 7.4 4110 - Sugar Maple Sawtimber 330 - Low-94 70 1-50 No

**Density Trees** Association Medium Planting

Specs:

S

t

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. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Could also work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. Concentrate some of the shrub and tree planting along the north side of the hunting trail and both sides of the snowmobile trail for a living hedge, to prevent vehicle access into the GEMS, and snow retention on the snowmobile trail.

Next Step **Treatments:** 

<u>Acceptable</u> Regen:

**Other** Comment:

Site Condition

Proposed Start Date: 10/1 /2023

61022095-Cut 7.2 330 - Low-Density Nonstocked Unspec Harvest Clearcut with 4139 - Aspen, Even-Aged No Trees ified Retention Mixed Deciduous

Prescription Clearcut stand to regenerate and expand aspen. Long term retention in drainage areas as outlined by site condition layer. Mark to leave Specs: any unique large red maple and/or cherry. Also, leave all conifers. Leave any oak that may be present. Add drumming log spec.

NonForestMgt, Brush Cutting; Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable aspen, maple, cherry

Regen:

This area is being harvested now to go along with adjacent harvest to the east in compartment 21 for access purposes. Other

Maintain stands 95 and 81 as non-forested stands post timber harvest. See notes in Treatment Lineage.

Site Condition

Comment:

Proposed Start Date: 10/1 /2021

61022097-NF 12.5 3303 - Mixed Low Nonstocked Unspec NonForestMgt Fruit Tree/Shrub 3204 - Mast No **Density Trees** ified **Planting** 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. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Could also work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. Concentrate some of the shrub and tree planting around herbaceous plantings and access trails.

Next Step Treatments:

Acceptable Regen:

**Other** Comment:

Site Condition

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 22 S Year of Entry: 2024 t а Treatment Size Stand RΔ **Treatment** Treatment **Cover Type** Acres Stand Age Habitat n Name Method Objective Structure CoverType Density Age Range Type Cut d 61022099-NF NonForestMqt Fruit Tree/Shrub 99 7.8 4110 - Sugar Maple Sawtimber 70 1-50 330 - Low-Nο Association **Planting Density Trees** 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. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food Specs: and cover. Could also work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization. Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. Concentrate some of the shrub and tree planting along the north side of the hunting trail and both sides of the snowmobile trail for a living hedge, to prevent vehicle access into the GEMS, and snow retention on the snowmobile trail. Next Step Treatments: Acceptable Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2023 3102 - Grass Other Other 3105 - Mixed 100 61022100-12 Nonstocked Unspec No ified Other Upland Herbaceous Prescription Could plant some shrubs and mast producing trees. Specs:

Next Step
Treatments:

<u>Treatments:</u>

Acceptable Regen:

**Other** 

This is an old well site that is now used as a parking area for the GEMS and a log landing for harvest operations.

Comment:

Site Condition

Proposed Start Date: 10/1 /2023

Total Treatment 239.9 Acreage Proposed:

Compartment: 22

Traverse City Mgt. Unit

Craig Allen: Examiner Year of Entry: 2024

Availa	ability for	Managemer	nt													
Total	Acres	Acres Avail	Acres	De	omina	nt Site	Con	dition	s							
Acres	Available	With Condition	Not Available		5B	5C	MC	2A	2F	2G	3D	31	3J	3L	5A	5E
188	157	11	20	Aspen		11		18	0	0						2
13	10	0	2	Herbaceous Openland				2					0			
171	120	15	36	Low-Density Trees	15		0		0		28	8				
183	98	1	84	Lowland Aspen/Balsam Poplar			1			84						
125	0	0	125	Lowland Deciduous				0		111			14			
12	0	0	12	Lowland Mixed Forest						12						
9	9	0	0	Lowland Shrub												
11	11	0	0	Marsh												
60	0	60	0	Mixed Upland Deciduous	60											
4	0	4	0	Natural Mixed Pines	4											
593	509	2	83	Northern Hardwood	2				73						10	
168	155	0	13	Red Pine	0			10	1							1
2	2	0	0	Sand, Soil												
11	11	0	0	Upland Shrub												
63	10	0	53	Upland Spruce/Fir							23			22		8
5	5	0	0	Urban												
2	2	0	0	Water												
28	28	0	0	White Pine												
1,648	1,127	94	427	Total Forested Acres	81	11	1	30	75	207	51	8	14	22	10	11
	68%	6%	26%	Relative Percent												

<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.

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	3L: Other wildlife concerns	12	5B: Maintain for regeneration purposes	3A: Conservation Values incompatible with harvest at this time	Unspecified	Unspecified
	Comments:						
2	Unavailable	2F: Too steep	26	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: very steep hillstoo	steep for logging activity.					

Traverse City Mgt. Unit

Craig Allen: Examiner

ed Unspecified
ed Unspecified
ed Unspecified
cifie

Traverse City Mgt. Unit
Craig Allen: Examiner

10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)		2A: Adjacent landowner denied access	Unspecified	Unspecified	Unspecified
	Comments:						
11	Unavailable	2A: Adjacent landowner denied access	30	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
12	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	39	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
	Comments: Stand has not beer	n inventoried due to landlocked	by priv	ate lands. Not sure if a harv	vest prescription is needed		
14	Unavailable	3D: Recreational / Scenic values	9	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
15	Unavailable	3D: Recreational / Scenic values	14	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:						

Traverse City Mgt. Unit
Craig Allen: Examiner

16	Unavailable	3L: Other wildlife concerns	10	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
17	Unavailable	5E: Long-Term Retention	8	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
C	Comments:						
18	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	75	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
20	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
21	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

Traverse City Mgt. Unit

Craig Allen: Examiner

22	Unavailable 5A: Not able to obtain desirable regeneration		10	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
23	Unavailable	2F: Too steep	1	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
24	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
25	Available	5B: Maintain for regeneration purposes	4	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
26	Unavailable	(Inactive)3I: Historical / archeological (add locked comments)	8	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
(	Comments:						
27	Available	5B: Maintain for regeneration purposes	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Hardwood saps involutional comments. Diantation are weld	vading edges. Allow continued r come diversity addition.	natural	seeding in of the area to ha	rdwoods. Also some natu	ral seeding in of spruce tre	es from adjacent

Traverse City Mgt. Unit
Craig Allen: Examiner

28	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
29	Unavailable	5E: Long-Term Retention	1	3D: Recreational / Scenic values	Unspecified	Unspecified	Unspecified
C	omments:						
80	Available	5B: Maintain for regeneration purposes	15	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
31	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
32	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	51	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
33	Unavailable	3D: Recreational / Scenic values	28	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
C	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 Comp





### 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	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 condition stocked trout populations and those of other coldwater fish specific conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable ey are relatively deep, have substantial the state. Such lakes are established by
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	es (e.g., slimy sculpin) to persist from se conditions due to substantial
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from sp approved distance from the river centerlines. The Natural Rivers most Natural Rivers. The Vegetative Buffer ranges from 25 to 10	Zoning District is a 400 foot buffer for



Stan	d Level 4 C	over Type		Size De	ensity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
1	4112 - Maple, Beec	h, Cherry A	Association	Sawtimb	er Well	9.5	85	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBI	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Sugar Maple	25	Log/Pole	12			Beech	Medium	< 5 feet	Sapling	
	Red Maple	75	Log/Pole	12	85	Su	gar Maple	Medium	Variable	Sapling	
						Su	gar Maple	Medium	Variable	Pole	
						Ir	onwood	Low	Variable	Sapling	
2	42200 - Natu	ıral White F	Pine F	Poletimbe	r Mediun	n 27.8	71	51-80	N/A		Red maple cut out of stand in Dec.2004.
	Canopy Species	% Cover	Size Class	s DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Black Cherry	15	Pole/Log	8		W	hite Pine	Medium	Variable	Sapling	
	White Pine	85	Pole/Log	9	71	Re	ed Maple	High	Variable	Sapling	
							Beech	Medium	Variable	Sapling	
3	42210 - Nat	tural Red P	ine F	Poletimbe	r Mediun	n 7.3	45	51-80	N/A		nice young natural red pine stand. slowly filling in gaps with pine regen
	Canopy Species	% Cover	Size Class	DBI	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Red Maple	5	Pole	8		W	hite Pine	Low	Variable	Sapling	
	Red Pine	85	Pole/Log/Sa	ap 7	45	R	led Pine	High	Variable	Sapling	
	White Pine	5	Pole/Saplir	ng 7							
	Black Cherry	5	Pole	8							
4	4130	- Aspen		Poletimb	er Well	5.3	62	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBI	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Quaking Aspen	50	Pole	8	62	Re	ed Maple	Medium	Variable	Sapling	
	Red Maple	15	Pole	8	62	Re	ed Maple	Medium	>20 feet	Pole	
	Bigtooth Aspen	35	Pole/Log	9	62	W	hite Pine	Low	< 5 feet	Sapling	
5	4130	- Aspen		Saplin	g Well	11.8	18	Unspecified	N/A		Was clearcut in Dec.2004. for regen and expansion of aspen. Some scattered white pine pole and saw log trees were retained.
	Canopy Species	% Cover	Size Class	DBH	l Age						scattered write pine pole and saw log trees were retained.
	Black Cherry	10	Sapling	2							
	Red Maple	10	Sapling	2	18						
	Quaking Aspen	80	Sapling	2	18						
6	4110 - Sugar N	laple Asso	ciation	Poletimb	er Poor	8.0	38	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Red Maple	10	Pole	6		W	hite Pine	Medium	Variable	Sapling	
	Black Cherry	85	Pole	6	38	Bla	ck Cherry	Medium	Variable	Sapling	



Stand	d Level 4 C	over Type		Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments	
7	4130	- Aspen		Poletimb	er Well	3.3	38	Unspecified	N/A		_	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size		
	Quaking Aspen	35	Pole	6	38	Bla	ck Cherry	High	Variable	Sapling		
	Black Cherry	20	Pole	6	38							
	Bigtooth Aspen	35	Pole	6	38							
	Red Maple	10	Pole	6	38							
8	42110 - Pla	nted Red P	ine	Poletimb	er Well	13.8	66	141-170	N/A		Row thinned in 1994. Select thinned approx. 1/3 volume of lower quality	
	Canopy Species	% Cover	Size Class	DBH	l Age						in spring 2006.	
	Red Pine	100	Pole/Log	9	66							
9	3102	- Grass		Nonst	ocked	3.3		Unspecified	No			
10	42110 - Pla	nted Red P	ine	Poletimb	er Well	25.9	66	141-170	N/A		Was row thinned in 1994. Was thinned again in spring 2006.	
	Canopy Species	% Cover	Size Class	DBH	l Age							
	Red Pine	100	Pole/Log	9								
11	4110 - Sugar N	/laple Assoc	ciation	Sawtimb	er Well	52.2	111	81-110	N/A		Stand was thinned in 1947, 1978 and most recently in Spring of 2005.	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size	Medium quality Hardwoods. Better quality located middle to west.	
	Sugar Maple	84	Log/Pole	16	111	Su	gar Maple	Low	Variable	Pole		
	Basswood	10	Log	16		Ir	onwood	Medium	Variable	Sapling		
	Black Cherry	3	Log/Pole	14			Beech	Medium	Variable	Sapling		
	Beech	3	Log	16				'		•	-	
12	330 - Low-	Density Tre	es	Nonst	ocked	11.7		Unspecified	No		transitioning to stocked forested stand of mix species hardwood and conifers.	
13	4110 - Sugar N	Maple Assoc	ciation	Sawtimb	er Well	47.5	95	81-110	N/A		Stand had TSI commercial cut in 1978.  Then, 35 acres were thinned in 1997.	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size	Hilly, many multi-stems,	
	Sugar Maple	66	Log/Pole	14	95	Ir	onwood	High	Variable	Sapling		
	Beech	15	Log/Pole	12			Beech	High	Variable	Sapling		
	Bigtooth Aspen	3	Log/Pole	12		Su	gar Maple	Medium	Variable	Pole		
	Basswood	16	Log/Pole	12		Su	gar Maple	Low	>20 feet	Sapling		
14	4191 - Mixed Upla Co	and Decidu onifer	ous with	Poletimb	er Well	60.4	72	1-50	N/A		Allow jack pine overstory to naturally fall out of stand to let hardwood understory to continue to nurse in and takeover the stand. Getting quite	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size	a bit of windthrow and dieoff of jack pine overstory.	
	Jack Pine	25	Pole	8	72		Beech	High	Variable	Sapling		
	White Oak	15	Sapling/Pole	е 3		Ja	ack Pine	Low	Variable	Sapling		
	Red Oak	20	Sapling/Pol	e 3				1			· · ·	
	Beech	20	Pole/Sapling	g 6								
	Sugar Maple	20	Sapling/Pol	e 3								



											Source State of Entry: 2024
Stand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
15	330 - Low-	Density Tre	es	Nonsto	cked	1.6		Unspecified	No		
16	330 - Low-	Density Tre	es	Nonsto	cked	8.2		Unspecified	No		
17	42110 - Pla	inted Red P	ine	Sapling	Well	38.8	11	Immature	N/A		Stand has been trenched and will be hand-planted by contract to red pin-
	Canopy Species Red Pine	<b>% Cover</b>	Size Class Sapling	2 DBH	Age 11						seedlings in spring of 2012.  On 9/6/2013 stand was treated with herbicide due to unsatisfactory regel survey determined previous planting was a failure. Site will be replanted in spring of 2014  TSI not recommended because of poor red pine survival in southern half of stand. This stand has been updated from a field evaluation for a project on free to grow red pine.
18	4110 - Sugar N	Maple Assoc	ciation	Sawtimb	er Well	22.6	115	81-110	N/A		Select thinned in Sept. 2013
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	Commercial TSI cut in 1977
	Beech	1	Log/Pole	17			Beech	Medium	Variable	Sapling	Commercial for cut in 1977
	Basswood	10	Log/Pole	15		Ire	onwood	Low	Variable	Sapling	
	Sugar Maple	89	Log/Pole	14	115	Sug	gar Maple	Medium	Variable	Pole	
						W	hite Ash	Medium	Variable	Sapling	
19	42310 - PI	anted Sprud		Poletimb		11.6	59	51-80	N/A		
	Canopy Species		Size Class	DBH	Age						
	White Spruce	100	Pole/Log	9	59						
20	42110 - Pla	inted Red P	ine	Poletimb	er Well	1.4	52	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Pine	100	Pole/Log	8	52						
21	4110 - Sugar <b>N</b>	<u> </u>		Sapling N		1.5	35	1-50	N/A		
	Canopy Species		Size Class		Age						
	Sugar Maple	100	Sapling	3	35						
22	42290 - Nat			Poletimb	er Well	4.3	65	1-50	N/A		_
	Canopy Species		Size Class		Age		nopy Specie		Avg. Height	Size	
	Scotch Pine	90	Pole/Log		65		te Spruce	Low	< 5 feet	Sapling	
	Sugar Maple	10	Log/Pole	12		Sug	gar Maple	Medium	Variable	Pole	
							gar Maple	High	Variable	Sapling	
							Beech	Medium	Variable	Sapling	



Stand	Level 4 Co	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	iite	General Comments
23	4112 - Maple, Beec	h, Cherry	Association	Sawtimb	er Well	4.0	100	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Black Cherry	5	Log/Pole	12		I	Beech	Low	Variable	Sapling	
	Beech	5	Log/Pole	15		Iro	onwood	Medium	Variable	Sapling	
	Sugar Maple	40	Log/Pole	13	100						
	Red Maple	50	Log/Pole	13	100						
24	3301 - Low Densi	ty Deciduo	ous Trees	Nonsto	cked	10.9		Unspecified	No		
25	4112 - Maple, Beec	h, Cherry	Association P	oletimber	Mediun	n 48.2	38	51-80	N/A		Was cut in 1984.
	Canopy Species	% Cover	Size Class	DBH	Age						
	Bigtooth Aspen	15	Pole	8							
	Red Maple	38	Pole/Sapling	g 6	38						
	Black Cherry	38	Pole/Sapling	g 6	38						
	Sugar Maple	9	Pole/Sapling	g 6	38						
26	4112 - Maple, Beec	h, Cherry	Association	Sawtimb	er Well	11.1	100	81-110	N/A		variable volume density
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Sugar Maple	10	Log/Pole	15		I	Beech	High	Variable	Sapling	
	Red Maple	77	Log/Pole	15	100	I	Beech	Medium	Variable	Pole	
	Beech	10	Log/Pole	13							
	Black Cherry	3	Log/Pole	13							
27	4112 - Maple, Beec	h, Cherry	Association	Sawtimb	er Well	16.5	90	81-110	N/A		Lots of multi-stems.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	Also has a few mature beech
	Sugar Maple	25	Log/Pole	13	90	Sug	gar Maple	Low	Variable	Pole	
	Red Maple	70	Log/Pole	13	90	Iro	onwood	Medium	Variable	Sapling	
	Black Cherry	5	Log/Pole	13		Sug	gar Maple	Low	Variable	Sapling	
28	623 - Emer	gent Wetla	and	Nonsto	cked	3.6		Unspecified	No		
29	4110 - Sugar N			Sawtimb		77.9	90	81-110	N/A		Due to terrain and access43 acres of the stand were thinned in fall of 2014. Very hilly in some areas. some quite steep.
	Canopy Species	% Cover			Age		nopy Specie		Avg. Height	Size	25 15., imin in bonio dibas. Bonio quito bioop.
	Basswood	30	Log/Pole	13			Beech	Medium	Variable	Sapling	
	Sugar Maple	70	Log/Pole	13	90	Sug	gar Maple	Medium	Variable	Pole	
						_		8.4 11	\ / = =   =   =   =	0 1	
						Sug	gar Maple	Medium	Variable	Sapling Sapling	



tand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
30	42110 - Pla	nted Red P	ine	Sawtimb	er Well	56.1	73	141-170	N/A		Was thinned in Feb. of 2005.
C	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Red Pine	100	Log/Pole	12	73	Ja	ck Pine	Low	5 - 10 feet	Sapling	
						Wh	nite Pine	Low	5 - 10 feet	Sapling	
						E	Beech	Medium	5 - 10 feet	Sapling	
31	4110 - Sugar N	/laple Assoc	ciation	Sawtimb	er Well	58.8	100	81-110	N/A		Has some steep slopes
C	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Sugar Maple	65	Log/Pole	12	100	Sug	ar Maple	Low	Variable	Sapling	
	Beech	3	Log/Pole	12		Irc	nwood	Medium	Variable	Sapling	
В	igtooth Aspen	2	Log/Pole	11		Е	Beech	High	Variable	Sapling	
	Basswood	30	Log/Pole	12		Sug	ar Maple	Low	Variable	Pole	
32	623 - Emer	gent Wetla	nd	Nonsto	cked	1.7	ı	Unspecified	No		
33	4130	- Aspen		Poletimb	er Well	5.9	52	Unspecified	N/A		Also has a trace of oak
(	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Sugar Maple	20	Log/Pole	11		Irc	nwood	Medium	Variable	Sapling	
В	ligtooth Aspen	60	Log/Pole	10	52	WI	nite Ash	Medium	Variable	Sapling	
	Basswood	20	Log/Pole	10		Sug	ar Maple	Low	Variable	Sapling	
34	122 - Road	d/Parking Lo	ot	Nonsto	cked	2.8		Unspecified	No		Milnichol road
35	710 - S	Sand, Soil		Nonsto	cked	1.9	ı	Unspecified	No		
36	3102	- Grass		Nonsto	cked	1.1	(	Unspecified			
37	42110 - Pla	nted Red P	ine	Sawtimb	er Well	1.3	73	81-110	N/A		small strip of trees left along Wallin road. and adjacent cut.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	White Pine	20	Log/Pole				ar Maple	Low	Variable	Sapling	
	Sugar Maple	5	Log/Pole						l .	1 3	1
	igtooth Aspen	5	Log/Pole								
	Red Maple	5	Log/Pole								
	Red Pine	65	Log/Pole		73						
38		d/Parking Lo		Nonsto		2.3	ı	Unspecified	No		road corridor



					-						
39	42210 - Nat			Poletimb		1.6	37	81-110	N/A		1
	Canopy Species		Size Class		l Age		nopy Species		Avg. Height	Size	
	Red Pine	60	Pole	7	37		ck Pine	Medium	Variable	Sapling	
	Jack Pine	40	Pole	7	37		ed Pine	Medium	Variable	Sapling	
						E	Beech	Low	< 5 feet	Sapling	
40	4110 - Sugar N	laple Assoc	ciation	Sawtimb	er Well	26.3	100	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	
	Beech	7	Log/Pole	12		Sug	ar Maple	Low	Variable	Sapling	
	Basswood	20	Log/Pole	12		Wh	nite Ash	High	< 5 feet	Sapling	
	Sugar Maple	73	Log/Pole	15	100						
41	4110 - Sugar N	laple Assoc	ciation	Sawtimb	er Well	4.0	90	51-80	N/A		Was thinned in 2006.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	
	Red Maple	10	Log/Pole	12			ar Maple	Low	>20 feet	Sapling	
	Sugar Maple	85	Log/Pole	12	90	Wh	ite Pine	Low	< 5 feet	Sapling	
	Bigtooth Aspen	5	Log/Pole	10		Iro	nwood	Low	Variable	Sapling	
42	4130	- Aspen		Saplin	y Well	21.6	16	Unspecified	N/A		Was clearcut in 2006 to regenerate and expand aspen component.
	Canopy Species	% Cover	Size Class	DBH	l Age						Various trees retained out in sale areamostly maple and some while pine a few red oak.
	Bigtooth Aspen	60	Sapling	2	16						pine a low rea can.
	Black Cherry	20	Sapling	2	16						
	Red Maple	20	Sapling	2							
43	4130	- Aspen		Sapling	y Well	7.3	14	Unspecified	N/A		Clearcut in late summer early fall of 2008. Was cut to expand and
	Canopy Species	% Cover	Size Class	DRI	l Age			·			regenerate aspen component.
	Red Maple	20	Sapling	3	14						
	Bigtooth Aspen	70	Sapling	3	14						
	Black Cherry	10	Sapling	3	14						
	Black Officity	10	очринд	0	1-7						
44	3102	- Grass		Nonst	ocked	1.5	l	Unspecified	No		
45	4130	- Aspen		Sawtimb	er Well	25.9	50	Unspecified	N/A		
70	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	
70	District Assessed	77	Log/Pole	10	50	Е	Beech	Low	Variable	Sapling	
	Bigtooth Aspen			1	1 1 1				.,		1
	Sugar Maple	3	Pole/Log	9	50	Wh	nite Ash	Low	Variable	Sapling	



Stand	Level 4 C	over Type		Size D	ensity	Acres	Stand Age	BA Range	Managed S	ite	General Comments	MICHIGAN
47	6131 - Hemlock, B	White Pine	e, Maple,	Sawtim	ber We	II 11.8	100	81-110	N/A			
	Canopy Species	% Cover	Size Class	DB	H Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Red Maple	45	Log/Pole	13	100	Н	emlock	Low	Variable	Pole		
	White Pine	20	XLog/Log/Pol	e 18		Н	emlock	Low	< 5 feet	Sapling		
No	rthern White Cedar	5	Pole/Log	8		Re	ed Maple	Low	Variable	Sapling		
	Hemlock	30	Log/Pole	11		Ва	ılsam Fir	High	Variable	Sapling		
				-		Ва	ılsam Fir	Medium	Variable	Pole		
						W	hite Pine	Low	Variable	Sapling		
48	4130	- Aspen	F	Poletim	ber We	ll 5.4	41	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DB	H Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size		
	Black Cherry	3	Pole	9		Sug	gar Maple	Low	Variable	Sapling		
	Red Maple	5	Pole	9	41	Ire	onwood	High	Variable	Sapling		
	Bigtooth Aspen	92	Pole	9	41			-		1		
49	6112 - Lov	wland Aspe	en	Saplin	ng Well	8.2	26	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DB	H Age							
	Quaking Aspen	95	Sapling/Pole	4	26							
	Red Maple	5	Sapling/Pole	4								
50	4110 - Sugar N	/laple Asso	ciation S	Sawtim	ber We	II 147.0	100	81-110	N/A		stand was thinned in fall of 2014. (very rainy fall)	
	Canopy Species	% Cover	Size Class	DB	H Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size		
	Sugar Maple	75	Log/Pole	14	100	Sug	gar Maple	Low	< 5 feet	Sapling		
	Basswood	20	Log/Pole	13	100	W	hite Ash	Low	< 5 feet	Sapling		
	Beech	5	Log/Pole	15			Beech	High	< 5 feet	Sapling		
						In	onwood	High	Variable	Sapling		
						Sug	gar Maple	Medium	Variable	Pole		
51	4130	- Aspen	5	Sawtim	ber We	II 10.2	41	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DB	H Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Bigtooth Aspen	82	Log/Pole	10	41	Suç	gar Maple	Low	Variable	Sapling		
	Red Maple	15	Log/Pole	10		W	hite Ash	Low	Variable	Sapling		
	Black Cherry	3	Log/Pole	10		Ire	onwood	Medium	Variable	Sapling		
						Re	ed Maple	High	Variable	Sapling		
						Bla	ck Cherry	Low	Variable	Sapling		
							Beech	Low	Variable	Sapling		



Stand	Level 4 C	over Type		Size De	ensity	Acres	Stand Age	e BA Range	Managed S	Site	General Comments
52	4130	- Aspen		Saplin	g Well	3.0	26	Unspecified	N/A		also contains some scattered red oak leave trees
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Red Maple	25	Sapling/Pole	4	26						
	Black Cherry	5	Sapling/Pole	4	26						
	Bigtooth Aspen	70	Sapling/Pole	4	26						
53	4130	- Aspen		Saplin	g Well	10.0	14	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Red Maple	15	Sapling/Pole	3	14						
	Bigtooth Aspen	70	Sapling/Pole	3	14						
	Black Cherry	15	Sapling/Pole	3	14						
54	629 - Mixed nor	n-forested w	vetland	Nonst	ocked	9.5		Unspecified	No		
55	4110 - Sugar N	laple Assoc		Sawtimb		13.7	100	81-110	N/A		Thinned in 1996
	Canopy Species	% Cover			l Age	Sub-Ca	nopy Spec	ies Density	Avg. Height	Size	
	Sugar Maple	90	Log/Pole	16	100	W	hite Ash	Low	Variable	Sapling	
	Beech	5	Log/Pole	16		Ir	onwood	High	Variable	Sapling	
	Basswood	5	Log/Pole	14			Beech	High	Variable	Sapling	
56	4130	- Aspen	F	Poletimb	er Well	10.0	41	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Spec	ies Density	Avg. Height	Size	
	Black Cherry	15	Pole	7	41	Re	ed Maple	Full	Variable	Sapling	
	Quaking Aspen	70	Pole	7	41						•
	Red Maple	15	Pole	7	41						
57	4130	- Aspen	F	Poletimb	er Well	9.8	41	Unspecified	N/A		steep slopes
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Spec	ies Density	Avg. Height	Size	
	Red Maple	20	Log/Pole	10	41		Beech	Low	Variable	Sapling	
	Bigtooth Aspen	80	Log/Pole	10	41	Bla	ck Cherry	Low	Variable	Sapling	
				'	· · · · · ·	Re	ed Maple	High	Variable	Sapling	
						W	hite Ash	Low	Variable	Sapling	
58	500	- Water		Nonst	ocked	1.7		Unspecified	No		Lost Lake
59	6119 - Mixed Lowla	and Decidud	ous Forest S	Sawtimb	er Well	28.9	80	Unspecified	N/A		Canopy species information is an estimate of what may possibly be there
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Spec	ies Density	Avg. Height	Size	based on stands nearby and using imagery.
	rthern White Cedar	15	Pole/Log	9			ed Maple	High	Variable	Sapling	
No				1	1		<u> </u>	0		, ,	1
No	Quaking Aspen	35	Pole/Log	8		Re	ed Maple	Medium	Variable	Pole	



Stand	d Level 4 Co	over Type	\$	Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
60	4130	- Aspen	Р	oletimb	er Well	9.7	41	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	40	Pole	6	41	Re	d Maple	High	Variable	Sapling	
	Bigtooth Aspen	40	Pole	7	41		Alder	Medium	Variable	Tall Shrub	
	Black Cherry	5	Pole	7							
	Red Maple	15	Pole	7	41						
61	6112 - Lov	wland Aspe	n	Sapling	ı Well	9.2	26	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	5	Sapling/Pole	4	26	Ва	lsam Fir	Low	< 5 feet	Sapling	
	Quaking Aspen	95	Sapling/Pole	4	26	Ta	ag Alder	High	Variable	Tall Shrub	
62		wland Mapl		awtimb		10.3		Unspecified	N/A		Stand canopy information is an estimate based on imagery and surrounding stands.
	Canopy Species		Size Class		Age		nopy Specie		Avg. Height	Size	Surrounding Startus.
	Red Maple	90	Log/Pole	10	90	Re	d Maple	High	Variable	Sapling	
No	orthern White Cedar	10	Pole/Log	9							
63	6112 - Lov	wland Aspe	n S	apling I	Лedium	9.9	26	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	2	Sapling/Pole	4	26	Ва	Isam Fir	Low	< 5 feet	Sapling	
	Quaking Aspen	98	Sapling/Pole	4	26	Ta	ag Alder	High	< 5 feet	Tall Shrub	
64	6112 - Lov	wland Aspe	n P	oletimb	er Well	7.0	41	Unspecified	N/A		
	Canopy Species		Size Class	DBH	Age		nopy Specie		Avg. Height	Size	
	Quaking Aspen	90	Pole	7	41		pery Elm	Medium	Variable	Sapling	
	Red Maple	10	Pole	7	41	Bla	ack Ash	Medium	Variable	Sapling	
65	4110 - Sugar M	/aple Assoc	ciation S	awtimb	er Well	24.7	90	81-110	N/A		
	Canopy Species	% Cover	Size Class		Age		nopy Specie		Avg. Height	Size	
	Beech	1	Log/Pole	12		Sug	jar Maple	Medium	Variable	Pole	
	Basswood	19	Log/Pole	1		I	Beech	High	Variable	Sapling	
	Sugar Maple	80	Log/Pole	11	90						
66	330 - Low-[	Density Tre	es	Nonsto	cked	4.4		Unspecified	No		



tand	Level 4 Co	over Type		Size De	ensity	Acres	Stand Age	BA Range	Mana	jed Site	General Comments	MICHIGA
67	6117 - Lowland I Coni	Deciduous, ferous	Mixed	Poletimb	er Poor	22.7	85	Unspecified	d	N/A		
(	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Densit	y Avg. Hei	ght Size	7	
	Paper Birch	15	Pole	6		Ame	rican Elm	Mediu	m Variab	e Sapling		
	Red Maple	25	Log/Pole	10	85	Ta	ng Alder	High	Variab	e Tall Shru	b	
C	Quaking Aspen	10	Pole	7		Re	d Maple	Mediu	m Variab	e Sapling		
	Balsam Fir	15	Pole	6							_	
Nort	hern White Cedar	10	Log/Pole	1								
	Slippery Elm	25	Pole/Log	8								
68	6119 - Mixed Lowla	ınd Decidud	ous Forest	Poletimb	er Well	10.7	34	Unspecified	d	N/A	wet year round	
- (	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Densit	y Avg. Hei	ght Size	7	
	Balsam Fir	5	Pole	6		Ta	ng Alder	Mediu	m Variab	e Tall Shru	b	
Nort	hern White Cedar	5	Pole	7	34	Bla	ack Ash	Mediu	m Variab	e Sapling		
	Slippery Elm	35	Pole	5	34	Re	d Maple	Mediu	m Variab	e Sapling		
	Paper Birch	20	Pole	5	34	Ame	rican Elm	Low	Variab	e Sapling		
	Red Maple	35	Pole	5	34			·		·	_	
69	4130	- Aspen		Saplin	g Well	9.8	8	Immature		N/A		
	Canopy Species	% Cover		DBH	l Age							
	Black Cherry	3	Sapling	1	8							
E	Bigtooth Aspen	72	Sapling	1	8							
	Red Maple	25	Sapling	1	8							
70	4139 - Aspen, I	Mixed Deci	duous	Poletimb	er Well	10.8	41	Unspecified	d	N/A		
(	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Densit	y Avg. Hei	ght Size	]	
	Black Cherry	3	Pole	6			d Maple	High				
	Red Maple	35	Pole	6	41	Ва	lsam Fir	Low	Variab	e Pole		
(	Quaking Aspen	54	Pole	6	41			1	1	'	_	
	Paper Birch	3	Pole	6								
Nort	hern White Cedar	5	Pole/Log	9								
71	42310 - Pla	anted Sprud	се	Poletimb	er Well	8.9	61	51-80		N/A		
(	Canopy Species	% Cover	Size Class	DBH	l Age							
	White Spruce	100	Pole	8	61							
72	310 - Herbac	eous Open	land	Nonst	ocked	1.1		Unspecified	d	No		



Stand	Level 4 C	over Type		Size Densi	ty	Acres St	and Age B	A Range	Managed S	iite	General Comments
73	6119 - Mixed Lowla			Poletimber \	Vell	10.3	34 U	nspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH A	je	Sub-Canor	py Species	Density	Avg. Height	Size	
	Slippery Elm	6	Pole	5 3	4	Black	Ash	Low	Variable	Sapling	
	Quaking Aspen	35	Pole	6 3	4	Tag A	Alder	Medium	Variable	Tall Shrub	
	Balsam Fir	6	Pole	6 3	4	Slipper	ry Elm	Low	Variable	Sapling	
	Paper Birch	3	Pole	6 3	4	Red N	/laple	Medium	Variable	Sapling	
	Red Maple	50	Pole	6 3	4						-
74	6118 - Lowland De	eciduous wi	ith Cedar S	awtimber Me	dium	14.2	95	1-50	N/A		Narrow corridor and banks along both sides of Betsie River.
	Canopy Species	% Cover	Size Class	DBH A	je	Sub-Canor	py Species	Density	Avg. Height	Size	Some bur oak along river bank area east side of river in south end of stand and has had some natural regen around the area.
	Sugar Maple	25	Log/Pole	12 9	5	Bur (	Oak	Low	Variable	Pole	stand and has had some natural regen around the area.
	Red Maple	25	Log/Pole	10 9	5	White S	Spruce	Low	< 5 feet	Sapling	
No	rthern White Cedar	25	Pole/Log	9		Black	Ash	Low	Variable	Sapling	
	Bigtooth Aspen	25	Pole/Log	8		Bur (	Oak	Low	Variable	Sapling	
						Ald	ler	Medium	Variable	Tall Shrub	
75	6113 - Lo	wland Maple	е	Sawtimber V	Vell	7.6	101	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH A	je	Sub-Canor	py Species	Density	Avg. Height	Size	
	Red Maple	100	Log/Pole	13 10	)1	Red N	/laple	High	Variable	Pole	
						Red N	/laple	Medium	Variable	Sapling	
76	310 - Herbac	eous Openi	land	Nonstocke	ed	2.0	U	nspecified	No		used for Betsie river access and minimal camping/fishing
77	42310 - Pla	anted Sprud	e	Poletimber \	Vell	14.2	61	51-80	N/A		Some nice natural spruce regen along outside edges.
	Canopy Species	% Cover	Size Class	DBH A	16						Rows less defined and trees more spaced apart than the spruce stand
	White Spruce	100	Pole	9 6							south of this one
78	330 - Low-I	Density Tree	es	Nonstocke	ed	27.8	U	nspecified	No		
79	310 - Herbac	eous Openl	land	Nonstocke	ed	2.5	U	nspecified	No		
80	6113 - Lov	wland Maple	е	Sawtimber V	Vell	18.1	101 U	nspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH A	ie e	Sub-Canor	py Species	Density	Avg. Height	Size	
	Red Maple	100	Log/Pole	12 10	_	Red N		Low	Variable	Sapling	
81	42110 - Plat Canopy Species Red Pine		ine Size Class		ge	10.1	66	171-200	N/A		-
	Kea Pine	100	Pole	9 6	0						



Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
82	4130	- Aspen	F	Poletimb	er Well	3.5	62	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	30	Pole/Log	9	62	Re	d Maple	Low	Variable	Sapling	
	Bigtooth Aspen	70	Pole/Log	9	62						
83	4130	- Aspen	F	Poletimb	er Well	14.2	72	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	30	Pole/Log	9	72	Re	d Maple	Medium	Variable	Sapling	
	Bigtooth Aspen	70	Pole/Log	9	72						-
84	42110 - Pla	inted Red P	ine S	Sawtimb	er Well	11.6	66	141-170	N/A		Row thinned in 1995.2nd thinning done in fall of 2015 (select mark
	Canopy Species	% Cover	Size Class	DBH	l Age						approx 1/3 volume removed)
	Red Pine	100	Log/Pole	11	66						
85	42310 - PI	anted Sprud	ce F	Poletimb	er Well	18.0	61	81-110	N/A		
	Canopy Species		Size Class	DBH	l Age						
	White Spruce	98	Pole	8	61						
	Red Pine	2	Log/Pole	11							
86	623 - Emei	rgent Wetla	nd	Nonsto	ocked	5.6		Unspecified	No		
87	4130	- Aspen	F	Poletimb	er Well	10.4	36	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Specie	es Density	Avg. Height	Size	
	Quaking Aspen	90	Pole	7	36	Blac	k Cherry	Low	Variable	Sapling	
	Red Maple	10	Pole	7	36	Quak	ing Aspen	Low	Variable	Sapling	
						Re	d Maple	Low	Variable	Sapling	
88	6112 - Lo	wland Aspe	n F	Poletimb		73.4	36	Unspecified	N/A		Also contains some scattered spruce and burr oak to save and keep in stand for diversity and mast production. (Oak = most are small dbh but a
	Canopy Species	% Cover			l Age		nopy Specie		Avg. Height	Size	few mature)
	Black Cherry	10	Pole/Sapling	_	36		ing Aspen	Medium	Variable	Sapling	
	Red Maple	10	Pole/Sapling		36	Blac	k Cherry	Medium	Variable	Sapling	
	Quaking Aspen	80	Pole/Sapling	g 7	36						
89	330 - Low-	Density Tre	es	Nonsto	ocked	8.1		Unspecified	No		This opening is part of a series of openings in the compartment. These were likely old farm homestead fields originally.  Nice opening as is. Limited access and is adjacent to private property.
90	3303 - Mixed L	 .ow Density	Trees	Nonsto	ocked	50.2		Unspecified	No		This opening is part of a series of openings in the compartment. These were likely old farm homestead fields originally. Scattered trees are mostly multi-stem cherry. 5/5/22-This opening was prescribed for opening maintenance last inventory cycle to reduce the extent of bracken fern and establish herbaceous cover conducive to wildlife grazing and cover. SG



Stand	Level 4 C	over Type		Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
91	3205 - Mixed	d Upland Sh	nrub	Nonst	ocked	11.5	l	Jnspecified	No		This opening is part of a series of openings in the compartment
92	6113 - Lo	wland Mapl	e I	Poletimb	er Well	2.5	50 l	Jnspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	25	Log/Pole	12	50		Beech	Medium	Variable	Sapling	
	Red Maple	75	Pole/Sapling	9 6	50	Re	ed Maple	High	Variable	Sapling	
93	3303 - Mixed L	ow Density	Trees	Nonst	ocked	14.8	l	Jnspecified	No		This opening is part of a series of openings in the compartment. Thes were likely old farm homestead fields originally.
94	4110 - Sugar N	/laple Asso	ciation Sa	awtimbe	r Mediun	n 10.4	70	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Black Cherry	85	Log/Pole	11	70	Re	ed Maple	High	Variable	Sapling	
	Red Maple	10	Pole	8				1			-
	Quaking Aspen	5	Pole	7							
95	330 - Low-	Density Tre	es	Nonsto	ocked	4.4	l	Jnspecified	No		
96	6112 - Lo	wland Aspe	n l	Poletimb	er Well	74.9	47 l	Jnspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Black Cherry	10	Pole	7	47	Qual	king Aspen	Medium	Variable	Sapling	
	Quaking Aspen	85	Pole	7	47	Bla	ck Cherry	Medium	Variable	Sapling	
	Red Maple	5	Pole	7	47	Whi	te Spruce	Low	Variable	Sapling	
97	3303 - Mixed L	ow Density	Trees	Nonst	ocked	13.7	l	Jnspecified	No		This opening is part of a series of openings in the compartment. Thes were likely old farm homestead fields originally.
98	42310 - Pl	anted Sprud	ce	Poletimb	er Well	10.1	61	81-110	N/A		Originally planted for wildlife cover.
	Canopy Species	% Cover	Size Class	DBH	l Age						
	White Spruce	100	Pole	7	61						
99	4110 - Sugar N	/laple Asso	ciation	Sawtimb	er Poor	7.8	70	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Black Cherry	100	Log/Pole	10			ck Cherry	Low	Variable	Sapling	
						Whi	te Spruce	Low	Variable	Sapling	
100	3102	- Grass		Nonst	ocked	1.2	l	Jnspecified	Managed Op	pening	