

Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61124 Entry Year 2025 Acreage: 1,929

County Kalkaska

Management Area: Kalkaska Sandy Moraines

Stand Examiner: Paul Roell

Legal Description:

T26N-R6W, Sec.9,10,15,16

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:

Soils range from lupton muck to rubicon sand, with lupton muck predominating. The topography is low and flat with a few upland islands in the larger swamp complex.

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

To the north, east and south is primarily state land. To the west is private land with the town of Sigma being directly on the west property line. The private land is mainly used as farm land and seasonal recreation use.

Unique Natural Features:

A rich conifer swamp*, corresponding to stand 64, has been identified by MNFI ecologists in the southeast portion of section 15. The swamp extends below the compartment to the south on the east side of the North Branch of the Manistee river. This natural community is situated primarily along streams and lakes but also occurs in drainage ways and in depressions in shallow drift over limestone and dolomite. The saturated peat of this swamp forest is typically very strongly acid at the surface and neutral to mildly alkaline below the surface in areas of groundwater influence. The dominant species is northern white-cedar (Thuja occidentalis) which often forms nearly pure stands. Rich conifer swamps are found on glacial lake plains, glacial outwash, foot slopes of morainal ridges and on coarse-to-medium textured ground moraines (especially drumlin fields). This exemplary rich conifer swamp occurs on poorly drained outwash adjacent to sandy moraine. The overstory is dominated by cedar with black spruce, red maple and balsam fir as canopy associates. During a brief survey of the vascular flora, 121 species were identified in this highly diverse swamp. Rich conifer swamps, particularly those dominated by cedar, tend to be high in biodiversity, especially plant species, and may contain rare plant species.

Blanding's turtle, wood turtle, and eastern massasauga rattle snake could occur in this compartment. In addition, the lowland brush, swamp conifer and swamp hardwoods could harbor great blue heron rookeries.

Archeological, Historical, and Cultural Features:

None listed however several old railroad grades run throughout the compartment.

Special Management Designations or Considerations:

There are two areas proposed for Special Conservation Area (SCA) status. The southeast end of the compartment (stand 64) is listed as it has been identified by MNFI ecologists as being a good example of a rich conifer swamp.

Watershed and Fisheries Considerations:

The North Branch of the Manistee River flows through Compartment 124.

Wildlife Habitat Considerations:

The bulk of state land in this compartment lies on an outwash plain (LTA 5149) with poorly drained soils. Presettlement records show that this outwash formation was typically dominated by coniferous wetlands with small occurrences of upland coniferous and northern hardwood forests. Present vegetation within this LTA and compartment is dominated by lowland communities including conifers, hardwoods, and shrubs. Upland communities, including northern hardwoods, aspen, and upland brush, are present to a much smaller extent. The North Branch of the Manistee River is a prominent feature in this compartment.

This large complex of lowlands is part of a significant deer yard. Existing coniferous wetlands and lowland hardwoods could be managed to perpetuate the sheltering aspects of expansive forested lowland communities. Conversely, maintaining early successional communities, including upland brush, on higher elevations in this LTA is appropriate as natural disturbances such as windfalls and wildfires occur here. Small upland pockets of aspen and hardwoods provide ideal stands to cut, mimicking natural windfalls or fire, for deer browse. This compartment also contains several Wildlife Division DRIP plantings that will have opening maintenance prescriptions on them. Some selective hand felling of encroaching woody vegetation will also be employed to maintain upland brush communities. Conifer dominated wetlands, in association with dry upland inclusions, provide habitat for white-tailed deer, bear, snowshoe hare, bobcat, evening grosbeaks, massasauga rattlesnakes, northern blazing star, and secretive locusts.

Mineral Resource and Development Concerns and/or Restrictions

Sections 9-10 & 15-16, T26N-R6W, Kalkaska County

There is no known metallic mineral potential in this part of the state. No active sand/gravel pits are known to exist in the area. The compartment is primarily low and wet, and potential for development of sand & gravel appears to be low. Very minimal oil & gas test drilling has occurred in the area, and there has been no significant production for miles. Some testing and minor production from the Collingwood Formation occurred a few miles to the northeast, but the Collingwood has not been proven to be economical to produce. Nevertheless, all State-owned mineral rights in and around the compartment were recently nominated for oil & gas leasing by Lambda Energy. Lambda's intentions in the area are unknown.

Vehicle Access:

There is limited high ground within the compartment which results in very little vehicle access within this compartment. Kniss Rd provides county road access on the north end. The bridge on Kniss Rd has been barricaded to through traffic but you can access either side. There is a State Forest two track that provides limited access from the south.

Survey Needs:

No survey needs at this time.

Recreational Facilities and Opportunities:

Snowmobile trail runs just to the east of this compartment.

Fire Protection:

Low wet covertypes will hinder fire suppression activity as well as fire spread. Some of the spruces areas could become a fire hazard if extended drought periods are experienced in the late summer months. Access for wheeled fire suppression vehicles is very limited.

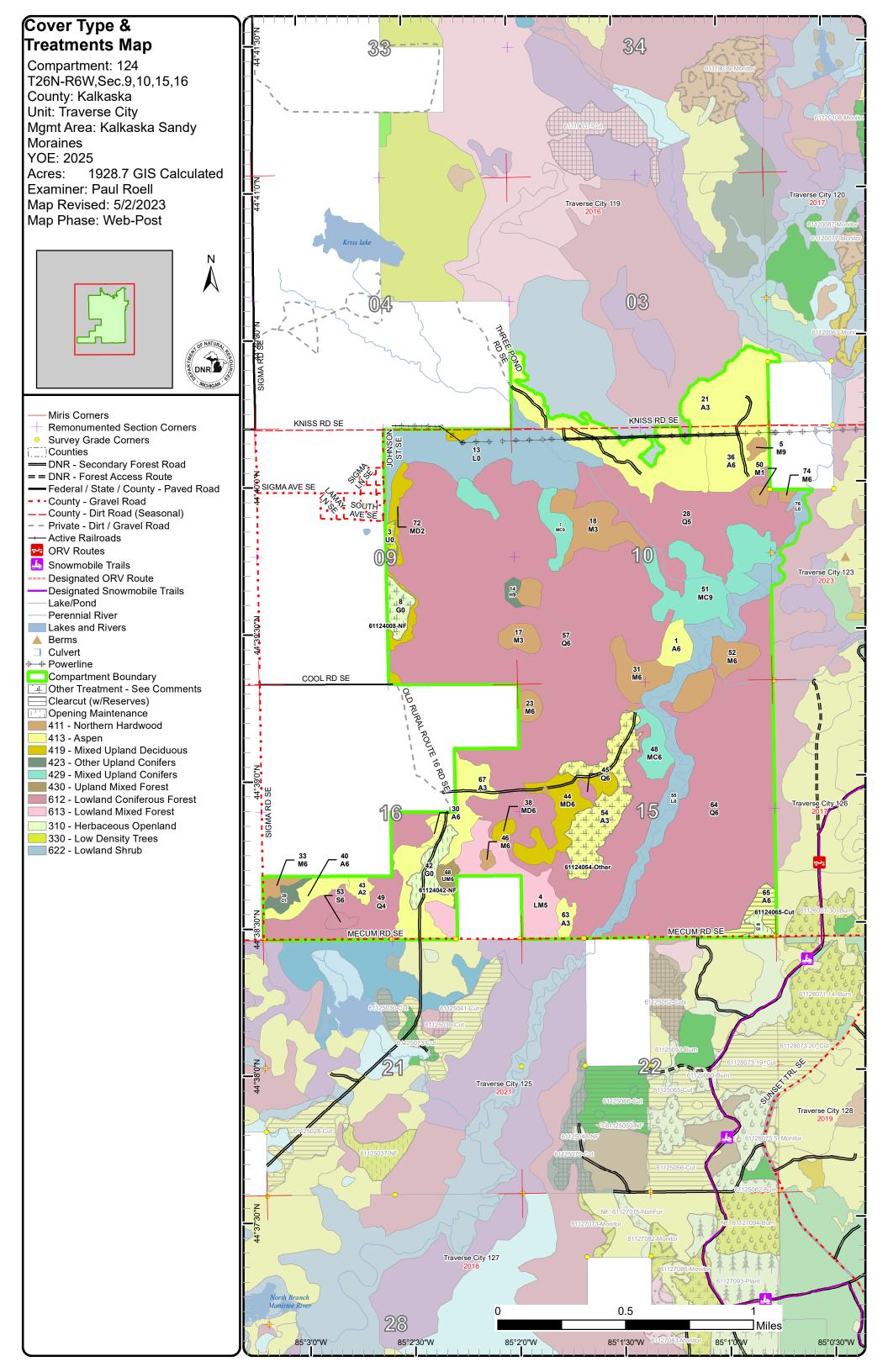
Additional Compartment Information:

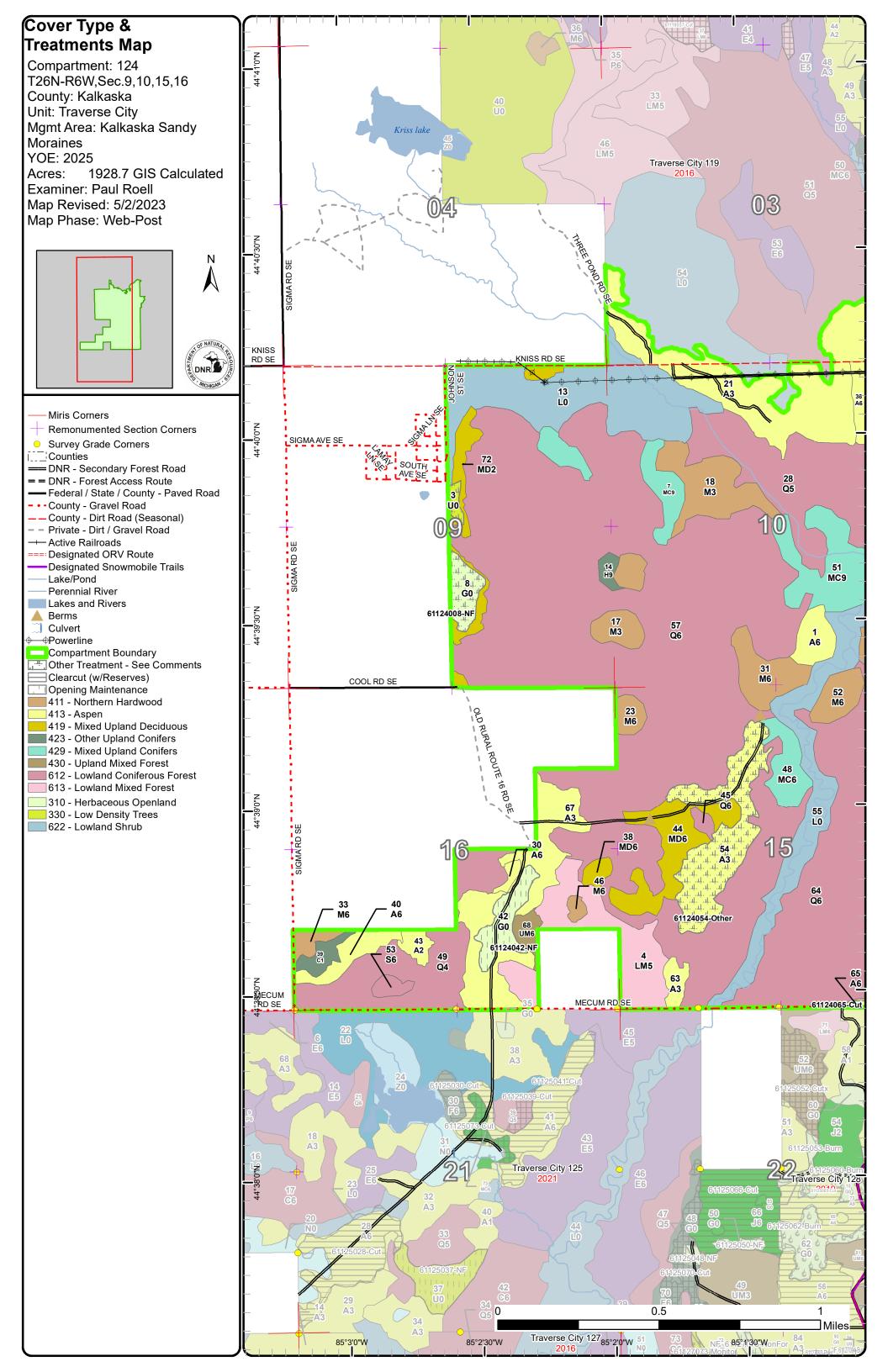
The following reports from the Inventory are attached:

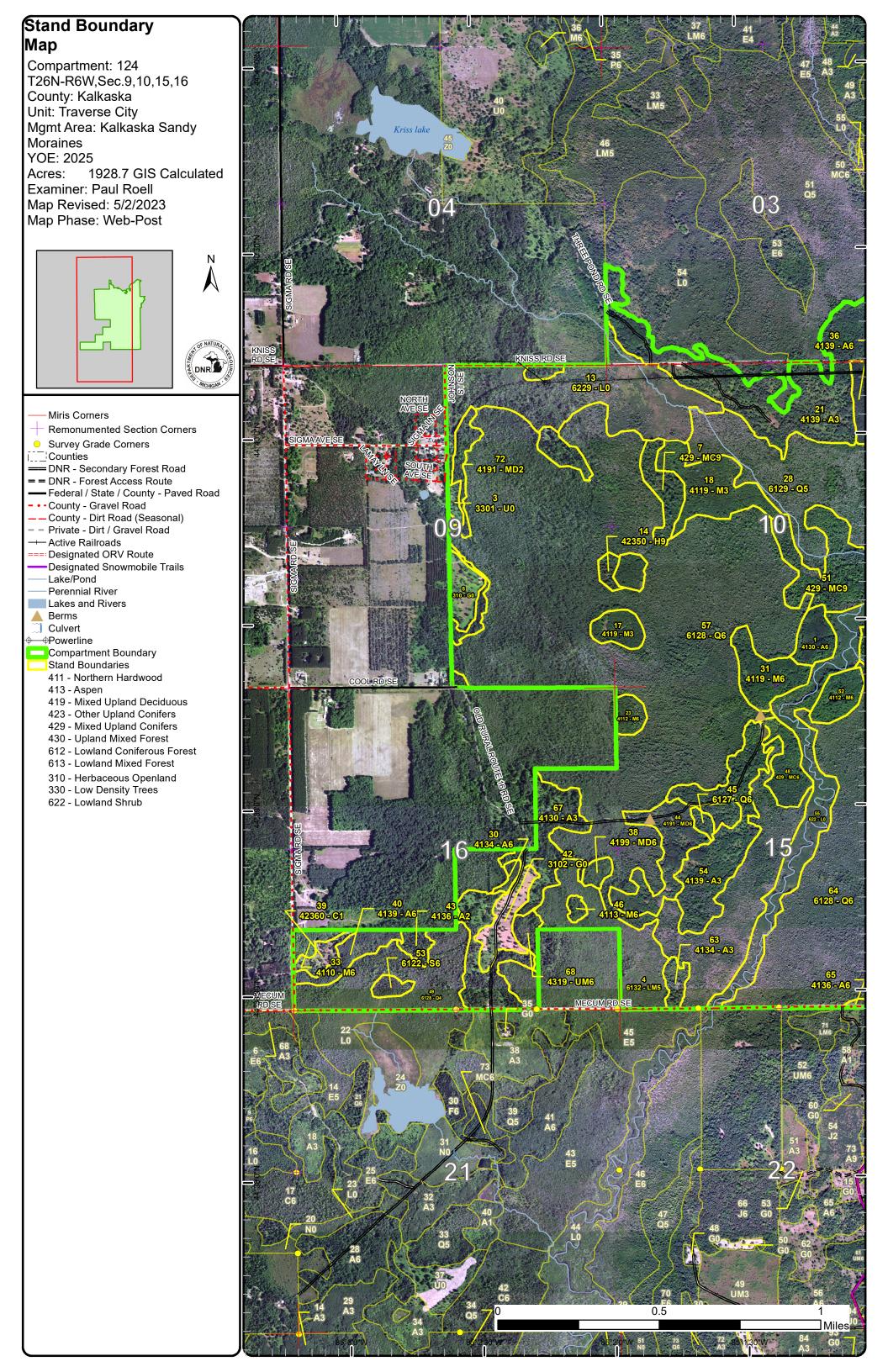
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

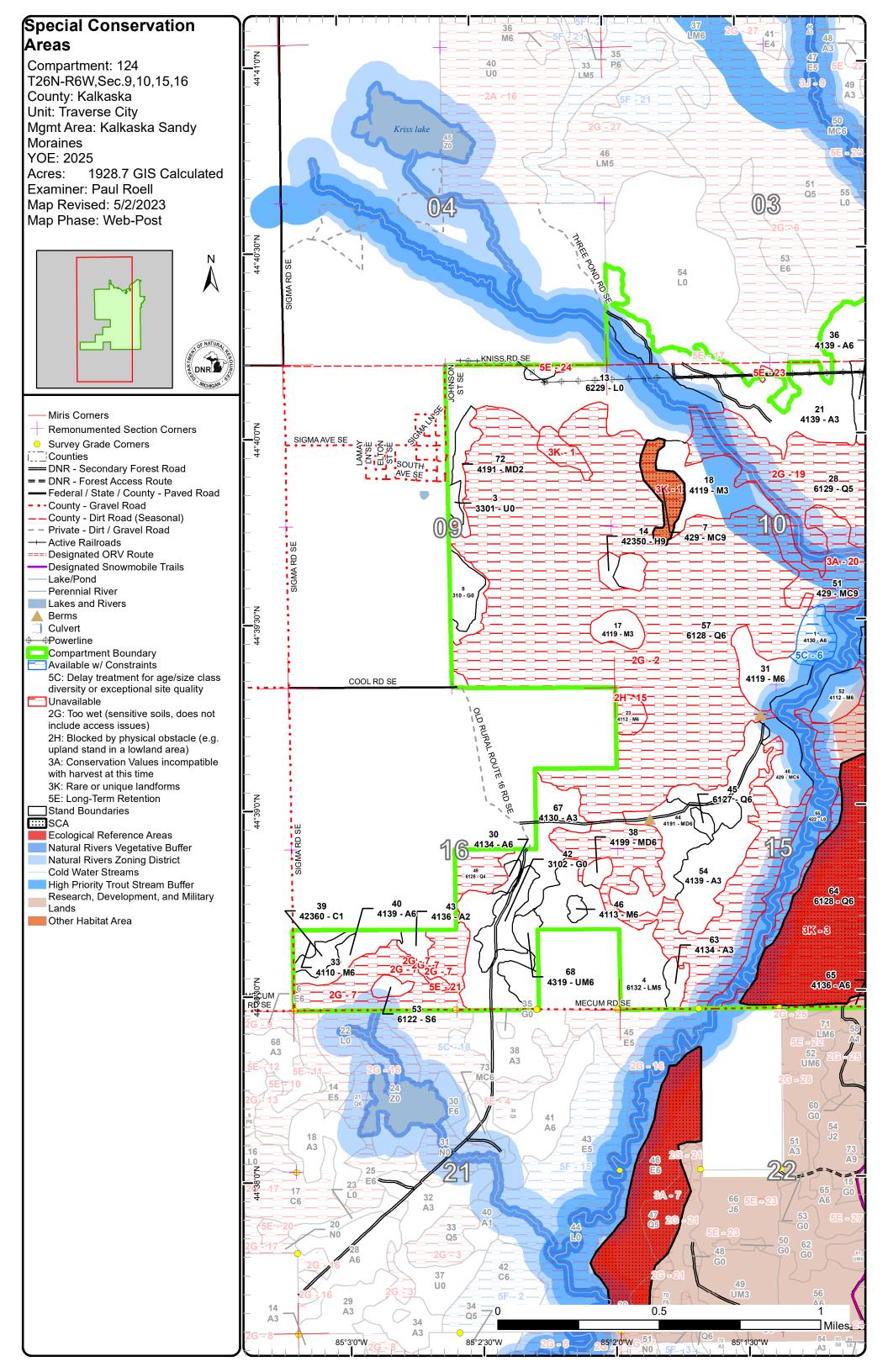
The following information is displayed, where pertinent, on the attached compartment maps:

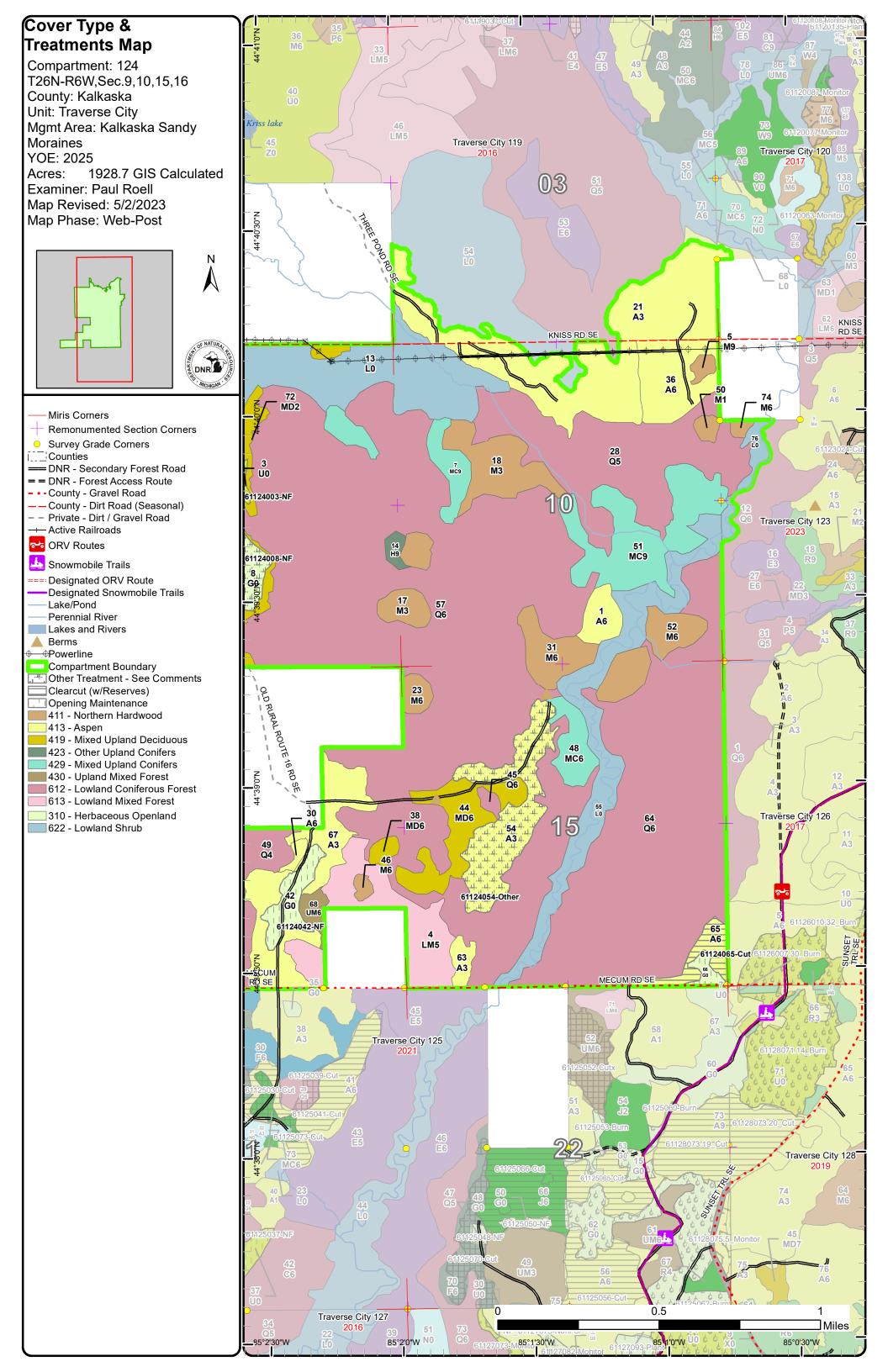
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

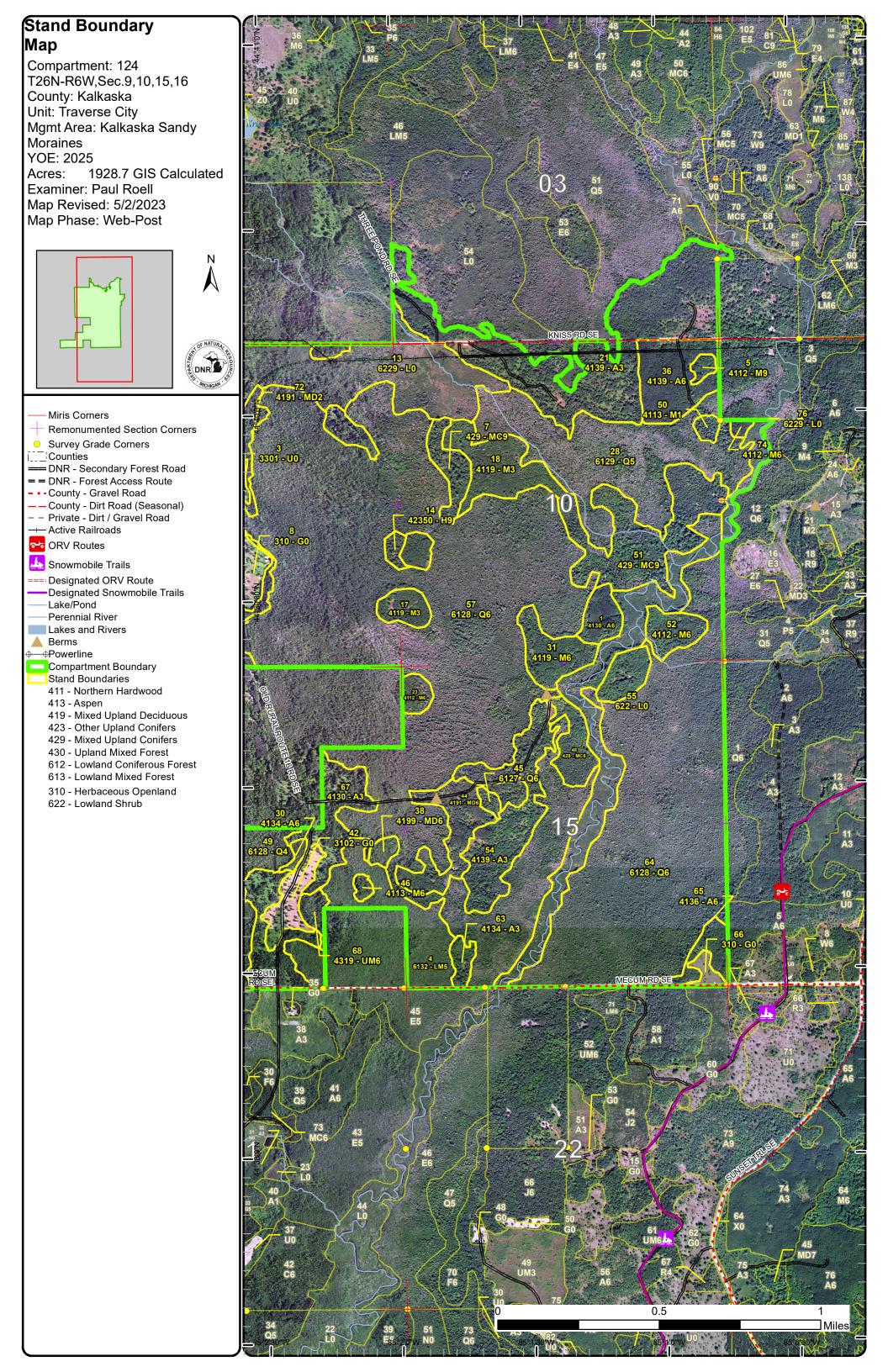


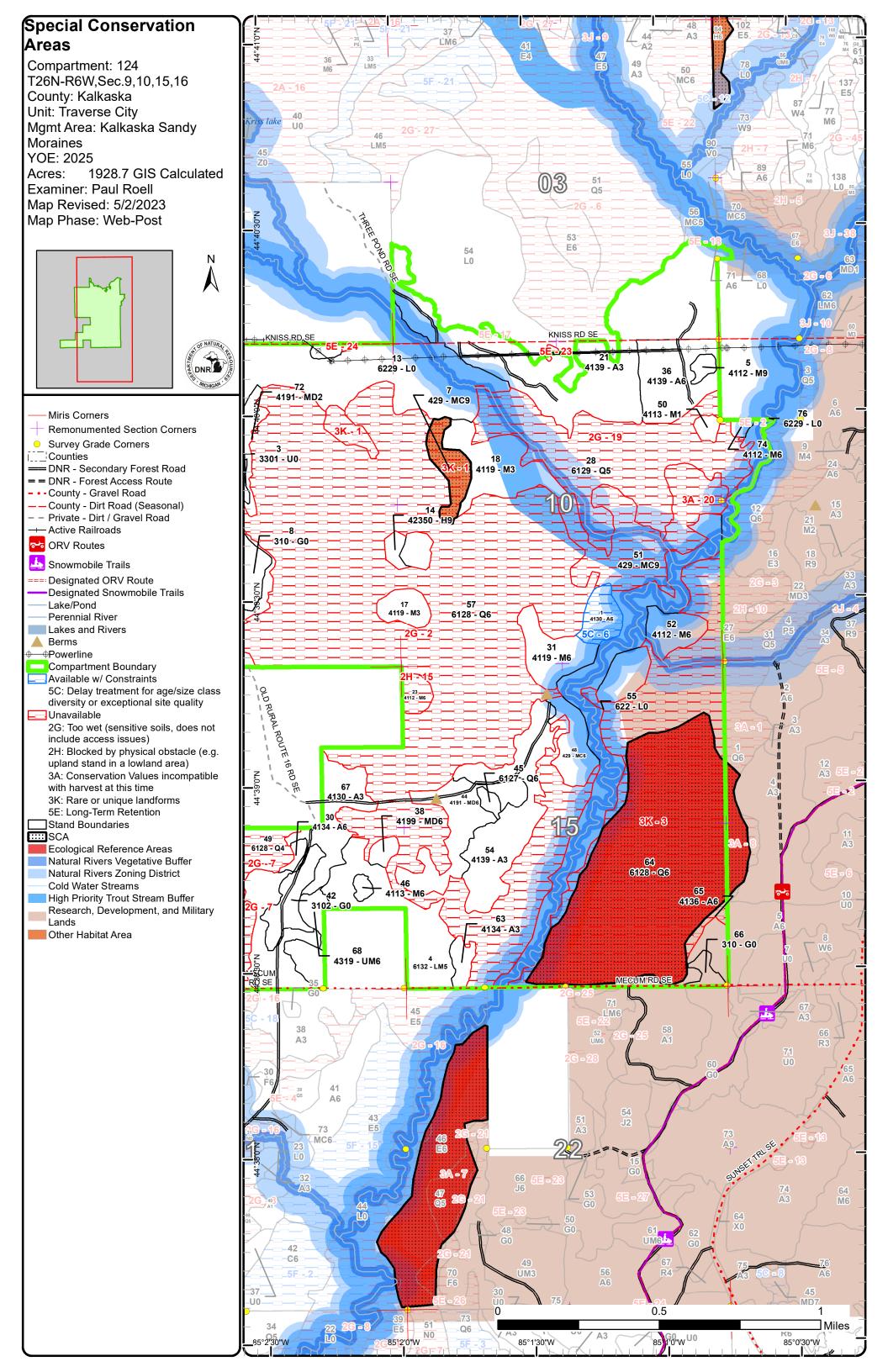












Compartment 124 Year of Entry 2025

Traverse City Mgt. Unit
Paul Roell: Examiner



Age Class

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Aspen	0	242	0	$\frac{1}{0}$	47	11	13	0	0	0	0	0	0	0	0	0	0	0	313
Cedar	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
Herbaceous Openland	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Low-Density Trees	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lowland Conifers	0	0	0	0	0	0	0	0	0	671	395	3	0	0	0	0	0	0	1069
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	49	0	0	0	0	0	0	0	0	49
Lowland Shrub	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	174
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	4
Mixed Upland Deciduous	0	19	0	0	4	33	0	0	0	0	0	0	0	0	0	0	0	0	55
Northern Hardwood	0	3	0	46	25	20	0	0	6	13	0	0	0	0	0	0	0	0	113
Upland Conifers	0	0	0	0	0	15	0	0	0	0	63	0	21	0	0	0	0	0	99
Upland Mixed Forest	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6
Total	207	264	0	53	76	79	13	6	6	737	458	3	25	0	0	0	0	0	1926



Report 2 – Treatment Summary

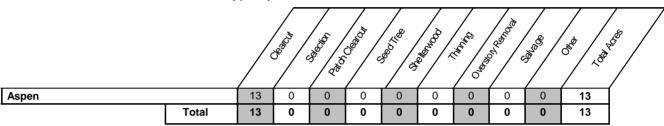
Traverse City Mgt. Unit Year of Entry: 2025

Acres of Harvest

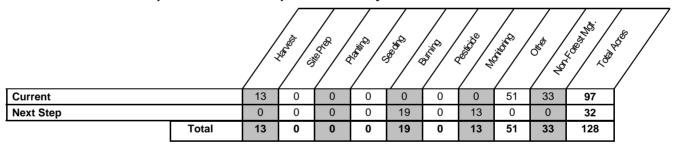
Compartment 124
Total Compartment Acres: 1,929

Commercial Harvest - 13 Harvests with Site Condition - 0 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: 124 Year of Entry: 2025

S t а n d

Treatment Name

Acres Stand CoverType

Stand Size Density Age

BA Range **Treatment** Type

Treatment Method

Cover Type Objective

Age Structure Habitat Cut

No

Proposed Treatments:

61124003-NF 2.8 3301 - Low Density Nonstocked **Deciduous Trees**

NonForestMqt Fruit Tree/Shrub Planting

3105 - Mixed Upland

Herbaceous

Specs:

Prescription Selectively 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. Adjacent to private.

Comment:

Site Condition

Proposed Start Date: 10/1 /2024

61124008-NF 11.3 310 - Herbaceous Nonstocked

Openland

Nonstocked

NonForestMgt Fruit Tree/Shrub **Planting**

3105 - Mixed Upland Herbaceous No

Specs:

Prescription Selectively 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:**

<u>Acceptable</u>

Regen:

Other Comment: Could augment herbaceous vegetation with low maintenance native spp via overseeding. This opening contains what used to be an original WLD DRIP opening. Adjacent to private.

Site Condition

Proposed Start Date: 10/1 /2024

61124042-NF 42

14.8 3102 - Grass

ified

Unspec NonForestMgt Herbaceous/Crop /Grass Planting

3105 - Mixed Upland

No

Herbaceous

Prescription Plant herbaceous species for wildlife forage needs. Consider an appropriate native species, but don't rule out approved pasture mix (CSG mix). Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. Specs:

Next Step Burn, Opening

Treatments:

Acceptable Regen:

Other

Original DRIP opening was seeded to perreniel pasture mix in 2022. The rest of the opening was seeded with native grasses and forbs in

Comment:

The original stand was about 29 acres prior to including part of this stand in a timber sale to the west. Chase the grasses and brush to reclaim as much of the original acreage as possible.

Site Condition

Proposed Start Date: 10/1 /2024

Mixed Deciduous

Well

Compartment: 124

Year of Entry: 2025

Mixed Deciduous

S t а

Treatment Size Stand BA **Treatment Treatment Cover Type** Acres Stand Age Habitat n CoverType **Objective** Method Name Density Age Range Type Structure Cut d 54 61124054-50.5 4139 - Aspen, Sapling **Immatu** Other Other 4139 - Aspen, Even-Aged

re

Specs:

Other

Prescription This young aspen stand contains part of a former upland brush stand and small <1 ac openings. In the scattered non forested areas 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. and could augment herbaceous vegetation with low maintenance native spp via overseeding.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2024

65 61124065-Cut 12.7 4136 - Aspen, Poletimber 51 51-80 Harvest Clearcut 413 - Aspen Even-Aged No Mixed Conifer Well

Prescription Cut all trees 2 inches and greater. Possible look to leave a few scattered trees if anything unique is present. No retention to maximize aspen Specs: regeneration.

Include grouse spec in timber sale.

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable Mixed stand of aspen and red maple with a minor component of conifer which might minimum stocking requirement.

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2024

61124066-NF 4.4 310 - Herbaceous Nonstocked Unspec NonForestMqt Herbaceous/Crop 31022 - Warm No Openland /Grass Planting Season Grass

Selectively remove woody vegetation to barrens equivalent. Important trees to retain would be mature "wolf" trees of oak, pine or cherry, <u>Prescription</u> fruiting shrubs, and a scattering of other trees and shrubs. Should eventually burn to stimulate any existing seed bank and encourage Specs:

existing native vegetation. Augment with additional native seeds/seedling as needed to diversify site for wildlife forage and cover. Eventually burn rotationally to maintain barrens dynamic. Remove invasive species mechanically or with herbicide treatment.

Next Step Burn, Opening

Treatments:

<u>Acceptable</u> Regen:

This opening is a former WLD DRIP field that has converted to nearly 100% little bluestem. Land Ethics LLC. has included maintaining this Other

opening in native vegetation in their 2022 awarded Wildlife Habitat Grant. Comment:

Site Condition

Proposed Start Date: 10/1 /2024

Total Treatment 96.5 **Acreage Proposed:**

Traverse City Mgt. Unit

Paul Roell: Examiner

Compartment: 124
Year of Entry: 2025

Availa	ability for	Managemer	nt							
Total	Acres	Acres Avail	Acres		Oomina	nt Site	e Con	dition	s	
Acres	Available	With Condition	Not Available		5C	2G	2H	ЗА	3K	5E
313	301	11	1	Aspen	11	0				1
7	7	0	0	Cedar						
4	4	0	0	Hemlock						
31	31	0	0	Herbaceous Openland						
3	3	0	0	Low-Density Trees						
1069	3	0	1066	Lowland Conifers		785			279	2
49	49	0	0	Lowland Mixed Forest						
174	174	0	0	Lowland Shrub		0				0
4	4	0	0	Lowland Spruce/Fir						
56	55	0	0	Mixed Upland Deciduous						0
114	107	0	7	Northern Hardwood			6			0
100	15	0	84	Upland Conifers				63	21	
6	6	0	0	Upland Mixed Forest						
1,929	758	11	1,159	Total Forested Acres	11	785	6	63	301	4
	39%	1%	60%	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.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	3K: Rare or unique landforms	21	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: proposed SCA						
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	606	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						

Report 4 – Site Conditions

Traverse City Mgt. Unit
Paul Roell: Examiner

Compartment: 124 Year of Entry: 2025

3	Unavailable	3K: Rare or unique landforms	279	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
	Comments: MNFI identified this	s stand as a rich conifer swamp	ERA				
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	11	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	63	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
15	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	6	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
	Comments:						
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	116	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Traverse City Mgt. Unit

Paul Roell: Examiner Year of Entry: 2025

Compartment: 124

20	Unavailable	3A: Conservation Values incompatible with harvest at this time	63	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
_	Comments:		N 1 41	B 1 (11 M 11 B)			
F	alls within the 175	i' natural vegetation buffer of the	Nortr	n Branch of the Manistee River.			
21	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
23	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
24	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

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Mgt. Unit

Compartment: #Type! Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Traverse City Mgt. Unit Compartment: 124





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	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area			
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen constocked trout populations and those of other coldwater fish specyear to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such stream designated as trout resources by Fisheries Order 210.	cies (e.g., slimy sculpin) to persist from ese conditions due to substantial			
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated frinclude the 5,847 acre Forest Fire Experiment Station, the 12,00 Area, the Beaver Islands Archipelago Wildlife Research Area (the High and Hog Islands, all state owned land on Beaver, South For Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Renursery, and over 144,000 acres of Military Lands.	00 acre Houghton Lake Wildlife Research hat includes most of Garden Island, all of ox and North Fox Islands), the Cusino			
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecos influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjace streams and open water wetlands, riparian areas harbor a high diversity of plants and wildl communities are ecologically and socially significant in their effects on water quality and quas aesthetics, habitat, bank stability, timber production, and their contribution to overall bio				
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from s approved distance from the river centerlines. The Natural River most Natural Rivers. The Vegetative Buffer ranges from 25 to 1	rs Zoning District is a 400 foot buffer for			
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of identified as Element Occurrences (EOs) by the Michigan Nature context of their natural community classification system. Elemer (Excellent) or B (Good) and a Global (G) or State (S) element (rethreatened (2), or rare (3) serve as an initial base of ERAs. The the State. The system is comprised of individual or associations managed for restoration and maintenance of natural ecological submit recommendations for lands as ERAs using the DNR Core	ral Features Inventory (MNFI) within the nt Occurrences with viability ranks of A rarity) ranking of endangered (1), y may be located upon any ownership in of natural community types that are processes and values. The public may			