



Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61129

Entry Year 2023

Acreage: 2,855

County Kalkaska

Management Area: Camp Grayling

Revision Date: 2021-05-19

Stand Examiner: Paul Roell

Legal Description:

T26N R5W Sections 1, 10, 11, 12, 13, 14 and 15

Identified Planning Goals:

The Camp Grayling management area management area (MA) is the Michigan National Guard training grounds used primarily for military exercises while allowing varying degrees of Department of Natural Resources (DNR) management on certain portions depending on classification of ownership. The DNR will coordinate all prescribed activities with the National Guard to ensure they are compatible with military training needs. On these lands military training has precedence over resource management activities. Management in the Camp Grayling MA will emphasize continued balancing the age-class of aspen on suitable sites and regenerating the aging oak resource. Management will strive to sustainably produce various forest products, enhance game and non-game wildlife habitat and protect areas of unique character while accommodating military training. Management activities will be constrained or modified based on military training needs. Expected trends within this 10-year planning period are introduced pests and diseases and the difficulty in regenerating oak.

Most of this compartment is on Military Board Land and is used for military training throughout the year.

Soil and topography:

Soils in this compartment are mostly excessively to moderately drained sands, including Grayling Sand, Rubicon Sand, and Croswell Sand. Southeast of Portage Creek is mostly the very poorly drained Tawas-Lupton mucks. Soils along the Manistee River and Portage Creek tend to be poorly drained including Ausable-Bowstring mucks and the Au Gres-Kinross-Croswell Complex. The terrain ranges from low and wet to gently rolling upland hills. Along the Manistee River, the land often transitions sharply from upland stands down a steep bluff to a lowland floodplain along the river.

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

Most of the land within this compartment is either Military Board Land or under a long term lease with the military. This land is used extensively for military training maneuvers and includes several fenced small arms ranges (Ranges 12,16, 18 and 19) in Sections 12 and 13. Most of Sections 10, 11, and 15 are state forest land. Numerous permanent and seasonal residences are located along the Manistee River corridor, many of which are accessed through state land.

Unique Natural Features:

There are multiple Element Occurrences for rare plant and animal species in this compartment. In addition there is an ecologically significant community with a plan to have a MNFI survey done in the summer of 2021. The Eastern Massasauga rattlesnake has also been found in and around the the area with several clearcuts done in 2006 to promote habitat.

Archeological, Historical, and Cultural Features:

There are records within the compartment.

Special Management Designations or Considerations:

Much of the compartment is part of the Eastern Massasauga Rattlesnake Managed Land (High Conservation Value Area), identified in the Candidate Conservation Agreement. The Manistee River, Portage Creek and tributaries are protected by the Upper Manistee River Natural Rivers Plan. There are a few areas identified as ERA or potential ERA's within the compartment. This land is also used extensively for military training maneuvers and includes several fenced small arms ranges (Ranges 12,16, 18 and 19) in Sections 12 and 13. Most of Sections 10, 11, and 15 are state forest land

Watershed and Fisheries Considerations:

The Manistee River and Portage Creek flow through Compartment 130. Portage Creek is a tributary of the Manistee River, and both are Designated Trout Streams. Both are also protected by the Manistee River Natural Rivers Designation. Both the Manistee River and Portage Creek host naturally reproducing populations of brook trout and brown trout. For other timber operations near the Manistee River and Portage Creek, Natural Rivers buffers should be adhered to.

Wildlife Habitat Considerations:

The Manistee River borders this compartment to the northwest. An approximately one-mile-wide strip of excessively drained broad flat outwash plain (LTA 5111) runs through the compartment southeast of the river. This area is dominated by jack pine of various age classes and several red and white pine stands, interspersed with patches of upland brush. These cover types are appropriate to this fire driven ecosystem. These stands should continue to be managed for a variety of age classes, successional stages, and patch sizes, as well as grass/shrub openings and barrens, consistent with the fire driven dynamics that historically shaped habitats on this LTA. Cuts should be designed to leave as many snags as possible and scattered leave trees/islands for a component of structural diversity in regenerating stands of timber. Forest prescriptions should also consider the potential presence of special plants and animals indigenous to jack pine barrens and sand prairies. Timber harvests and habitat treatments need to in Compartment should need to reference Eastern Massasauga Rattlesnake BMP, and any other BMPs related to ETS species that occur in the area.

Management of state-owned lands immediately bordering the Manistee River should take into consideration the importance of this riparian forest corridor. The Manistee has been designated as a Natural and Scenic River. This designation will help reinforce the values of this riparian area, such as: effects on water quality, aesthetics, and the potential to harbor unique species and/or communities.

The southeast corner of this compartment is situated on a poorly drained broad, flat outwash plain (LTA 5149). In pre-settlement times this LTA was dominated by coniferous wetlands with small occurrences of upland coniferous and northern hardwood forests. This lowland complex drains into Portage Creek, which is an important wintering area for bald eagles. Existing coniferous wetlands and adjacent lowland shrub swamps should be left to succeed to mature coniferous wetland communities. Conifer dominated wetlands, in association with drier upland inclusions, provide habitat for white-tailed deer, snowshoe hare, bobcat, evening grosbeaks, massasauga rattlesnakes, blazing star, and secretive locusts.

Mineral Resource and Development Concerns and/or Restrictions

The nearest active sand/gravel pit is four miles to the southeast. There appears to be some sand potential within the compartment, but potential for development appears low. There is no known potential for oil & gas from known productive formations beneath the compartment. There was past exploration and testing of the Collingwood Formation in this area, but the Collingwood Formation overall has not been proven to be a viable economic play in Michigan, and additional future development in the Collingwood is unlikely at current gas prices. There is no known metallic mineral potential in this part of the state. The State does not own most 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:

There is sufficient vehicular access throughout the compartment.

Survey Needs:

There are no survey needs at this time.

Recreational Facilities and Opportunities:

The Manistee River and Portage Creek are popular with recreational users for fishing, canoeing, kayaking, river boating and tubing. Two designated access sites are located on the Manistee River along Portage Creek Road near the center of Section 11.

Fire Protection:

The compartment is protected by the Kalkaska DNR office and Camp Grayling fire department. This is within the Zone 5 dispatch area which means that additional units would respond from Grayling, Houghton Lake, and Manton on very high fire danger days. The nearest volunteer fire department is Bear Lake.

Additional Compartment Information:

The following reports from the Inventory are attached:

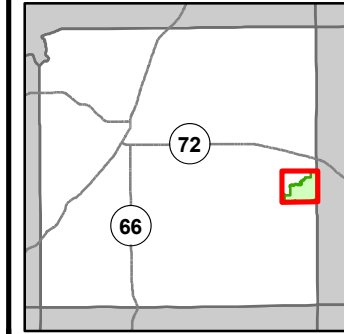
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

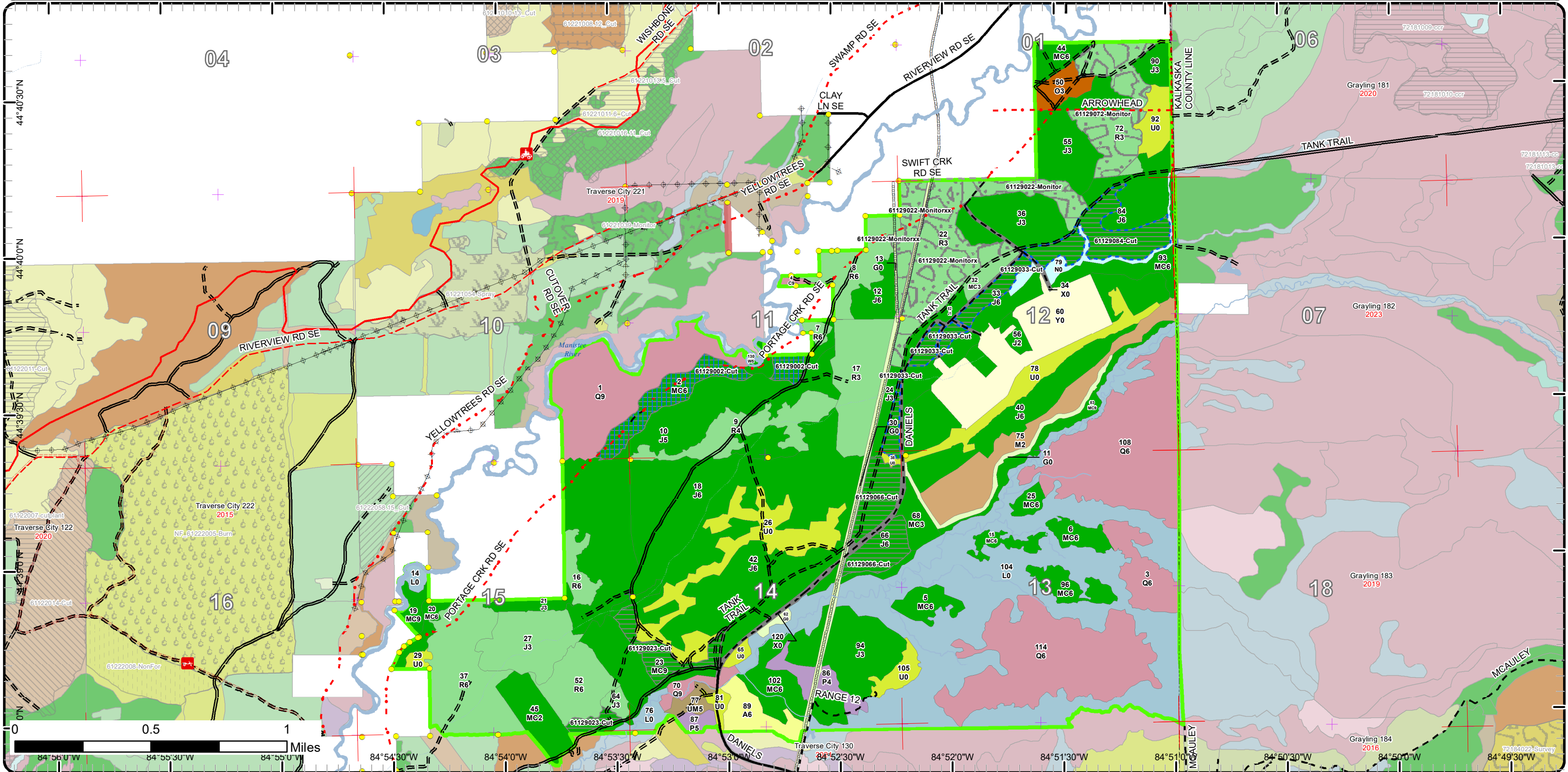
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 129
 T26N, R05W, Sec. 1, 10-15
 County: Kalkaska
 Unit: Traverse City
 Mgmt Area: Camp Grayling
 YOE: 2023
 Acres: 2854.9 GIS Calculated
 Examiner: Paul Roell
 Map Revised: 9/15/2021
 Map Phase: Post-Review

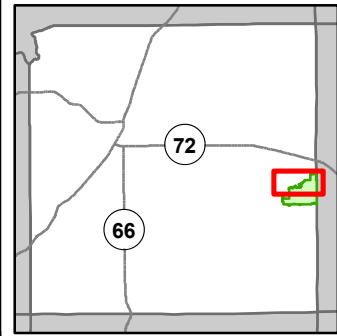


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- 🚲 ORV Trails
- Designated ATV Trails
- Culvert
- Intermittent Stream
- Island in Lake or River
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Pipeline
- Powerline
- Compartment Boundary
- Treatments with Site Conditions
- Clearcut (w/Reserves)
- Seed Tree (w/Reserves)
- Regeneration Survey
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 710 - Sand/Soil

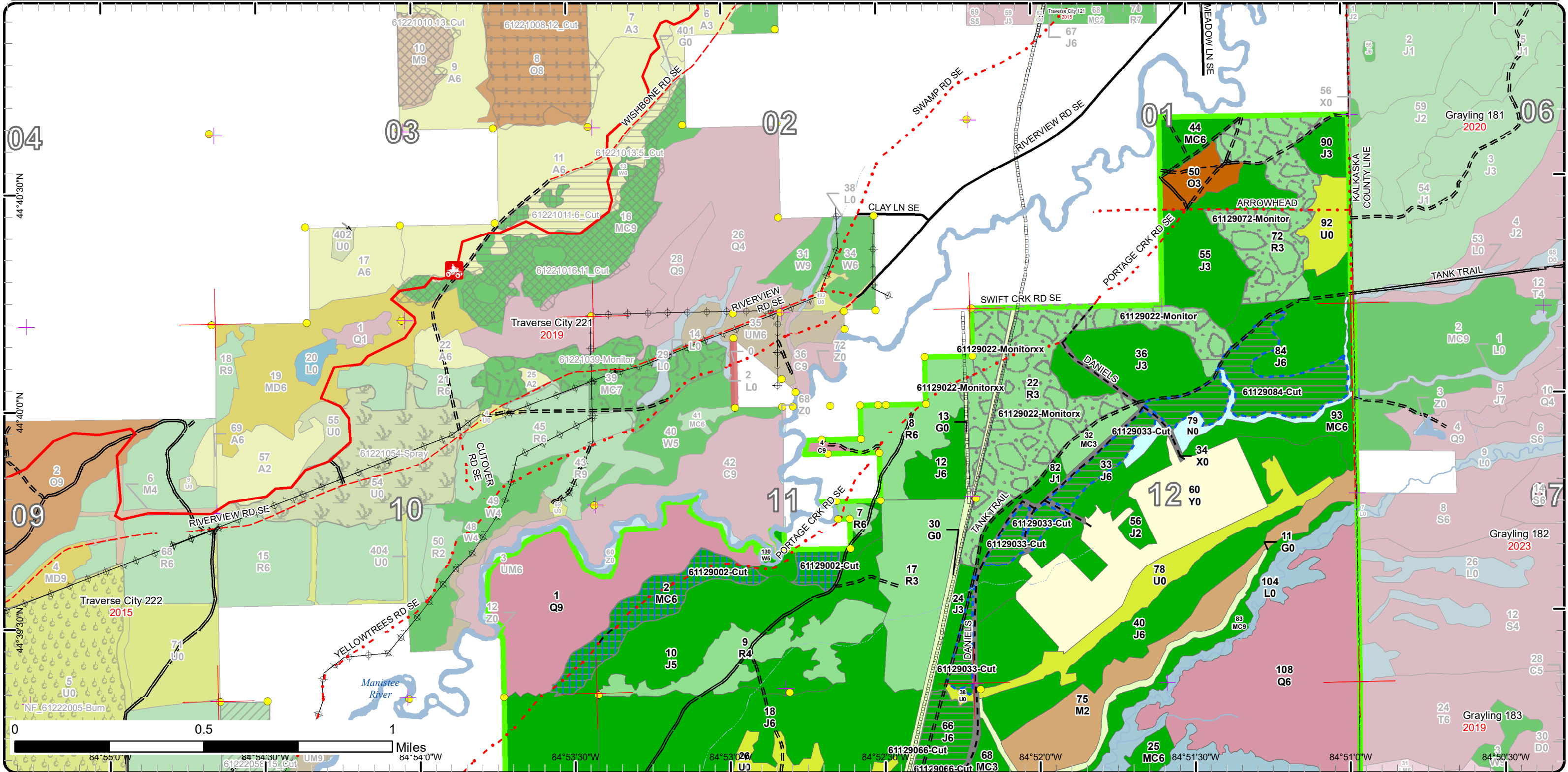


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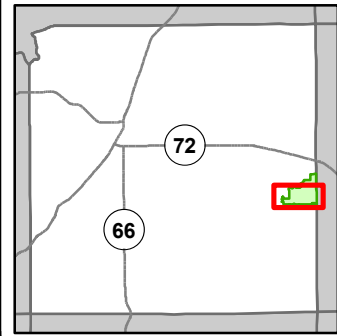


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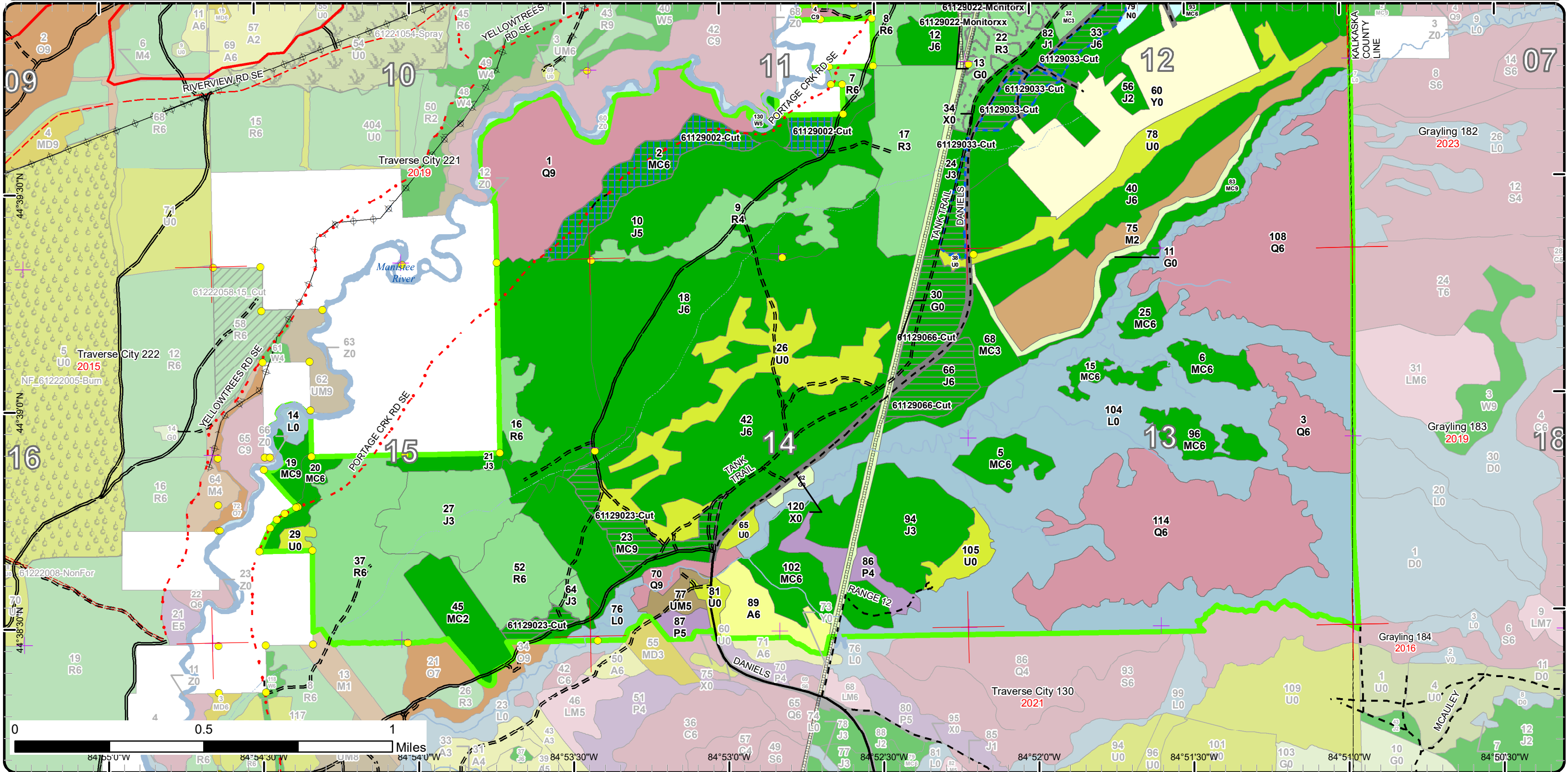


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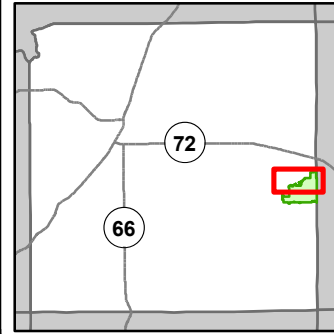


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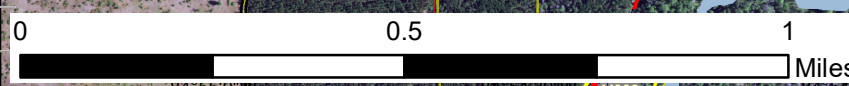
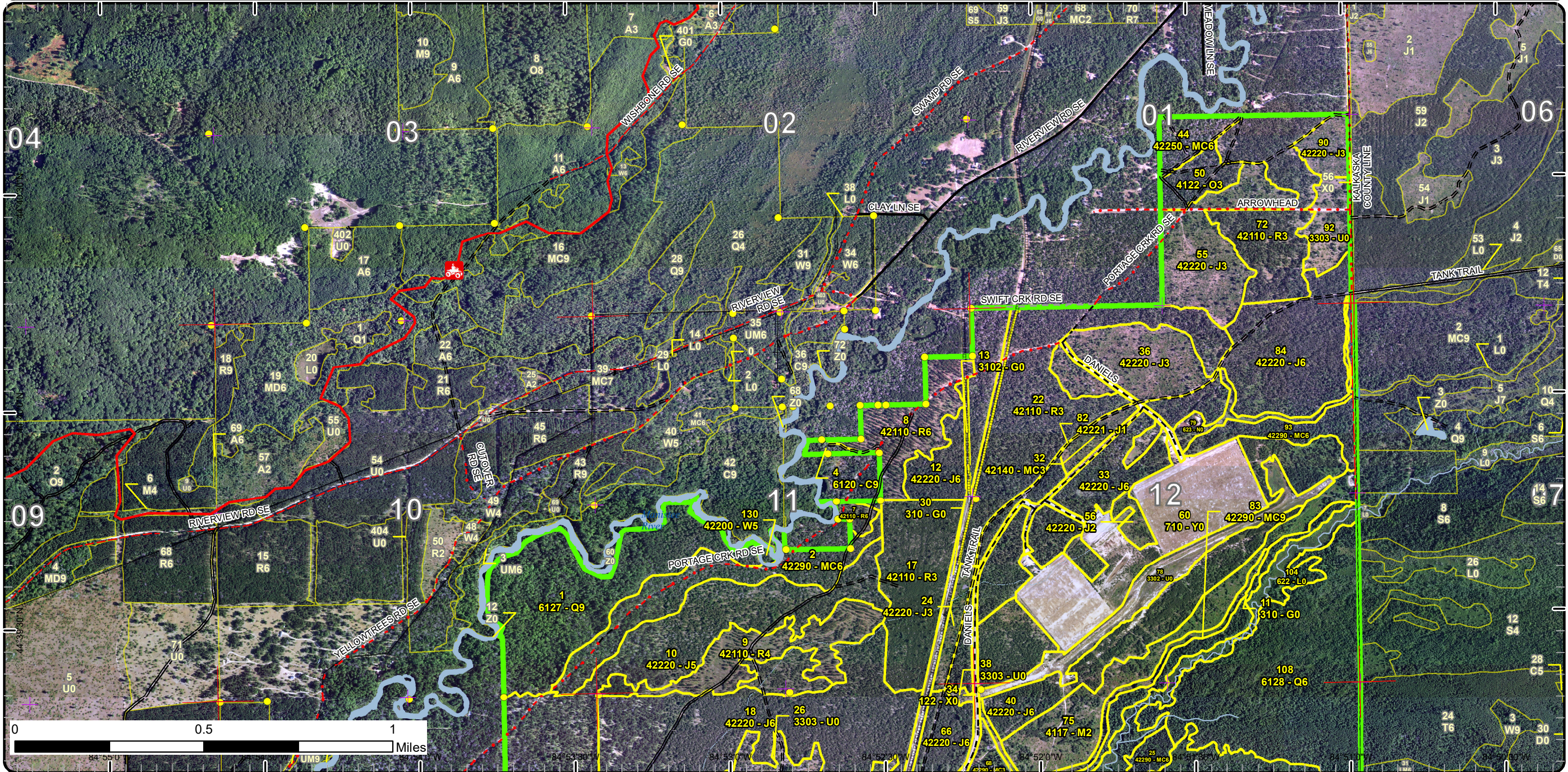


Stand Boundary Map

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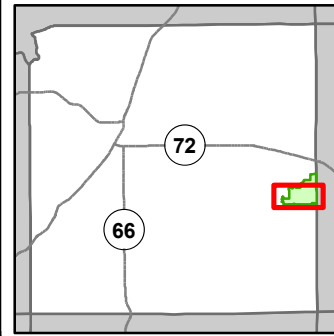
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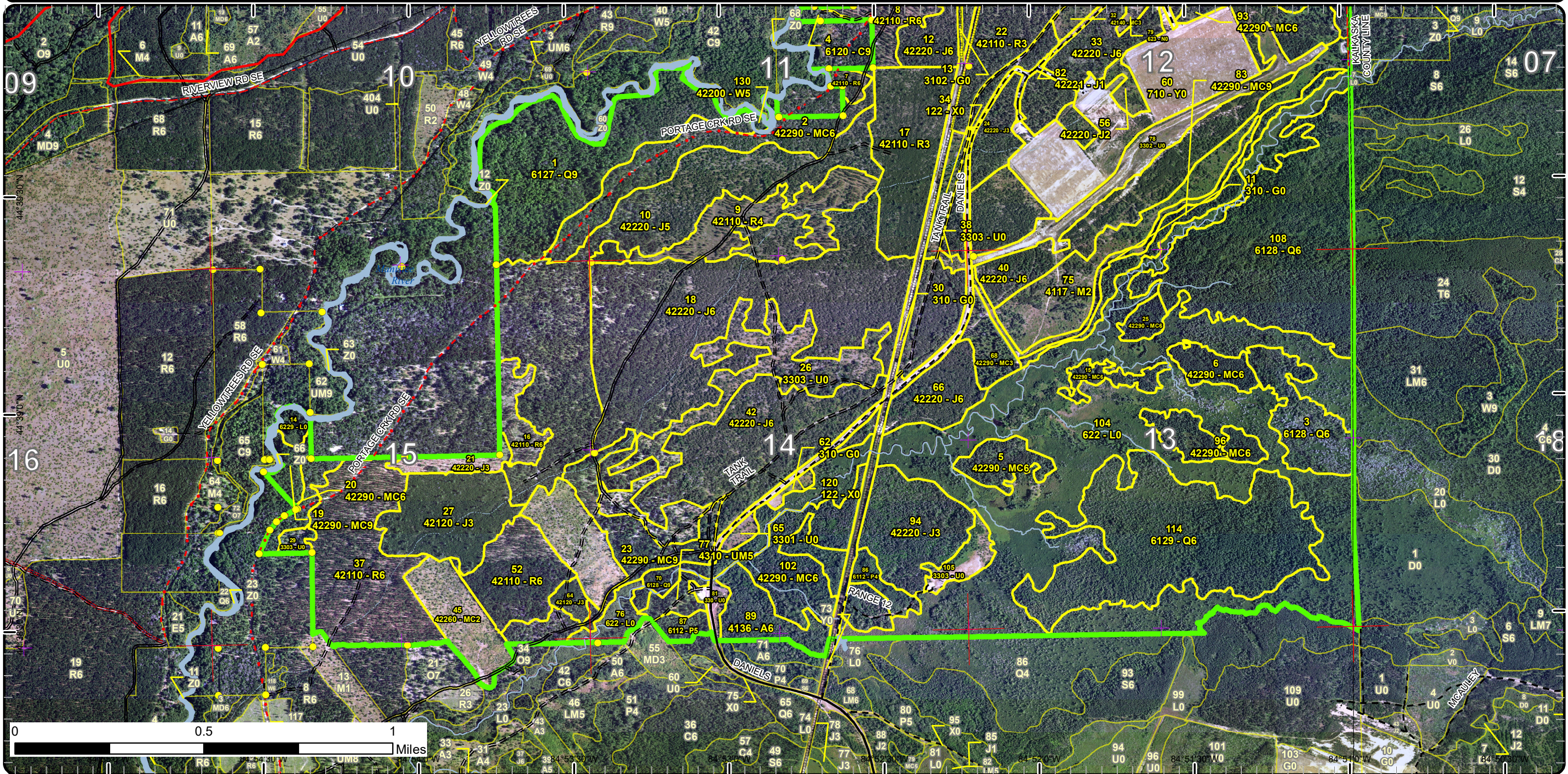
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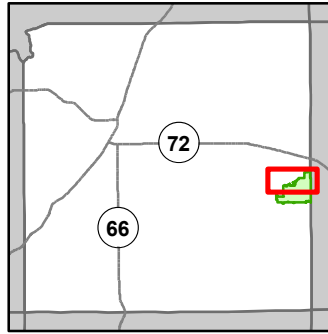


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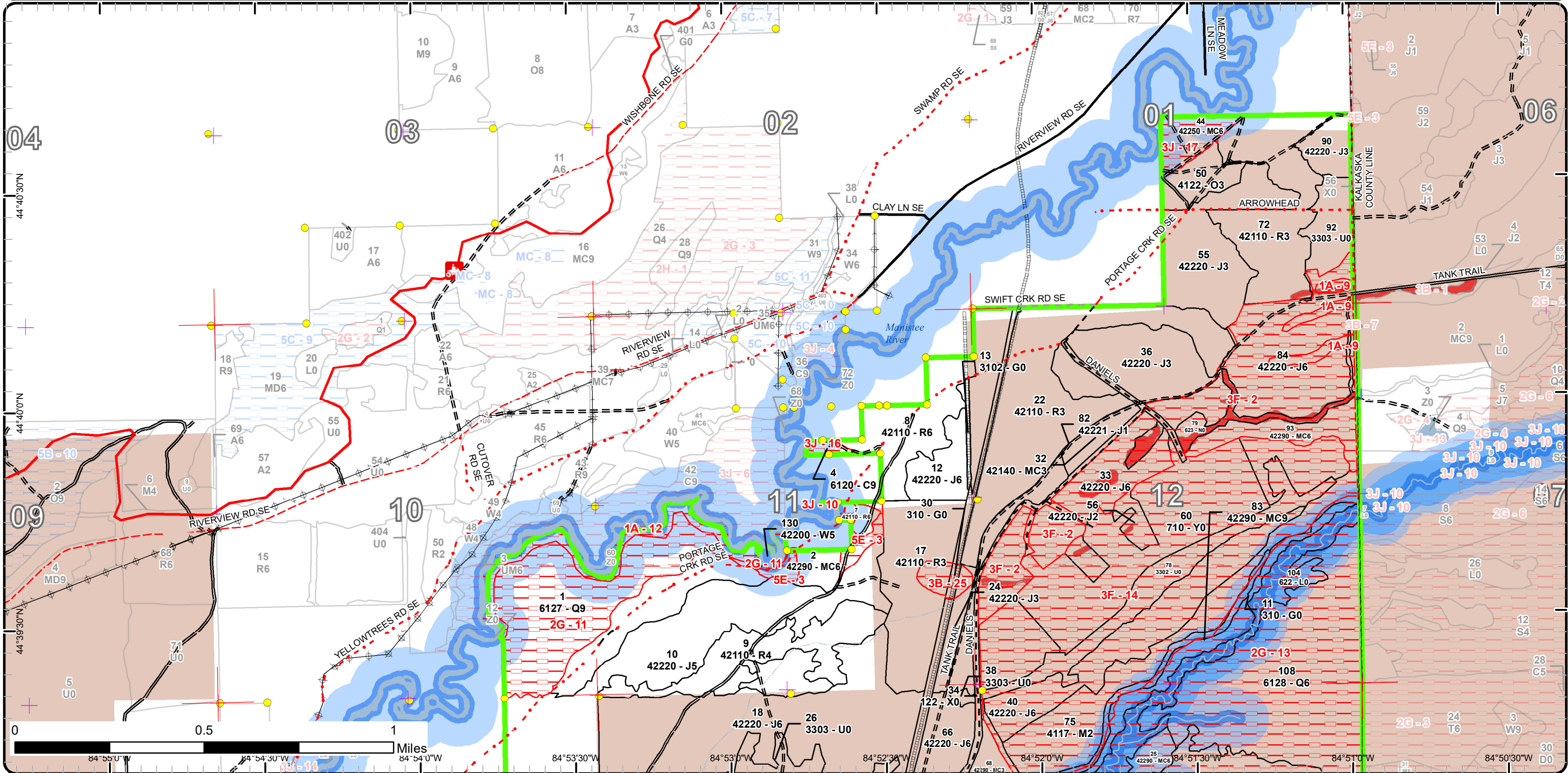


Special Conservation Areas

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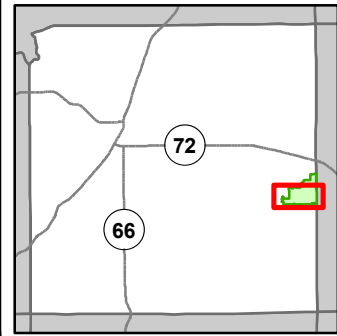


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- Unavailable
- 1A: Federal/State/Local Law
- 2G: Too wet (sensitive soils, does not include access issues)
- 3F: Military easement / lease
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Ecological Reference Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Research, Development, and Military Lands

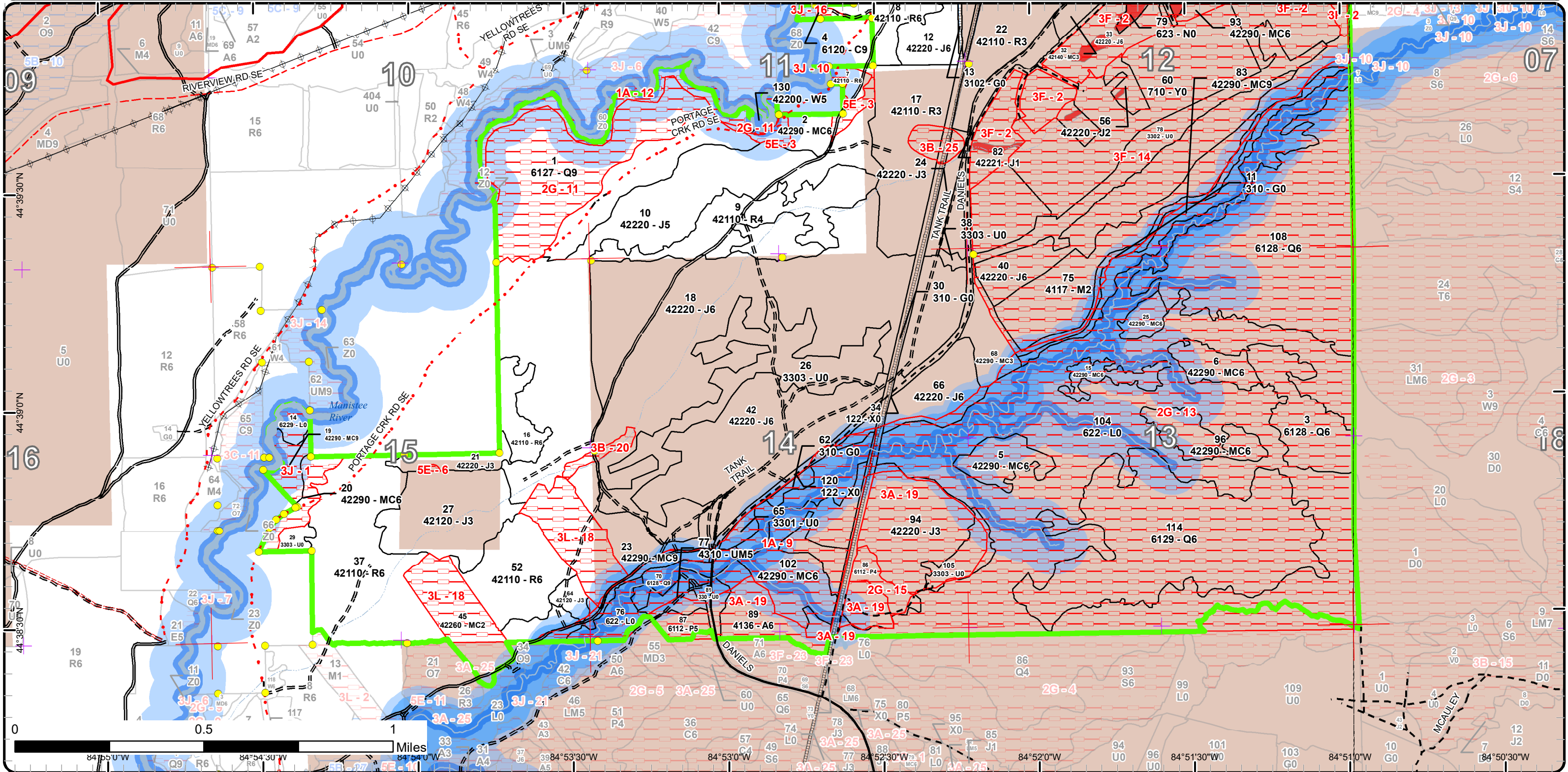


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- Compartment Boundary
- Unavailable
- 3L: Other wildlife concerns
- 5E: Long-Term Retention
- Stand Boundaries
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- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Research, Development, and Military Lands
- 1A: Federal/State/Local Law
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Conservation Values incompatible with harvest at this time
- 3F: Military easement / lease
- 3J: Water quality / BMPs (stream, river, or lake)



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	21
Cedar	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Herbaceous Openland	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Jack Pine	0	60	108	55	93	478	77	55	0	0	0	0	0	0	0	0	0	0	926
Low-Density Trees	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
Lowland Aspen/Balsam Poplar	0	0	0	0	0	15	6	0	0	0	0	0	0	0	0	0	0	0	21
Lowland Conifers	0	0	0	0	0	0	0	0	0	162	132	9	0	0	91	0	0	0	394
Lowland Shrub	376	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	376
Marsh	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Natural Mixed Pines	0	0	68	0	0	0	10	114	46	20	52	13	0	0	0	0	0	0	322
Northern Hardwood	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
Oak	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Planted Mixed Pines	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Red Pine	0	159	0	52	0	53	148	0	0	0	0	0	0	0	0	0	0	0	412
Sand, Soil	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84
Upland Mixed Forest	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	8
Urban	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
White Pine	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	675	286	184	107	93	567	241	177	46	183	186	22	0	0	91	0	0	0	2855



Report 2 – Treatment Summary

Traverse City Mgt. Unit
Year of Entry: 2023

Acres of Harvest

Compartment 129
Total Compartment Acres: 2,855

Commercial Harvest - 103
Harvests with Site Condition - 66
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Jack Pine	107	0	0	0	0	0	0	0	0	107
Natural Mixed Pines	25	0	0	37	0	0	0	0	0	62
Total	132	0	0	37	0	0	0	0	0	169

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	169	0	0	0	0	0	155	0	0	324
Next Step	0	0	0	0	0	0	324	0	0	324
Total	169	0	0	0	0	0	480	0	0	648



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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Approved Treatments:

2	61129002-Cut	36.9	42290 - Natural Mixed Pine	Poletimber Well	70	141-170	Harvest	Seed Tree with Retention	42260 - Natural Pine, Mixed Deciduous	Even-Aged	No
<p><u>Prescription</u> cut all jack pine and aspen. Leave tree mark scattered red, white pine and oak. Make sure to adhere to Natural River requirements. There is a lot of dead oak within the stand. Work with the road commission to establish road ROW and winter harvest only for Eastern Massasauga Rattlesnake and oak wilt concerns.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Jack pine, oak, aspen, red maple and red and white pine.</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>											
22	61129022-Monitor	16.5	42110 - Planted Red Pine	Sapling Well	1	Immature	Monitoring	Artificial Regen(1yr)	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> 1-year regen check for replant</p> <p><u>Specs:</u></p> <p><u>Next Step</u> ; Monitoring, Artificial Regen(3yr)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Fully stocked RP.</p> <p><u>Regen:</u></p> <p><u>Other</u> Percent to Treat = 100%</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 9/1 /2021</p>											
22	61129022-Monitorx	67.9	42110 - Planted Red Pine	Sapling Well	1	Immature	Monitoring	Artificial Regen(1yr)	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> 1-year regen check for replant</p> <p><u>Specs:</u></p> <p><u>Next Step</u> ; Monitoring, Artificial Regen(3yr)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Fully stocked red pine.</p> <p><u>Regen:</u></p> <p><u>Other</u> Percent to Treat = 100%</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 9/1 /2021</p>											



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
22 61129022-Monitorxx	18.2	42110 - Planted Red Pine	Sapling Well	1	Immature	Monitoring	Artificial Regen(1yr)	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> 1-year regen check for replanting</p> <p><u>Specs:</u></p> <p><u>Next Step</u> ; Monitoring, Artificial Regen(3yr)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Fully stocked red pine.</p> <p><u>Regen:</u></p> <p><u>Other</u> Percent to Treat = 100%</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 9/1 /2021</p>										
23 61129023-Cut	25.4	42290 - Natural Mixed Pine	Sawtimber Well	61	81-110	Harvest	Clearcut with Retention	4310 - Pine, Oak Mix	Even-Aged	No
<p><u>Prescription</u> Cut all trees 2 inches and larger. Require chipping for the military and a winter harvest to protect the Eastern Massasaga Rattle</p> <p><u>Specs:</u></p> <p>Area retention along Portage Creek has already been removed from treatment.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Jack pine with a mix of oak aspen white pine and red maple</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>										
33 61129033-Cut	27.0	42220 - Natural Jack Pine	Poletimber Well	62	81-110	Harvest	Clearcut with Retention	42221 - Natural Jack Pine, Mixed Deciduous	Even-Aged	No
<p><u>Prescription</u> Harvest of this stand needs approval from MNFI and hinges of the results of the MNFI survey</p> <p><u>Specs:</u></p> <p>Cut all trees 2 inches and larger. Require chipping for the military and a winter harvest to protect the Eastern Massasaga Rattlesnake.</p> <p>Possible green mark some scattered pines and oaks</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> jack pine with a mix of oak aspen and red maple</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u> Military Lease/Easement</p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
66 61129066-Cut	40.6	42220 - Natural Jack Pine	Poletimber Well	45	81-110	Harvest	Clearcut with Retention	42250 - Pine, Oak	Even-Aged	No
<p><u>Prescription</u> Cut all trees 2 inches and larger. Require chipping for the military and a winter harvest to protect the Eastern Massasaga Rattlesnake</p> <p><u>Specs:</u> Area retention along Portage Creek has already been removed from treatment</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Jack pine with a mix of oak and other mixed conifer and deciduous tree species.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>										
72 61129072-Monitor	52.8	42110 - Planted Red Pine	Sapling Well	1	Immature	Monitoring	Artificial Regen(1yr)	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> 1-year regen check for replant</p> <p><u>Specs:</u></p> <p><u>Next Step</u> ; Monitoring, Artificial Regen(3yr)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Fully stocked red pine.</p> <p><u>Other Comment:</u> Percent to Treat = 100%</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 9/1 /2021</p>										
84 61129084-Cut	38.9	42220 - Natural Jack Pine	Poletimber Well	59	81-110	Harvest	Clearcut with Retention	4222 - Natural Jack Pine	Even-Aged	No
<p><u>Prescription</u> Harvest of this stand needs approval from MNFI and hinges of the results of the MNFI survey</p> <p><u>Specs:</u> Cut all trees 2 inches and larger. Require chipping for the military and a winter harvest to protect the Eastern Massasaga Rattlesnake.</p> <p>Possible green mark some scattered pines and oaks</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> is jack pine with a mix of oak, aspen, red maple, red and white pine.</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u> Military Lease/Easement</p> <p><u>Proposed Start Date:</u> 10/1 /2022</p>										

Total Treatment Acreage Proposed: 324.2

Report 4 – Site Conditions

Traverse City Mgt. Unit

Paul Roell : Examiner

Compartment: 129

Year of Entry: 2023

Availability for Management

Total Acres	Acres Available	Acres <i>With Condition</i>	Acres Not Available
21	0	0	21
2	0	0	2
42	23	0	19
926	655	0	272
135	84	0	51
21	0	0	21
394	0	0	394
376	0	0	376
12	0	0	12
321	76	0	245
53	0	0	53
14	14	0	0
8	8	0	0
412	406	0	6
84	0	0	84
7	0	0	7
25	19	0	5
1	1	0	0
2,855	1,286		1,569
	45%		55%

Dominant Site Conditions

	Availability for Management			Dominant Site Condition	Dominant Site Conditions							
	Acres Available	Acres <i>With Condition</i>	Acres Not Available		1A	2G	3A	3B	3F	3J	3L	5E
21	0	0	21	Aspen	5		16					
2	0	0	2	Cedar						2		
42	23	0	19	Herbaceous Openland	5	5		1	8			
926	655	0	272	Jack Pine	10	5	41	1	214			0
135	84	0	51	Low-Density Trees	6	2	11		32			
21	0	0	21	Lowland Aspen/Balsam Poplar	8	8	6					
394	0	0	394	Lowland Conifers	25	369						
376	0	0	376	Lowland Shrub	27	344	0			5		
12	0	0	12	Marsh	0				12			
321	76	0	245	Natural Mixed Pines	45	77	15	4	19	30	47	8
53	0	0	53	Northern Hardwood		1			52			
14	14	0	0	Oak								
8	8	0	0	Planted Mixed Pines								
412	406	0	6	Red Pine				4	0	2		
84	0	0	84	Sand, Soil					84			
7	0	0	7	Upland Mixed Forest	5		3					
25	19	0	5	Urban	2				4			
1	1	0	0	White Pine	0							
2,855	1,286		1,569	Total Forested Acres	136	811	92	11	425	39	47	8
	45%		55%	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	3J: Water quality / BMPs (stream, river, or lake)	23	1A: Federal/State/Local Law	Unspecified	Unspecified	Unspecified
Comments: Manistee River corridor, Natural Rivers buffer.							

Report 4 – Site Conditions

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2	Unavailable	3F: Military easement / lease	149	3B: Threatened, endangered, and special concern species	Unspecified	Unspecified	Unspecified
Comments: Leave western section untreated.							
3	Unavailable	5E: Long-Term Retention	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Rattlesnake Red Pine, 61-044-13-01.							
9	Unavailable	1A: Federal/State/Local Law	119	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments: Natural Rivers buffer							
10	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	1A: Federal/State/Local Law	Unspecified	Unspecified	Unspecified
Comments: Manistee River - natural rivers buffer							
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	76	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Traverse City Mgt. Unit

Paul Roell : Examiner

Compartment: 129

Year of Entry: 2023

12	Unavailable	1A: Federal/State/Local Law	31	2G: Too wet (sensitive soils, does not include access issues)	3A: Conservation Values incompatible with harvest at this time	Unspecified	Unspecified
Comments: Natural Rivers buffer along Manistee River.							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	742	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
14	Unavailable	3F: Military easement / lease	277	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Military Board Land. Maintain as range buffer.							
15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	3F: Military easement / lease	Unspecified	Unspecified	Unspecified
Comments:							
16	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	1A: Federal/State/Local Law	Unspecified	Unspecified	Unspecified
Comments: Manistee River, natural rivers buffer.							
17	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	13	1A: Federal/State/Local Law	Unspecified	Unspecified	Unspecified
Comments: Manistee River, natural rivers buffer.							

Report 4 – Site Conditions

Traverse City Mgt. Unit

Paul Roell : Examiner

Compartment: 129

Year of Entry: 2023

18	Unavailable	3L: Other wildlife concerns	47	Unspecified	Unspecified	Unspecified	Unspecified
Comments: EMR research project.							
19	Unavailable	3A: Conservation Values incompatible with harvest at this time	86	Unspecified	Unspecified	Unspecified	Unspecified
Comments: EMR habitat.							
20	Unavailable	3B: Threatened, endangered, and special concern species	4	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:							
25	Unavailable	3B: Threatened, endangered, and special concern species	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



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.

ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																					
1	6127 - Lowland Pine	Sawtimber Well	91.2	137	141-170	N/A	Stand is along Manistee River; part is within Natural River vegetative buffer. Mature, natural red pine and white pine with no obvious rows. Contains areas of lowland dense red and white pine, dense cedar and oak with mixed pine ridges. Most of stand is bounded by a steep bluff. Good white pine regeneration. Was once part of the Livingstone estate. Some logging occurred prior to state ownership.OI: 1883. River bottomland area. Much of stand is within Natural Rivers Corridor. Once owned by Livingstone estate. Considered for OG status? Look for C6 stands along oxbows in river (OI 80, 81, 82).																																																					
<table border="1"> <thead> <tr> <th>Canopy Species</th> <th>% Cover</th> <th>Size Class</th> <th>DBH</th> <th>Age</th> </tr> </thead> <tbody> <tr> <td>Red Maple</td> <td>10</td> <td>Pole/Log</td> <td>8</td> <td></td> </tr> <tr> <td>Black/Red (Hybrid) Oak</td> <td>10</td> <td>Log/Pole</td> <td>10</td> <td></td> </tr> <tr> <td>White Pine</td> <td>25</td> <td>Log/Pole</td> <td>13</td> <td></td> </tr> <tr> <td>Red Pine</td> <td>35</td> <td>Log/Pole</td> <td>12</td> <td>137</td> </tr> <tr> <td>Northern White Cedar</td> <td>15</td> <td>Pole/Log</td> <td>8</td> <td></td> </tr> <tr> <td>Jack Pine</td> <td>5</td> <td>Pole/Log</td> <td>8</td> <td></td> </tr> </tbody> </table>		Canopy Species	% Cover	Size Class	DBH	Age		Red Maple	10	Pole/Log	8		Black/Red (Hybrid) Oak	10	Log/Pole	10		White Pine	25	Log/Pole	13		Red Pine	35	Log/Pole	12	137	Northern White Cedar	15	Pole/Log	8		Jack Pine	5	Pole/Log	8		<table border="1"> <thead> <tr> <th>Sub-Canopy Species</th> <th>Density</th> <th>Avg. Height</th> <th>Size</th> </tr> </thead> <tbody> <tr> <td>Black Spruce</td> <td>Low</td> <td>5 - 10 feet</td> <td>Sapling</td> </tr> <tr> <td>White Pine</td> <td>High</td> <td>Variable</td> <td>Sapling</td> </tr> </tbody> </table>		Sub-Canopy Species	Density	Avg. Height	Size	Black Spruce	Low	5 - 10 feet	Sapling	White Pine	High	Variable	Sapling									
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2	42290 - Natural Mixed Pine	Poletimber Well	46.3	70	141-170	N/A	Stand is along Manistee River; part is within Natural River corridor much of the oak within stand has died. two small pockets of planted red pine and scattered pockets of jack pine																																																					
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3	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	30.8	81	51-80	N/A	Stand is along Portage Creek and contains a tributary; part is within Natural River vegetative buffer. Stand appears similar to Stand 99. similar stand to 114																																																					
4	6120 - Lowland Cedar	Sawtimber Well	2.4	98	51-80	N/A	Stand is along Manistee River; part is within Natural River vegetative buffer. Most of stand is bottomland but part along the road is upland. Upland is red oak, red pine, red maple and white pine saplings. Bottomland is cedar with several very large white pine. Powerline to private cabin along east edge of stand.																																																					
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7	42110 - Planted Red Pine	Poletimber Well	4.5	57	111-140	N/A	Stand is along Manistee River; part is within Natural River vegetative buffer. Contains boat launch known as Z landing and designated parking area. Row thinned in 2015.																																																
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8	42110 - Planted Red Pine	Poletimber Well	34.4	57	111-140	N/A	Planted in rows with high density. South end contains poorer regen. Third row thinned in 2015. Rows were tight in some places so took 2 rows and left 4. Also removed all jack pine and oak.																																																
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9	42110 - Planted Red Pine	Poletimber Poor	39.5	46	51-80	N/A	Planted red pine but rows are uneven and starting to break up. Row thinned in 2015. Also removed all jack pine and oak, leaving significant open areas																																																
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10	42220 - Natural Jack Pine	Poletimber Medium	157.4	45	51-80	N/A	Regenerated naturally from 1975 clearcut. Patchy regeneration. Includes some sizeable openings.																																																
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11	310 - Herbaceous Openland	Nonstocked	12.0		Immature	Managed Opening	mowed opening along the fence inside the fence																																																
12	42220 - Natural Jack Pine	Poletimber Well	16.0	43	51-80	N/A	Naturally regenerated from cut in early 1970s. Regen is patchy, contains small gaps in canopy.																																																
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13	3102 - Grass	Nonstocked	1.9		Unspecified	No	Natural gas pipeline.																																																



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14	6229 - Mixed lowland shrub	Nonstocked	4.9		Unspecified	No	Stand is along Manistee River; part is within Natural River vegetative buffer. Stand is between main stem of Manistee River and tributary/slough. Vegetation is mostly tag alder with pockets of cedar, tamarack, and paper birch.																																																												
15	42290 - Natural Mixed Pine	Poletimber Well	8.8	60	51-80	N/A	Stand is near Portage Creek and between two tributaries; small part is within Natural River vegetative buffer. Variable stand. Mostly upland but with some wet spots. Used to have aspen component. Jack pine mortality has led to a lot of CWD.																																																												
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16	42110 - Planted Red Pine	Poletimber Well	13.0	46	111-140	N/A	Red pine planted in rows but patchy. Some red pine extends into south part of Stand 10 but it's scattered enough that it's not worth including. Row thinned in 2016.																																																												
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17	42110 - Planted Red Pine	Sapling Well	52.0	27	Immature	N/A	Sale 015-93-01 (1 of 3 units). Portage Creek Jack Pine. Clearcut 1993. 3-0 red pine planted June 1994. Also contains significant amount of natural jack pine, at least at edges.																																																												
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18	42220 - Natural Jack Pine	Poletimber Well	177.9	45	81-110	N/A	Regenerated naturally from 1975 harvest there are a few scattered large red and white pine.																																																												
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19	42290 - Natural Mixed Pine	Sawtimber Well	8.1	97	141-170	N/A	Stand is along Manistee River; part is within Natural River vegetative buffer. Stand is in river bottomland down steep bluff but appears dry.																																																												
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22	42110 - Planted Red Pine	Sapling Well	104.4	1	Immature	N/A	5/5/2021 Stand was replanted with red pine. Approximately 616 trees per acre was replanted. Cut fall/winter 2016. Trenched June 2018. Site prep sprayed 9/7/2018. Planted April 2019. 4-0 red pine. 1-year regen check 10/8/19. Did plots north of Portage Creek Rd, 42% survival. Looked at south part from pipeline and mortality appears similar. Spray was very effective, almost 100% FTG. Great variability in seedling size: 3"-12". Military board land.																																																			
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23	42290 - Natural Mixed Pine	Sawtimber Well	38.8	61	81-110	N/A	Some very large white pine in canopy. includes a pocket of thinned red pine.																																																			
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24	42220 - Natural Jack Pine	Sapling Well	8.5	14	Immature	N/A	Sale 034-04-01 (2 of 5 units). Range 18 Jack Pine. Cut winter 2006. Intermittent stream runs through stand. Military tank trail runs along eastern edge of stand. Large slash pile just north of stream. Mostly jack pine seedlings with scattered large red oak, red pine and jack pine.																																																			
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25	42290 - Natural Mixed Pine	Poletimber Well	6.3	60	51-80	N/A	Stand is near Portage Creek and between two tributaries; small part is within Natural River vegetative buffer. Variable stand. Mostly upland but with some wet spots. Used to have aspen component. Jack pine mortality has led to a lot of CWD.																																																			
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																												
26	3303 - Mixed Low Density Trees	Nonstocked	62.5		Unspecified	No	Part of a very large clearcut in 1975. Some sapling jack pine and lots of stump sprout cherry.																																												
27	42120 - Planted Jack Pine	Sapling Well	44.3	26	Immature	N/A	Sale 015-93-01 (1 of 3 units). Portage Creek Jack Pine. Clearcut 1993. 2-0 jack pine planted June 1994. Mostly dense jack pine saplings with a few black cherry stump sprouts and overstory red oak. Intermittent stream runs through stand.																																												
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29	3303 - Mixed Low Density Trees	Nonstocked	3.5		Unspecified	No	Opening with lots of black cherry stump sprouts and scattered shrubby jack pine. Also includes some red pine and white pine saplings.																																												
30	310 - Herbaceous Openland	Nonstocked	25.4		Unspecified	No	pipeline.																																												
32	42140 - Planted Mixed Pine	Sapling Well	8.0	15	Immature	N/A	Sale 034-04-01 (1 of 5 units). Range 18 Jack Pine. Cut winter 2006. Red pine planted May 2006.																																												
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33	42220 - Natural Jack Pine	Poletimber Well	55.2	62	81-110	N/A	Spring 2016. Amec Foster Wheeler is cutting a ditch to improve drainage north of ranges, which will involve cutting trees and grading soil.																																												
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34	122 - Road/Parking Lot	Nonstocked	18.2		Immature	No	Daniels Road. Also known as ARF and AFF Range Road.																																												
36	42220 - Natural Jack Pine	Sapling Well	42.0	14	Immature	N/A	Sale 034-04-01 (2 of 5 units). Range 18 Jack Pine. Cut Winter 2006. Scattered natural jack pine regen (seedlings). Scattered sapling/pole sized jack pine and poor quality red oak (pole/sapling) in overstory.																																												
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
37	42110 - Planted Red Pine	Poletimber Well	75.5	55	111-140	N/A	Row thinned in 2016.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Red Oak		3	Log/Pole	10		Red Oak	
White Pine		2	Pole/Log	8		Black Cherry	
Red Pine		95	Pole/Log	8	55	Density	
						Avg. Height	
						Size	
						Sapling	
						Sapling	
38	3303 - Mixed Low Density Trees	Nonstocked	1.5		Unspecified	No	Scattered jack pine saplings and clumps of black cherry.
40	42220 - Natural Jack Pine	Poletimber Well	92.6	32	51-80	N/A	Inside fenced area of Range 18.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
White Pine		10	Sapling/Pole	4		Black Cherry	
Jack Pine		85	Pole/Sapling	5	32	Jack Pine	
Black Cherry		5	Sapling	2		Density	
						Avg. Height	
						Size	
						Sapling	
						Sapling	
42	42220 - Natural Jack Pine	Poletimber Well	82.7	45	51-80	N/A	Regenerated naturally from 1975 cut. Patchy canopy cover. Some areas have more oak.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Black/Red (Hybrid) Oak		10	Pole/Log	8		Black Cherry	
Red Pine		10	Log/Pole	10		Jack Pine	
Jack Pine		70	Pole	6	45	Density	
White Pine		10	Pole/Log	8		Avg. Height	
						Size	
						Sapling	
						Sapling	
44	42250 - Pine, Oak	Poletimber Well	12.6	103	81-110	N/A	Stand is along Manistee River; part is within Natural River vegetative buffer. Significant amount of dead white pine. Oak is poor quality.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Black/Red (Hybrid) Oak		35	Pole/Log	8	103	Black/Red (Hybrid) Oak	
White Pine		25	Pole/Log	8		White Pine	
Red Pine		5	Log	12		Density	
Jack Pine		30	Pole/Log	8		Avg. Height	
White Oak		5	Pole/Log	8		Size	
						Sapling	
						Sapling	
45	42260 - Natural Pine, Mixed Deciduous	Sapling Medium	54.5	14	Immature	N/A	Sale 023-06-02. Rattlesnake research project (continues into Comp 130). Clearcut Winter 2006. Mostly jack pine seedlings and black cherry stump sprouts.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Jack Pine		55	Sapling	3	14	Black/Red (Hybrid) Oak	
Black Cherry		30	Sapling	3	14	White Pine	
White Pine		5	Sapling	4		Density	
Red Pine		5	Sapling	3		Avg. Height	
Black/Red (Hybrid) Oak		5	Sapling	2		Size	
						Sapling	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																												
50	4122 - Oak, Pine	Sapling Well	13.7	5	Immature	N/A	Cut fall 2016 and chipped. Good oak regeneration. There are a few scattered mature oak in the canopy that were unable to be coded because of mifi data rules																												
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52	42110 - Planted Red Pine	Poletimber Well	33.5	55	111-140	N/A	Red pine planted 1966. Row-thinned in 2016. Significant planting gaps had filled in with jack pine which was also removed in 2016. Also, removed dead oak.																												
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Red Pine	95	Pole/Log	8	55																															
55	42220 - Natural Jack Pine	Sapling Well	46.7	14	Immature	N/A	Sale 45-03-01 (3 of 4 units). Arrowhead Jack Pine. Clearcut winter 2006.																												
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56	42220 - Natural Jack Pine	Sapling Medium	5.7	22	Unspecified	N/A	Between ranges 16 and 19. inside the Fence																												
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60	710 - Sand, Soil	Nonstocked	84.4		Unspecified	No	Ranges 16, 18, and 19 are located within the fenced area.																												
62	310 - Herbaceous Openland	Nonstocked	2.6		Immature	Managed Opening	mowed opening																												
64	42120 - Planted Jack Pine	Sapling Well	4.9	26	Immature	N/A	Dense jack pine saplings with overstory red oak. Sale 015-93-01 (1 of 3 units). Portage Creek Jack Pine. Clearcut 1993. 2-0 jack pine planted June 1994. Mostly dense jack pine saplings with a few black cherry stump sprouts and overstory red oak.																												
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65	3301 - Low Density Deciduous Trees	Nonstocked	3.4		Unspecified	Managed Opening	Mostly cherry, jack pine, red pine, red oak, and white pine. Some log-sized oak near road.																												



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																											
66	42220 - Natural Jack Pine	Poletimber Well	44.7	45	81-110	N/A	Stand is near Portage Creek; small part is within Natural River vegetative buffer. Mostly sapling sized jack pine with most of red pine at west end.																																											
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68	42290 - Natural Mixed Pine	Sapling Well	12.7	15	Immature	N/A	Sale 034-04-01 (1 of 5 units). Range 18 Jack Pine. Cut winter 2006. Large slash piles at north end.																																											
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70	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	8.9	101	Unspecified	N/A	Portage Creek runs through stand; part is within Natural River vegetative buffer. Diverse stand. Good wildlife habitat.																																											
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72	42110 - Planted Red Pine	Sapling Well	54.8	1	Immature	N/A	5/5/2021 Stand was replanted to red pine. Approximately 441 trees per acre were planted. Cut fall/winter 2016. Left scattered oak. Trenched June 2018. Sprayed fall 2018. Planted spring 2019. 4-0 red pine, 875 TPA. 1-year regen check 10/8/19. 46% mortality. 95% FTG. Spraying was very effective, except for a few skips that didn't get sprayed. Good trenches. Jack pine seedlings are present and might be an issue in the future. 4-6" tall now. Merging stands 72 and 74 (was south of Arrowhead Rd). Military Board Land.																																											
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75	4117 - Mixed N. Hardwood - Pine	Sapling Medium	53.2	5	Immature	N/A	Looks like a fuel break																																											
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76	622 - Lowland Shrub	Nonstocked	9.5		Unspecified	No	Portage Creek runs through stand; part is within Natural River vegetative buffer. Mostly tag alder with a few overstory trees. Short bluff (4-5") separates this from upland stands.																																											



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																														
77	4310 - Pine, Oak Mix	Poletimber Medium	7.5	65	51-80	N/A	Stand is along Portage Creek; part is within Natural River vegetative buffer. Part, especially along the road, is an opening that is filling in. Tag alder along creek.																																														
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78	3302 - Low Density Conifer Trees	Nonstocked	32.2		Unspecified	No	Inside fenced range area. Contains berm at back of ranges and multiple roads. Scattered jack pine saplings and shrubby black cherry sprouts.																																														
79	623 - Emergent Wetland	Nonstocked	12.5		Unspecified	No																																															
81	330 - Low-Density Trees	Nonstocked	5.1		Immature	No	Stand is along Portage Creek; part is within Natural River vegetative buffer. Mostly jack pine and clumps of black cherry with road passing through the middle																																														
82	42221 - Natural Jack Pine, Mixed Deciduous	Sapling Poor	8.1	4	Immature	N/A	stand was supposed to be planted but never got trenched. Military board land. filling in with some jack pine probably will be a fully forested stand in 10 years																																														
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83	42290 - Natural Mixed Pine	Sawtimber Well	19.5	85	81-110	N/A	Variable stand. Mostly upland but with some lowland cedar along creek. Good buffer for Portage Creek.																																														
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86	6112 - Lowland Aspen	Poletimber Poor	15.3	49	51-80	N/A	Variable stand. Definitely wet. 100% tag alder in places and alder is thick under a lot of tree canopy.																																														
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87	6112 - Lowland Aspen	Poletimber Medium	5.6	55	51-80	N/A	Variable stand. Aspen is poor quality.																																														
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89	4136 - Aspen, Mixed Conifer	Poletimber Well	21.2	49	51-80	N/A	Stand is along Portage Creek and tributary; part is within Natural River vegetative buffer.																																														
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90	42220 - Natural Jack Pine	Sapling Well	11.1	14	Immature	N/A	Sale 45-03-01 (1 of 4 units). Arrowhead Jack Pine.																																														
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92	3303 - Mixed Low Density Trees	Nonstocked	16.1		Unspecified	No	Almost 25% forested but fewer jack pine seedlings in understory than recently regenerated stand to north. Canopy is scattered sapling/pole-sized jack pine (avg. 4" dbh), pole/log-sized red oak (avg. 8" dbh), and black cherry stump sprouts.																																														
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
93	42290 - Natural Mixed Pine	Poletimber Well	18.3	64	51-80	N/A	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Black/Red (Hybrid) Oak		25	Pole/Log	8		Red Oak	
White Pine		15	Pole	6		White Pine	
Red Pine		20	Log/Pole	10		Black Cherry	
Jack Pine		40	Pole/Log	8	64		
						Density	Avg. Height
							Size
94	42220 - Natural Jack Pine	Sapling Well	42.3	3	Immature	N/A	Mostly upland but with low spots. Cut winter 2017-18, leaving clumpy spruce and some white pine. Loggers reported some of the leave trees blowing over even before they'd left the sale.
Canopy Species		% Cover	Size Class	DBH	Age		
Jack Pine		70	Sapling	1	3		
Red Pine		10	Pole/Log	8			
White Pine		10	Pole/Log/Sap	6			
Black Cherry		5	Sapling	1	3		
Red Maple		5	Sapling	1	3		
96	42290 - Natural Mixed Pine	Poletimber Well	15.8	60	51-80	N/A	Stand is near Portage Creek and between two tributaries; small part is within Natural River vegetative buffer. Variable stand. Mostly upland but with some wet spots. Used to have aspen component. Jack pine mortality has led to a lot of CWD.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Balsam Fir		20	Pole	6		White Spruce	
Northern White Cedar		5	Pole/Log	8		White Pine	
Tamarack		5	Pole	6		Labrador Tea	
White Pine		15	Pole	6			
Red Pine		5	Log/Pole	10			
Jack Pine		50	Pole/Log	8	60		
						Density	Avg. Height
							Size
102	42290 - Natural Mixed Pine	Poletimber Well	43.7	99	1-50	N/A	Variable stand. White pine is mostly poles in some places, with few logs. Large white pine is mostly south of road. May contain vernal pond/area of standing water. Beaver activity south of road. Gets increasingly wet toward south.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Red Maple		7	Sapling/Pole	4		White Spruce	
Quaking Aspen		10	Pole	8		White Pine	
Bigtooth Aspen		10	Pole	8		Red Pine	
White Spruce		2	Pole	6			
White Pine		40	Log/Pole/XLog	16	99		
Red Pine		15	Log	10			
Jack Pine		16	Pole	6			
						Density	Avg. Height
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104	622 - Lowland Shrub	Nonstocked	361.9		Immature	No	Portage Creek and multiple tributaries run through stand; part is within Natural River vegetative buffer. Mostly tag alder with scattered cedar tamarack and pine. Some areas of standing water. Some areas are marshy with cattails.
105	3303 - Mixed Low Density Trees	Nonstocked	10.2		Unspecified	No	Contains Range 12 and parking area. Within fenced range area. Some open grassy area with scattered jack pine saplings and black cherry stump sprouts. Higher elevation than surrounding stands.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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108	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	131.0	81	51-80	N/A	Stand is along Portage Creek and contains a tributary; part is within Natural River vegetative buffer. Stand appears similar to Stand 99. similar stand to 114
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114	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	132.0	93	81-110	N/A	Stand contains tributaries of Portage Creek; part is within Natural River vegetative buffer. Some tributaries are not mapped correctly or at all. Variable stand. Parts are dense cedar, parts are dense tamarack, parts are black spruce/leatherleaf bog while others are mixed. Some parts were mostly upland.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	8	Pole/Log	8	
Paper Birch	5	Pole	6	
White Spruce	10	Pole	8	
Black Spruce	20	Pole/Sapling	6	
Northern White Cedar	30	Pole/Sap/Log	8	93
Tamarack	20	Pole/Log	8	
White Pine	5	Log/XLog	14	
Black Ash	2	Sapling/Pole	4	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	< 5 feet	Sapling
Black Spruce	Medium	5 - 10 feet	Sapling
Tag Alder	High	5 - 10 feet	Tall Shrub

120	122 - Road/Parking Lot	Nonstocked	6.4		Unspecified	No	Daniels Road, also known as ARF and AFF Range Road.
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130	42200 - Natural White Pine	Poletimber Medium	1.1	85	51-80	N/A	Island
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Canopy Species	% Cover	Size Class	DBH	Age
White Pine	95	Pole/Log	8	85
Northern White Cedar	5	Pole	8	

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	5 - 10 feet	Tall Shrub