



Compartment Review Presentation

Newberry Forest Management Unit

Compartment 42015

Entry Year 2019

Acreage: 3,132

County Luce

Management Area: Deer Park

Revision Date: 2017-09-01

Stand Examiner: Matt Payment

Legal Description:

T49N R11W sections 27 – 33 T48N R11W sections 5, 6

Identified Planning Goals:

Promote multiple aged and diversified tree species where possible to reduce forest pest impacts and improve conditions for wildlife species. Retain/enhance the quality of recreational uses of the area. Provide for consistent, sustainable wood fiber production over the long term.

Soil and topography:

The compartment is mainly underlain with Rubicon sands. The southern sections transition to muck soils with adjacent ridges of Rousseau – Markey soils. The terrain is largely flat, with the southern sections having flat, seasonally ponded areas with short, steep ridge slopes.

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

For the most part, contiguous state ownership is adjacent to the compartment. Private, non industrial ownerships border the compartment in the southern sections. Deer and bear hunting occur within the compartment with heavy recreational ORV use along the trails and interior forest roads. Intensive timber management has occurred in the past and is ongoing.

Unique Natural Features:

North Branch Lakes, Pretty Lake ERA Dry Mesic Northern Forest

Archeological, Historical, and Cultural Features:

None Identified

Special Management Designations or Considerations:

Southern sections are within the Two Hearted Natural River corridor and are affected by the natural river plan.

Watershed and Fisheries Considerations:

Fisheries Values: Excellent

Fisheries Concerns: The North Branch Two-Hearted River flows through the southern tier of this compartment. This branch of the Two Hearted River is within the Natural River System and management zone. The Two Hearted River is known for its salmon and steelhead runs during the fall and spring months, respectively. Native Brook Trout populations exist in this reach of the North Branch Two Hearted River. In addition, there is an outlet stream from Tank Lake that flows to the North Branch Two Hearted River through a series of small unnamed lakes. This outlet is intermittent at best and likely does not have much for fisheries values. Currently in this compartment, all treatments are not in proximity to any other surface water, so there are no fisheries concerns at this time.

Wildlife Habitat Considerations:

Compartment 15 lies in the far northern portion of Luce county and is in the Grand Marais Sandy End Moraine and Outwash ecological sub-subsection. The compartment is on the western side of the Deer Park Management Area and American marten, Kirtland's warbler, Piping plover, and red crossbill are featured species. The vegetation is largely dominated by jack, red and white pine, with slightly more diversity in the southern portion of the compartment. Diversity of tree species in pine stands is relatively low and will be retained during harvest. Overall, pre-settlement vegetation patterns appear to have been similar to the current landscape of this compartment.

In a predominantly pine forested ecosystem, maintaining a variety of age and size classes and maintaining as much structural and species diversity as possible in managed stands will be important to achieving wildlife objectives. For example, retaining soft and hard mast producing species where they occur and a component of red and white pine in jack pine final harvests will provide food sources, nest, and den trees, and improve stand diversity. Retaining mature stands as

connected marten habitat across the compartment will be important. White-tailed deer, black bear, otter, mink, gray wolves, coyote, marten and fisher are noteworthy wildlife species using this compartment.

Mineral Resource and Development Concerns and/or Restrictions

An active sand/gravel pit is located more than four miles to the east. There may be some sand and gravel potential within the compartment but little information about the surface geology is available for the area. There is no known metallic mineral potential in this area, and there is no known potential for economic oil and gas production in the UP.

Vehicle Access:

Good access is present in the north $\frac{3}{4}$ of the compartment. Firelane roads are along the section lines and old roads exist from previous timber management. The far southern area of the compartment has very limited to no vehicle access due to no roads and expansive swamp.

Survey Needs:

Recreational Facilities and Opportunities:

Heavily used for various recreation activities including hunting, berry picking, and trail riding. Designated ORV and snowmobile trails run through the compartment.

Fire Protection:

Large fire runs are possible in the continuous pine stands in northern portion. Intermixed private property in the southern portion could be at risk to large fires. Modified suppression tactics may need to be considered in the Two Hearted River Area. Road access through the compartment is fair providing some opportunities for fire lines if needed.

Additional Compartment Information:

The following reports from the Inventory are attached:

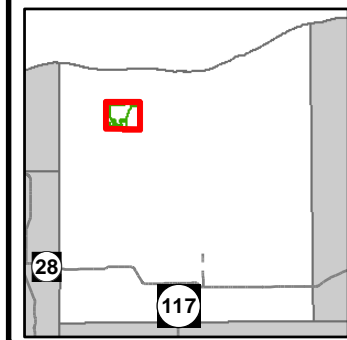
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

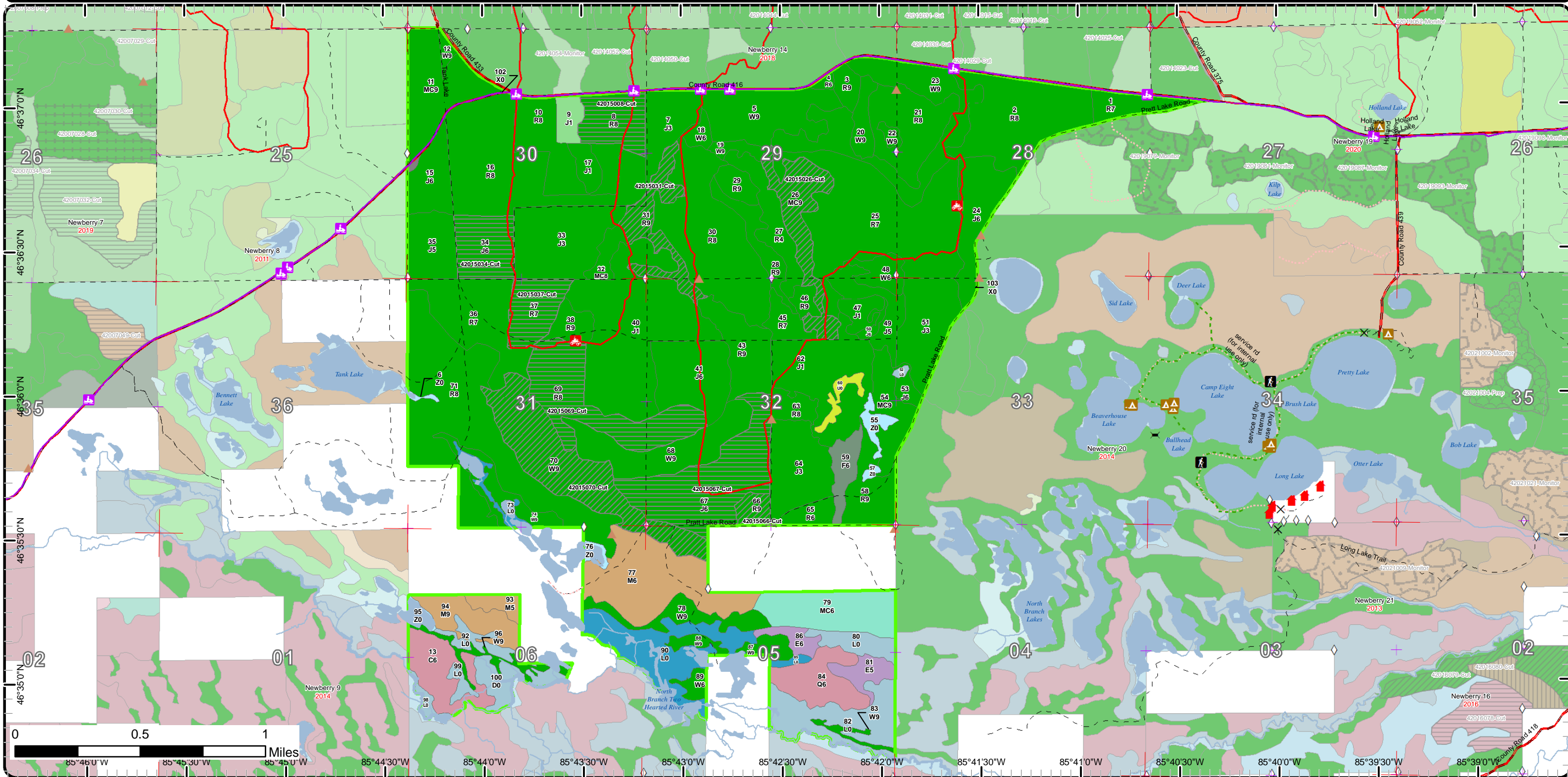
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 15
 T49N, R11W, Sec. 27-33
 T48N, R11W, Sec. 5, 6
 County: Luce
 Unit: Newberry
 Mgmt Area: Deer Park
 YOE: 2019
 Acres: 3132.3 GIS Calculated
 Examiner: Matt Payment
 Map Revised: 12/14/2017
 Map Phase: Post-Review

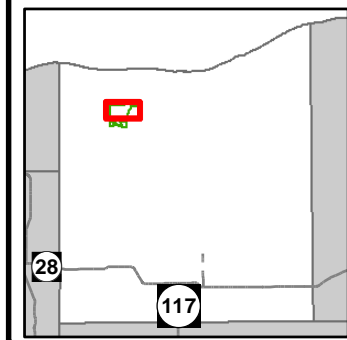


- Miris Corners
- + Remonumented Section Corners
- Field Grade GPS Corners
- Counties
- X Gate
- ▲ Berms
- Bridge
- Cabin
- ▲ Campground
- Hiking Trails
- ORV Trails
- Snowmobile Trails
- Designated Hiking Trails
- Designated ATV
- Designated Snowmobile Trails
- County Gravel Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Clearcut (w/Reserves)
- Thinning (Crown, Low, Systematic)
- 411 - Northern Hardwood
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 629 - Mixed non-forested wetland
- Lakes

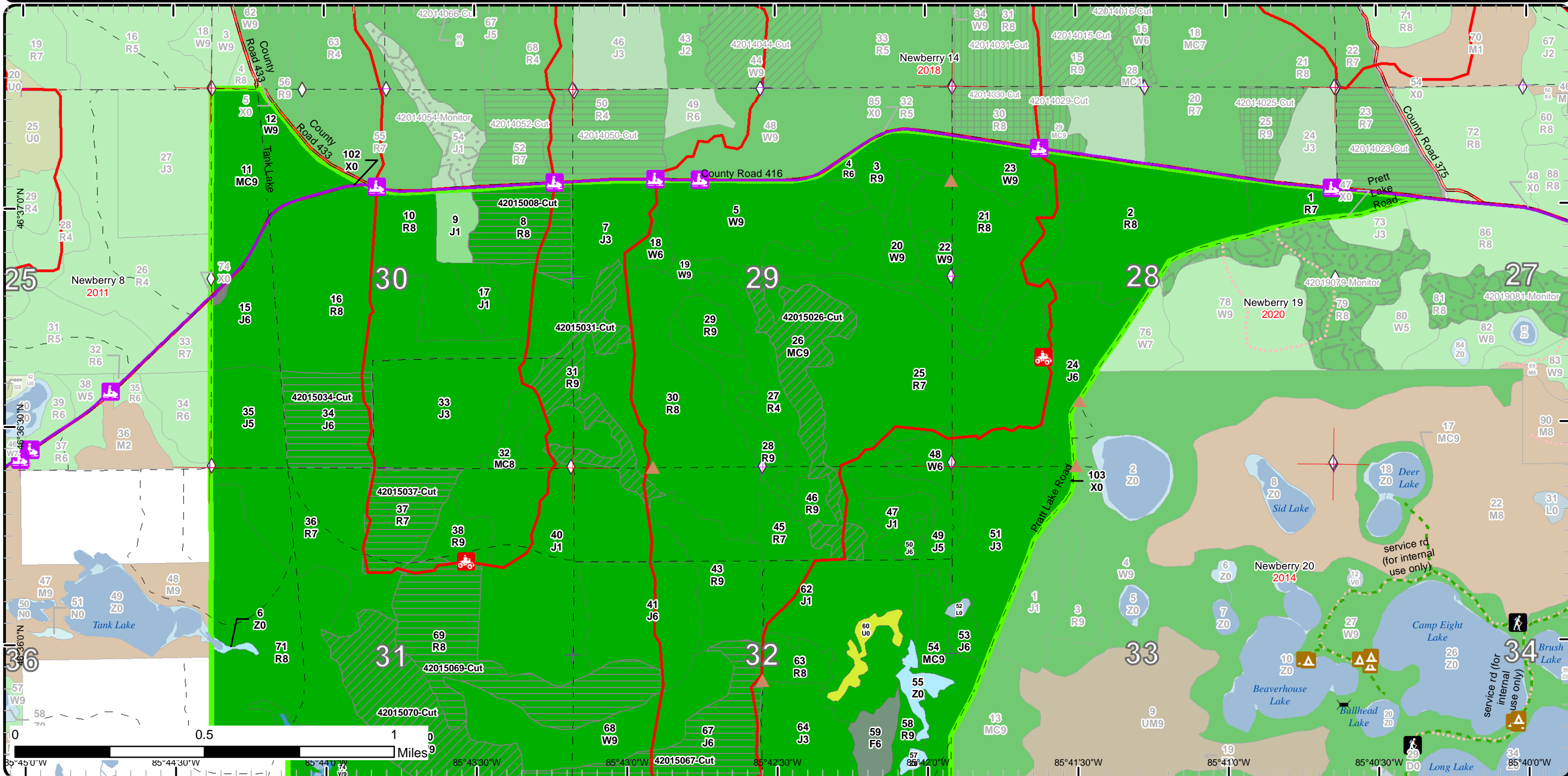


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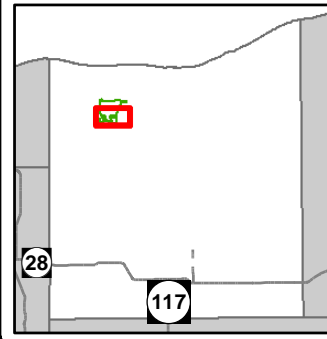


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|------------------------------|-----------------------------------|----------------------------------|
| Miris Corners | Designated Snowmobile Trails | 622 - Lowland Shrub |
| Remonumented Section Corners | County Gravel Roads | 629 - Mixed non-forested wetland |
| Field Grade GPS Corners | Poor Dirt Roads | Lakes |
| Counties | Closed | |
| Berms | Streams | |
| Bridge | Lakes and Rivers All | |
| Campground | Compartment Boundary | |
| Hiking Trails | Clearcut (w/Reserves) | |
| ORV Trails | Thinning (Crown, Low, Systematic) | |
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| | 330 - Low Density Trees | |
| | 500 - Water | |

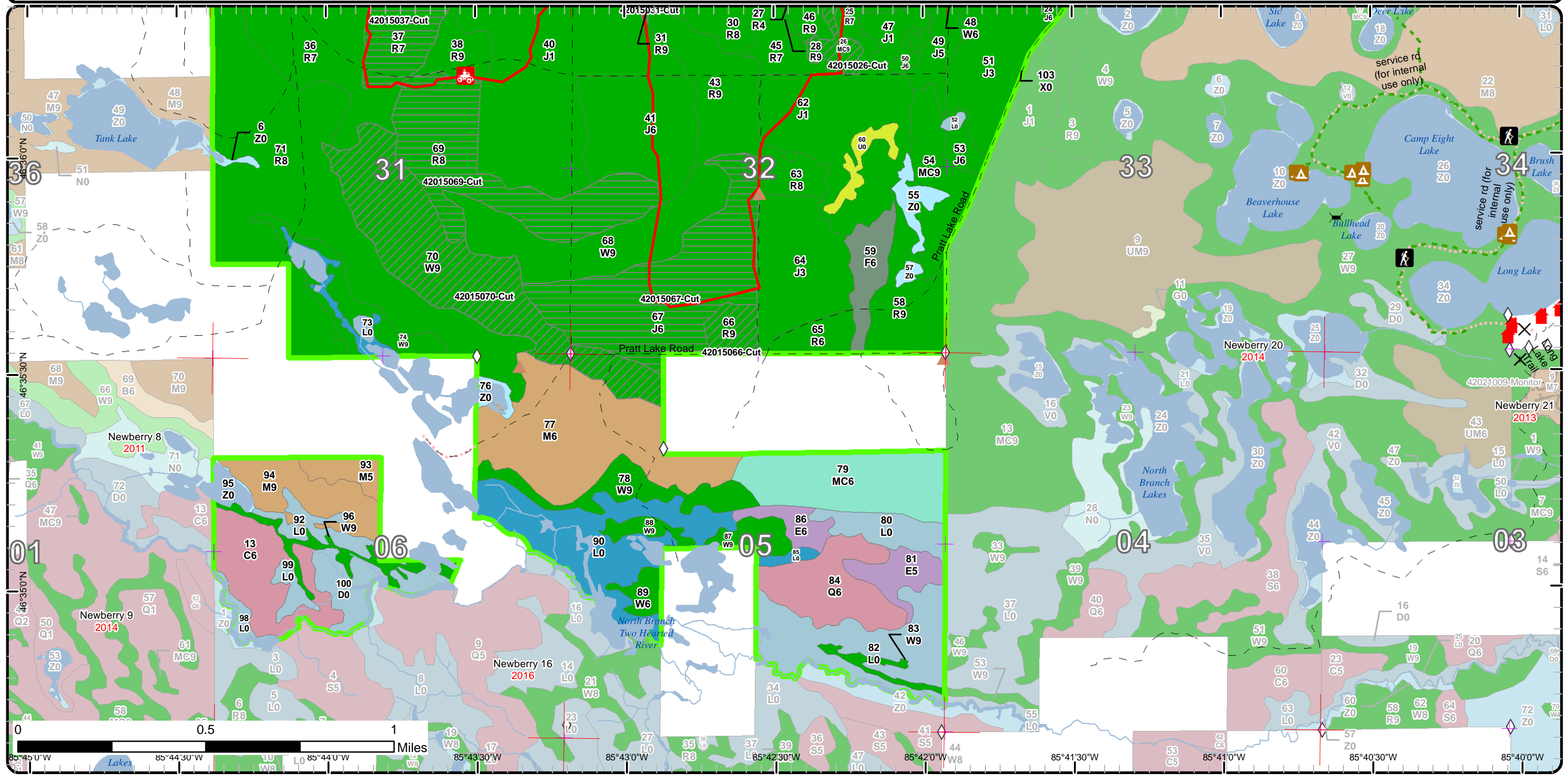


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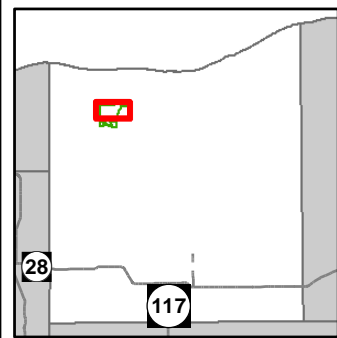


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|--------------------------------|-------------------------------------|------------------------------------|
| — Miris Corners | — Designated ATV | ■ 330 - Low Density Trees |
| ⊕ Remonumented Section Corners | — Poor Dirt Roads | ■ 500 - Water |
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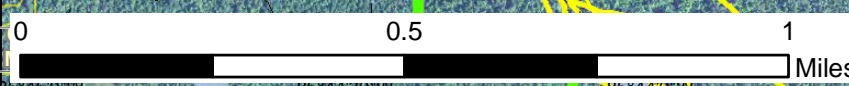
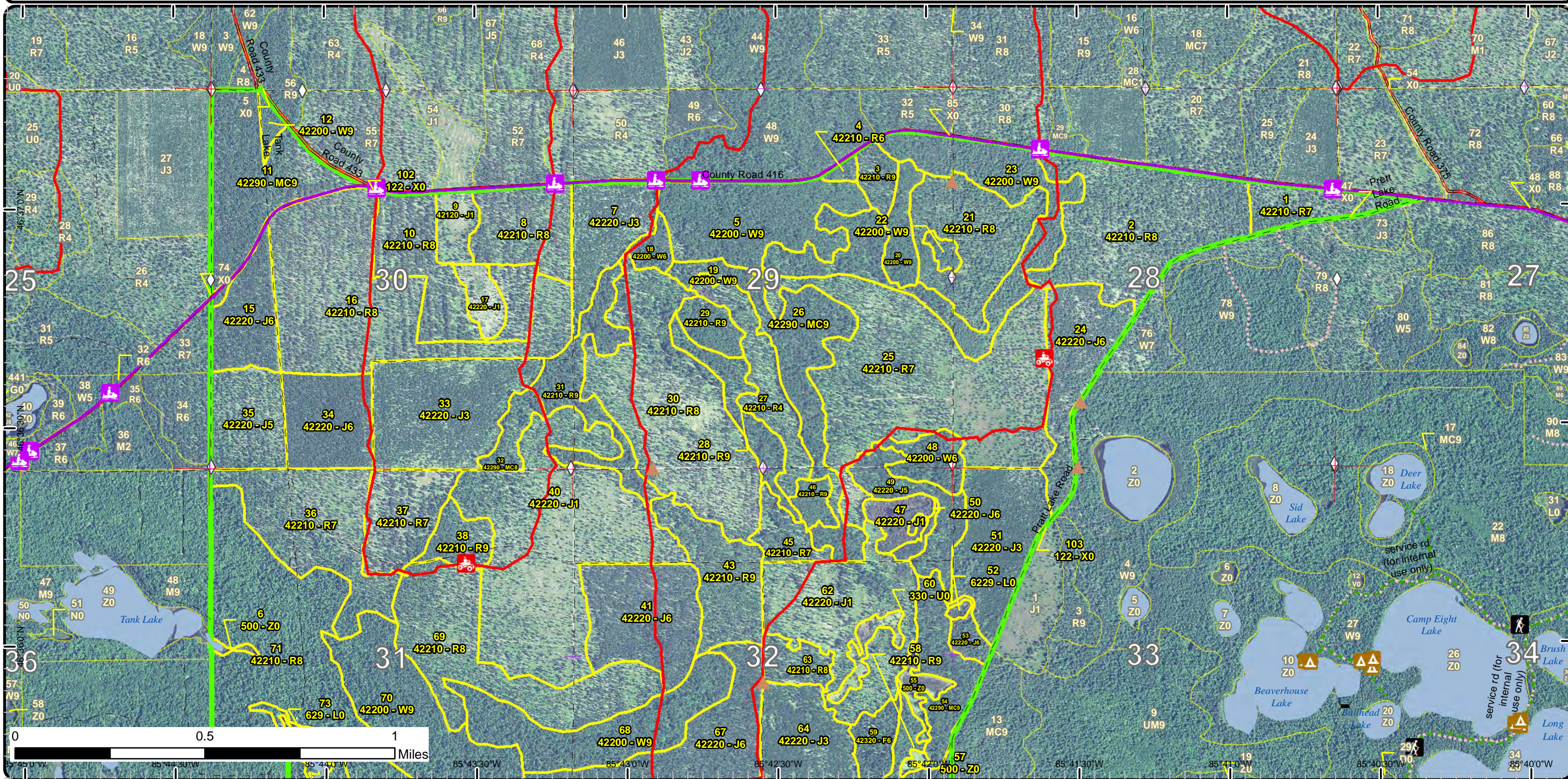


Stand Boundary Map

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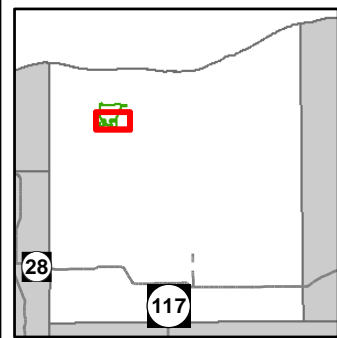
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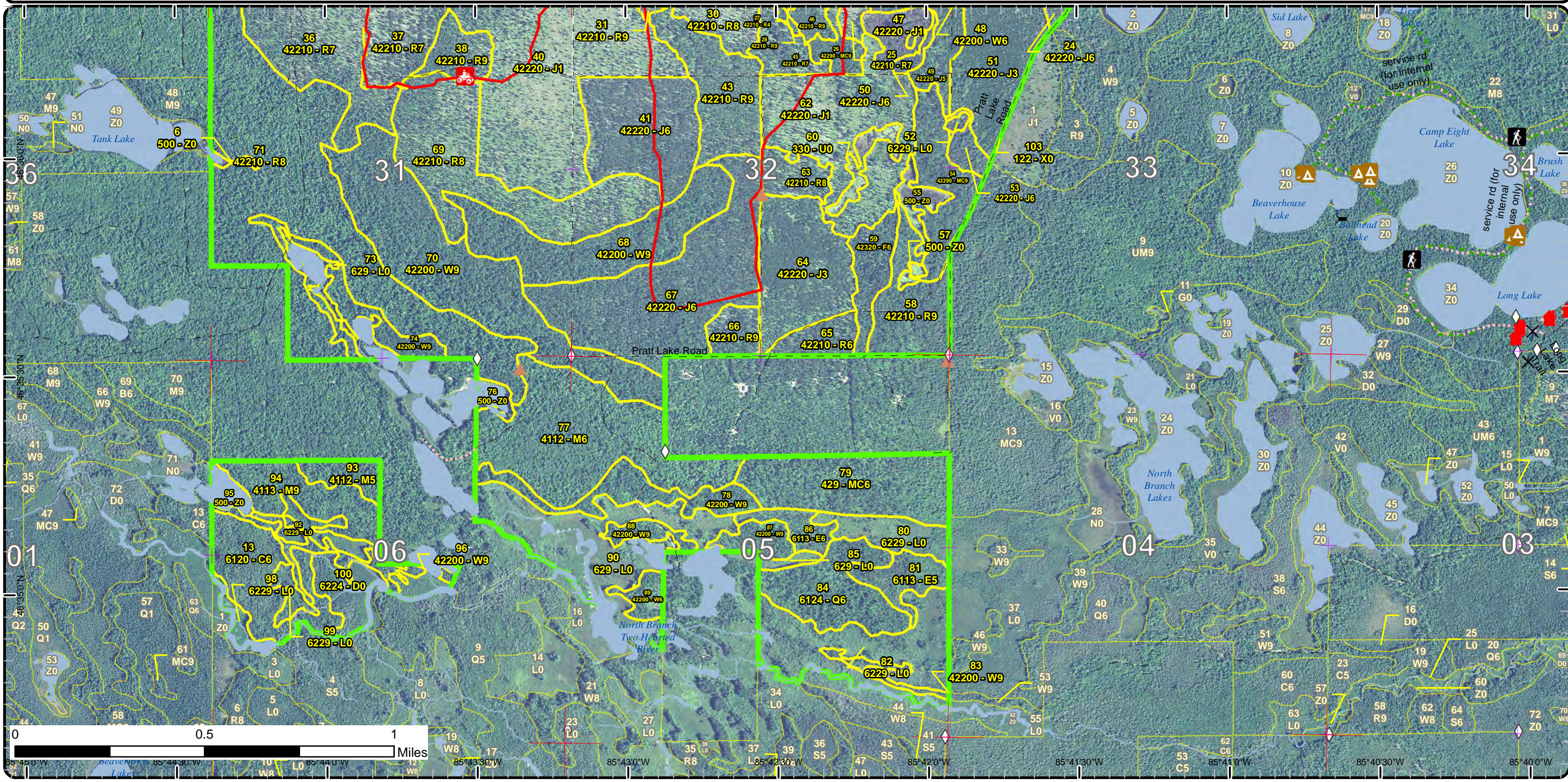
85°45'0"W 85°44'30"W 85°44'0"W 85°43'30"W 85°43'0"W 85°42'30"W 85°42'0"W 85°41'30"W 85°41'0"W 85°40'30"W 85°40'0"W

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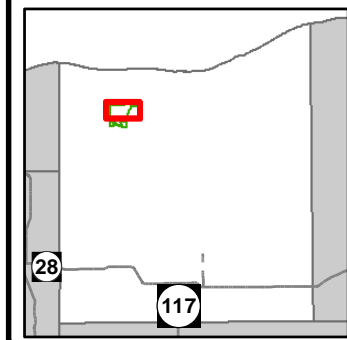


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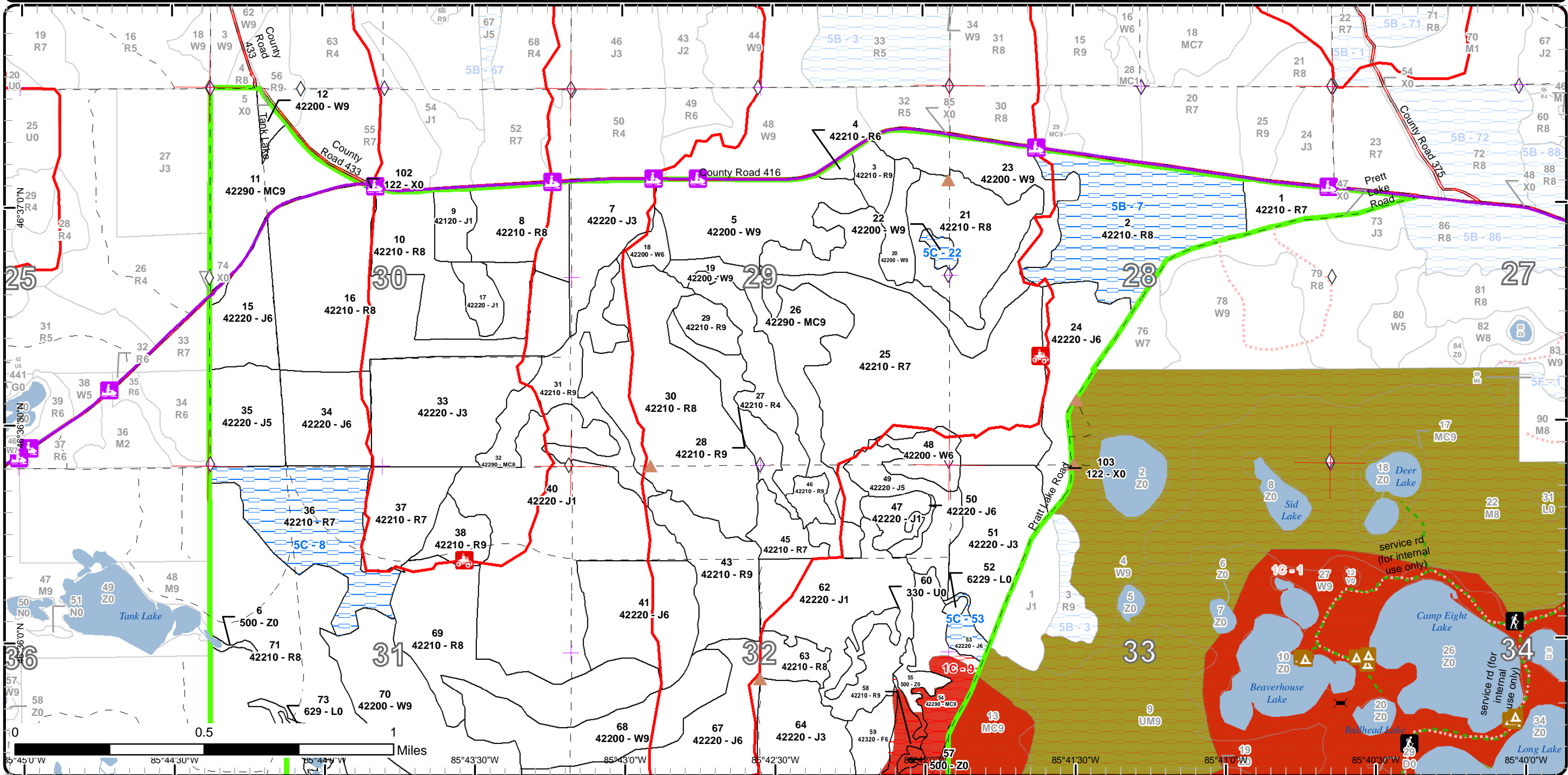


Special Conservation Areas & Site Conditions Map

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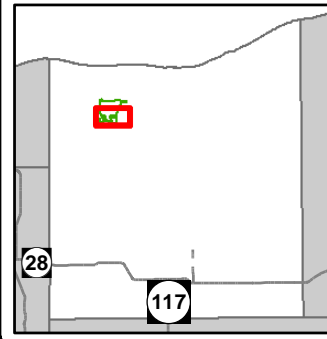


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- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 1C: Other dept or div proc/practices
- Stand Boundaries
- Ecological Reference Areas
- Forest Habitat Core Interior
- Cold Water Streams
- Cold Water Lakes
- Verified Type 2 Old Growth

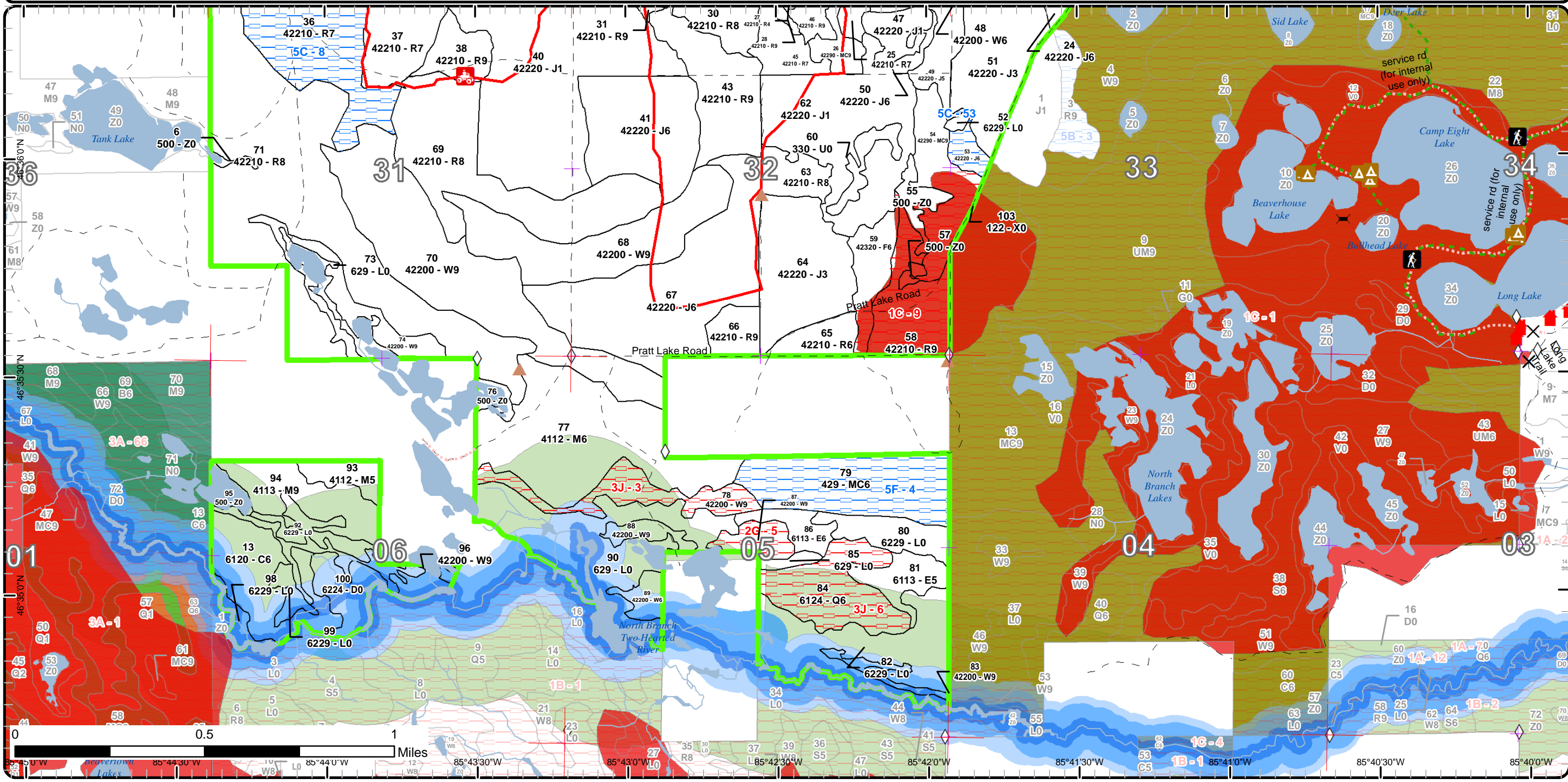


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- Streams
- Lakes and Rivers All
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 1C: Other dept or div proc/practices
- 2G: Too wet (sensitive soils, does not include access issues)
- 3J: Water quality / BMPs (stream, river, or lake)
- Stand Boundaries
- Ecological Reference Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Forest Habitat Core Interior
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Verified Type 1 Old Growth
- Verified Type 2 Old Growth
- Habitat Corridor
- Other Habitat Area
- Recreational/Scenic Value Area



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
Cedar	0	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	37
Jack Pine	0	159	117	201	36	0	127	4	140	0	0	0	0	0	0	0	0	0	784
Low-Density Trees	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Lowland Conifers	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	37
Lowland Deciduous	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	15	25
Lowland Shrub	179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	179
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147	147
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129	129
Red Pine	0	0	0	0	0	0	202	14	569	171	0	0	0	0	0	0	0	281	1237
Treed Bog	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	54
Upland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Water	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
White Pine	0	0	0	0	0	0	0	7	7	0	15	0	0	0	0	0	0	412	441
Total	229	159	117	201	36	0	376	25	716	171	52	0	0	0	0	0	0	1055	3137



Report 2 – Treatment Summary

Newberry Mgt. Unit

Year of Entry: 2019

Acres of Harvest

Compartment 15

Total Compartment Acres: 3,132

Commercial Harvest - 474
 Harvests with Site Condition - 0
 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	133	0	0	0	0	0	0	0	0	133
Natural Mixed Pines	0	0	0	0	0	48	0	0	0	48
Red Pine	147	0	0	0	0	46	0	0	0	194
White Pine	0	0	0	0	0	100	0	0	0	100
Total	281	0	0	0	0	194	0	0	0	474

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	474	0	0	0	0	0	0	0	0	474
Next Step	0	414	184	0	36	0	281	0	0	914
Total	474	414	184	0	36	0	281	0	0	1389



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	Approval Status
8	42015008-Cut	35.7	42210 - Natural Red Pine	Sawtimber Medium	81	51-80	Harvest	Clearcut with Retention	42210 - Natural Red Pine	Even-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Remove all species, leaving 3-5% retention in form of pockets or individual trees. This is to facilitate planting operations.											
<u>Specs:</u> If any oak is in the stand leave for retention purposes.											
<u>Next Step</u> SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Burn, Slash											
<u>Treatments:</u>											
<u>Acceptable</u> red pine.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
26	42015026-Cut	47.9	42290 - Natural Mixed Pine	Sawtimber Well	103	141- 170	Harvest	Crown Thinning	42210 - Natural Red Pine	Two-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Thin stand 80-110BA targeting red/white pine. Remove all aspen, jack pine, black spruce if present in the stand.											
<u>Specs:</u> Stand size may vary after sale prep.											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u> red pine with a component of jack and white pine.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
31	42015031-Cut	35.5	42210 - Natural Red Pine	Sawtimber Well	98	171- 200	Harvest	Crown Thinning	42210 - Natural Red Pine	Two-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Thin stand 110-120. Remove all jack pine and aspen. Thin from above.											
<u>Specs:</u> Stand size may vary after sale prep.											
Leave oak if it exists.											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u> Red pine with component of jack and white pine.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
34	42015034-Cut	36.9	42220 - Natural Jack Pine	Poetimber Well	78	111- 140	Harvest	Clearcut with Retention	4222 - Natural Jack Pine	Two-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Cut all species. Leave all Oak.											
<u>Specs:</u> Scarify Stand. Trench and plant if scarification fails.											
<u>Next Step</u> SitePrep, Scarification; Monitoring, Natural Regen (Intermediate); SitePrep, Trenching; Planting, Initial Plant											
<u>Treatments:</u>											
<u>Acceptable</u> Jack pine with red and white pine is acceptable.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											



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	Approval Status
37	42015037-Cut	32.3	42210 - Natural Red Pine	Sawtimber Poor	80	1-50	Harvest	Clearcut with Retention	4212 - Planted Jack Pine	Even-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Clearcut with retention. Leave 1-2 red or white pine per acre. Remove all other trees.											
<u>Specs:</u>											
<u>Next Step</u> SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)											
<u>Treatments:</u>											
<u>Acceptable</u> Jack Pine with mixed red and white pine.											
<u>Regen:</u>											
<u>Other</u> Stand has failed regeneration counts two times since 2003. Stand needs to be trench and planted.											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
66	42015066-Cut	10.7	42210 - Natural Red Pine	Sawtimber Well	86	111- 140	Harvest	Crown Thinning	42210 - Natural Red Pine	Two-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Thin Red and white pine 80-110. Removing all jack pine, aspen, and balsam fir if present.											
<u>Specs:</u>											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u> Red pine with a component of white and jack pine.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
67	42015067-Cut	96.4	42220 - Natural Jack Pine	Poletimber Well	78	111- 140	Harvest	Clearcut with Retention	4222 - Natural Jack Pine	Even-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Remove all species present. Have retention pockets 3-5% in form of 1-3 pockets within the stand that have larger mature trees in them.											
<u>Specs:</u>											
Scarify stand or trench and plant if possible.											
<u>Next Step</u> SitePrep, Scarification; Monitoring, Natural Regen (Intermediate); SitePrep, Trenching											
<u>Treatments:</u>											
<u>Acceptable</u> Jack Pine with component of red and white pine.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
69	42015069-Cut	79.3	42210 - Natural Red Pine	Sawtimber Medium	78	51-80	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Remove all species present. Leave no more than 3-5% retention in the form of pockets or individual trees. This is to promote ease of trenching											
<u>Specs:</u> the stand for planting.											
<u>Next Step</u> SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)											
<u>Treatments:</u>											
<u>Acceptable</u> Red pine and minor component of jack or white pine.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											



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	Approval Status
70	42015070-Cut	99.6	42200 - Natural White Pine	Sawtimber Well	103	141-170	Harvest	Crown Thinning	429 - Mixed Upland Conifers	Two-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Thin stand 80-110BA, thinning red and white pine and any red maple and balsam fir present. Remove all jack pine.

Specs:
Leave all aspen over 18".
Leave all hemlock.

Next Step
Treatments:

Acceptable Mixed conifer species of white pine, red pine, and jack pine.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

Total Treatment Acreage Proposed: 474.3

Report 4 – Site Conditions

Newberry Mgt. Unit
Matt Payment : Examiner

Compartment: 15
Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available		Dominant Site Conditions								
		With Condition				5B	5C	5F	1C	2G	3A	3J		
37	0	0		37	Cedar								37	
782	775	7		0	Jack Pine		7							
8	8	0		0	Low-Density Trees									
37	0	0		37	Lowland Conifers									37
24	24	0		0	Lowland Deciduous									
179	179	0		0	Lowland Shrub									0
146	131	0		16	Natural Mixed Pines				16					
128	128	0		0	Northern Hardwood									
1234	1046	157		32	Red Pine	91	65		32					
16	16	0		0	Treed Bog									
54	0	54		0	Upland Conifers			54						
17	13	0		4	Upland Spruce/Fir				4					
5	5	0		0	Urban				0					
21	21	0		0	Water									
441	402	4		35	White Pine		4			10				25
3,131	2,749	221		161	Total Forested Acres	91	75	54	52	10		37		62
	88%	7%		5%	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
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	25	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
Comments: Natural River Corridor. Evaluated for SBW.							
4	Available	5F: Evaluated for Forest Health Considerations	54	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Evaluated for SBW.							

Report 4 – Site Conditions

Newberry Mgt. Unit
Matt Payment : Examiner

Compartment: 15
Year of Entry: 2019

5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	3J: Water quality / BMPs (stream, river, or lake)	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified
Comments: Natural River Corridor. Evaluated for SBW.							
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	37	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified
Comments: Natural River Corridor. Evaluated for SBW.							
7	Available	5B: Maintain for regeneration purposes	92	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Remove overstory in 10 years allowing the advanced regeneration to become better established.							
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	65	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	1C: Other dept or div proc/practices	51	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Part of the Pretty Lakes ERA for Dry Mesic Northern Forest.							
22	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Hold for 10 years treat with stand 23							

Report 4 – Site Conditions

Newberry Mgt. Unit
Matt Payment : Examiner

Compartment: 15
Year of Entry: 2019

53	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							



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
Unspecified	Habitat Areas or Corridors	Habitat Corridor	SCA Removal	395
Comments				
Two Hearted River Habitat Corridor SCA reclassified into Two Hearted River Visual Management SCA.				



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	Type 1 and Type 2 Old Growth	Old-Growth forest (also termed primary forest, ancient forest, virgin forest, or primeval forest) is an area of forest that has few or no signs of human disturbance and that exhibits unique ecological features related to age, composition and associated structure. Old growth forests are of natural origin. They may be dominated by late successional forest species (i.e. sugar maple and American beech), or may be a very old example of a stand dominated by long-lived early- or mid-seral species (i.e. oak, or red pine).
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	General Comments:
1	42210 - Natural Red Pine	Sawtimber Poor	21.2	75	51-80	<p>Thinned in 2000 - j pine removed. Fair to good form on r pine 12-16" dbh 1-2 log heights. W pine saplings 8-16' throughout the stand. Aspen, j pine seedlings/saplings in more open areas. Associated r maple saplings from stump sprouts.</p> <p>Hold for 10 years and remove overstory to release advanced regeneration coming up in the stand.</p>
2	42210 - Natural Red Pine	Sawtimber Medium	91.5	80	81-110	<p>Thinned in 8/90 - j pine removed. Good form on r pine 10-14" dbh 1-3 log heights. Good w pine sapling growth 8-20' tall, well stocked in areas. W pine, r pine, j pine seedling establishment 6" - 3' in height. R maple saplings from stump sprouts. Associated w pine poletimber and sawtimber - low to fair quality.</p> <p>Hold for 10 years and remove large overstory trees to release regeneration.</p>
3	42210 - Natural Red Pine	Sawtimber Well	9.8	77	81-110	<p>Fair to good r pine 8-14" dbh, 1 log heights. Trees are just self pruning so short heights to the first heavy limbs. Areas of more open grown and limby trees. Good w pine sapling establishment 6-10' tall. Scattered r maple saplings. Cut in 7/00, j pine, aspen, mixed softwood removed and w pine, r pine thinned.</p>
4	42210 - Natural Red Pine	Poletimber Well	2.7	54	81-110	<p>Fair to good Red pine poletimber 4-10" dbh, 2-3 stick heights. Scattered, LOW quality aspen component. Associated w pine and j pine poletimber. W pine saplings 8-12' tall,</p>
5	42200 - Natural White Pine	Sawtimber Well	62.3	92	111-140	<p>Well formed w pine sawtimber and poletimber. 8-18" dbh. Associated good quality r pine. Moderate to heavy r maple sapling understory 3-8' tall. B spruce/fir saplings. W pine, r pine seedlings 6" -1' established in skid trails. W birch snags throughout the stand.</p>
7	42220 - Natural Jack Pine	Sapling Well	33.3	26	81-110	<p>Good j pine regen 20-30' tall 1-3" dbh. Small pockets of aspen regen. Final harvested in 9/91 Overall stand looks healthy and in good shape.</p>
8	42210 - Natural Red Pine	Sawtimber Medium	35.7	81	51-80	<p>R pine intermixed with mature j pine. Well formed r pine 8-14" dbh, 3 - 5 sticks, 1 log heights. J pine 10" dbhs 4 -5 stick heights. Scattered w pine throughout. Pockets of low quality aspen and w birch. R maple saplings throughout the stand. Isolated areas of r pine stocking 140 -150 BA. Removed merchantable j pine, aspen, thinned r pine and w pine to 40 -50 BA where appropriate. Protected w birch and any oak. MO is for r pine, though a component of w pine regen is also expected, secondary MO j pine/aspen.</p> <p>Jack pine is coming back under the red pine patchy. Potentially a stand to remove the overstory and scarify and or trench and plant back to jack pine. Possibly burn the stand before trenching it. Combine with stands to the north in compartment 14 that have burning specs on them.</p> <p>Stand harvested via shelterwood as sale #017-09-01, Learning Curve Pine. Completed 08/30/10. Stand scarified 2010 by Holli.</p>

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Newberry Mgt. Unit

Report 7 – Forested Stands

Compartment: 15
Year of Entry: 2019

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
9	42120 - Planted Jack Pine	Sapling Poor	12.1	7	Immature	Stand had jack pine removed leaving component of mainly red pine 10-12" with a very small component of white pine. Jack pine was hand planted no furrows in 2016. Regeneration is doing well and at a fully stocked level. Stand harvested via final harvest as sale #019-08-01, Pine Junction Jack Pine. Complete 05/13/10.
10	42210 - Natural Red Pine	Sawtimber Medium	49.9	53	51-80	R pine poletimber 8-10" dbh 3 stick heights - short/limby trees. Scattered associated aspen and b spruce saplings. W pine poletimber component. Widely scattered j pine r pine seedlings 1-8' tall, though excellent r pine seedling establishment in old access road. Final harvest of jack pine done 7/01 Remaining trees have significant amount of defect from sweep to splits.
11	42290 - Natural Mixed Pine	Sawtimber Well	58.7	100	51-80	R pine poletimber 6-10" dbh. Larger 12-14" diam r pine, w pine component. W pine, r pine, r maple saplings established. Final harvest done 8/01, j pine removed. A large vein of larger red pine also runs through the stand SW-NE. 16" avg. Too small to be its own stand. East half of stand east of fire lane Scarified as Stand 34 in 7/01 (FTP #41-515) Final harvest done 8/01, j pine removed.
12	42200 - Natural White Pine	Sawtimber Well	4.2	97	81-110	OPIC - FMD: Mixed stand of w pine and r pine sawtimber. Good quality r pine, fair w pine. R maple saplings from stump sprouting 6-12' tall. Widely scattered hemlock component. Scattered w pine sapling establishment. Thinning completed 8/01
13	6120 - Lowland Cedar	Poletimber Well	37.3	94	81-110	Stand of mixed conifer with cedar, tamarack, bf, some black ash and a trace amount of white pine. Low wet ground borders the Two Hearted River - Two-Hearted River Zone, Access would be very difficult for any harvest activities.
15	42220 - Natural Jack Pine	Poletimber Well	29.5	53	81-110	Mixed r pine, j pine stand 6-12" dbh 3 -5 stick heights. Associated w pine poletimber. R pine, w pine r maple saplings - fairly open understory. J pine appears in good condition currently. Hold until next cutting cycle for diverstiy and timber sustainability.
16	42210 - Natural Red Pine	Sawtimber Medium	118.4	53	51-80	Stand had jack pine removed and red and white pine thinned. Regeneration is coming in under the red pine. Red pine averaging 10-12". Stand harvested via shelterwood as sale #017-09-01, Learning Curve Pine. Completed 08/30/10. Stand scarified 2010 by Holli.
17	42220 - Natural Jack Pine	Sapling Poor	10.4	16	51-80	Appears to be originally heavily burned in the past, producing a more sterlie soil - grasses and sweetfern present. Slowly seeding in to j pine with seedlings 1-2' tall scattered throughout. Small aspen sapling inclusion. Area was final harvested 8/01 by removing j pine and thinning r pine and w pine.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	42200 - Natural White Pine	Poletimber Well	6.9	76	81-110	Mixed stand of w pine and r pine poletimber/sawtimber with associated j pine. R pine/w pine is poorer quality - heavy limbs and crook. J pine appears healthy. B spruce, r maple, w pine saplings 8-20' tall. North end of stand has better form to r pine, south end of stand heavier to j pine.
19	42200 - Natural White Pine	Sawtimber Well	7.0	94	81-110	Low quality mixed pine. W pine poletimber predominate 6-8" dbh. Scattered w pine sawtimber inclusions. Associated b spruce saplings and minor j pine poletimber component.
20	42200 - Natural White Pine	Sawtimber Well	13.8	114	81-110	Well formed w pine. B spruce/fir, r maple saplings in understory 4-8' tall. W pine r pine seedlings 1-12' tall. Thinned 7/00
21	42210 - Natural Red Pine	Sawtimber Medium	53.8	70	51-80	Previously thinned - j pine was removed. Good form to r pine and w pine. W pine saplings 3-16' tall throughout the stand. Scattered, previously semi open areas are heavily stocked with w pine saplings 6-10' tall. Thinning done 8/01
22	42200 - Natural White Pine	Sawtimber Well	3.7	95	171-200	Heavily stocked w pine poletimber and sawtimber 8-14" dbh 4-7 stick heights. Associated r pine sawtimber 14-16" dbh. Scattered low quality r maple poletimber. B spruce/fir saplings 3-10' tall. W pine saplings in more open areas. Prescribe with st 23 in next cutting cycle.
23	42200 - Natural White Pine	Sawtimber Well	81.9	100	111-140	Mixed w pine, r pine. Good form 10-16" dbh 1-3 log heights, 4-6 stick pulp heights. W pine, b spruce/fir, r maple saplings. West end has a LOW quality j pine w pine inclusion, semi-open with high mortality on j pine.
24	42220 - Natural Jack Pine	Poletimber Well	43.8	50	51-80	J pine 4-7" dbh 2-3 stick heights - limby. Scattered r pine poletimber inclusions among scattered openings. Aspen component 4-6" dbh. Scattered pockets of good quality w pine, r pine sawtimber 10-16" dbh
25	42210 - Natural Red Pine	Sawtimber Poor	153.3	70	1-50	Jack pine removed left with a mixed stand of large rp left with wp. W pine saplings 8-10' throughout and scattered, associated limby w pine. R maple saplings. West side of the stand is more heavily stocked to red pine. Hold for 10 years re evaluate removing overstory to release regeneration. Partial scarification in 2010 by Holli. Stand harvested as sale #015-09-01, "Pratt Lake Jack Pine". Completed 07/22/11. Scarification partially done as of 11/02/11. FTP #42-751 completed 8/29/2011. Regen 2015: Jack pine 147 TPA, white pine 177 TPA, red pine 35 TPA, red maple 372 TPA.
26	42290 - Natural Mixed Pine	Sawtimber Well	47.9	103	141-170	Excellent formed r pine and w pine - tall, 2-4 log heights, 5-8 stick pulp heights. Fir, w birch, r maple understory. Upland b spruce component.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
27	42210 - Natural Red Pine	Poletimber Poor	30.8	50	1-50	<p>Associated r pine. W pine, r maple b spruce saplings throughout, 3-10' tall. South end of the stand has higher stocking of limby w pine. Removed merchantable j pine, aspen. Thinned w pine and r pine to 20-30 BA where needed to promote seedling establishment. Kept w birch and oak. Scarify or plant if needed for j pine in 10 year if regen isn't showing up. Possibly remove overstory and then trench and plant to jack pine. MO for j pine, no secondary MO.</p> <p>Stand harvested as sale #015-09-01, "Pratt Lake Jack Pine". Completed 07/22/11. Scarification yet to be done as of 11/02/11. FTP #42-751 completed 8/29/2011.</p>
28	42210 - Natural Red Pine	Sawtimber Well	20.8	110	111-140	<p>Well formed r pine sawtimber 1-3 log heights. W pine sawtimber component. R maple saplings 4-8' in understory. W pine, r pine seedlings in skid trails. Thinned in 01.</p> <p>Thin stand in 10 years.</p>
29	42210 - Natural Red Pine	Sawtimber Well	11.7	87	111-140	<p>Excellent form to r pine sawtimber and poletimber. 4-6 stick heights 1-3 logs. Also good form to w pine sawtimber. R maple saplings, fir understory.</p>
30	42210 - Natural Red Pine	Sawtimber Medium	111.8	70	1-50	<p>Stand had j pine removed, currently an R5 - scattered j pine and r pine seedlings 1-2' overall. Does not appear to be successful regen at this time. Older residual r pine over scattered j pine r pine seedlings. Open areas throughout the stand that were heavier to j pine before the cut. Final harvested 7/02 MO was for j pine</p> <p>Possibly trench and plant areas to jack pine, if BA is to high remove overstory and trench and plant. consult TMS.</p>
31	42210 - Natural Red Pine	Sawtimber Well	35.5	98	171-200	<p>Mixed r pine and w pine sawtimber. Excellent form 10-16" dbh 4-7 sticks. R maple w pine b spruce saplings throughout. Widely scattered w birch poletimber. High stocking levels of r pine runs in pockets with lower stocked areas in between.</p>
32	42290 - Natural Mixed Pine	Sawtimber Medium	10.6	105	81-110	<p>Mixed w pine r pine sawtimber 1-2 log heights - limby. Good w pine regen 4-10' tall with occasional r pine sapling. R maple saplings.</p>
33	42220 - Natural Jack Pine	Sapling Well	67.4	25	111-140	<p>good j pine regen 1-2" dbh 8-10' tall. Scattered residual r pine poletimber.</p>
34	42220 - Natural Jack Pine	Poletimber Well	36.9	78	111-140	<p>Mature, well formed j pine. Evidence of weak tops from previous JPBW. R pine poletimber throughout. W pine, r maple sapling in understory 8-10' tall. Remove merchantable j pine, aspen, thin r pine w pine to 20 -30 BA. MO would be for j pine, would need scarification or planting if required.</p>



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
35	42220 - Natural Jack Pine	Poletimber Medium	32.7	17	81-110	<p>W pine, r pine poletimber residual from previous cut. Two aged stand with Jack Pine coming in nicely under the red pine and white pine. Good rp regen coming in as well along with some aspen and wp.</p> <p>Scarified as Stand 43 in 6/04. Regen check in 05/07 showed 215 trees/acre. Little j pine regen. ***Secondary regen count completed 6/4/08 = 171 t/ac (43J <1' ht, 85W 1-4' ht, 43BF >4' ht). Residual BA R,W = 40.</p>
36	42210 - Natural Red Pine	Sawtimber Poor	65.2	78	51-80	<p>Hold stand for age class diversity. R pine poletimber 8-12" dbh - good form. W pine poletimber component, especially in northwest area of the stand. R maple spruce/fir w pine sapling understory 3-10' tall. MO for r pine expecting concurrent w pine regen. secondary MO j pine/aspen. Left w birch and oak</p> <p>Stand harvested via shelterwood as sale #018-09-01, Tank Lake Pine. Sale completed 07/02/10. Stand scarified by Holli in 2010.</p>
37	42210 - Natural Red Pine	Sawtimber Poor	32.3	80	1-50	<p>Stand regenerating from final harvest in 2003. After two failed regen checks stand is still poorly stocked. Recommend Final harvest stand and trench and plant.</p> <p>Scarified as Std 57 (FTP #509) in 8/02. Regen survey in 5/07 showed 274 trees/acre- mainly r pine and w pine seedlings. WIDELY scattered j pine seedlings, mainly in road edges and skid trails where mineral soils was well exposed. Fair amount of r pine and w pine poletimber residual from previous cut widespread dead terminal leaders on r pine. Follow up regen check may be needed ***Secondary regen count completed 6/4/08 = 249 t/ac (<1' JP showing up - 62t/ac, with 187 t/ac WP). Average residual = 40BA.</p>
38	42210 - Natural Red Pine	Sawtimber Well	14.5	77	111-140	<p>Well formed r pine sawtimber and w pine poletimber. R maple sapling understory. R pine seedlings in old skid trails from previous cut. Previously thinned in 2003 by removing j pine and thinning r pine/w pine.</p>
40	42220 - Natural Jack Pine	Sapling Poor	146.8	7	Immature	<p>Overall scattered r pine and w pine poletimber and saplings but the north and west ends of stand have areas of higher stocking. Removed merchantable j pine and any associated aspen, if any. Thinned r pine w pine to 20-30 BA where necessary. Regen MO for j pine, no secondary MO.</p>
41	42220 - Natural Jack Pine	Poletimber Well	53.4	54	111-140	<p>J pine 4-8" dbh 3-5 stick heights. Associated larger diameter j pine scattered throughout. Scattered r pine poletimber and small aspen pockets 4-6" dbh. Moderate to heavy JPBW tip flagging at western end of stand as the stand transitions to Stand 40 where heavy JPBW damage has occurred. As stand progresses eastward, evidence of JPBW lessens. Stand first planted in 1937 and failed, replanted with r pine in 1963 and had successful j pine volunteers at that planting.</p>
43	42210 - Natural Red Pine	Sawtimber Well	39.2	74	81-110	<p>Excellent r pine sawtimber and poletimber. Scattered inclusions of lower quality r pine, w pine. Jack pine and aspen removed and wp / rp thinned 80-90BA.</p> <p>Stand thinned as sale #016-09-01, Bumpy Ride Pine. Complete 09/03/10. Partial scarification in 2010 by Holli.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
45	42210 - Natural Red Pine	Sawtimber Poor	13.9	62	1-50	Fair form to r pine 8-14":dbh 3-5 sticks tall. Associated w pine poletimber. In more open areas weak j pine saplings are established 4-10' tall. Inclusions of higher stocking of r pine w pine with w pine saplings. Final harvest completed 11/91
46	42210 - Natural Red Pine	Sawtimber Well	7.4	71	81-110	Well formed r pine sawtimber 8-16" dbh. W pine sawtimber and saplings. Scattered r maple stump sprouting. Hold stand another 10 years and then potentially harvest by thinning red and white pine.
47	42220 - Natural Jack Pine	Sapling Poor	11.4	34	1-50	Excellent j pine sapling growth 10-25' tall - very high stocking levels. Grass ground cover, seems to be slightly wetter site - middle of the stand has an obviously high water table grass pocket, likely seasonally ponded. Large amount of mortality due to the high water in the stand. Direct seeding by snowmobile 1983
48	42200 - Natural White Pine	Poletimber Well	15.0	90	111-140	Mixed pine stand. W pine, r pine, j pine poletimber. Scattered low quality aspen. Widely scattered w birch. Large diameter w pine component 18-22"dbh. R maple, w pine saplings.
49	42220 - Natural Jack Pine	Poletimber Medium	25.0	36	81-110	J pine 4-5" dbhs just moving into poletimber size class. Scattered r pine and white pine throughout the stand as well.
50	42220 - Natural Jack Pine	Poletimber Well	3.9	63	81-110	J pine 8-12" dbh 3-5 sticks. High ground leatherleaf site. Scattered w pine, r pine poletimber. Small acres and has some standing water in places similar to stand 47.
51	42220 - Natural Jack Pine	Sapling Well	49.5	26	81-110	J pine saplings 10-20' tall. Scattered r pine poletimber. W pine, r maple and aspen sapling component. Final harvested 10/91
53	42220 - Natural Jack Pine	Poletimber Well	6.6	77	81-110	J pine 9-12" dbh 4-6 sticks. B spruce poletimber 4-8" dbh, understorey of b spruce saplings 4-10' tall and minor component of r maple saplings. Scattered w pine. Upland leatherleaf pockets. Stand could be harvested in a dry summer but may be best if held for another 10 years if there is significant harvesting in this compartment due to its small acreage.
54	42290 - Natural Mixed Pine	Sawtimber Well	29.1	105	51-80	Mixed stand of w pine and r pine sawtimber. Good form to r pine, fair to w pine. 12-18" dbhs. B spruce sapling and poletimber throughout, saplings 15-25' tall. Very low quality r maple poletimber and saplings. Scattered aspen. ERA = North Branch Lakes dry northern mesic forest.
58	42210 - Natural Red Pine	Sawtimber Well	31.8	111	111-140	Well formed r pine and w pine sawtimber 12-18" dbhs. Associated low quality w pine poletimber. B spruce poletimber and saplings in understorey. Scattered aspen and r maple. Minor component of fir poletimber. W pine, fir saplings 10-20' tall throughout. Southeast portion of the stand has a b spruce poletimber inclusion. ERA = Pretty Lakes Dry Mesic Northern Forest.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
59	42320 - Upland Spruce	Poletimber Well	17.2	68	111-140	Upland b spruce 3-6 sticks tall, 6-10" dbh. Areas of lower ground leatherleaf inclusions, seasonally ponded. Upland j pine inclusions with w pine scattered throughout. R maple poletimber and low quality aspen. B spruce r maple sapling understory. ERA = Pretty Lakes Dry Mesic Northern Forest.
62	42220 - Natural Jack Pine	Sapling Poor	73.6	15	Immature	High incidence of residual r pine, w pine poletimber from previous cut, widely scattered areas of R4. Northern edge has heavy leatherleaf with scattered j pine seedlings 1' high, overall low occurrence of j pine seedling establishment. Final harvest done 11/01 Scarified 7/02 (FTP42-505). ***Regen count completed 6/4/08 = 210 t/ac (123 t/ac J 1-2' hts, 52 S >4', 18 R <1', 18W 2-3' hts). Average residual of 20BA, but up to 60, in places. Continue to monitor regeneration for success.
63	42210 - Natural Red Pine	Sawtimber Medium	12.6	72	81-110	R pine 10-14" dbh. Widely scattered large diameter old aged r pine. Associated w pine poletimber. R pine w pine jp saplings 3-20' tall. Scattered b spruce and r maple saplings. Fairly open understory stand - thinned 11/01.
64	42220 - Natural Jack Pine	Sapling Well	50.6	26	Immature	good j pine regen 10-20' tall, . Small areas of low quality aspen regen 8-10' tall. Cut in 11/91
65	42210 - Natural Red Pine	Poletimber Well	11.8	90	111-140	R pine 4-20" dbh 3-4 sticks tall, 1-2 log heights. Pulp quality, sawlog diameter w pine and scattered super canopy w pine. W pine, r maple, r pine, b spruce saplings in understory. Fir seedlings in old skid trails. Stand thinned 11/01
66	42210 - Natural Red Pine	Sawtimber Well	10.7	86	111-140	Good form to r pine 4-18" dbh, 2-5 stick heights, scattered sawtimber. Associated low quality w pine. W pine saplings 4-8' tall. Stand thinned in 11/01
67	42220 - Natural Jack Pine	Poletimber Well	96.4	78	111-140	Variable stand, originally planted to r pine and j pine. Areas of nearly pure j pine to mix of j pine and r pine with well stocked r pine poletimber inclusions throughout. Southeast portion of the stand has a small w pine sawtimber inclusion. J pine for the most part is healthy. B spruce poletimber component in southwest area of the stand. W pine, b spruce/fir understory. Treat stand with a clear cut and leave some retention pockets for residual.
68	42200 - Natural White Pine	Sawtimber Well	58.3	111	141-170	Large diameter w pine and r pine 8-18" dbh. Good form on r pine, w pine is fair. R maple, b spruce/fir sapling understory 5-15' tall. Widely scattered w birch and aspen - in decline. B spruce poletimber component.
69	42210 - Natural Red Pine	Sawtimber Medium	79.3	78	51-80	Mixed with r pine 8-16"dbh 4-5 sticks, 1-2 logs. Associated w pine, b spruce/fir, r maple understory. MO is for r pine though w pine and j pine regen is also expected. Secondary MO for j pine Stand should have the majority of the overstory removed and it may become bigger or smaller after prep work. Heavy seed tree or leave retention pockets in thicker areas. Trench and plant back to rp. Stand harvested via shelterwood as sale #018-09-01, Tank Lake Pine. Sale completed 07/02/10. Stand scarified 2010 by Holli.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
70	42200 - Natural White Pine	Sawtimber Well	99.6	103	141-170	W pine 10-18" dbh 1-3 log heights. Associated r pine sawtimber and poletimber Hemlock poletimber and sawtimber component. Heavy r maple, beech, spruce/fir sapling understory. North end of the stand transitions to R6/J6 with r pine more prevalent. Shelterwood with reserves - remove all aspen, jack pine, spruce, and balsam fir. Thin red and white pine 30-50BA releasing the regeneration underneath.
71	42210 - Natural Red Pine	Sawtimber Medium	168.8	78	81-110	Residual beech 12-20" is mainly gone from the stand - BBD, bark is sloughing off and widespread beech snap. Widely scattered w pine and hemlock throughout. Good regen - beech and r maple stump sprouting 3-10' tall, light fir component in understory. North end of the stand is transitional to low quality w pine and hemlock. Avg dbh shows sawtimber but not sawtimber quality to be classed as such. Thinned 8/04. FTP C-512 wildlife underplanting of white pine seedlings and N. red oak acorns in the more open areas. White pine seedling spacing approx 20', acorns in clumps of 2 or 3 approx 10' apart. Wildlife evaluate plantings in 10 years and release seedlings by hand tools as needed.
74	42200 - Natural White Pine	Sawtimber Well	22.7	100	81-110	Large diamter w pine 8-20", fair to good form. Beech r maple saplings. Scattered hemlock poletimber and saplings.
77	4112 - Maple, Beech, Cherry Association	Poletimber Well	89.4	70	81-110	Heavy beech sapling understory with r maple sapling component. Overstory beech is for the most part dead - BBD. Far west end of stand has fair quality M6 inclusion. 16" diameter limit cut in 6/80. HCVA Two Hearted wild river 1/4 mile zone touches a small piece of the stand on the south end which could be buffered out. Check river plan when prescribing for management guidelines.
78	42200 - Natural White Pine	Sawtimber Well	25.2	115	111-140	Good quality w pine sawtimber 1-3 log heights, 10-24" dbh. Heavy understory of beech and r maple saplings. Associated fir saplings. West end of stand has hemlock component. HCVA Two Hearted Wild River 1/4 mile zone on the west end of the stand.
79	429 - Mixed Upland Conifers	Poletimber Well	54.4	87	111-140	W pine poletimber stand with inclusions of M6- beech, r maple. Hemlock component. Beech overstory shows heavy mortality from BBD. Thick fir understory except in the M6 inclusion. Soil: Croswell - Spot Complex
81	6113 - Lowland Maple	Poletimber Medium	14.8	67	81-110	R maple, w pine saplings 1-3" dbh, scattered low quality w pine poletimber. Associated b spruce saplings. Low ground-leatherleaf and winterberry, seasonally ponded. Appears to have been clearcut in 1950's. HCVA Two Hearted Wild River 1/4 mile zone.
83	42200 - Natural White Pine	Sawtimber Well	5.1	117	111-140	Large diameter w pine 10- 20" dbh - good form. B spruce/fir understory, b spruce becomes more prevalent at edges of the stand as it transitions to lowland. Stand is on a narrow ridge, surrounded by lowland marsh/brush. HCVA Two Hearted wild river 400' zone.
84	6124 - Lowland Spruce-Fir	Poletimber Well	37.2	55	51-80	Overall immature stand. B spruce/fir, r maple 4-6" dbh, widely scattered aspen is showing mortality. W pine sawtimber component 18-26" dbh. Two Hearted river 1/4 mile zone.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
86	6113 - Lowland Maple	Poletimber Well	9.7	59	1-50	R maple, w pine saplings 2-6" dbh, scattered low quality w pine poletimber. Associated b spruce saplings. Low ground-leatherleaf and winterberry, seasonally ponded. Appears to have been clearcut in 1950's.
87	42200 - Natural White Pine	Sawtimber Well	9.8	102	81-110	Fair to good form on w pine, r pine sawtimber 1-2 log heights 10-18" dbh. Edges of the stand are poorer in transition to adjacent lowlands. Associated b spruce/fir, r maple saplings. HCVA Two Hearted wild river 1/4 mile zone. Stand was very wet with some areas partially flooded.
88	42200 - Natural White Pine	Sawtimber Well	6.7	107	81-110	Fair to well formed w pine sawtimber with associated r pine sawtimber 10-18". B spruce/fir, r maple saplings and poletimber in understory. West end of the stand has higher stocking of w pine. HCVA Two Hearted wild river 1/4 mile zone.
89	42200 - Natural White Pine	Poletimber Well	7.1	60	81-110	Pine ridge. R pine and w pine sawtimber. Associated r maple poletimber, especially at east end of the stand. Scattered, clump b spruce saplings. HCVA Two Hearted Wild R. 400' zone. Blocked by private property to the east.
93	4112 - Maple, Beech, Cherry Association	Poletimber Medium	9.7	69	81-110	Low quality r maple - straight boles but show defects. Beech is gone - severe mortality from BBD, heavy beech sapling understory 8-10' tall. Scattered hemlock inclusions. Many large diameter snags from the dead beech. HCVA Two Hearted wild river 1/4 mile zone. Easiest access would be through corporate land to the north.
94	4113 - R.Maple, Conifer	Sawtimber Well	29.2	70	81-110	R maple 6-12" fair form, 2-4 stick heights. W pine component 10-20" dbh. Scattered cedar and aspen. West end has heavier w birch component. Scattered lower areas in southwest of the stand-M3. Aspen is in decline, though good quality remains in pockets. Best access would be from corporate land from the north. HCVA Two Hearted wild river 1/4 mile zone. Small drainage splits the stand running nw-se.
96	42200 - Natural White Pine	Sawtimber Well	11.5	111	111-140	Large w pine sawtimber 12-20" dbh, 1-3 log heights. Associated w pine and r pine poletimber. Scattered cedar in understory - C3/6 in areas. HCVA Two Hearted wild river 1/4 mile zone.



Stand	Cover Type	Acres	Managed Site	General Comments:
6	500 - Water	1.5	No	Part of the lake to the compartment to the west. Can be dry in the summer but appears seasonally ponded.
52	6229 - Mixed lowland shrub	1.3	No	lowland leatherleaf bog pocket, seasonally ponded.
55	500 - Water	7.6	No	lowland leatherleaf bog pocket, seasonally ponded.
57	500 - Water	1.7	No	Lowland leatherleaf /sedge opening. Seasonally ponded. ERA North Branch Lakes White Pines Dry Mesic Northern Forest.
60	330 - Low-Density Trees	7.8	No	Small, stunted j pine in low area 6-10' tall 1-2" dbh. Leatherleaf ground cover, open areas - the stand likely sits in a frost pocket resulting in the poor growth. Direct seeding by snowmobile in 1983 Soil:Crowell - Spot Complex
73	629 - Mixed non-forested wetland	10.6	No	sedge/leatherleaf marsh, seasonally ponded
76	500 - Water	4.7	No	sedge/leatherleaf marsh, seasonally ponded
80	6229 - Mixed lowland shrub	16.6	No	leatherleaf, sedge winterberry , seasonally ponded. Small, isolated r pine w pine islands
82	6229 - Mixed lowland shrub	53.6	No	leatherleaf, sedge winterberry , seasonally ponded. Small, isolated r pine w pine islands. Two Hearted wild river 1/4 mile zone.
85	629 - Mixed non-forested wetland	3.1	No	Open leatherleaf/swale grass marsh. Winterberry and tag alder pockets. Scattered cedar, b spruce, tamarack and w pine. Multiple creeks/drainages. Seasonal ponding - entire area is flooded out during spring runoff. HCVA Two Hearted wild river 1/4 mile zone
90	629 - Mixed non-forested wetland	66.9	No	Open leatherleaf/swale grass marsh. Winterberry and tag alder pockets. Scattered cedar, b spruce, tamarack and w pine. Multiple creeks/drainages. Seasonal ponding - entire area is flooded out during spring runoff. HCVA Two Hearted wild river 100' zone
92	6229 - Mixed lowland shrub	16.8	No	Mutiple drainages throughout tag alder and winterberry. Pockets of cedar, tamarack and w birch. Series of old beaver floodings. Two Hearted wild river 1/4 mile zone
95	500 - Water	5.6	No	Bog pond with outlet to the river. Two Hearted wild river 1/4 mile zone.
98	6229 - Mixed lowland shrub	5.1	No	Marsh grass, scattered tag alder along the river zone HCVA Two Hearted wild river 100'
99	6229 - Mixed lowland shrub	5.2	No	Tag alder with scattered cedar and tamarack. Extremely wet.Two Hearted wild river 400' zone.



Stand	Cover Type	Acres	Managed Site	General Comments:
100	6224 - Treed Bog	15.7	No	Widely scattered cedar, tamarack, and w pine 3-10" tall - severely stunted growth. Areas of w pine ridges and isolated, single w pine trees scattered throughout. Multiple drainages. Two Hearted wild river 400' zone.
102	122 - Road/Parking Lot	2.5	No	CR 416
103	122 - Road/Parking Lot	2.4	No	