



Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32304

Entry Year 2019

Acreage: 334

County Marquette

Management Area: Peshekee Highlands

Revision Date: 2017-08-01

Stand Examiner: Jason Caron

Legal Description:

T49N-R28W, Sections 10 & 15

Identified Planning Goals:

Manage timber within the southern portion of the compartment to encourage regeneration. The north part of the compartment is considered an Ecological Reference Area (ERA). This area will be kept as is to allow natural processes to occur.

Soil and topography:

Loamy sands to sandy loams occur within this area. The topography is mostly rugged with rock hills and outcrops throughout the area.

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

This compartment is surrounded by corporate ownership and private landowner inholdings. Land use in and around the compartment consists primarily of recreation and timber production. The land use within the state ownership of section 10 consists of primarily of hiking and fishing.

Unique Natural Features:

The unique natural features within this compartment would be the Mulligan Cliffs and the Rocking Chair Lakes. The Mulligan Cliffs are an extensive stretch of granite cliffs that extend onto private land both to the north and south. The Rocking Chair Lakes are nestled on the top of these cliffs and provide a very scenic view.

Archeological, Historical, and Cultural Features:

According to former inventory notes there is an old mine shaft on state land within section 10.

Special Management Designations or Considerations:

The northeastern portion of section 10 is within the Ecological Reference Area and will left in it's natural state. Currently an ERA plan is being written to describe the area and the plant life it supports.

Watershed and Fisheries Considerations:

COMPARTMENT 304

Fisheries Values: Excellent

Fisheries Concerns: Mulligan Creek is located in this compartment and is also a designated trout stream. Brook Trout are present in this stream and offers a very popular fishery. The creek should be buffered wherever treatments may be proposed when hard factors are ever addressed.

Wildlife Habitat Considerations:

Compartment 304 is found within the Peshekee Highlands Management Area; on a Bedrock Controlled Ground Moraine in east central Baraga and northwestern Marquette County. The dominant Natural Communities are mesic northern forest, poor conifer swamps, and boreal forests. This management area receives significant snowfall and does not offer wintering habitat for deer. As a result, many tree species that do not reliably recruit across the Ecoregion are found in numerous age classes across this management area. Additionally, three of the largest tracts of mature forest in the Great Lakes (e.g. McCormick Tract, Craig's Lake Wilderness State Park, and the Huron Mountain Club) occur within or adjacent to this management area, the best example of a dry mesic northern forest (Rocking Chair Lakes) in the state and two of the top eight examples of Mesic Northern Forest statewide occur here. The current condition and spatial arrangement of these areas provide some of the best opportunities within the WUP, state, and Great Lakes for area sensitive wildlife requiring large tracts of mature forest, mesic conifer or corridors between such areas. Wildlife management issues in this management area are: habitat fragmentation; course woody debris; retain or develop large living and dead standing trees (for cavities); mesic conifer; mature forest; within-stand diversity; early successional forest (hardwood browse adjacent to closed canopy lowland conifer swamps); and course woody debris.

The following have been identified as featured species for the Peshekee Highlands Management area: American marten,

blackburnian warbler, gray jay, moose, northern goshawk, and pileated woodpecker.

Mineral Resource and Development Concerns and/or Restrictions

Sections 10 &15, T49N R28W, Marquette County

Sand/gravel pits are not located in the area and potential appears to be limited. Some historical metallic mineral prospects and an abandoned mine are located in the area and part of the compartment was leased in the recent past for mineral exploration. There has been mineral exploration in the area and there appears to be some metallic mineral potential within the compartment. There is no economic oil and gas production in the UP.

Vehicle Access:

Vehicle access is limited within the compartment. County roads allow access to the state ownership within section 15. There is no vehicle access within section 10, an old abandoned county road does provide walking access along the Mulligan Creek.

Survey Needs:

Survey is required along the southern portion of section 10. A survey request has been submitted.

Recreational Facilities and Opportunities:

No recreational facilities exist. Recreational opportunities consist of hiking, hunting, fishing and trapping.

Fire Protection:

Fire protection within this compartment would be difficult depending on location. Most areas within the compartment are rugged and without roads.

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**

Report 1 – Total Acres by Cover Type and Age Class

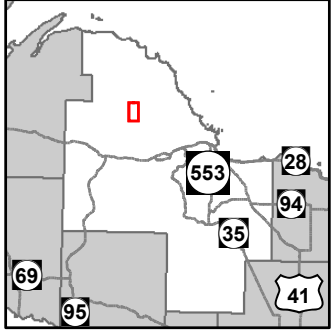


Age Class

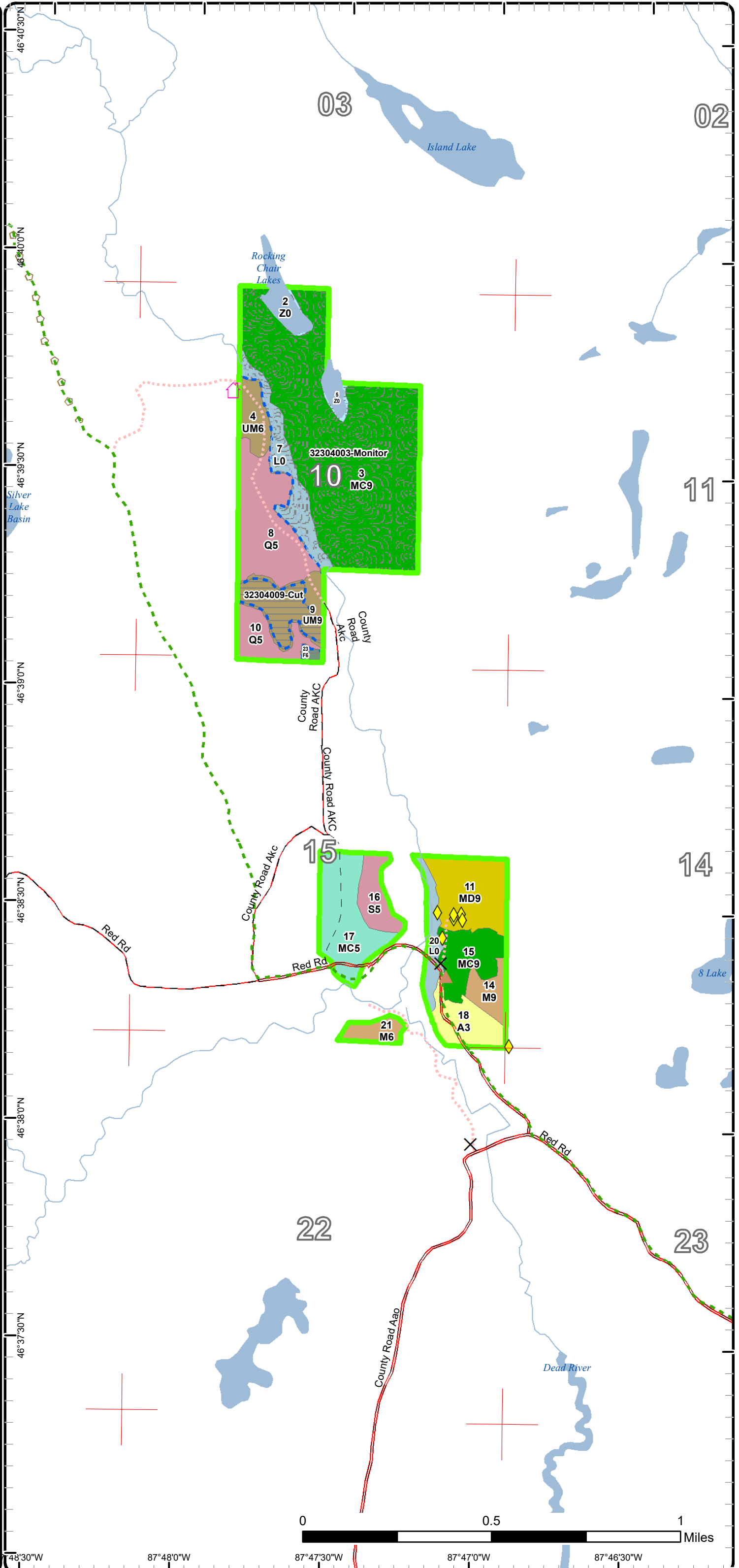
	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Lowland Conifers	0	0	0	0	0	0	0	43	0	0	0	0	0	0	0	0	0	0	43
Lowland Shrub	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Lowland Spruce/Fir	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	24
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	15	0	127	0	0	0	0	0	0	142
Northern Hardwood	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	7	13
Upland Conifers	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	26
Upland Mixed Forest	0	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	28
Upland Spruce/Fir	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Water	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Total	33	13	0	0	0	36	0	72	0	6	15	0	127	0	0	0	0	31	333

Cover Type & Treatments Map

Compartment: 304
 T49N, R28W, Sec. 10, 15
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Peshekee Highlands
 YOE: 2019
 Acres: 333.5 GIS Calculated
 Examiner: Jason Caron
 Map Revised: 1/12/2018
 Map Phase: Post-Review

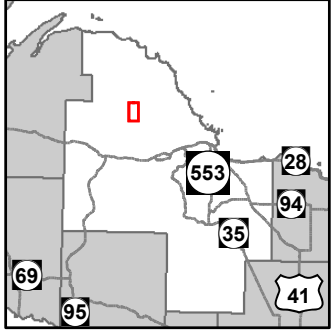


- Miris Corners
- ◆ Survey Grade GPS Corners
- Counties
- ✕ Gate
- ▲ Berms
- Unspecified Structure
- Designated Hiking Trails
- Designated Ski Trails
- Designated Snowshoe Trails
- County Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Treatments with Site Conditions
- Clearcut (w/Reserves)
- Monitoring
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest
- 500 - Water
- 622 - Lowland Shrub
- Lakes

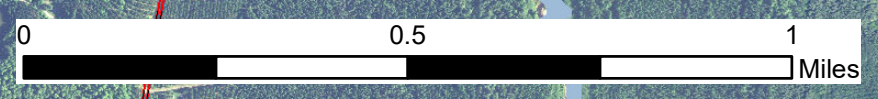
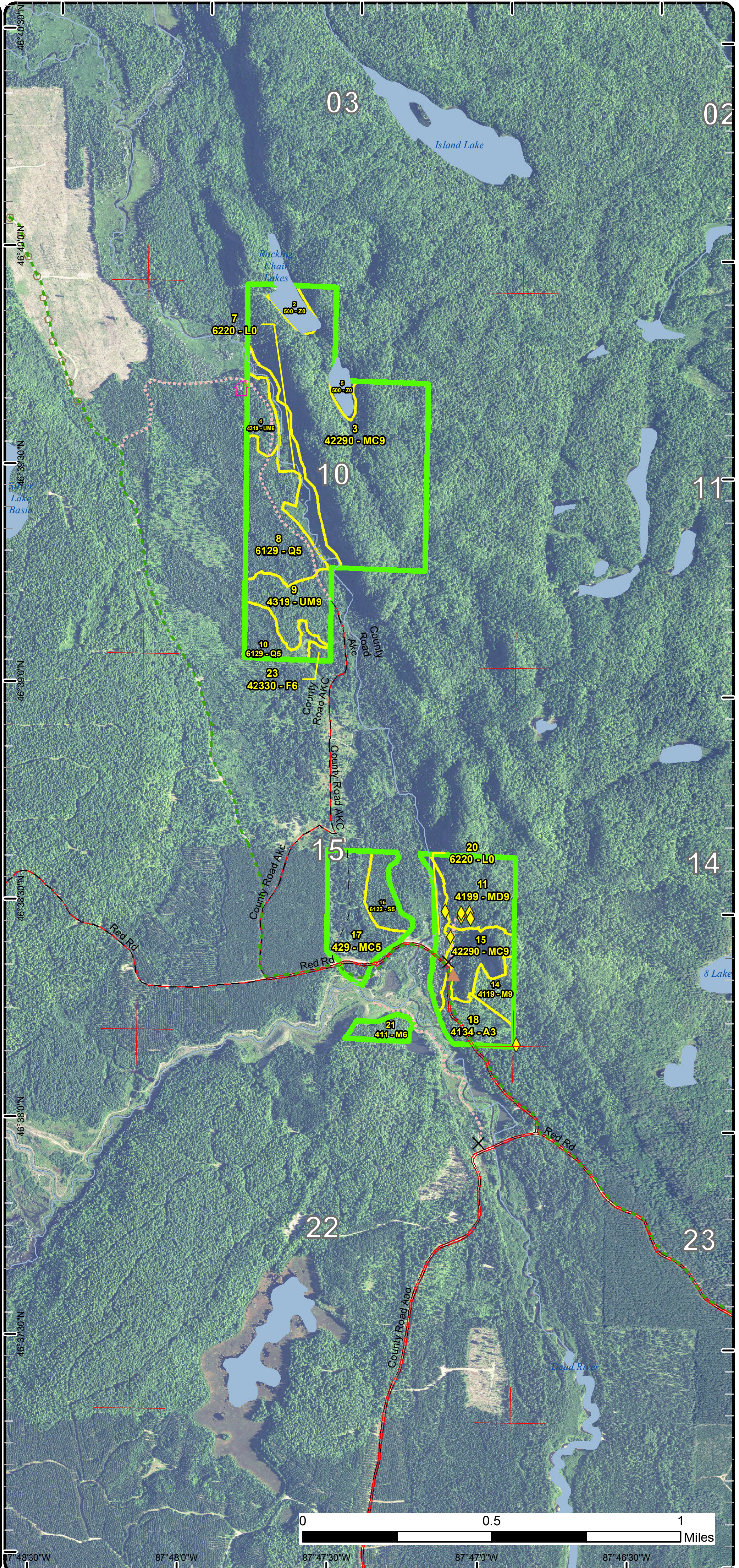


Stand Boundary Map

Compartment: 304
 T49N, R28W, Sec. 10, 15
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Peshekee Highlands
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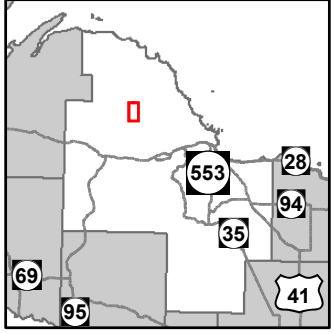
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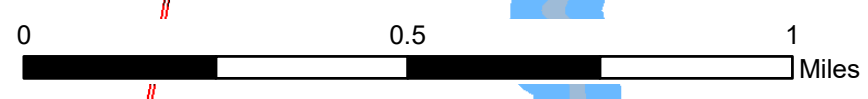
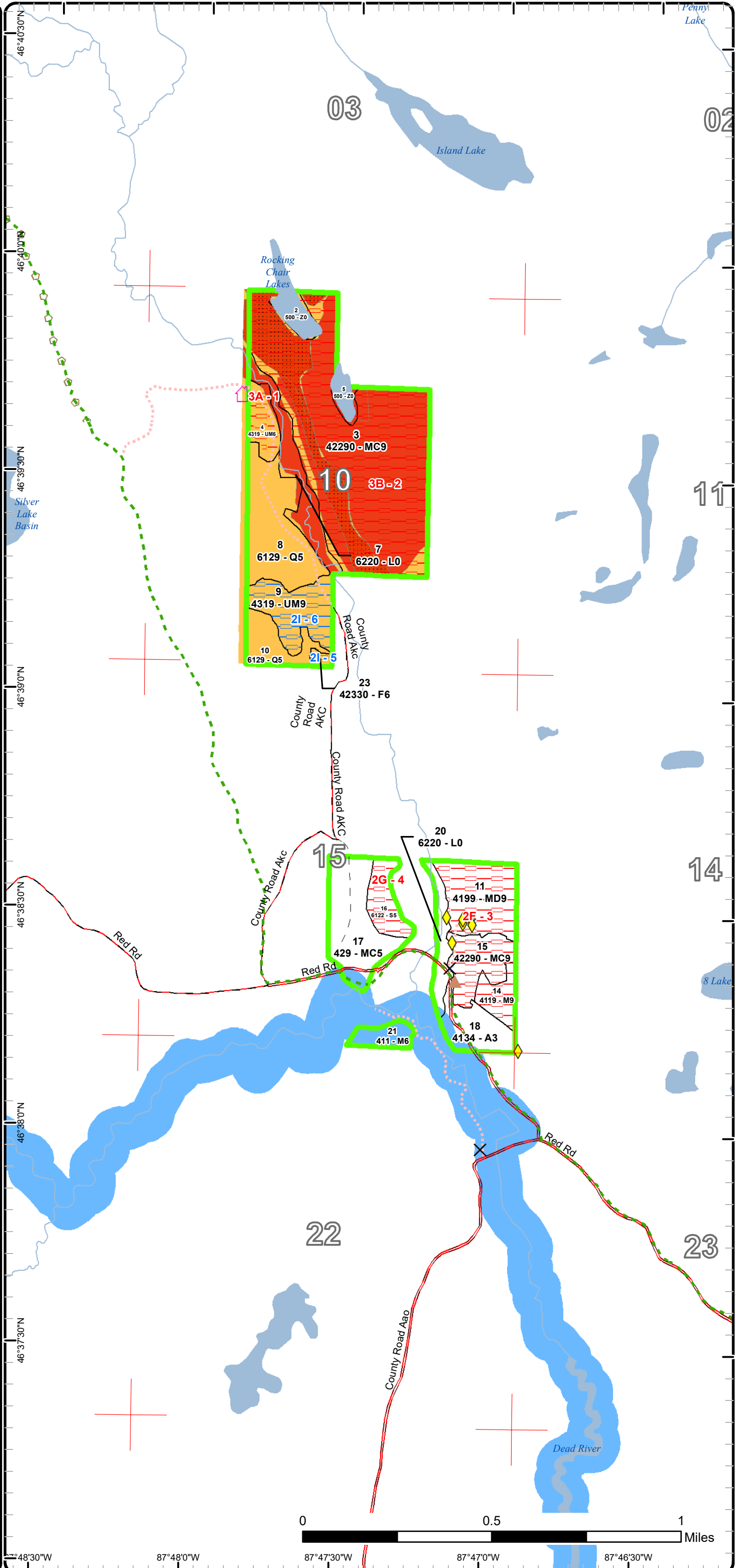
48°30'W 87°48'0"W 87°47'30"W 87°47'0"W 87°46'30"W

Special Conservation Areas & Site Conditions Map

Compartment: 304
 T49N, R28W, Sec. 10, 15
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Peshekee Highlands
 YOE: 2019
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 Map Revised: 1/12/2018
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- Miris Corners
- ◆ Survey Grade GPS Corners
- Counties
- ✕ Gate
- ▲ Berms
- Unspecified Structure
- Designated Hiking Trails
- Designated Ski Trails
- Designated Snowshoe Trails
- County Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Compartment Boundary
- SCA Proposed
- Available w/ Constraints
- Unavailable
- 2I: Survey needed
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Conservation Values incompatible with harvest at this time
- Stand Boundaries
- Ecological Reference Areas
- Cold Water Streams
- Cold Water Lakes
- Non-Dedicated Natural Areas and National Natural Landmarks
- High Priority Trout Stream Buffer
- Possible Type 2 Old Growth



46°48'30"N 87°48'0"W 87°47'30"W 87°47'0"W 87°46'30"W
 46°40'30"N 46°40'00"N 46°39'30"N 46°39'00"N 46°38'30"N 46°38'00"N 46°37'30"N 46°37'00"N



Report 2 – Treatment Summary

Gwinn Mgt. Unit

Year of Entry: 2019

Acres of Harvest

Compartment 304

Total Compartment Acres: 334

Commercial Harvest -
 Harvests with Site Condition - 15
 Next Step Harvest - 1
 Habitat Cut - 1

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Upland Mixed Forest	14	0	0	0	0	0	0	0	0	14
Upland Spruce/Fir	1	0	0	0	0	0	0	0	0	1
Total	15	0	0	0	0	0	0	0	0	15

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	15	0	0	0	0	0	152	0	0	167
Next Step	1	0	0	0	0	0	166	0	0	167
Total	16	0	0	0	0	0	318	0	0	334



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
3	32304003-Monitor	152.1	42290 - Natural Mixed Pine	Sawtimber Well	113	81-110	Monitoring	Invasive Species	4117 - Mixed N. Hardwood - Pine	Uneven- Aged	Draft Field Boundary

Habitat Cut: No **Site Condition: Species of special concern or T&E**

Prescription Monitor the stand for invasive species.

Specs:

Next Step Monitoring, Invasive Species

Treatments:

Acceptable A mix of species that are currently onsite.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

9	32304009-Cut	13.5	4319 - Mixed Upland Forest	Sawtimber Well	62	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition: Survey Needed**

Prescription Clearcut with reserves. Do not harvest the under-represented species such as pine, and yellow birch. Provide buffers around the wet areas that exist within the stand and along the edge of the stand.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Spruce, fir, aspen, maple, pine, hemlock and birch.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

23	32304023-Cut	1.2	42330 - Upland Fir	Poletimber Well	62	1-50	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition: Survey Needed**

Prescription Clearcut with reserves. Red line out a buffer strip along the edge of the stand to act as retention and for BMP purposes. Do not harvest under represented species such as oak, pine, hemlock, cedar and yellow birch if they exist.

Specs:

Next Step Harvest, Clearcut with Retention

Treatments:

Acceptable Spruce, fir, maple, birch, pine, oak, aspen, cherry and cedar.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

**Total Treatment
Acreage Proposed: 166.8**

Report 4 – Site Conditions

Gwinn Mgt. Unit
Jason Caron : Examiner

Compartment: 304
Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available	Dominant Site Conditions					
		With Condition			2I	2F	2G	3A	3B	
13	13	0		0	Aspen					
43	43	0		0	Lowland Conifers					
25	25	0		0	Lowland Shrub					
10	0	0		10	Lowland Spruce/Fir			10		
23	0	0		23	Mixed Upland Deciduous		23			
143	1	0		142	Natural Mixed Pines		15			127
13	6	0		7	Northern Hardwood		7			
26	26	0		0	Upland Conifers					
29	4	19		6	Upland Mixed Forest	19			6	
1	0	1		0	Upland Spruce/Fir	1				
9	0	0		9	Water					9
337	118	21		198	Total Forested Acres	21	46	10	6	136
	35%	6%		59%	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	3A: Conservation Values incompatible with harvest at this time	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stand is too close to the ERA that exists. Invasive species concerns exist.							
2	Unavailable	3B: Threatened, endangered, and special concern species	136	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gwinn Mgt. Unit
Jason Caron : Examiner

Compartment: 304
Year of Entry: 2019

3	Unavailable	2F: Too steep	46	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	2I: Survey needed	1	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
Comments:							
6	Available	2I: Survey needed	20	2B: Unknown if access through adjacent landowner(s) is possible	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
Rocking Chair Lakes	Type 1 or Type 2 Old Growth	Possible Type 2 Old Growth Area	Proposed SCA	32
Comments				
Element Occurrence				



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	Non-Dedicated Natural Areas and National Natural Landmarks	This category is comprised of those Natural, Wilderness and Wild Areas that have been nominated or proposed for legal dedication, but for which legal dedication by legislature has not occurred. The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.
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	Legally dedicated Natural Areas, Wilderness or Wild Areas	The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.
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:
3	42290 - Natural Mixed Pine	Sawtimber Well	127.1	113	81-110	Rock escarpment along the Mulligan Creek. Depending on where you stand along the cliff the vegetation changes. A small lowland strip exists along the Mulligan which consists of cedar, fir and spruce. As you go up the escarpment the vegetation changes to a mix of red and white pine. Numerous rock screes exist within the stand.
4	4319 - Mixed Upland Forest	Poletimber Well	8.6	62	81-110	A stand of mixed conifer and deciduous that is in poor condition due to age. Wet areas exist within the stand.
8	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	31.8	62	1-50	Stand consists of a mix of black spruce, tamarack, and cedar. Ground is very wet. Stand contains an area of higher ground that contains a mix of red maple, spruce, and paper birch.
9	4319 - Mixed Upland Forest	Sawtimber Well	19.5	62	81-110	Stand of mixed species of poorer quality. Balsam is in poor condition and is falling apart. Larger diameter yellow birch scattered throughout the stand, as well as a few white pine.
10	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	10.9	62	1-50	Unique wetland complex. A diverse type containing a mix of species. Contains a drain that feeds into the Mulligan Creek. A small strip of black spruce exists on the southern edge of the stand.
11	4199 - Other Mixed Upland Deciduous	Sawtimber Well	23.5	94	81-110	Stand of mixed deciduous and conifer. Stand is growing on rocky knobs. Timber is poorer quality due to shallow soils. Numerous drainages exist which are flowing into the Mulligan Creek. The west side of the stand consists of mostly poorer quality paper birch.
14	4119 - Mixed Northern Hardwoods	Sawtimber Well	7.4	97	81-110	Poor quality stand of northern hardwood. Trees are stunted and a fair amount of defect exists. Basal area averages around 100 square feet. Paper birch and spruce will eventually fall out of the stand. A few red oak exist on the northern edge of the stand.
15	42290 - Natural Mixed Pine	Sawtimber Well	14.9	94	111-140	Stand consists of mostly a red pine stand which is primarily growing on a large rock escarpment. The big tooth aspen that exists within the stand is very poor quality and will eventually fall out of the stand composition. The southern edge of the stand provides a great scenic view. The SW corner of the stand has been managed with stand 18. The understory of spruce, fir, maple and aspen were removed during harvest. All the mature white pine and red pine were left.
16	6122 - Black Spruce	Poletimber Medium	9.9	46	1-50	Lowland conifer complex along the Mulligan Creek. Stand consists of mostly conifer with red maple scattered throughout. The timber varies in age due to very wet ground conditions. Pockets of younger balsam and spruce mixed with older pockets. I did notice mistletoe damage on some of the black spruce within the stand.
17	429 - Mixed Upland Conifers	Poletimber Medium	26.1	41	1-50	A mix of species that has filled in over time. Stand is growing on a very dry site. Ages vary depending on where you are standing. Some older timber, some younger. Allow stand to mature at least another 10 years and consider a harvest.
18	4134 - Aspen, Spruce/Fir	Sapling Well	13.3	7	Immature	Stand of decent quality aspen mixed with conifer. Scattered mature white pine and oak within the stand.

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Gwinn Mgt. Unit

Report 7 – Forested Stands

Compartment: 304
Year of Entry: 2019



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	411 - Northern Hardwood	Poletimber Well	5.7	85	81-110	Previous inventory stated this was a birch stand. I was not able to make it to this stand yet but plan to shortly. I will update the inventory when I do.
23	42330 - Upland Fir	Poletimber Well	1.4	62	1-50	Small stand of spruce and balsam. Balsam and spruce are in poorer condition due to age.



Stand	Cover Type	Acres	Managed Site	General Comments:
2	500 - Water	5.7	No	North Rocking Chair Lake.
5	500 - Water	3.3	No	South Rocking Chair Lake.
7	6220 - Alder/willow	16.0	No	Bottom lands of the Mulligan Creek. Contains minor inclusions of lowland conifers.
20	6220 - Alder/willow	8.4	No	Stand consists of the Mulligan Creek and it's riparian corridor.