



Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32013

Entry Year 2019

Acreage: 1,387

County Marquette

Management Area: Dead Horse Moraines

Revision Date: 2017-08-04

Stand Examiner: Rachel McDonald

Legal Description:

T44N R23W, parts of sections 20, 29, 32

Identified Planning Goals:

The Deadhorse Moraine Management Area has the following silvicultural planning goals:

- identify cedar regeneration opportunities
- identify northern hardwood even-aged regeneration opportunities
- harvest aspen close to 40 year rotation to mitigate future surplus of older age classes

Soil and topography:

The soils in this compartment are a complex of gently rolling silt loams and fine sandy loams over lowland mucks. Small, ponded areas are occasional to frequent across the landscape. In general, most areas are poorly drained to very poorly drained and are very susceptible to rutting. Management activity should only occur in frozen winter or on dry soils.

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

This compartment is somewhat fragmented by private land. The northern 80 acres is only accessible through private land. No documented easement was found for this access. Marquette County Road Commission holds an easement for use of the gravel pit located on this northern 80-acre portion of the compartment. Land use in the area includes farming, grazing, recreational forestland, timber, and gravel mining. Local use of this state land includes recreational ATV and truck traffic, hunting, and firewood collection. This area supports local loggers, foresters, and truckers with local logging.

Unique Natural Features:

Pocket bogs, extensive cedar wetlands, headwaters.

Archeological, Historical, and Cultural Features:

MNFI and HAL searched 4/18/17, no special features found.

Special Management Designations or Considerations:

In general, most areas are poorly drained and very susceptible to rutting. Winter management activity only. Cedar and lowland conifer/deciduous mixes have running or standing water throughout the stand. These types would only be harvestable with modern logging equipment in very dry or very deep frozen soil conditions. Many transitional (between upland and lowland) stands, and upland with lowland stands have deep ruts that are still holding water and promoting the spread of alder. Ecologically these transitional and lowland types have higher species richness, hosting a variety of lowland conifer and hardwood species than is typical for lowland types in the area.

In general, regeneration stocking of hardwood and conifer is adequate to full stocking. One species with low abundance the overstory that is noticeably absent from regeneration is hemlock. Hardwood (maple) regeneration is consistently browsed, but relatively abundant and recruiting into the sapling size class. Overall quality of the hardwood resource is moderate to low, and can be managed with even-aged regeneration harvests when appropriate.

Watershed and Fisheries Considerations:

The North region of this compartment contains waterbodies that serve as tributaries to Rapid River, as well as to Deer Creek (West Branch Whitefish River). Both waterbodies are designated Type 1 trout stream less than 50' width. A 300' buffer is recommended for these waterbodies in riparian areas susceptible to Aspen regeneration (Specifically stand 13). For all other riparian areas Best Management Practices should be followed.

Wildlife Habitat Considerations:

This is part of a deer wintering complex. Extensive cedar forest is used for thermal cover, and hardwood regeneration is consistently browsed. The hardwood regeneration is abundant and recruiting, but it also has multiple years of moderate-intensity browse.

Compartment 013 is found within the Dead Horse Moraines Management Area; on Ground Moraines in southeastern Marquette, southwestern Alger, and northwestern Delta Counties. The dominant Natural Communities are poor conifer swamps, mesic northern forests, and dry northern forests. Major forest cover types include Northern Hardwood, Aspen, and Mixed Lowland Conifer. This management area contains a large proportion of hardwood forest which regenerates well partly due to the heavier snow cover and lower deer numbers than the southern portion of this Management Area. The most significant wildlife management issues in the management area are: mast (hard and soft); mature forest (upland deciduous, especially aspen and mixed forest with little understory); coarse woody debris, early successional forest, and deer wintering complexes.

The following have been identified as featured species for the Dead Horse Moraines Management Area: black bear, pileated woodpecker, ruffed grouse, and white-tailed deer.

Mineral Resource and Development Concerns and/or Restrictions

Compartment 13 Sections 20, 29, & 32, T44N R23W, Marquette County

A sand/gravel pit is located less than two miles to the west, but sand and gravel potential within the compartment may be limited due to thin glacial drift. There may be limestone potential within the compartment due to the occurrence of bedrock limestone near the surface. Metallic mineral potential is considered low in this area. There is no economic oil and gas production in the UP.

Vehicle Access:

Vehicle access is very poor. County Road RAH accesses the compartment from the west, heading south from County Road 444. CR RAH is a very poor or failed road. The poorly drained soils and lack of adequate drainage have made RAH and the forest access route extending from it inaccessible by 2-wheel and sometimes 4-wheel drive conventional vehicles. Check the RDR database for descriptions of needed improvements on this forest road.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

Local use of this state land includes recreational ATV and truck traffic, hunting, and firewood collection.

Fire Protection:

Fire protection is within the Gwinn Management Unit of fire protection. Being dominated by wet, lowland soils, this is not a fire-prone landscape. In severe drought, the lowland cedar would be susceptible to stand-replacing fire.

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

Gwinn Mgt. Unit

Compartment 13

Year of Entry 2019

Rachel McDonald : Examiner

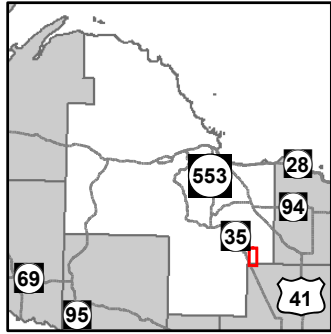


Age Class

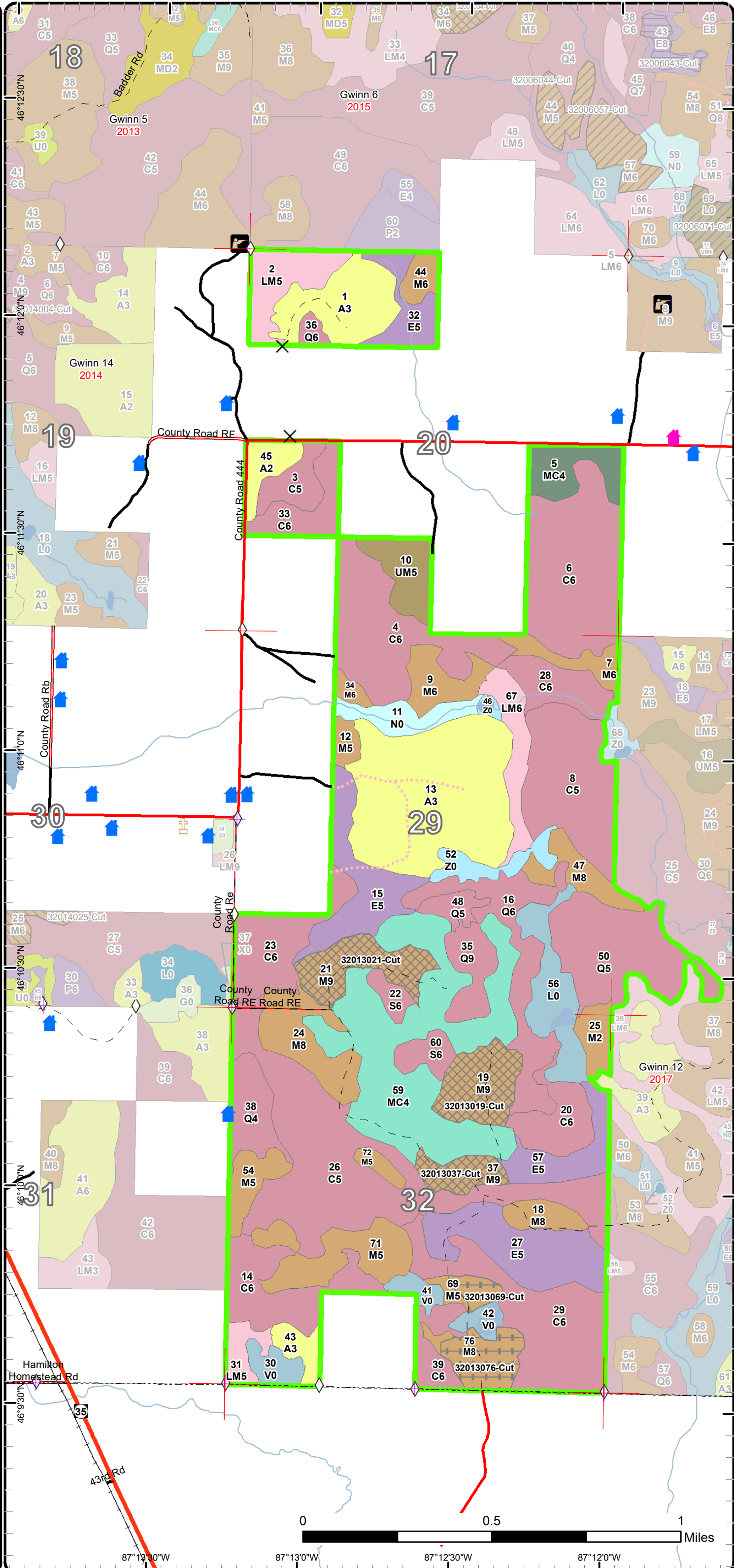
	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	19	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150
Bog	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Cedar	0	0	0	0	0	53	0	18	0	12	0	211	54	115	20	0	0	0	483
Lowland Conifers	0	0	0	0	0	7	0	0	0	21	0	16	91	0	0	0	0	0	135
Lowland Deciduous	0	0	0	0	0	0	0	0	42	0	15	31	19	0	0	0	0	0	107
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	22	9	17	0	0	0	0	0	48
Lowland Shrub	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	14
Marsh	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Northern Hardwood	0	0	0	10	0	0	0	15	0	60	0	40	0	0	0	0	0	109	234
Upland Conifers	0	0	0	0	0	0	18	0	0	0	0	108	0	0	0	0	0	0	126
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	18
Water	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Total	73	0	19	141	0	60	18	33	42	125	37	415	181	115	20	0	0	109	1388

Cover Type & Treatments Map

Compartment: 13
 T44N, R23W, Sec. 20, 29, 32
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Dead Horse Moraines
 YOE: 2019
 Acres: 1387.5 GIS Calculated
 Examiner: Rachel McDonald
 Map Revised: 1/12/2018
 Map Phase: Post-Review

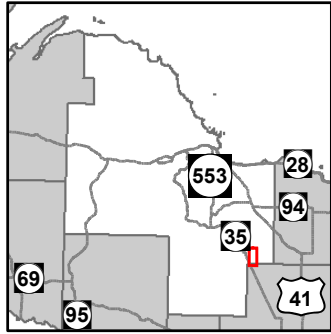


- Miris Corners
- Remonumented Section Corners
- Field Grade GPS Corners
- Counties
- Gate
- Deer Blind
- House
- Structure, Seasonal Dwelling
- Cemetery
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Active Railroads
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Selection (Group, Single Tree)
- Harvest, Overstory Removal
- 411 - Northern Hardwood
- 413 - Aspen
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- Lakes

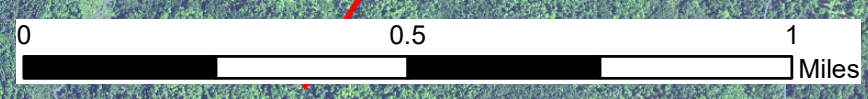
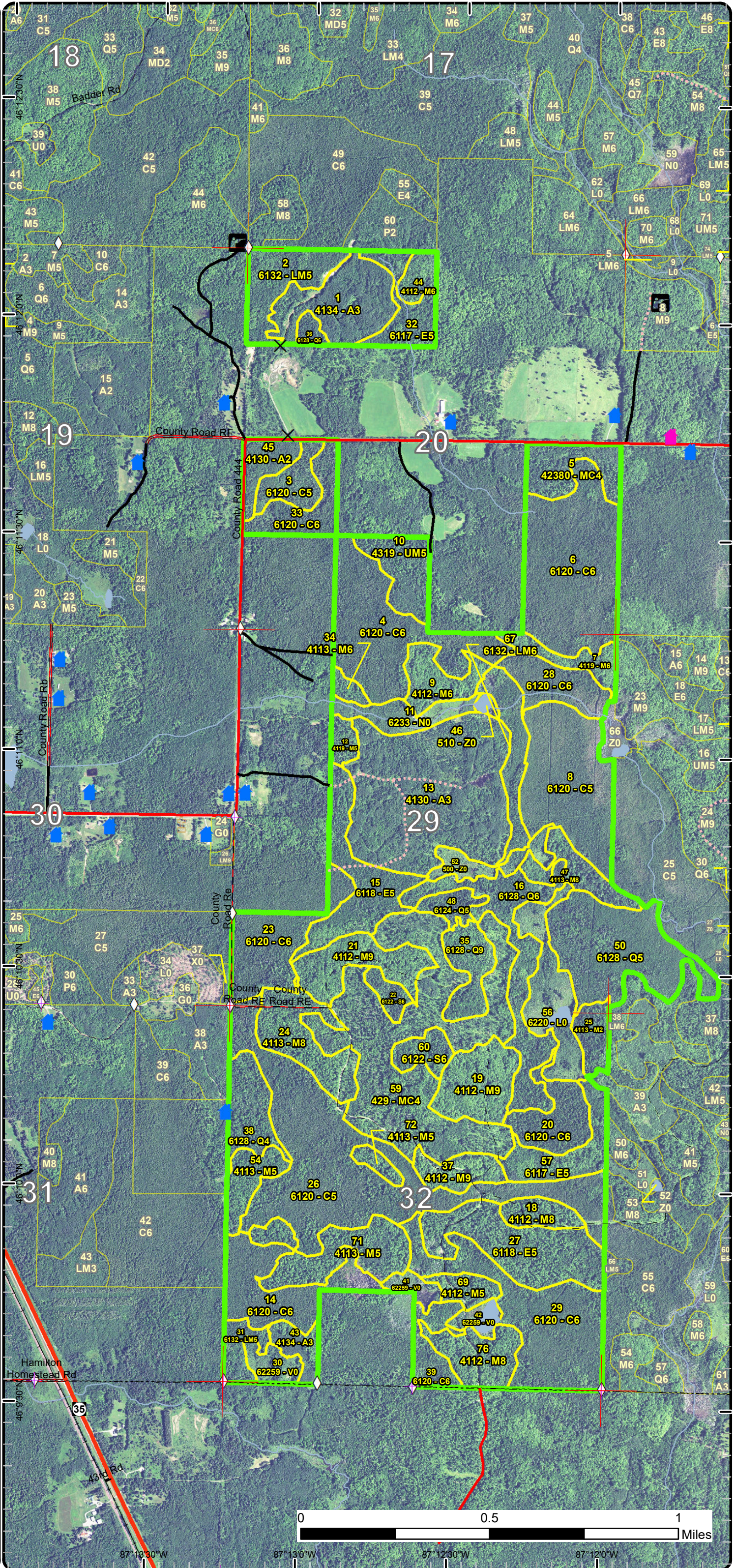


Stand Boundary Map

Compartment: 13
 T44N, R23W, Sec. 20, 29, 32
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Dead Horse Moraines
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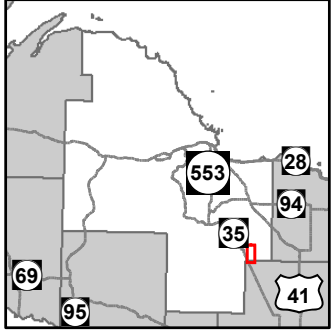
- Miris Corners
- + Remonumented Section Corners
- ◇ Field Grade GPS Corners
- Counties
- ✕ Gate
- Deer Blind
- House
- Structure, Seasonal Dwelling
- Cemetery
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- - - Closed
- Active Railroads
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Stand Boundaries
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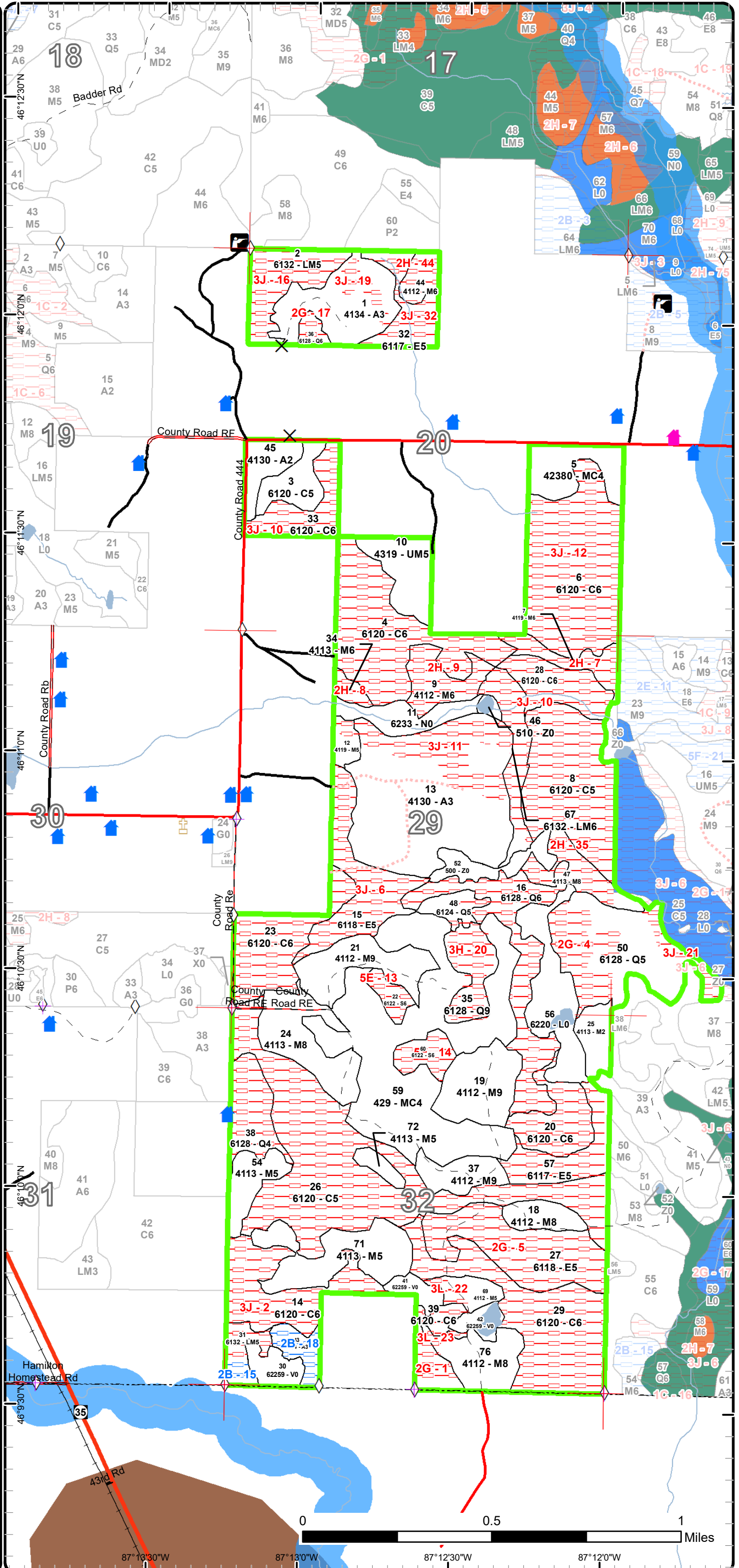
87° 13' 30" W 87° 13' 0" W 87° 12' 30" W 87° 12' 0" W

Special Conservation Areas & Site Conditions Map

Compartment: 13
 T44N, R23W, Sec. 20, 29, 32
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Dead Horse Moraines
 YOE: 2019
 Acres: 1387.5 GIS Calculated
 Examiner: Rachel McDonald
 Map Revised: 1/12/2018
 Map Phase: Post-Review



- Miris Corners
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- Paved Roads
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- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Active Railroads
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3J: Water quality / BMPs (stream, river, or lake)
- 3L: Other wildlife concerns
- 5E: Long-Term Retention
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Deer Winter Range
- Riparian Area
- Habitat Corridor
- Other Habitat Area





Report 2 – Treatment Summary

Gwinn Mgt. Unit

Compartment 13

Year of Entry: 2019

Acres of Harvest

Total Compartment Acres: 1,387

Commercial Harvest - 82
 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
Northern Hardwood		0	60	0	0	0	22	0	0		82
	Total	0	60	0	0	0	22	0	0		82

Proposed and Next Step Treatments by Method

		Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current		82	0	0	0	0	0	0	0		82
Next Step		0	0	0	0	0	82	0	0		82
	Total	82	0	0	0	0	82	0	0		164



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
19	32013019-Cut	24.1	4112 - Maple, Beech, Cherry Association	Sawtimber Well	181	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Selection harvest to improve quality of stems and release advanced regeneration. Use gaps to release advanced regeneration where present,
Specs: especially where overstory quality is low. Target residual basal area of 80.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Sugar maple, red maple, hemlock, white pine, yellow birch, black cherry, basswood.
Regen:

Other Favor minor species like hemlock white pine, yellow birch, black cherry. WLD- Favoring black cherry (10% of stand)–Black Bear, Ruffed Grouse
Comment: and keeping all cedar, hemlock if present – white-tailed deer

Proposed Start Date: 10/01/2018

21	32013021-Cut	23.5	4112 - Maple, Beech, Cherry Association	Sawtimber Well	181	141- 170	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Selection harvest to improve quality of stems and release advanced regeneration. Use gaps to release advanced regeneration where present,
Specs: especially where overstory quality is low. Target residual basal area of 80.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Sugar maple, red maple, white pine, hemlock, yellow birch, basswood.
Regen:

Other Favor minor species like hemlock, white pine, black cherry, yellow birch. Winter harvest only, patches of lowland and road conditions need
Comment: frozen ground. WLD- Favoring black cherry–Black Bear, Ruffed Grouse and keeping all cedar if present, hemlock (3% of stand) – white-tailed deer

Proposed Start Date: 10/01/2018

37	32013037-Cut	11.9	4112 - Maple, Beech, Cherry Association	Sawtimber Well	181	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Selection harvest to improve quality of stems and release advanced regeneration. Use gaps to release advanced regeneration where present,
Specs: especially where overstory quality is low. Target residual basal area of 80.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Sugar maple, red maple, hemlock, white pine, yellow birch, and black cherry.
Regen:

Other Favor minor species like hemlock, white pine, yellow birch, and black cherry. WLD - Favoring black cherry–Black Bear, Ruffed Grouse and
Comment: keeping all cedar, hemlock if present – white-tailed deer

Proposed Start Date: 10/01/2018

S
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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
69 32013069-Cut	5.3	4112 - Maple, Beech, Cherry Association	Poletimber Medium	101	51-80	Harvest	Overstory Removal	411 - Northern Hardwood	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Harvest the remaining mature stems to release abundant advanced hardwood regeneration. Leave birch, cedar, hemlock, and cherry.
Specs:

Next Step Monitoring, Natural Regen (Re-Inventry)
Treatments:

Acceptable Regen: Sugar maple, red maple, basswood, elm, white spruce, northern white cedar, hemlock, paper birch, yellow birch.

Other Comment: Quality of stems is low, with an open-growing canopy. Remove the overstory to release existing regeneration, promote species diversity, and provide browse for deer overwintering in nearby cedar complexes. Look for opportunities to leave wildlife and cavity trees.

Active beaver lodge on west side of stand. May have to buffer and alter harvest boundary.

WLD - Add in retain all hemlock with the birch, cedar and cherry – white-tailed deer, Ruffed Grouse, and Black Bear.

Proposed Start Date: 10/01/2018

76 32013076-Cut	17.1	4112 - Maple, Beech, Cherry Association	Sawtimber Medium	101	81-110	Harvest	Overstory Removal	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Harvest the remaining mature stems to release abundant advanced hardwood regeneration. Leave birch, hemlock, cedar, and cherry.
Specs:

Next Step Monitoring, Natural Regen (Re-Inventry)
Treatments:

Acceptable Regen: Sugar maple, red maple, basswood, yellow birch, elm, paper birch, hemlock, white spruce, northern white cedar.

Other Comment: Quality of stems is low, with an open-growing canopy. Remove the overstory to release existing regeneration, promote species diversity, and provide browse for deer overwintering in cedar complexes. Look for opportunities to leave wildlife and cavity trees.

WLD- Add in retain all hemlock with the birch, cedar and cherry – white-tailed deer, Ruffed Grouse, and Black Bear.

Proposed Start Date: 10/01/2018

**Total Treatment
 Acreage Proposed: 81.9**

Report 4 – Site Conditions

Gwinn Mgt. Unit

Rachel McDonald : Examiner

Compartment: 13

Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail With Condition	Acres Not Available
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Dominant Site Conditions

2B 2G 2H 3H 3J 3L 5E

150	109	8	33	Aspen	8				33		
19	19	0	0	Bog							
483	14	0	469	Cedar		195	4		270		
135	31	0	104	Lowland Conifers		82	0	15	7		
107	1	0	107	Lowland Deciduous		61			46		
48	2	3	43	Lowland Mixed Forest	3		0		43		
27	27	0	0	Lowland Shrub		0					
14	0	0	14	Lowland Spruce/Fir							14
14	14	0	0	Marsh					0		
233	177	0	56	Northern Hardwood		0	50		2	4	
126	125	0	1	Upland Conifers		0		1			
18	18	0	0	Upland Mixed Forest							
13	13	0	0	Water							
1,387	548	12	828	Total Forested Acres	12	338	55	16	401	4	14
	40%	1%	60%	Relative Percent							

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	11	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	Unspecified	Unspecified	Unspecified
Comments:							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	38	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gwinn Mgt. Unit

Compartment: 13

Rachel McDonald : Examiner

Year of Entry: 2019

4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	304	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	60	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified
Comments:							
7	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gwinn Mgt. Unit

Rachel McDonald : Examiner

Compartment: 13

Year of Entry: 2019

9	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	18	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	155	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments: The North region of this compartment contains waterbodies that serve as tributaries to Rapid River, as well as to Deer Creek (West Branch Whitefish River). Both waterbodies are designated Type 1 trout stream less than 50' width. A 300' buffer is recommended for these waterbodies in riparian areas susceptible to Aspen regeneration (Specifically stand 13).							
12	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	68	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified
Comments:							
13	Unavailable	5E: Long-Term Retention	6	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
Comments:							
14	Unavailable	5E: Long-Term Retention	9	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gwinn Mgt. Unit

Rachel McDonald : Examiner

Compartment: 13

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15	Available	2B: Unknown if access through adjacent landowner(s) is possible	3	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
Comments: Very small stand, only upland surrounded by low on state land. This was designated to be cut 10 years ago but never completed. Access may have been denied from the south.							
16	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	22	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
18	Available	2B: Unknown if access through adjacent landowner(s) is possible	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments: Alder drain; running water.							

Report 4 – Site Conditions

Gwinn Mgt. Unit

Rachel McDonald : Examiner

Compartment: 13

Year of Entry: 2019

20	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	16	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments: 2017-Stand currently under inventory for YOE 2019. Stand notes indicate it was harvested in 2012.							
21	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: The North region of this compartment contains waterbodies that serve as tributaries to Rapid River, as well as to Deer Creek (West Branch Whitefish River). Both waterbodies are designated Type 1 trout stream less than 50' width. A 300' buffer is recommended for these waterbodies in riparian areas susceptible to Aspen regeneration.							
22	Unavailable	3L: Other wildlife concerns	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Active beaver pond buffer. Beaver is cutting saplings into M5 stand to the west. 06/13/17							
23	Unavailable	3L: Other wildlife concerns	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Retain for buffer of active beaver pond to the north. 06/13/17.							
32	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	15	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
35	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gwinn Mgt. Unit

Compartment: 13

Rachel McDonald : Examiner

Year of Entry: 2019

44	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	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	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.

Report 7 – Forested Stands

Compartment: 13
Year of Entry: 2019



Stand	Gwinn Mgt. Unit		Report 7 – Forested Stands			Compartment: 13 Year of Entry: 2019
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4134 - Aspen, Spruce/Fir	Sapling Well	32.8	25	1-50	OPIC - FMD: A3, 2-3 IN. DBH,10-30 FT TALL, CUT PRMT # 34-89-1 Aspen fir, with hard wood mix. Occasional cherry or maple wildlife tree retained from previous harvest. Low ground around conifer swamp south. 3-6" diameter. Very wet alder drains on east side.
2	6132 - Mixed Lowland Forest with Cedar	Poletimber Medium	22.2	98	51-80	Black ash, cedar, fir with lowland hardwood components. Wet. Standing and running water in alder. Good stocking of diverse lowland regeneration.
3	6120 - Lowland Cedar	Poletimber Medium	12.0	87	1-50	OPIC - FMD: C5, Cut prmt. #1-99-1 Aspen and softwood harvested 13 years ago. 2-aged. Remaining cedar stand with fir, and aspen saplings.
4	6120 - Lowland Cedar	Poletimber Well	54.4	116	81-110	Low and very wet cedar pole stand. Unique black spruce bog inclusion to the southeast.
5	42380 - Non Pine Upland Conifer, Mixed Deciduous	Poletimber Poor	18.0	52	1-50	Cut prmt. #1-99-1. Reconstructed; data lost 4/10/17
6	6120 - Lowland Cedar	Poletimber Well	68.3	128	111-140	Cedar poles with black ash. Wet. Access roads very wet.
7	4119 - Mixed Northern Hardwoods	Poletimber Well	10.6	101	111-140	Higher, narrow ridge of soft maple and fir. Mostly wildlife trees low quality timber. Component of yellow birch. Good diversity. Leave for retention.
8	6120 - Lowland Cedar	Poletimber Medium	52.9	46	1-50	Younger cedar stand, becoming pole-sized.
9	4112 - Maple, Beech, Cherry Association	Poletimber Well	14.9	61	51-80	Red maple-dominated hardwood pole stand. Regenerating and recruiting well in patches, especially in wet spots that occur throughout the stand. Island surrounded by low wet ground.
10	4319 - Mixed Upland Forest	Poletimber Medium	17.8	81	1-50	OPIC - FMD: M4F4, CUT IN 1999, PRMT. # 52-99-2. Sparse hardwood residual left in the canopy from prior harvest. Mostly aspen and fir regeneration. Patchy wet and open areas dominated by alder. Lots of deep ruts holding water, likely from last harvest.
12	4119 - Mixed Northern Hardwoods	Poletimber Medium	5.1	101	51-80	OPIC - FMD: THINNED 1973 PERMIT 27-70,,AND 1990 2012- Cut winter of 2012 by LaFleur under contract #001-09-01. Reconstructed species data; data lost 4/10/2017
13	4130 - Aspen	Sapling Well	97.8	28	1-50	Predominantly aspen but fir, cherry, spruce, birch. CUT IN 1990 includes open marsh grass, alder patches, patchy conifers
14	6120 - Lowland Cedar	Poletimber Well	33.0	101	51-80	Small diameter cedar stand with paper birch, spruce, tamarack. Wet. Interior cedar stands here.
15	6118 - Lowland Deciduous with Cedar	Poletimber Medium	31.1	101	51-80	OPIC - FMD: E4Q4L, Poor site, Some dead ash and birch.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	39.4	118	81-110	Variable stand. Lowland conifer with hardwood mix. Patchy cedar, grades wetter to ash component with cedar. Low quality soft and hard maple with fir and spruce in the slight rises and knobs. Wind damage common on knobs. Alder veins throughout. BA: 120,80,110. Too much wet for whole stand harvest.
18	4112 - Maple, Beech, Cherry Association	Sawtimber Medium	9.1	101	81-110	Patches of higher quality hardwoods, with a decent sugar maple component. Exists within the upland conifer and hardwood mix of the higher and transitional ground. Decent sugar maple regeneration recruiting. Red maple regenerating mostly by multi-stems on stump sprouts.
19	4112 - Maple, Beech, Cherry Association	Sawtimber Well	24.1	181	111-140	OPIC - FMD: M6M7, NICE STD, FDF QUAL , THINNED IN 1992
20	6120 - Lowland Cedar	Poletimber Well	19.6	131	111-140	3-4 stick cedar, wet site.
21	4112 - Maple, Beech, Cherry Association	Sawtimber Well	23.5	181	141-170	OPIC - FMD: THINNED, PRMT # 23-89-1
22	6122 - Black Spruce	Poletimber Well	5.6	87	81-110	Long-term retention left from previous harvest. High quality mixed conifer habitat with locally unique hemlock and black spruce components. Retain for habitat continuity and regeneration purposes.
23	6120 - Lowland Cedar	Poletimber Well	29.7	128	81-110	OPIC - FMD: OI Stand Year Origin was 1890. Swales throughout, too wet cedar with ash, tamarack.
24	4113 - R.Maple, Conifer	Sawtimber Medium	26.5	101	51-80	OPIC - FMD: Cut prmt. #2-99-01, now, M6M7, ROAD CUT THRU STD, PRMT # 031-86-2 ,
25	4113 - R.Maple, Conifer	Sapling Medium	9.5	21	51-80	High knob with poor quality red maple, fir and spruce. Dominated by sapling regeneration.
26	6120 - Lowland Cedar	Poletimber Medium	108.0	101	81-110	OPIC - FMD: C6 POOR C STD , WET
27	6118 - Lowland Deciduous with Cedar	Poletimber Medium	41.6	76	51-80	OPIC - FMD: M6M7, Some conifer scattered throughout the stand, Cut prmt. # 2-99-01. Pretty wet red maple, cedar, hardwood mix. Good regeneration stocking. Mainly multi-stemmed red and sugar maple. Moderate browse. Dense hazel and red, sugar maple in patches. Extensive stand, repeats up and lowland complex with cedar/ash throughout south part of compartment. BA 80 average.
28	6120 - Lowland Cedar	Poletimber Well	18.4	66	81-110	Cedar pole stand, 1-2-stick and wet. A long north of 8.
29	6120 - Lowland Cedar	Poletimber Well	57.0	100	111-140	Cedar pole stand with black ash and cedar saplings.Wet. tip-ups
31	6132 - Mixed Lowland Forest with Cedar	Poletimber Medium	8.6	101	81-110	Most is wet, diverse conifer hardwood mix. Decent hardwood regeneration. Slightly higher ground inclusion to the south.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
32	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	15.3	98	51-80	Black ash, cedar with maple, fir, spruce on slightly higher ground. Majority of stand is wet, standing water.
33	6120 - Lowland Cedar	Poletimber Well	17.3	127	111-140	Lowland cedar with fir in understory.
34	4113 - R.Maple, Conifer	Poletimber Well	3.5	88	51-80	Upland island surrounded by lowland. Site condition. Reconstructed species data; data lost event 4/10/2017.
35	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	15.7	101	81-110	Central lowland inclusion surrounded by more upland, recently cut stand. Harvesting would be difficult around cedar and very wet spots. Retained for deer yard and habitat.
36	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	3.4	85	51-80	Standing water surrounding stand. Lowland conifer and deciduous mix, Good red maple, spruce regeneration.
37	4112 - Maple, Beech, Cherry Association	Sawtimber Well	11.9	181	111-140	OPIC - FMD: M6M7, THINED 1992, FDF QUAL.
38	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Poor	18.2	81	1-50	OPIC - FMD: Cut prmt. # 2-99-01. 2016: Lowland hardwood regeneration coming in under residual cedar and occasional hardwood left from previous harvest.
39	6120 - Lowland Cedar	Poletimber Well	12.8	100	81-110	Wet cedar pole stand. Lowest spots in central and north with running water and alder cover. The south end has a slight slope that drains a few acres; thus better growth on cedar here and occasional hemlock, white pine.
43	4134 - Aspen, Spruce/Fir	Sapling Well	8.3	16	Immature	Aspen sapling stand combined with hardwood transitional stand to the north. 70-80 BA in transitional.
44	4112 - Maple, Beech, Cherry Association	Poletimber Well	7.0	181	81-110	Couldn't access: vary wet, to win drain on west, north
45	4130 - Aspen	Sapling Medium	10.9	14	Immature	OPIC - FMD: P2A2F1, 1/2 to 1" dbh, 5-15 ft. tall . A few cedar poles scattered in stand. Cut prmt. #1-99-1,
47	4113 - R.Maple, Conifer	Sawtimber Medium	14.2	81	81-110	Higher knobs within the lowland softwood McFarland mix. Dominated by red maple, fir, spruce. Patchy density, some open- growing, and wind damage is common.
48	6124 - Lowland Spruce- Fir	Poletimber Medium	6.8	41	51-80	Moderate deer browse. Initial SBW noted on fir.
50	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	52.0	118	51-80	Variable stand. Lowland conifer with hardwood mix; slightly more conifer than the mixed swamp conifer to the west. Patchy cedar, grades wetter to ash component with cedar. Low quality soft and hard maple with fir and spruce in the slight rises and knobs. Wind damage common on knobs. Alder veins throughout.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
54	4113 - R.Maple, Conifer	Poletimber Medium	12.3	81	51-80	OPIC - FMD: Cut prmt. # 2-99-01. Hardwood and fir-dominated transitional ground. This large complex of hardwood/fir in the transitional upland and cedar/ash lowland repeats in the southern part of this compartment. Poor quality hardwood stems, but good hardwood regeneration (mostly multi-stemmed). No SBW evidence on fir.
57	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	19.2	118	81-110	Reconstructed after 04/2017 data loss: Stand is wet throughout. Patch of higher ground dominated by more hardwood to the east, but this is an island surrounded by lowland.
59	429 - Mixed Upland Conifers	Poletimber Poor	108.0	101	1-50	OPIC - FMD: M5A4F4, Cut this TP, Cut no hemlock, cedar, white pine, black cherry, thin to 60 BA, then underplant hemlock and white pine. 2012-Cut winter of 2012 by LaFleur under contract #001-09-01. 2016 Inventory: Stand is regenerating well with hardwood, fir, white pine, spruce, and aspen clones. Interior cedar pockets in low spots, retained from previous harvest. Retained some conifer and hardwood seed trees.
60	6122 - Black Spruce	Poletimber Well	8.8	87	81-110	Retained from last harvest (2012). This mixed conifer stand and very similar stand to the north (60, 22) are part of up/low complex. Can be one stand, rm hem and nwc complex. Diverse low habitat cover.
67	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	17.4	118	111-140	Ash-dominated with significant cedar. Mortality moderate with cedar tip-ups. Very wet. Slight rise to south but still ash, cedar mix.
69	4112 - Maple, Beech, Cherry Association	Poletimber Medium	7.7	101	51-80	OPIC - FMD: Cut prmt. # 2-99-01. Reconstructed data from 04/2017 data loss. Low-moderate quality, open-growing hardwoods that were cut heavily last entry. Abundant hardwood regeneration, mostly multi-stemmed. Moderate browse levels too, but regeneration still abundant and recruiting. North part of stand grades into lower red maple, cedar, fir transitional type.
71	4113 - R.Maple, Conifer	Poletimber Medium	29.9	81	51-80	OPIC - FMD: Cut prmt. # 2-99-01. Hardwood and fir-dominated transitional ground. This large complex of hardwood/fir in the transitional upland and cedar/ash lowland repeats in the southern part of this compartment. Poor quality hardwood stems, but good hardwood regeneration (mostly multi-stemmed). No SBW evidence on fir. Aspen sapling inclusion on east side.
72	4113 - R.Maple, Conifer	Poletimber Medium	4.1	101	51-80	OPIC - FMD: Cut prmt. # 2-99-01. Reconstructed data from 04/2017 data loss. Small ridge of transitional ground dominated by the maple, fir, and spruce mix typical for the area. Good diversity of hardwood and conifer regeneration.
76	4112 - Maple, Beech, Cherry Association	Sawtimber Medium	18.7	101	81-110	OPIC - FMD: Cut prmt. # 2-99-01. 2017 data reconstructed after 04/2017 data loss. Sugar and red maple logs over hardwood and aspen regeneration. West end of stand slopes to transitional ground dominated by red maple and fir.



Stand	Cover Type	Acres	Managed Site	General Comments:
11	6233 - Wet Meadow	13.5	No	Old beaver flooding, good waterfowl habitat.
30	62259 - Bog (OI)	8.0	No	Alder opening to water, marsh grass in center. Small diameter fir, paper birch, ash, cedar on edges.
41	62259 - Bog (OI)	5.4	No	Beaver flooding. New activity on northwest edge, cutting aspen regeneration.
42	62259 - Bog (OI)	5.4	No	Small diameter black ash with cedar on edges, opening to alder and water. Beaver dam, cutting on NW. Map.
46	510- Water (OI)	1.8	No	OPIC - FMD: Z-WATER, BEAVER FLOODING
52	500 - Water	10.9	No	Old beaver flooding. No recent activity observed. Alder, grasses, fir red maple on edges.
56	6220 - Alder/willow	27.4	No	Blask ash swamp on the edges, grading to alder and open water. Wet.