



Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32039

Entry Year 2017

Acreage: 1,568

County Marquette

Management Area: Chain Lakes Moraine

Revision Date: 2015-07-07

Stand Examiner: Ben Travis

Legal Description:

T45N R26W, Sections 22, 27, and 34

Identified Planning Goals:

Planning will focus on integrated timber management, forest recreation, fisheries management, and wildlife habitat management. Increasing public access is a high priority. Forest road maintenance, trespass incidents, forest regeneration, forest health, forest fire control, stream crossings, water quality, and any resource damage issues are critical assessments considered during the forest mapping, inventory, public comment, and forest management planning processes.

Soil and topography:

Terrain ranges from fairly level to very steep slopes with high ridges and sinkholes. Soils range from excessively drained sands including Rubicon, Croswell, Munising, and Kalkaska to

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

This compartment can be separated into a northern portion and a smaller southern portion. Access to the southern block is problematic. Other large state parcels surround this compartment except for a few small private parcels. Some seasonal camps are found within this compartment.

Unique Natural Features:

Haywire Lake.

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations:

Compartment 39 is found within the Chain Lakes Moraine Management Area; on a Disintegration Moraine in Southwestern Marquette County. The dominant Natural Communities are dry mesic northern forests, poor conifer swamps, and mesic northern forests. This management area offers opportunities to increase diversity and perhaps long-term oak sustainability through under planting white and red pine. Another priority is to maintain or increase wildlife corridors especially along riparian corridors. Wildlife management issues in the management area are: mast (hard and soft); habitat fragmentation; mature forest conditions; mesic conifer; coarse woody debris; and retention or development of large living and dead standing trees (for cavities). This management area represents approximately ¼ of the oak resource on WUP state forest.

The following have been identified as featured species for Chain Lakes Management Area: black bear, gray jay, pileated woodpecker, Northern goshawk, red crossbill.

Mineral Resource and Development Concerns and/or Restrictions

Sections 22, 27, & 34, T45N R26W, Marquette County

Surface sediments consist of medium- and coarse-textured glacial till and peak and muck. The glacial drift thickness varies between 100 and 200 feet. Archean granite/gneiss and minor Proterozoic Munising Group subcrop below the glacial drift. Some of the granite/gneiss has been/could be used as dimension stone. Gravel pits are located in the area (some on State land) and potential is good. Abandoned iron mines are located three miles to the east. This area was previously leased for metallic mineral exploration. There is no economic oil and gas production in the UP.

Vehicle Access:

Vehicle access to the center and northern portions of the compartment is very good via Crooked Lake Road, Haywire Lake Road, and numerous forest roads. Vehicle and public access to the south portion of this compartment is poor.

Survey Needs:

Survey requests for the establishment of several monuments will be submitted.

Recreational Facilities and Opportunities:

This compartment contains a segment of the Bass Lake Motorcycle Trail. ATVs utilize many of the forest roads. Hunting and wildlife observation are important recreational activities. Forest roads in this compartment provide access to Haywire Lake. An informal boat launch allows people to boat and fish on Haywire Lake.

Fire Protection:

This compartment has a relatively low risk for wildfire.

Additional Compartment Information:

Haywire Lake Road is a DNR maintained road. There are numerous large holes to repair on this road. Keeping this road graded and well-maintained is a difficult task.

The following reports from the Inventory are attached:

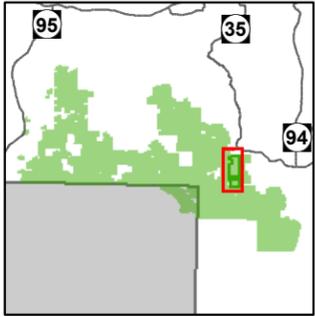
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

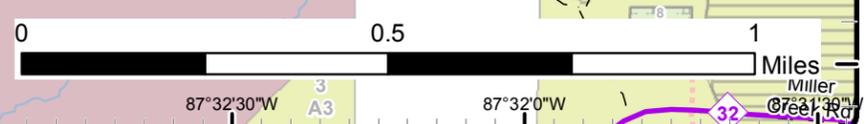
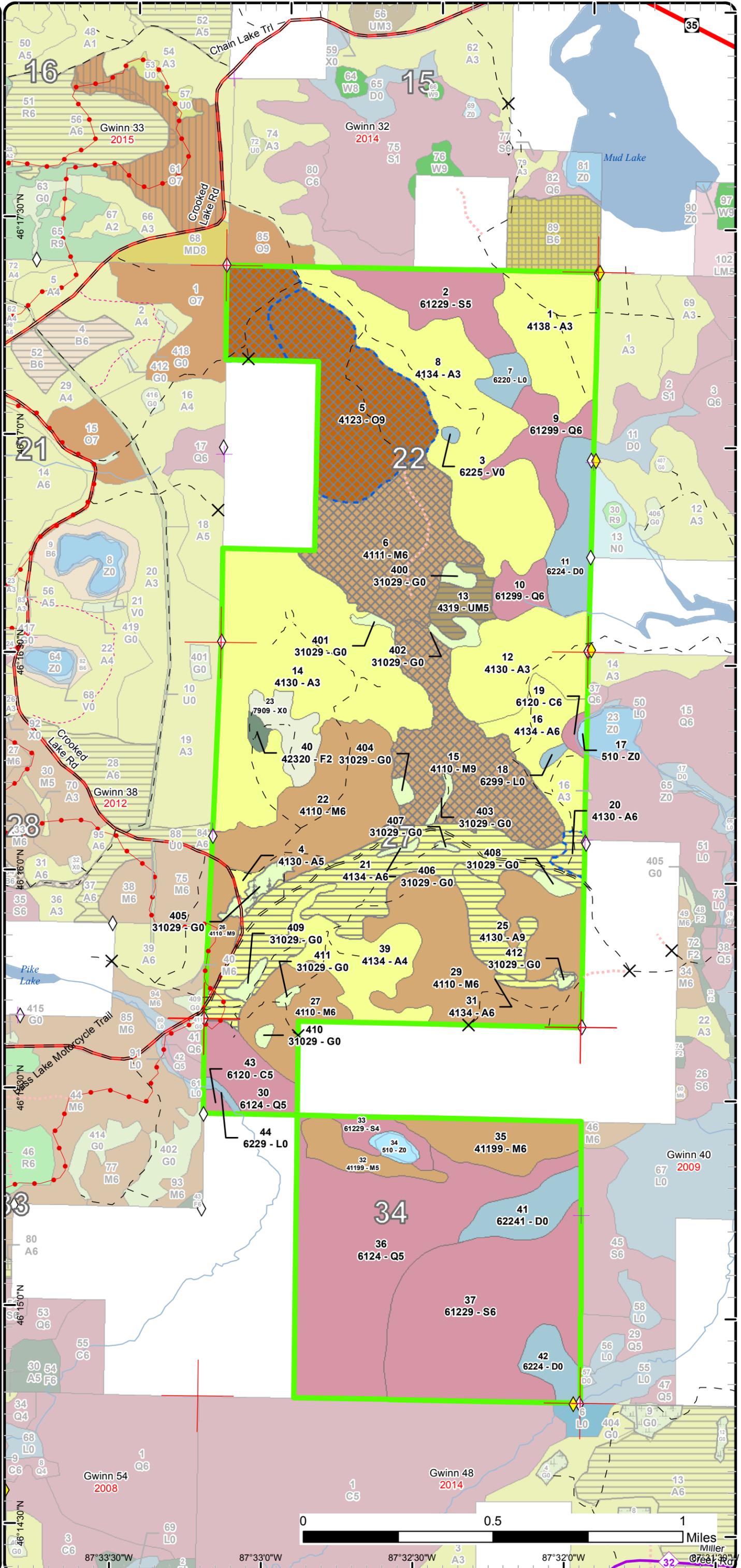
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments

Compartment: 39
 T45N, R26W, Sections. 22, 27, 34
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Chain Lakes Moraine
 YOE: 2017
 Acres: 1568 GIS Calculated
 Examiner: Ben Travis
 Map Revised: 8/7/2015
 Map Phase: Pre-Review

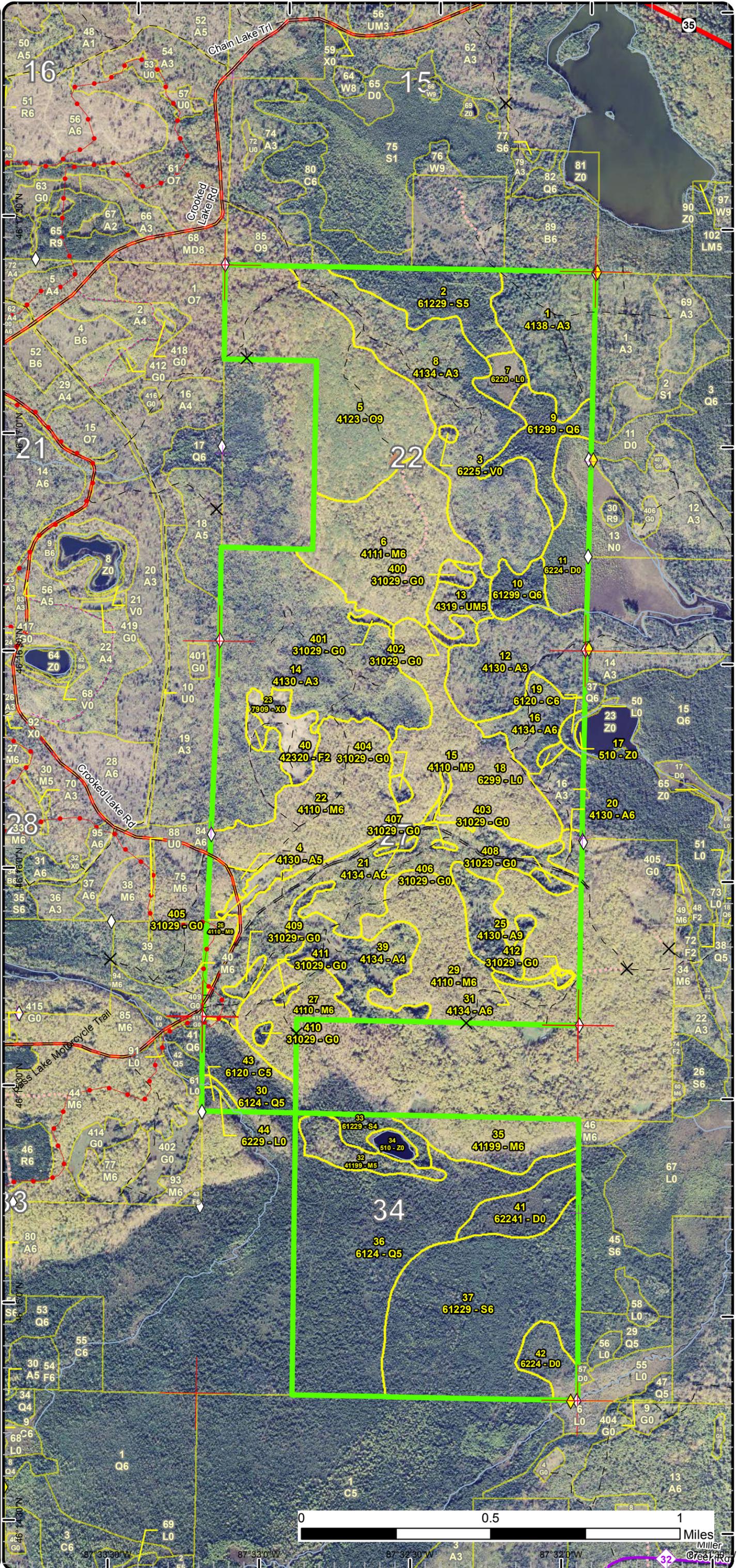
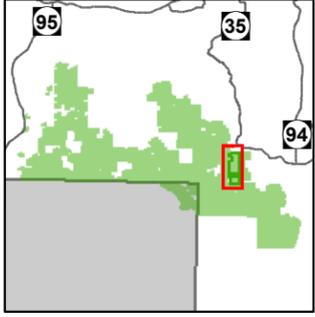


- ✦ Remonumented Section Corner
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Miris Corners
- Highway
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- ORV License & Trail Permit
- Snowmobile
- ✕ Gate
- ▲ Berms
- Rivers
- Lakes
- Treatments with Site Conditions
- Treatments**
- ▨ Selection (Group, Single Tree)
- ▨ Clearcut (w/Reserves)
- ▨ Planting (tree species)
- Forest Covertypes**
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen
- 423 - Other Upland Conifers
- 430 - Upland Mixed Fores
- 612 - Lowland Coniferous Forest
- Non-Forest Covertypes**
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 790 - Other Bare/Sparsely Vegetated

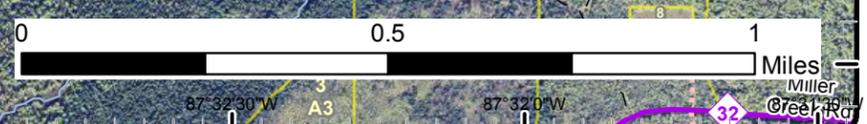


Stand Boundary Map

Compartment: 39
 T45N, R26W, Sections. 22, 27, 34
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Chain Lakes Moraine
 YOE: 2017
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 Examiner: Ben Travis
 Map Revised: 8/7/2015
 Map Phase: Pre-Review

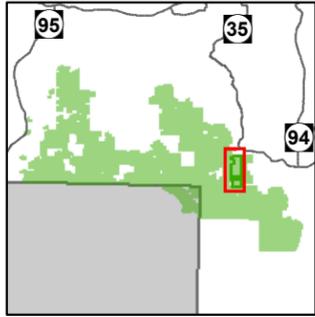


- ✚ Remonumented Section Corner
 - ◆ Survey Grade GPS Corners
 - ◇ Field Grade GPS Corners
 - Miris Corners
 - Highway
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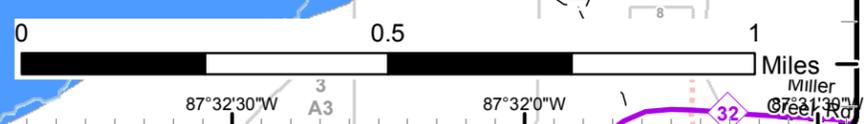
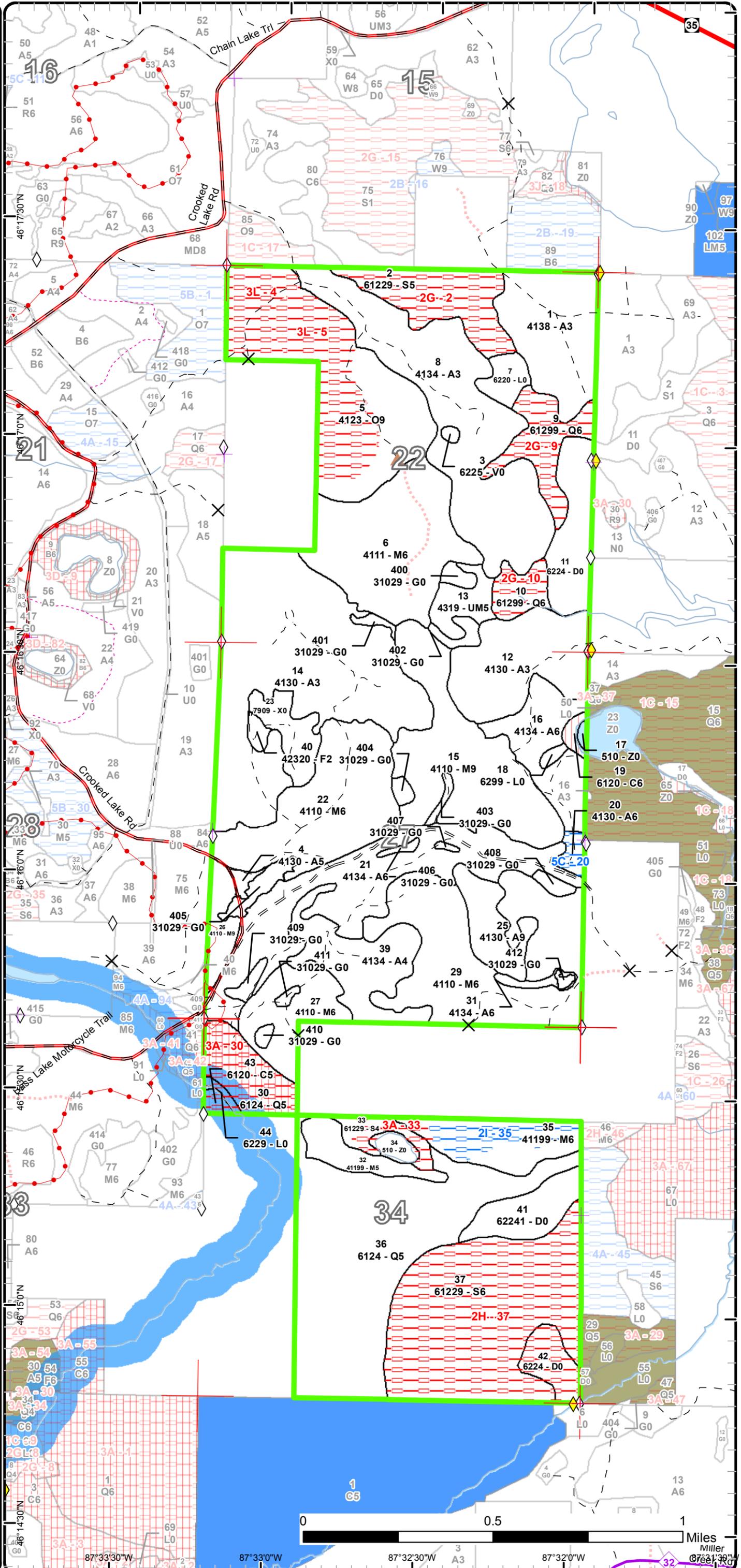


Special Conservation Areas & Site Conditions Map

Compartment: 39
 T45N, R26W, Sections. 22, 27, 34
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Chain Lakes Moraine
 YOE: 2017
 Acres: 1568 GIS Calculated
 Examiner: Ben Travis
 Map Revised: 8/7/2015
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- ✚ Remonumented Section Corner
- ◆ Survey Grade GPS Corners
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- Highway
- County Gravel Roads
- Gravel Roads
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- Trail (Non-Recreation)
- Closed Roads
- ORV License & Trail Permit
- Snowmobile
- ✕ Gate
- ▲ Berms
- Rivers
- Stand Boundaries
- Site Condition
- Available w/ Constraints
- Unavailable
- Available Factors W/ Constraints
- 2I: Survey needed
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable Factors
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3A: Potential old growth / biodiversity
- 3L: Other wildlife concerns
- Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Riparian Area



Report 1 – Total Acres by Cover Type and Age Class

Gwinn Mgt. Unit
Ben Travis : Examiner

Compartment 39 Year of Entry 2017



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	101	111	216	84	23	5	0	0	0	0	0	0	0	0	0	0	540
Bare/Sparsely Vegetated	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Bog	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cedar	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	6
Herbaceous Openland	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Lowland Conifers	0	0	0	0	0	0	0	0	164	0	0	0	36	0	0	0	0	0	200
Lowland Shrub	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	9	159	0	0	0	0	0	0	0	168
Northern Hardwood	0	0	0	0	0	0	0	75	0	0	0	0	0	0	0	0	0	333	408
Oak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	104
Treed Bog	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63
Upland Mixed Forest	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	12
Upland Spruce/Fir	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Water	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	127	0	101	114	216	84	35	80	167	12	159	0	36	0	0	0	0	437	1568



Report 2 – Treatment Summary

Gwinn Mgt. Unit

Year of Entry: 2017

Acres of Harvest

Compartment 39

Total Compartment Acres: 1,568

Commercial Harvest - 272
 Harvests with Site Condition - 109
 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
Aspen	111	0	0	0	0	0	0	0	0	111
Northern Hardwood	0	153	0	0	0	0	0	0	0	153
Oak	0	104	0	0	0	0	0	0	0	104
Upland Mixed Forest	12	0	0	0	0	0	0	0	0	12
Total	123	258	0	0	0	0	0	0	0	381

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	381	0	6	0	0	0	0	0	0	387
Next Step	0	0	0	0	0	0	387	0	0	387
Total	381	0	6	0	0	0	387	0	0	775



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
5	32039005-Cut	81.0	4123 - Red Oak	Sawtimber Well	90	141-170	Harvest	Single Tree Selection	412 - Oak Types	Uneven-Aged	Proposal

Habitat Cut: No**Site Condition: Wildlife Concerns**

Prescription Selectively mark individual trees for harvest to promote an uneven aged stand structure. Residual basal area will be variable due to distribution of superior oaks, but should be between 80 to 100 square feet. There are Legacy Tree size oaks to be preserved. Emphasis will be on removing high risk trees, releasing superior oak canopies to increase acorn production, and to improve the quality and productivity of the stand by releasing future crop trees. Remove majority of high risk, and/or poorly spaced competitors to achieve the target basal area. Quality timber trees may also be selected when suitable. Wildlife habitat, forest health, tree species diversity, and regeneration gaps are important factors to consider when marking the stand for sale. Release of dense advanced maple regeneration is desirable. Strive to maintain a diversity of diameter classes in the overstory. Retain any white pine, cedar, hemlock, oak, or white spruce present. Favor yellow birch, black cherry, and basswood retention.

Next Step
Treatments:

Acceptable Sugar maple, red maple, birch, basswood, black cherry, and red oak.

Regen:

Other Very dense 10 to 20 foot tall understory of sugar maple saplings. Will want to mark and cruise during leaf-off periods. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

5	32039005-Cutx	23.4	4123 - Red Oak	Sawtimber Well	90	141-170	Harvest	Single Tree Selection	412 - Oak Types	Uneven-Aged	Proposal
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Habitat Cut: No**Site Condition: Wildlife Concerns**

Prescription Selectively mark individual trees for harvest to promote an uneven aged stand structure. Residual basal area will be variable due to distribution of superior oaks, but should be between 80 to 100 square feet. There are Legacy Tree size oaks to be preserved. Emphasis will be on removing high risk trees, releasing superior oak canopies to increase acorn production, and to improve the quality and productivity of the stand by releasing future crop trees. Remove majority of high risk, and/or poorly spaced competitors to achieve the target basal area. Quality timber trees may also be selected when suitable. Wildlife habitat, forest health, tree species diversity, and regeneration gaps are important factors to consider when marking the stand for sale. Release of dense advanced maple regeneration is desirable. Strive to maintain a diversity of diameter classes in the overstory. Retain any white pine, cedar, hemlock, oak, or white spruce present. Favor yellow birch, black cherry, and basswood retention.

Next Step
Treatments:

Acceptable Maple, birch, basswood, black cherry, and red oak.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

6	32039006-Cut	76.6	4111 - S.Maple, Hard Mast Association	Poletimber Well	178	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Selectively mark individual trees for harvest to promote an uneven aged stand structure. Residual basal area should be between 80 to 90 square feet. Emphasis will be on improving the timber quality and productivity of the stand by releasing future crop trees. Remove majority of defective, poor form, high risk, and/or poorly spaced competitors to achieve the target basal area. Quality timber trees may also be selected when suitable. Wildlife habitat, forest health, tree species diversity, and regeneration gaps are important factors to consider when marking the stand for sale. Release of dense advanced maple regeneration is desirable. Strive to maintain a diversity of diameter classes in the overstory. Retain any white pine, cedar, hemlock, or white spruce present. Favor yellow birch, black cherry, and basswood retention.

Next Step
Treatments:

Acceptable Maple, birch, oak, basswood, and black cherry.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
13	32039013-Cut	12.4	4319 - Mixed Upland Forest	Poletimber Medium	56	51-80	Harvest	Clearcut	4319 - Mixed Upland Forest	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Remove all trees except those with wildlife habitat features. Leave hemlock, cedar, white pine, oak, cherry, and yellow birch. Leave some large aspen for goshawk. Buffer any vernal ponds.

Next Step
Treatments:

Acceptable Aspen, fir, spruce, red maple, white pine, and birch.
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

15	32039015-Cut	76.8	4110 - Sugar Maple Association	Sawtimber Well	82	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Remove suitable trees to reach a residual basal area of between 80 to 90 sq. ft.. Will retain any hemlock, white spruce, cedar, white pine, black cherry, and oak. Promote species diversity in the overstory as well as creating a varied mosaic of overstory gaps to promote shade mid-tolerant species.

Next Step
Treatments:

Acceptable Sugar maple, red maple, birch, and basswood.
Regen:

Other Rolling terrain with little underbrush. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

20	32039020-Cut	4.5	4130 - Aspen	Poletimber Well	65	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition: Age-Class or Site Quality**

Prescription Remove aspen, jack pine, red pine, red maple, fir, and spruce. Retain any larger hardwood patches. Leave all hemlock, yellow birch, white birch, white pine, and oak. Leave all hardwood 18 inches Dbh and greater. Leave some scattered black cherry. Use some of the included forest openings as centers for retention patches.

Next Step
Treatments:

Acceptable Aspen, maple, birch, fir, and spruce.
Regen:

Other Use road deduct on timber sale to fill in some of the larger holes on Haywire Lake Road. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

21	32039021-Cut	83.7	4134 - Aspen, Spruce/Fir	Poletimber Well	41	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Remove aspen, jack pine, red pine, maple, fir, and spruce. Retain any larger hardwood patches. Leave all hemlock, yellow birch, white birch, white pine, and oak. Leave all hardwood 18 inches Dbh and greater. Leave some scattered black cherry. Use some of the included forest openings as centers for retention patches.

Next Step
Treatments:

Acceptable Aspen, maple, spruce, fir, and birch.
Regen:

Other Use road deduct on timber sale to fill some of the larger holes on the Haywire Lake Road. Include sale specs to protect integrity of the Bass Lake motorcycle trail (with signage, minimize trail crossings, etc.). PRD to provide carsonite signs/posts to identify trail. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016



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
25	32039025-Cut	19.9	4130 - Aspen	Sawtimber Well	51	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Remove aspen, jack pine, red pine, red maple, fir, and spruce. Retain any larger hardwood patches. Leave all hemlock, yellow birch, white birch, white pine, and oak. Leave all hardwood 18 inches Dbh and greater. Leave some scattered black cherry. Use some of the included forest openings as centers for retention patches.

Next Step
Treatments:

Acceptable aspen, maple, birch, fir, and spruce.
Regen:

Other Use road deduct on timber sale to fill some of the larger holes on the Haywire Lake Road. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

31	32039031-Cut	2.9	4134 - Aspen, Spruce/Fir	Poletimber Well	51	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Remove aspen, jack pine, red pine, red maple, fir, and spruce. Retain any larger hardwood patches. Leave all hemlock, yellow birch, white birch, white pine, and oak. Leave all hardwood 18 inches Dbh and greater. Leave some scattered black cherry. Use some of the included forest openings as centers for retention patches.

Next Step
Treatments:

Acceptable Aspen, maple, birch, fir, and spruce.
Regen:

Other Use road deduct on timber sale to fill in some of the larger holes on the Haywire Lake Road. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

405	32039405- Plant	6.2	31029 - Grass (OI)	Nonstocked		Unspec ified	Planting	Other - Specify	4319 - Mixed Upland Forest	Even-Aged	Proposal
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Habitat Cut: Yes**Site Condition:**

Prescription Consider trenching and planting to red pine with red oak mixed in. Having a patch of dense conifer would improve horizontal patch diversity and eliminate ORV use.

Next Step
Treatments:

Acceptable Red pine, jack pine oak.
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

**Total Treatment
Acreage Proposed: 387.4**

Report 5 – Site Conditions

Gwinn Mgt. Unit
Ben Travis : Examiner

Compartment: 39
Year of Entry: 2017

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions						
		With Condition	Not Available		2I	5C	2G	2H	3A	3L	
539	535	5	0	Aspen		5					
15	15	0	0	Bare/Sparsely Vegetated							
1	1	0	0	Bog							
5	3	0	3	Cedar					3		
30	30	0	0	Herbaceous Openland							
200	142	0	58	Lowland Conifers			34		24		
12	10	0	2	Lowland Shrub					2		
169	1	0	168	Lowland Spruce/Fir			35	124	8		
408	387	19	2	Northern Hardwood	19				2		
104	33	0	71	Oak							71
63	50	0	13	Treed Bog				13			
12	12	0	0	Upland Mixed Forest							
3	3	0	0	Upland Spruce/Fir							
6	5	0	1	Water					1		
1,568	1,227	23	318	Total Forested Acres	19	5	69	138	39		71
	78%	1%	20%	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
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	35	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	3L: Other wildlife concerns	23	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Gwinn Mgt. Unit
Ben Travis : Examiner

Compartment: 39
Year of Entry: 2017

5	Unavailable	3L: Other wildlife concerns	48	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	25	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
20	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
30	Unavailable	3A: Potential old growth / biodiversity	28	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
33	Unavailable	3A: Potential old growth / biodiversity	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Gwinn Mgt. Unit
Ben Travis : Examiner

Compartment: 39
Year of Entry: 2017

35	Available	2I: Survey needed	19	2F: Too steep	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified
Comments:							
37	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	138	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 6 – 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 7 – 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.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4138 - Aspen (OI)	Sapling Well	49.9	18	Immature	Cut in 1998 under permit # 011-97-01. Past inventory lists F2 understory.
2	61229 - Black Spruce (OI)	Poletimber Medium	35.0	98	1-50	Wet black spruce swamp with scattered white pine sawtimber trees.
4	4130 - Aspen	Poletimber Medium	2.1	27	Unspecified	Aspen slowly filling in an old gravel pit.
5	4123 - Red Oak	Sawtimber Well	104.3	90	141-170	Area treated in 1998 under permit # 012-97-01. This stand is the best oak stand in the Gwinn area. Silvicultural treatment of the stand had been delayed in past to maintain the significant mast production benefits for wildlife. Many high risk oak stems and crotches that should be removed. The extremely dense M3 will be the future stand.
6	4111 - S.Maple, Hard Mast Association	Poletimber Well	76.6	178	111-140	Treated under permit # 012-97-01. Good regen. Scattered red oak, yellow birch with an occasional basswod.
8	4134 - Aspen, Spruce/Fir	Sapling Well	109.2	25	81-110	Vernal pools. Boulders. White birch, white pine, black cherry, black spruce, ironwood, and yellow birch saplings present. Sugar maple, yellow birch, balsam poplar, black cherry, white birch, and white pine poles in overstory.
9	61299 - Mixed Swamp Conifer (OI)	Poletimber Well	24.5	112	111-140	
10	61299 - Mixed Swamp Conifer (OI)	Poletimber Well	11.2	112	111-140	
12	4130 - Aspen	Sapling Well	51.2	18	Immature	Treated under permit # 013-97-01. Well-stocked stand. Black spruce saplings present.
13	4319 - Mixed Upland Forest	Poletimber Medium	12.4	56	51-80	Scattered cherry and white pine poles.
14	4130 - Aspen	Sapling Well	144.0	37	Unspecified	White birch saplings present. Red oak, balsam poplar, black cherry, white pine, and white birch are infrequent overstory associates. Thrifty stand, classic aspen over fir.
15	4110 - Sugar Maple Association	Sawtimber Well	76.8	82	111-140	Harvested under permit # 013-97-01. Maple understory browsed. Rolling terrain. Cedar and white pine are infrequent overstory members. Many snags and windfalls. Boulders.
16	4134 - Aspen, Spruce/Fir	Poletimber Well	32.7	30	Unspecified	Stand cut in 1986. 1 to 2 stick aspen. Scattered residual red oak canopy trees. Black spruce and white pine saplings found.
19	6120 - Lowland Cedar	Poletimber Well	2.8	85	51-80	Buffer around Haywire Lake.
20	4130 - Aspen	Poletimber Well	4.5	65	Unspecified	Aspen deteriorating, many snags and deadfalls. 3 to 4 stick aspen. Stand likely to convert to maple.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4134 - Aspen, Spruce/Fir	Poletimber Well	84.2	41	Unspecified	Basal area readings vary widely. Aspen is declining in health and structural integrity.
22	4110 - Sugar Maple Association	Poletimber Well	70.2	86	81-110	Smaller average DBH and poorer quality timber in the west portion of the stand. Some areas along the two-tracks have been cut quite heavily by illegal firewood cutting. Occasional cherry, yellow birch, and soft maple. ***Stand harvested as "Haywire Hardwoods" #014-07 (unit 1 and 2) - thinned September, 2010. No wildlife underplanting completed yet as of 11/3/11. Small patches of M3 greater than 4.5 ft tall. White pine and oak are infrequent overstory associates. Moderate site quality.
25	4130 - Aspen	Sawtimber Well	19.9	51	Unspecified	Former grassy opening. Very poor timber quality hardwood. 4 stick aspen. Areas where sugar maple understory is quite dense and 12 to 16 feet tall. High incidence of aspen snags and deadfalls.
26	4110 - Sugar Maple Association	Sawtimber Well	12.1	82	51-80	Fair quality hardwoods growing on the east side of a small ridge. Bass Lake Motorcycle Trail runs thru this stand.
27	4110 - Sugar Maple Association	Poletimber Well	29.8	65	81-110	Fair to good quality hard maple stand. Terrain is hilly with ridges and sink holes. Stand harvested under permit #014-07 (Unit 3) - thinned July, 2011. Moderately heavy raspberry patches. Patches of sedge. Red oak and hemlock in overstory.
29	4110 - Sugar Maple Association	Poletimber Well	96.9	75	51-80	Rolling terrain. Stand harvested under permit #14-07 (Unit 4) - thinned September, 2010. Many well- distributed canopy gaps. Large boulders found to south. Spring beauties are primary groundcover. Some areas heavy to sedge and raspberry to southeast. Fir saplings found. Maple diameters tend to be smaller to southeast.
30	6124 - Lowland Spruce- Fir	Poletimber Medium	23.8	76	Unspecified	Spruce crowns healthy. Patchy overstory distribution. Linear alder patches. Some upland knobs. Cedar and white birch saplings found. Black cherry and hemlock are uncommon overstory associates.
31	4134 - Aspen, Spruce/Fir	Poletimber Well	2.9	51	81-110	
32	41199 - Northern Hardwood (OI)	Poletimber Medium	14.9	65	51-80	OPIC - FMD: Fair quality soft maple growing on a steep esker surrounded by lowland conifers. This stand was formerly an F6 stand but budworm has killed most of the fir.
33	61229 - Black Spruce (OI)	Poletimber Poor	9.4	88	1-50	Buffer around bog pond.
35	41199 - Northern Hardwood (OI)	Poletimber Well	30.5	65	81-110	OPIC - FMD: Good quality even-aged hard maple stand with occasional larger sugar maple and yellow birch remnant. Most of the stand is inoperable due to very steep ridges and excessive rocks and scattered room size boulders. Access is required through private land and road building would be very expensive. A survey would also be required to establish ownership boundaries.

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Gwinn Mgt. Unit

Report 8 – Forested Stands

Compartment: 39
Year of Entry: 2017

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	6124 - Lowland Spruce- Fir	Poletimber Medium	140.5	76	51-80	
37	61229 - Black Spruce (OI)	Poletimber Well	124.5	98	81-110	Access to the stand is prohibitive due to wet soils. Stand also blocked by other physical features. Previous inventory reflects 100 sq ft of black spruce and 10 sq ft of tamarack. Average Dbh was 6 inches.
39	4134 - Aspen, Spruce/Fir	Poletimber Poor	38.7	37	1-50	Former grassy opening slowly filling in with trees.
40	42320 - Upland Spruce	Sapling Medium	2.6	20	Immature	Old gravel pit.
43	6120 - Lowland Cedar	Poletimber Medium	2.5	76	Unspecified	



Stand	Cover Type	Acres	Managed Site	General Comments:
3	6225 - Bog	1.1	No	Small pot-hole bog.
7	6220 - Alder/willow	8.3	No	
11	6224 - Treed Bog	28.9	No	
17	510- Water (OI)	1.1	No	Haywire Lake.
18	6299 - Lowland Shrub (OI)	1.6	No	Tag alder with patches of C4.
23	7909 - Nonstocked (OI)	15.3	No	Sand and gravel pit. Quite a few large piles of sand stockpiled. Area used as shooting range with associated rubbish left behind. ATV scramble area. Campfires/party site.
34	510- Water (OI)	4.7	No	WATER-POND
41	62241 - Treed Bog (OI)	21.0	No	OPIC - FMD: OI Stand Year Origin was 1939
42	6224 - Treed Bog	13.2	No	
44	6229 - Mixed lowland shrub	1.8	No	Chandler Brook floodplain.
400	31029 - Grass (OI)	2.9	No	
401	31029 - Grass (OI)	1.7	No	
402	31029 - Grass (OI)	3.8	No	
403	31029 - Grass (OI)	1.8	No	One of several older openings in this compartment slowly filling in with aspen, spruce and fir. Stand provides good horizontal patch diversity.
404	31029 - Grass (OI)	2.1	No	
405	31029 - Grass (OI)	6.2	No	Old sand borrow pit. Lot of sedge and lichens. Scattered trembling aspen, jack pine, and red pine saplings. Red pine thriving. ATVs and motorcycles using area.
406	31029 - Grass (OI)	1.3	No	Aspen, fir, spruce, and cherry filling in.



Stand	Cover Type	Acres	Managed Site	General Comments:
407	31029 - Grass (OI)	0.7	No	Scattered white spruce, black cherry, and trembling aspen poletimber. Apple tree. Fir and white spruce saplings.
408	31029 - Grass (OI)	2.7	No	White spruce, black cherry, fir, jack pine, and trembling aspen poletimber present. Fir, white spruce, and jack pine saplings present.
409	31029 - Grass (OI)	2.9	No	Cherry, spruce, fir, and aspen filling in.
410	31029 - Grass (OI)	1.5	No	Depression in landscape. Probable frost pocket. Fringe of F6. Center is barren ground strawberry, raspberry, and fir saplings.
411	31029 - Grass (OI)	1.2	No	Raspberry and grasses. Some fir and spruce saplings.
412	31029 - Grass (OI)	0.9	No	Roughly 1/2 area grasses, 1/2 raspberry. Fir is encroaching. Many boulders.