



# Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32240

Entry Year 2017

Acreage: 1,288

County Marquette

Management Area: Chain Lakes Moraine

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**Revision Date:** 2015-07-15

**Stand Examiner:** Jason Caron

**Legal Description:**

T45N-R28W, Sections 29 & 32.

**Identified Planning Goals:**

Clearcut stands of aspen, fir, spruce and birch to promote these species. Retention areas will be included within these cuts to promote diversity.

**Soil and topography:**

Ranging from relatively level creek bottoms, swamp conifer, tag alder, and bog marshlands. Upland stands are only slightly higher than lowland types with rolling to slightly hilly terrain. Logging opportunities are high within this compartment given the soil conditions and level terrain.

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

State ownership here is generally contiguous with private ownership to the east in an adjacent compartment (C-239). Development is very limited with a few seasonal cottages or hunting camps widely distributed. Production of forest products along with recreational activities such as hunting, mushroom & berry picking, trapping, fishing, and snowmobiling make up the land uses here.

**Unique Natural Features:**

The Flat Rock Creek and it's tributaries make up the unique natural features here.

**Archeological, Historical, and Cultural Features:**

Former "pine days" remnants include old pine stumps, and a network of old railroad grades and spurs. Former notes mention "Ike" Stephenson who was the foremost figure in the pine logging era in this area.

**Special Management Designations or Considerations:**

Winter harvesting of timber within the lowland types to reduce soil disturbance.

**Watershed and Fisheries Considerations:**

**Wildlife Habitat Considerations:**

Compartment 240 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**

Surface sediments consist of medium- and coarse-textured till. There is insufficient data to determine the glacial drift thickness. Archean granite/gneiss subcrops below the glacial drift. This rock could be used as dimension stone. There appears to be a small gravel pit located ½ mile to the northwest in Section 19, but potential is probably low. The compartment is a good distance from existing and historic iron mining. Section 29 was previously leased, and active metallic mineral leases are located less than two miles to the west. There is no economic oil and gas production in the UP.

**Vehicle Access:**

Country Road CAA (the Flat Rock Road) is the primary access from both the north and southwest. Interior two tracks complete the access network within the compartment but are limited to the NE corner and SE corner of the compartment. A steel I-beam bridge constructed by the DNR is in place over the Flat Rock Creek in the SW1/4 of Section 33, just east of this compartment.

**Survey Needs:**

No survey needed for this year of entry.

**Recreational Facilities and Opportunities:**

No recreational facilities exist within this compartment. Recreational opportunities consist of hunting, mushroom & berry picking, trapping, fishing, and snowmobiling.

**Fire Protection:**

This compartment is included in the 581 Zone Dispatch area which provides for a pre-planned dispatch of fire equipment. Areas of jack & red pine cover types with the encroachment of recreational seasonal dwellings have warranted this pre-planning. Mutual aide agreements with local volunteer fire departments also provide critical fire suppression response, especially in the area of structural fire protection and evacuations.

**Additional Compartment Information:**

**The following reports from the Inventory are attached:**

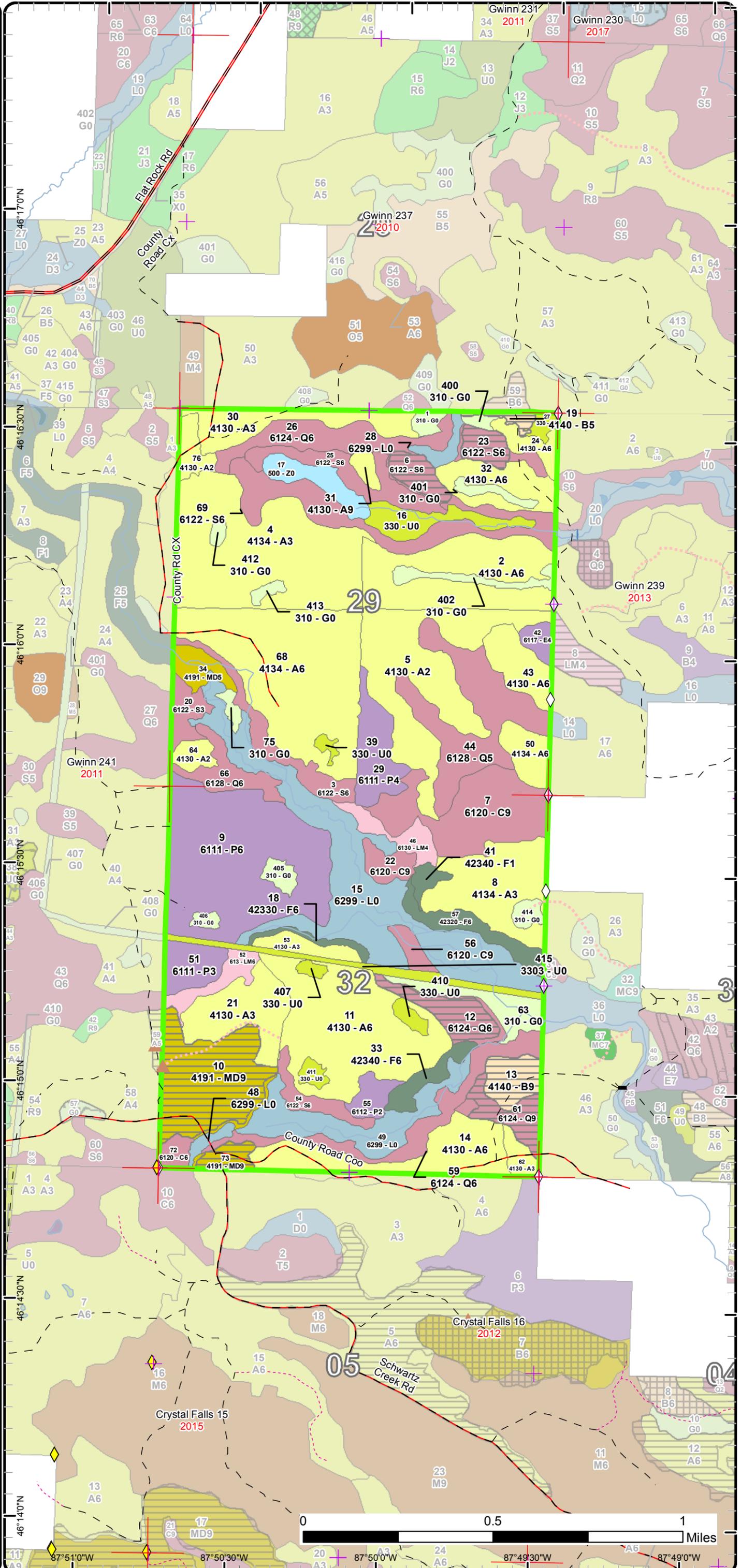
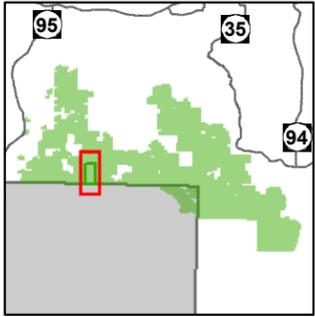
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

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

# Cover Type & Treatments

Compartment: 240  
 T45N, R28W, Sections. 29, 32  
 County: Marquette  
 Unit: Gwinn  
 Mgmt Area: Chain Lakes Moraine  
 YOE: 2017  
 Acres: 1288 GIS Calculated  
 Examiner: Jason Caron  
 Map Revised: 7/15/2015  
 Map Phase: Pre-Review

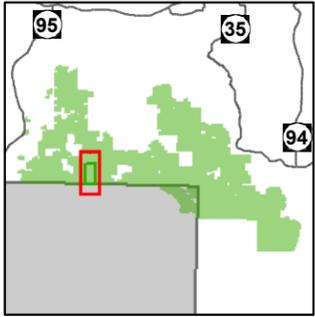


- ✚ Remonumented Section Corner
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Miris Corners
- County Gravel Roads
- - Poor Dirt Roads
- - County Poor Dirt Roads
- - Trail (Non-Recreation)
- - Closed Roads
- ▲ Berms
- ⚡ Bridges
- ⌒ Culverts
- Rivers
- Lakes
- Treatments**
- ▨ Clearcut (w/Reserves)
- Forest Covertype**
- 413 - Aspen
- 414 - Other Upland Deciduous
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- Non-Forest Covertype**
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub

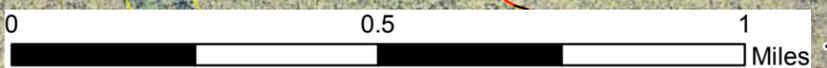
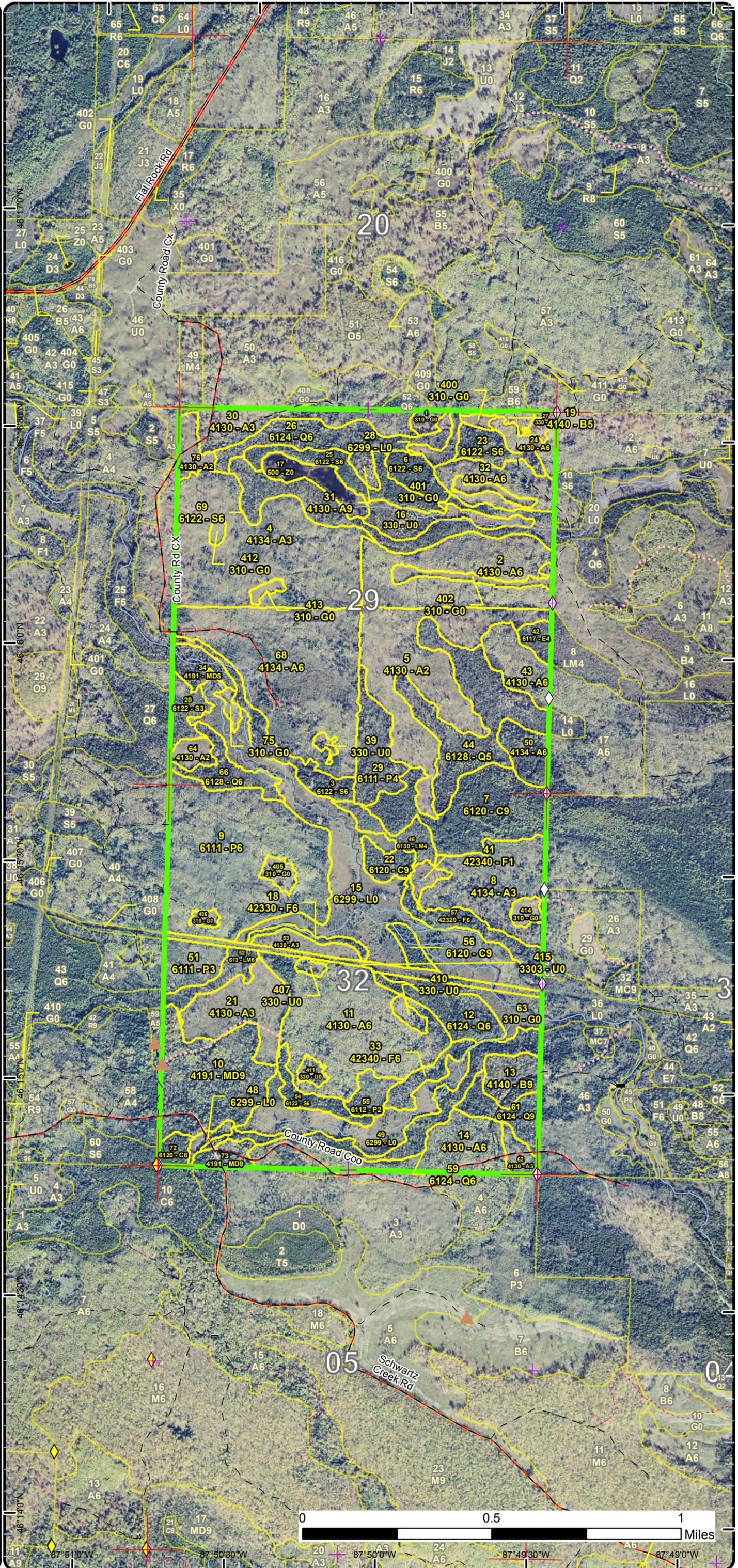


# Stand Boundary Map

Compartment: 240  
 T45N, R28W, Sections. 29, 32  
 County: Marquette  
 Unit: Gwinn  
 Mgmt Area: Chain Lakes Moraine  
 YOE: 2017  
 Acres: 1288 GIS Calculated  
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 Map Phase: Pre-Review



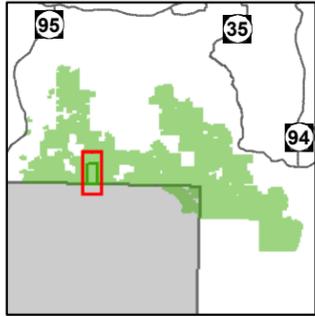
- ✚ Remonumented Section Corner
  - ◆ Survey Grade GPS Corners
  - ◇ Field Grade GPS Corners
  - Miris Corners
  - County Gravel Roads
  - - Poor Dirt Roads
  - - County Poor Dirt Roads
  - - - Trail (Non-Recreation)
  - - - Closed Roads
  - ▲ Berms
  - ⊠ Bridges
  - ⊡ Culverts
  - Rivers
  - ▭ Stand Boundaries
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- 413 - Aspen
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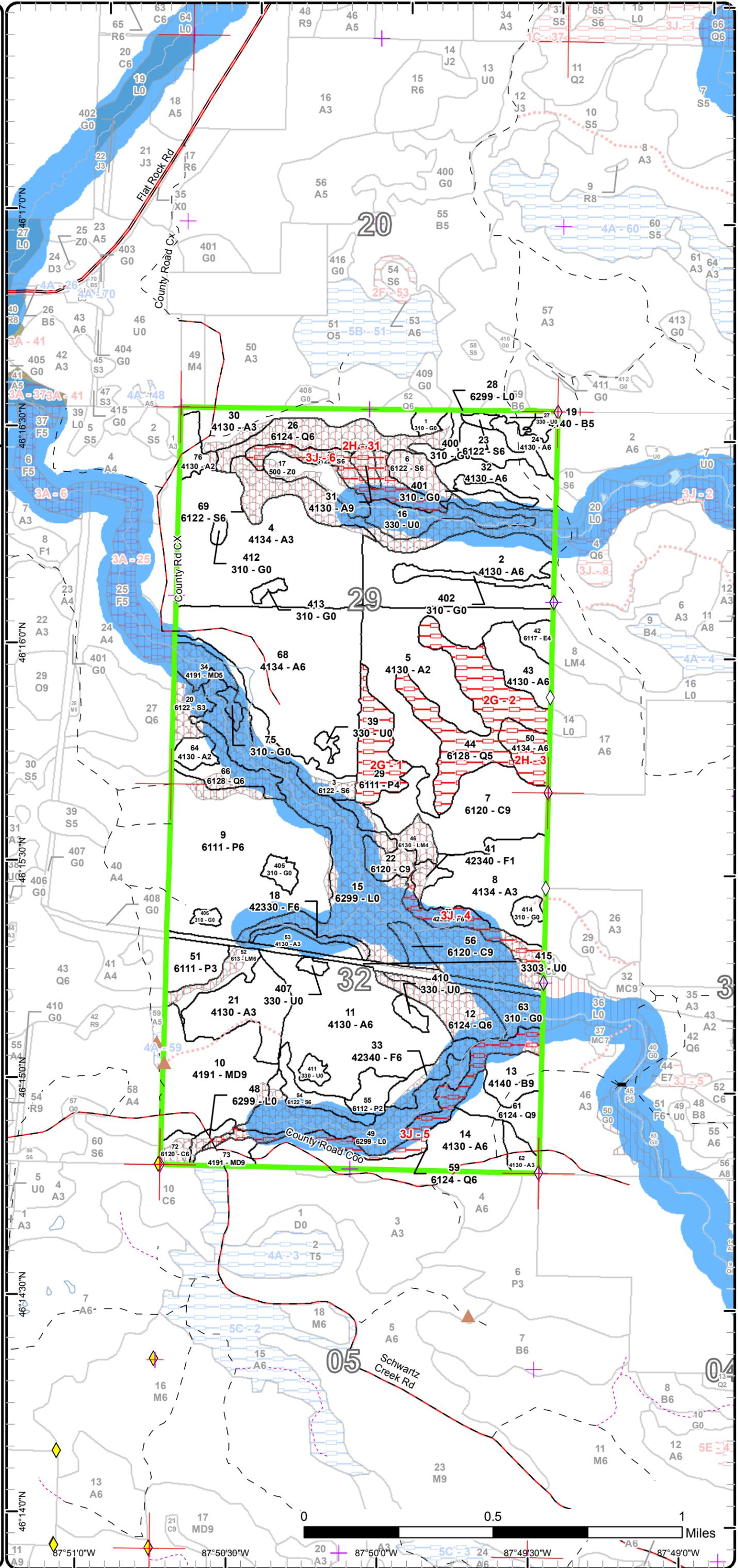
0 0.5 1 Miles

# Special Conservation Areas & Site Conditions Map

Compartment: 240  
 T45N, R28W, Sections. 29, 32  
 County: Marquette  
 Unit: Gwinn  
 Mgmt Area: Chain Lakes Moraine  
 YOE: 2017  
 Acres: 1288 GIS Calculated  
 Examiner: Jason Caron  
 Map Revised: 7/15/2015  
 Map Phase: Pre-Review



- ✚ Remonumented Section Corner
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Miris Corners
- County Gravel Roads
- - Poor Dirt Roads
- - County Poor Dirt Roads
- - Trail (Non-Recreation)
- ⋯ Closed Roads
- ▲ Berms
- ⊘ Bridges
- ⊘ Culverts
- Rivers
- Stand Boundaries
- Reviewable SCAs (dq)
- Recommendation
- ⊘ SCA Removal
- Site Condition
- ⊘ Unavailable
- 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)
- 3J: Water quality / BMPs (stream, river, or lake)
- Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



# Report 1 – Total Acres by Cover Type and Age Class

Gwinn Mgt. Unit  
Jason Caron : Examiner

Compartment 240 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	107	127	266	35	0	10	0	0	4	0	0	0	0	0	0	0	0	549
Cedar	0	0	0	0	0	0	0	0	4	0	0	0	7	4	43	0	0	0	58
Herbaceous Openland	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Low-Density Trees	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
Lowland Aspen/Balsam Poplar	0	0	0	108	0	0	0	0	0	18	0	0	0	0	0	0	0	0	126
Lowland Conifers	0	0	0	0	0	0	23	0	27	79	0	0	0	0	0	0	0	0	129
Lowland Deciduous	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5
Lowland Mixed Forest	0	0	0	0	0	0	0	9	8	0	0	0	0	0	0	0	0	0	17
Lowland Shrub	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	118
Lowland Spruce/Fir	0	0	0	0	8	0	0	33	33	25	0	0	0	0	0	0	0	0	99
Mixed Upland Deciduous	0	0	0	0	0	0	8	0	51	0	0	0	0	0	0	0	0	0	59
Paper Birch	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	14
Upland Spruce/Fir	0	0	4	0	12	0	0	0	0	0	12	0	0	0	0	0	0	0	28
Water	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
<b>Total</b>	<b>207</b>	<b>107</b>	<b>131</b>	<b>374</b>	<b>55</b>	<b>0</b>	<b>41</b>	<b>47</b>	<b>137</b>	<b>126</b>	<b>12</b>	<b>0</b>	<b>7</b>	<b>4</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1291</b>



## Report 2 – Treatment Summary

Gwinn Mgt. Unit

Year of Entry: 2017

Acres of Harvest

Compartment 240

Total Compartment Acres: 1,288

Commercial Harvest - 101  
 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
Lowland Conifers	24	0	0	0	0	0	0	0	0	24
Lowland Spruce/Fir	14	0	0	0	0	0	0	0	0	14
Mixed Upland Deciduous	49	0	0	0	0	0	0	0	0	49
Paper Birch	14	0	0	0	0	0	0	0	0	14
<b>Total</b>	<b>101</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	101	0	0	0	0	0	0	0	0	101
Next Step	0	3	3	0	0	3	101	0	0	110
<b>Total</b>	<b>101</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>101</b>	<b>0</b>	<b>0</b>	<b>212</b>



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
6	32240006-Cut	7.6	6122 - Black Spruce	Poletimber Well	87	Unspec ified	Harvest	Clearcut with Retention	6124 - Lowland Spruce-Fir	Even-Aged	Proposal

**Habitat Cut: No****Site Condition:**

Prescription Clearcut with reserves. Reserve patches of cedar within the stand. Clearcut cedar outside of the retention patches. As long as no dwarf mistletoe  
Specs: is present retain black spruce within the retention patches.

Next Step  
Treatments:

Acceptable Spruce, pine, cedar, fir, aspen and birch  
Regen:

Other Stream on West/SW side of the stand. Treatment was adjusted to account for this stream. More streams may exist within the stand. Old next  
Comment: step comments:

Proposed Start Date: 10/1 /2015

10	32240010-Cut	43.6	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	70	111- 140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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**Habitat Cut: No****Site Condition:**

Prescription Clearcut with reserves. Do not cut elm, cedar, white pine, yellow birch and red pine. Red line out wet areas and use them as retention pockets.  
Specs: Retention pockets should include large aspen.

Next Step  
Treatments:

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

Other Cut with stand 59 in adjacent compartment (C-241). Old next step comments:  
Comment:

Proposed Start Date: 10/1 /2015

12	32240012-Cut	12.6	6124 - Lowland Spruce-Fir	Poletimber Well	72	Unspec ified	Harvest	Clearcut with Retention	6124 - Lowland Spruce-Fir	Even-Aged	Proposal
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**Habitat Cut: No****Site Condition:**

Prescription Clearcut with reserves. Keep a patch of mature timber for retention purposes. Use low wet areas for retention to minimize soil disturbance. Make  
Specs: sure retention patch includes some large aspen.

Next Step  
Treatments:

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

Other Old next step comments:  
Comment:

Proposed Start Date: 10/1 /2015

13	32240013-Cut	11.1	4140 - Other Upland Deciduous	Sawtimber Well	74	Unspec ified	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal
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**Habitat Cut: No****Site Condition:**

Prescription Clearcut with reserves. Reserve a patch of mature timber for retention purposes. Make sure retention includes some larger aspen.  
Specs:

Next Step  
Treatments:

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

Other Old next step comments:  
Comment:

Proposed Start Date: 10/1 /2015



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
19	32240019-Cut	3.0	4140 - Other Upland Deciduous	Poletimber Medium	77	51-80	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Proposal

**Habitat Cut: No****Site Condition:**Prescription Clearcut with no reserves.Specs:Next Step Treatments: Pesticide, Skidder/Mechanical; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); SitePrep, TrenchingAcceptable Regen: Red PineOther Comment: Trench and plant to red pine. Herbicide if necessary. Old next step comments:Proposed Start Date: 10/1 /2015

23	32240023-Cut	6.8	6122 - Black Spruce	Poletimber Well	74	Unspecified	Harvest	Clearcut with Retention	612 - Lowland Coniferous Forest	Even-Aged	Proposal
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**Habitat Cut: No****Site Condition:**Prescription Clearcut with reserves. Spruce mistletoe present within the stand. For retention leave a patch of mature timber that does not show signs of spruce mistletoe. Retain all cedar within the stand.Next Step Treatments:Acceptable Regen: spruce, tamarack, fir, cedar, aspen.Other Comment: Old next step comments:Proposed Start Date: 10/1 /2015

61	32240061-Cut	11.0	6124 - Lowland Spruce-Fir	Sawtimber Well	82	Unspecified	Harvest	Clearcut with Retention	613 - Lowland Mixed Forest	Even-Aged	Proposal
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**Habitat Cut: No****Site Condition:**Prescription Clearcut with reserves. Do not cut pine. For retention red line out pockets of cedar within the stand, put an operational spec in the sale to allow some cutting of cedar outside of retention patches. I adjusted the treatment boundary in the SW corner to exclude a patch of cedar- 1.1 acres. Also reserve a pocket or two of black spruce for a seed source.Next Step Treatments:Acceptable Regen: pine, aspen, spruce, fir, cedar, maple and birch.Other Comment: Old next step comments:Proposed Start Date: 10/1 /2015

73	32240073-Cut	5.8	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	74	111-140	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal
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**Habitat Cut: No****Site Condition:**Prescription Clearcut with reserves. No cut on pine. Retention will include the buffer along the West side of the stand. Make sure retention includes some larger white birch and aspen.Next Step Treatments:Acceptable Regen: aspen, spruce, pine, maple, fir.Other Comment: Old next step comments:Proposed Start Date: 10/1 /2015

**Total Treatment Acreage Proposed: 101.4**

## Report 5 – Site Conditions

Gwinn Mgt. Unit  
Jason Caron : Examiner

Compartment: 240  
Year of Entry: 2017

### Dominant Site Conditions

	2G	2H	3J	5E
Aspen		14		
Cedar				
Herbaceous Openland				
Low-Density Trees				
Lowland Aspen/Balsam Poplar	18			
Lowland Conifers	44		23	
Lowland Deciduous				
Lowland Mixed Forest				8
Lowland Shrub				
Lowland Spruce/Fir			24	
Mixed Upland Deciduous				
Paper Birch				
Upland Spruce/Fir			12	
Water				
Total Forested Acres	62	14	59	8
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)	18	5D: Unproductive Forest Land	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Stand was excluded during last harvest due to wet soils. Also, very little merchantable timber within the stand. Mostly tag alder and bam regen.							
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	44	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Drainages exist. Very wet ground.							

## Report 5 – Site Conditions

Gwinn Mgt. Unit  
Jason Caron : Examiner

Compartment: 240  
Year of Entry: 2017

3	<b>Unavailable</b>	<b>2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)</b>	10	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Stand will need to be accessed from compartment 239, stand 17. Hold stand until adjacent stand becomes available.							
4	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	12	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Buffer along stream.							
5	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	23	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Buffer along stream.							
6	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	16	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Buffer along wetland and stream.							
7	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	8	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
8	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	8	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 5 – Site Conditions

Gwinn Mgt. Unit  
Jason Caron : Examiner

Compartment: 240  
Year of Entry: 2017

31	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	4	Unspecified	Unspecified	Unspecified	Unspecified
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Comments:



## 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
1	Other SCA		SCA Removal	4
<b>Comments</b> Riparian corridor, potential biodiversity area, - see Cmpt Header for comments.				
10	Other SCA		SCA Removal	27
<b>Comments</b> Potential biodiversity mgt. Area, - se Cmpt Header for comments.				
11	Other SCA		SCA Removal	5
<b>Comments</b> Potential biodiversity mgt area, - see Cmpt Header for comments.				
12	Other SCA		SCA Removal	78
<b>Comments</b> Stand is a riparian buffer or corridor along the Flat Rock Creek, and thus a potential biodiversity mgt. area. See comments on Cmpt Header for more detail.				
13	Other SCA		SCA Removal	2
<b>Comments</b> A natural grass opening located on the east edge of Flat Rock Creek. Potential biodiversity mgt area,- see Cmpt header for comments.				
14	Other SCA		SCA Removal	2
<b>Comments</b> Potential biodiversity area, - see Cmpt Header fo comments.				
15	Other SCA		SCA Removal	3
<b>Comments</b> Potential biodiversity mgt area, -see Cmpt Header for comments. Creek flowing through stand.				
16	Other SCA		SCA Removal	23
<b>Comments</b> Potential biodiversity management area providing a riparian buffer to easterly flowing creek. See cmpt header for additional discussion.				
17	Other SCA		SCA Removal	77
<b>Comments</b> Potential biodiversity management area providing a watershed buffer to the easterly flowing stream (locally know as "Scarffe's Creek). See cmpt header for further discussion of riparian values, enhancement, etc.				
18	Other SCA		SCA Removal	4
<b>Comments</b> Potential biodiversity management area. Offers enhancement to diversity of surrounding cover type, and is close enough to beaver pond (stand 17) to provide riparian buffer values, etc. See cmpt header for additional discussion. Natural succession will I				



## 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
2	Other SCA		SCA Removal	1
<b>Comments</b>				
This grass opening was a "pine days" archeological site where RR cars were loaded or unloaded. A tangled mess of old, rusty heavy wire used to secure logs on the cars is located on the north side of a large rock outcropping located here. Also a potentia				
3	Other SCA		SCA Removal	55
<b>Comments</b>				
Riparian buffer for small tributary creek to the Flat Rock Creek. Potential biodiversity mgt area, - see Cmpt Header for comments.				
4	Other SCA		SCA Removal	5
<b>Comments</b>				
Potential biodiversity mgt area, - see Cmpt Header for comments.				
5	Other SCA		SCA Removal	8
<b>Comments</b>				
Part of riparian corridor, - see Cmpt Header for comments. Cedar is prevalent in west end, otherwise, stand is mostly spruce.				
6	Other SCA		SCA Removal	24
<b>Comments</b>				
Part of riparian corridor along Flat Rock Creek and as such it is potential biodiversity mgt area, - see Cmpt Header for comments.				
7	Other SCA		SCA Removal	10
<b>Comments</b>				
Part of riparian stream corridor, biodiversity mgt area, - see Cmpt Header for comments.				
8	Other SCA		SCA Removal	8
<b>Comments</b>				
Potential biodiversity mgt area, - see Cmpt Header for comments.				
9	Other SCA		SCA Removal	11
<b>Comments</b>				
Part of riparian corridor, potential biodiversity mgt area, - see Cmpt Header for 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.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4130 - Aspen	Poletimber Well	50.5	26	Immature	Stand was cut in '89. TS# 008-87-01, Wildlife Division created a grass opening (stand #402) from the logging access road. Stand consists of pole sized aspen. Aspen quality varies with a few pockets showing signs of aspen decline while other areas of the stand look very healthy. Aspen is smaller diameter but consider an early harvest in the future if aspen decline becomes more prevalent throughout the stand.
3	6122 - Black Spruce	Poletimber Well	15.1	77	Unspecified	Riparian corridor along Flat Rock Creek. Many different age classes of conifers throughout. Rock outcrops throughout the stand. Budworm damage throughout the stand. Do not manage, maintain as a buffer along the stream.
4	4134 - Aspen, Spruce/Fir	Sapling Well	85.5	17	Immature	Stand was cut in the summer/fall of 1998. TS#102-97-01. Stand consists of good quality aspen. Clumps of pole sized white spruce and balsam are scattered throughout. Sale notes mentioned 1 stick spruce was left during the timber sale. A few scattered red oak exist in the NW corner of stand. 2 wildlife openings exist within the stand as well.
5	4130 - Aspen	Sapling Medium	62.1	3	Immature	Stand was harvested in 2012: TS#112-07-01. Stand has regenerated back well in most areas. The West and SW corner of stand have sparse areas but should fill in with spruce and fir. The mature paper birch that was left is in tough shape, 50% or more are dead.
6	6122 - Black Spruce	Poletimber Well	8.4	87	Unspecified	Stand of cedar and spruce. Black spruce is smaller diameter. Cedar is decent quality with a mix of poles and logs. The West and SW edge of this stand contains a stream. If harvested stream would need a buffer.
7	6120 - Lowland Cedar	Sawtimber Well	42.8	134	111-140	Lowland stand of mature cedar. Stand has pockets of black spruce and tamarack within it as well. Cedar looks to be decent quality. It's hard to discern through the snow but it appears there may be some flowages or seeps within the stand.
8	4134 - Aspen, Spruce/Fir	Sapling Well	36.8	17	Immature	Stand of decent quality aspen. Some areas are poorer quality than others. Pole sized balsam fir exist throughout the stand. A strip of low ground exists along the North edge of stand and regenerated back nicely with tamarack and black spruce. OI Notes: Stand was commercially cut in summer of 1998 by Minerick Logging, Inc., permit #008-97-01, "Flat Rock Bridge Sale". All cedar and 1 & 2 stick spruce were left. Also operations were restricted to shortwood skidding to protect advance conifer regeneration.
9	6111 - Lowland Balsam Poplar	Poletimber Well	89.9	29	Immature	Stand was cut in '86. TS# 004-79,. Sale filed in Cmpt 241. Stand consists of healthy lowland aspen and bam with balsam fir filling in underneath. Some wet areas exist that contain more tag alder, smaller diameter trees and a heavier component of balsam within the understory.
10	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	45.3	70	111-140	Poor quality stand of deciduous and conifer. Budworm has hit this stand hard. White spruce and balsam fir are in very tough shape. Aspen is old and poor quality. Wet pockets with tag alder exist within the understory.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
11	4130 - Aspen	Poletimber Well	67.9	27	Immature	Stand was cut in '88. TS #18-87-01. Three grass openings were created by Wildlife Division following completion of the sale (stands #407, 410, & 411.). Stand of aspen that appears to be a bit "off-site" with a little dieback present along with hypoxylon. Pockets of balsam fir exist within the understory and overstory. Continue to monitor the health of the stand during each inventory cycle to see if it should be harvested due to dieback.
12	6124 - Lowland Spruce-Fir	Poletimber Well	15.0	72	Unspecified	Stand of mixed species and various ages. Stand is low and wet. White spruce is declining due to budworm outbreak. Parts of the stand are poorly stocked. One island of high ground exists in the easternmost part of the stand.
13	4140 - Other Upland Deciduous	Sawtimber Well	11.1	74	Unspecified	Stand of poorer quality paper birch mixed with some aspen and fir. Budworm has hit the balsam and white spruce hard. Paper birch is declining.
14	4130 - Aspen	Poletimber Well	35.0	39	Unspecified	Stand was cut in 1974-77. Permit #17-74A. Stand consists of good quality aspen. A small patch of aspen decline exists along the compartment line on the south end but very minimal. Consider harvesting in the next YOE.
18	42330 - Upland Fir	Poletimber Well	3.5	30	Immature	A small stand that was left along the riparian edge. Heavy budworm damage. Many different aged balsam within the stand. Stand should be coded as long term retention.
19	4140 - Other Upland Deciduous	Poletimber Medium	3.0	77	51-80	Poor quality paper birch with scattered aspen mixed in. Some of the paper birch are dead and declining.
20	6122 - Black Spruce	Sapling Well	7.9	30	Immature	Very wet ground with a mix of both merchantable and non-merchantable timber. Stand consists of individual larger spruce with a mix of deciduous trees. Overall I decided to type the stand out younger due to only a couple patches of merchantable timber within it. I can discern a flowage within the center of the stand that runs to the East. A small patch of young aspen exists in the NW corner of the stand that was cut with the adjacent compartment 20+ years ago. Consider harvesting a small area of the West side of this stand if the adjacent stand get's prescribed in the future.
21	4130 - Aspen	Sapling Well	26.5	6	Immature	OPIC - FMD: Harvested in '09. TS #113-07. Stand consists of fully stocked and healthy looking aspen. I noticed a fair amount of dogwood within the understory.
22	6120 - Lowland Cedar	Sawtimber Well	6.8	119	Unspecified	Stand of very poor quality cedar in wet ground. Cedar is declining due to very wet ground. Most of the cedar is "cow-horn". Tops are dying out. A small rock knob exists in the SW corner of the stand.
23	6122 - Black Spruce	Poletimber Well	9.5	74	Unspecified	OI notes: An old east-west railroad grade used in the "pine days" is located in this stand. It connects with Kates Grade several miles to the east. Stand consists of mixed ages of spruce and tamarack. It appears there is a small flowage near the road within this stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4130 - Aspen	Poletimber Well	7.0	29	Immature	Stand was cut between '83-'86. TS# 10-83-01. Nice quality stand of aspen. Looks healthy.
25	6122 - Black Spruce	Poletimber Well	16.3	87	1-50	Lowland stand that surrounds what is locally known as Scarffe's Creek (according to OI notes). Easternmost part of stand contains drainages that head north to south. Do not cut due to stream corridor and BMP issues.
26	6124 - Lowland Spruce- Fir	Poletimber Well	22.5	55	Unspecified	Very wet stand with numerous seeps and flowages within it. Various ages of tamarack and black spruce due to low stocking and wet conditions. Heavy tag alder and balsam fir within the understory. Balm and paper birch are scattered throughout the stand. A small patch of merchantable timber exists in the SW corner of stand but is too small to delineate or treat. Budworm damage is extensive on the balsam and white spruce.
29	6111 - Lowland Balsam Poplar	Poletimber Poor	18.0	87	Unspecified	Stand was originally part of stand 5 but was omitted during t-sale prep. due to wet ground and low volume. Stand consists of lowland deciduous and conifer. Stand is very poor quality. Some areas consist of thick tag alder with young balsam fir and balm regeneration. Do not harvest the stand due to wet ground and low volume issues.
30	4130 - Aspen	Sapling Well	21.8	21	Immature	Harvested in 1993-94. TS# 4-90-01. Nice stand of big tooth and quaking aspen. Stand slopes down to wetland edge. Large red oak scattered throughout the stand. A few red oak sapling exist within the understory.
31	4130 - Aspen	Sawtimber Well	3.5	83	Unspecified	Small island of over mature aspen within a black spruce swamp. Stand contains a mix of species, all of which are in poorer condition due to age. Paper birch is falling apart. Budworm damage on the fir and white spruce.
32	4130 - Aspen	Poletimber Well	17.7	26	Immature	Stand of decent quality aspen with pockets of conifer throughout.  OI Notes: Stand was commercially cut in 1989 by Minerick Logging, Inc., permit #008-87-01, "Camp Hope Road Block". Note that a permanent corrugated galvanized metal 36 inch diameter by 20 foot long culvert was installed on Scarffe's Creek on the Camp Hope Road as a condition of this sale. Access into the sale was from the east off the Camp Hope Rd, and as a post sale treatment, Wildlife Division created a grass opening (stand #401) from the logging access road.
33	42340 - Upland Spruce/Fir	Poletimber Well	8.0	30	Immature	A buffer strip of timber that was left as a riparian corridor against the wetland edge. Stand consists of older aspen with pockets of younger balsam fir. Scattered white spruce and a patch of cedar exists to the north. Balsam and white spruce has been hit hard by budworm.
34	4191 - Mixed Upland Deciduous with Conifer	Poletimber Medium	7.6	55	81-110	OI notes say this stand is part of the riparian stream corridor of the Flat Rock Creek. I would concur with this statement. Stand consists of older timber that is falling apart. A thick understory of balsam will take over as the overstory continues to decline. The Flat Rock Creek flows through the middle of the stand. Large boulders in parts of the stand. A few large white and red pine along the stream edge. Do not harvest. Maintain as a buffer along stream edge.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
41	42340 - Upland Spruce/Fir	Sapling Poor	3.6	17	Immature	Stand was cut at the same time as the stand to the east. Stand is poorly stocked but is filling in with balsam fir and black spruce. The lowland part of the stand is fully stocked. Upland part is poorly stocked but should fill in within the next 10 years.
42	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Poor	4.6	60	1-50	Lowland stand of mixed species. Very wet ground. Most of the canopy species listed are in tough shape except for the cedar. Stand contains very low volume and is very wet, do not manage.
43	4130 - Aspen	Poletimber Well	14.6	27	Immature	Stand was cut in 1988. TS# 4-86-02. Stand of good quality aspen. Stand is in good condition.
44	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	43.7	87	Unspecified	Lowland stand with a mix of conifer and deciduous. Stand is very wet with thick pockets of tag alder throughout. Black spruce and tamarack are of small diameter. Balm and white spruce are in tough shape. Budworm damage on the spruce and balsam. Do not manage this stand.
46	6130 - Fir, Aspen, Maple	Poletimber Poor	9.0	60	Unspecified	Lowland stand with a high water table. Merchantable timber scattered throughout the stand but very few. Majority of the stand consists of regeneration that is 1-2" dbh. Bam and white spruce are dying out. Stand will eventually convert over to the understory species. Do not manage due to wet, wet ground.
50	4134 - Aspen, Spruce/Fir	Poletimber Well	10.4	50	Unspecified	OI notes say the stand was cut sometime in the '60's and then was hit hard by budworm in the '80's which may explain the heavy balsam fir within the understory. Stand consists of poorly stocked aspen with a very heavy component of small diameter balsam fir within the understory. Prescribe this stand for harvest when the adjacent stand to the East get's harvested in the adjacent compartment.
51	6111 - Lowland Balsam Poplar	Sapling Well	11.5	29	Immature	Was cut in '86. TS #004-79-01, Sale filed in Cmpt 241. Stand consists of low ground bam and aspen of decent quality. High stems per acre. Pockets of tag alder exist here and there.
52	613 - Lowland Mixed Forest	Poletimber Well	8.3	70	Unspecified	Riprarian corridor that was left as a buffer during the last timber sale harvest.
53	4130 - Aspen	Sapling Well	6.8	6	Immature	Cut in '09. TS# 113-07. Stand consists of good quality aspen regeneration. Fully stocked stand. A few scattered balsam fir exist.
54	6122 - Black Spruce	Poletimber Well	8.0	72	Unspecified	Buffer strip left along the stream edge after last harvest occurred. Stand of mature balsam and black spruce with scattered paper birch. Paper birch is declining. Heavy budworm damage on balsam.
55	6112 - Lowland Aspen	Sapling Medium	6.7	27	Immature	Stand was cut in '88, the same time as stand 11 to the north. This stand however is wet and the regeneration is smaller and more patchy. Stand is poorly stocked due to wet ground. Areas of tag alder and dogwood exist.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
56	6120 - Lowland Cedar	Sawtimber Well	4.4	123	Unspecified	Island of cedar of poorer quality. A fair amount of cow-horned cedar and short trees. Wet areas exist within the stand. Wet areas are heavy to tag alder. Flowages exist within the stand but are hard to discern through the snow.
57	42320 - Upland Spruce	Poletimber Well	12.3	91	Unspecified	Stand of older timber that was left as a buffer along the stream edge. Stand consists of black spruce mixed with other conifer and deciduous. Rocky areas exist within the stand. East part of the stand is low ground. Timber is in fairly good condition.
59	6124 - Lowland Spruce- Fir	Poletimber Well	22.6	86	Unspecified	Thin strip of conifer along the stream which as a buffer. Stand contains mixed ages on the spruce and balsam. Stand is in good condition overall. Do not manage. Keep as a buffer.
61	6124 - Lowland Spruce- Fir	Sawtimber Well	12.0	82	Unspecified	Stand of old timber that is declining due to age and budworm issues. A couple of pockets of cedar exist within the stand. A small patch of large white pine exist in the NE corner of stand.
62	4130 - Aspen	Sapling Well	5.2	17	Immature	Stand was cut in the summer of '98. TS# 008-97-01, "Flat Rock Bridge Sale". Stand consists of young healthy aspen.
64	4130 - Aspen	Sapling Medium	4.9	6	Immature	Stand was cut in 2009. TS #32-113-07-01. Stand is slowly regenerating back after the cut. The highest knob in the NE corner has poorer regeneration but should fill in over time. The remainder of the stand contains lower ground and is filling in with a mix of conifer and aspen. The aspen regeneration overall is poorer quality with short stubby trees.
66	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	11.8	75	Unspecified	Stand of black spruce and cedar with scattered quaking aspen and paper birch. Most of the stand is a buffer that was left along the Flat Rock Creek. Black spruce is decent quality.
68	4134 - Aspen, Spruce/Fir	Poletimber Well	86.1	25	Immature	Stand was cut in winter of '90-'91. TS# 009-87-01. Stand consists of good quality aspen. Pockets of low ground exist throughout the stand.
69	6122 - Black Spruce	Poletimber Well	32.7	60	1-50	OPIC - FMD: Located in the NWNE of Sec 29. OI Stand Year Origin was
72	6120 - Lowland Cedar	Poletimber Well	4.2	74	Unspecified	Stand of pole sized cedar with scattered tamarack and black spruce. A small stream flows through the central part of the stand. I considered prescribing the north 1/4 of this stand beings it is mostly black spruce but at only 1 acre in size I felt it was better served as a buffer against the stream within the stand.
73	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	6.1	74	111-140	Small stand of mixed deciduous and conifer. Stand is old and falling apart. Paper birch is in decline. Budworm damage is severe within the stand.
76	4130 - Aspen	Sapling Medium	6.8	3	Immature	Harvested in 2012: TS# 112-07-01. All the oak was left. Aspen is regenerating back nicely. Stand is fully stocked. A few scattered red oak and a couple of clumps of 3-4" balsam that was left after the cut.



Stand	Cover Type	Acres	Managed Site	General Comments:
1	310 - Herbaceous Openland	2.9	No	Open land area noticed on aerial photo.
15	6299 - Lowland Shrub (OI)	82.0	No	Stand is a riparian buffer or corridor along the Flat Rock Creek.
16	330 - Low-Density Trees	13.0	No	Lowland area with scattered trees.
17	500 - Water	10.9	No	
27	330 - Low-Density Trees	2.7	No	Low density trees. Rocky areas throughout.
28	6299 - Lowland Shrub (OI)	4.2	No	Lowland stand. Wet conditions with tag alder.
39	330 - Low-Density Trees	1.5	No	OPIC - FMD: Located in the SESW of Sec 29. OI Stand Year Origin was
48	6299 - Lowland Shrub (OI)	2.8	No	Riparian buffer for small tributary creek to the Flat Rock Creek.
49	6299 - Lowland Shrub (OI)	28.7	No	OPIC - FMD: Riparian buffer for small tributary creek to the Flat Rock Creek. Potential biodiversity mgt area, - see Cmpt Header for comments.
63	310 - Herbaceous Openland	12.8	No	A former grass opening that is filling in with deciduous and conifer species.
75	310 - Herbaceous Openland	2.2	No	OI Notes: This grass opening was a "pine days" archeological site where RR cars were loaded or unloaded. A tangled mess of old, rusty heavy wire used to secure logs on the cars is located on the north side of a large rock outcropping located here.
400	310 - Herbaceous Openland	1.6	No	OI Notes: FTP #W31-135. Was contract disked, dragged, seeded (rye/clover mix), & fertilized in Sept 1984.
401	310 - Herbaceous Openland	3.5	No	OI Notes: FTP #W31-221. Skid trail from commercial timber sale #8-87 was disked & seeded on 6/10/91, and east end was then bermed.
402	310 - Herbaceous Openland	6.7	No	OI Notes: FTP #W31-221. Logging road following a commercial harvest was widened by 1/2 chain on each side and landing at west end was expanded to 1 acre. After rock raking, these were then disked & seeded by Wildlife Division. Disking & seeding done on 6/10/1991. Then east end was bermed. In hindsight, now in 2005, this design may not be desirable due to the long, nearly 1/4 mile line of vision. Perhaps a winding or curved opening would have been better. We could still break up this long sight by planting patches of conifer at strategic spots along the course of the opening. A slight hill exists about midway which helps to shorten the sight somewhat.



Stand	Cover Type	Acres	Managed Site	General Comments:
405	310 - Herbaceous Openland	3.7	No	OI Notes: FTP #W31-175 Was disked & seeded to grasses & legumes in Sept of 1989 following completion of commercial timber sale. This was a landing site used during logging. Note: roads were also disked & seeded, then bermed to block public vehicle traffic.
406	310 - Herbaceous Openland	1.8	No	OI Notes: FTP #W31-175 Was disked & seeded to grasses & legumes in Sept of 1989 following completion of commercial timber sale. This was a landing site used during logging. Note: roads were also disked & seeded, then bermed to block public vehicle traffic.  I noticed a fair amount of raspberry sticking through the snow when walking through this stand.
407	330 - Low-Density Trees	1.7	No	Opening is filling in with red pine, balsam fir and black spruce. Stand is borderline between non-forested and forested.
410	330 - Low-Density Trees	2.9	No	OI Notes: FTP W31-182. Rock raked, disked, herbicided, & seeded in 1989 by Wildlife Division following a commercial timber sale cut in 1988. Trail roads were disked & seeded too, and then bermed.  Stand is filling in with aspen and white pine.
411	330 - Low-Density Trees	2.7	No	OI Notes: FTP W31-182. Rock raked, disked, & seeded in 1989 by Wildlife Division following a commercial timber sale cut in summer of 1990. Was herbicided in June of 1991. Trail roads were disked & seeded also, then bermed.
412	310 - Herbaceous Openland	1.5	No	OI Notes: Grass opening made from trails & landing of completed commercial timber sale cut in 1998. FTP #W31-411. Stand was stumped, disked, & seeded in Fall of 2000 by Wildlife Division.  Raspberry and grass within the opening.
413	310 - Herbaceous Openland	1.9	No	OI Notes: Grass opening made from trails & landing of completed commercial timber sale cut in 1998. FTP #W31-411. Stand was stumped, disked, & seeded in Fall of 2000 by Wildlife Division.
414	310 - Herbaceous Openland	3.3	No	OI Notes: FTP #W31-408. Was stumped, disked, & seeded in July of 2000 by Wildlife Division. Stand 8 was commercially cut prior to this in 1998.
415	3303 - Mixed Low Density Trees	11.1	No	OI Notes: This stand was the cleared ELF row from 1985 to 2005 and is now being de-commissioned for military use and will revert back to a natural state.