



# Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32051

Entry Year 2018

Acreage: 1,937

County Marquette

Management Area: Ralph Ground Moraine

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**Revision Date:** 2016-08-08

**Stand Examiner:** Kevin LaBumbard

**Legal Description:**

T44N, R26W, Sections 22, 23, 24

**Identified Planning Goals:**

This and several adjacent compartments constitute the southern Marquette County GEMS, with management activities prioritized by the GEMS Plan. Additional goals are to provide age-class distribution of Aspen by harvesting selected stands. This compartment will be combined with others in accordance with the GEMS plan.

**Soil and topography:**

topography Terrain is relatively level to lightly sloping with soils ranging from mucks in the bog areas to excessively drained sands in the northeast portion of the compartment. Major soil associations include the Sagola-Rubicon Complex, Emmet-Escanaba, Paquin-Finch sand, and Rubicon sand.

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

This compartment lies within a large block of state land and contains no private ownership.

**Unique Natural Features:**

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

There is some evidence of old logging camps in this compartment but no major concerns.

**Special Management Designations or Considerations:**

**Watershed and Fisheries Considerations:**

This compartment contains Chandler Brook and Bob's Creek which are tributaries to the Middle Branch of the Escanaba River and the main branch of the Escanaba River, respectively. Chandler Brook contains Brook Trout, Mottled Sculpin, Finescale Dace (SGCN), Longnose Dace, and other species. No Fisheries data for Bob's Creek are available. Both waterbodies are designated Type 1 trout streams less than 50' width. Priorities include keeping beaver densities low and ensuring that sediment from upstream sources does not reach the creek channel. A 300' buffer is recommended for Chandler Brook in riparian areas adjacent to stands which include Aspen. For all other riparian areas, including Bob's Creek, Best Management Practices should be followed to reduce erosion into waterbodies.

**Wildlife Habitat Considerations:**

Compartment 51 is found within the Ralph Ground Moraine Management Area; on Ground Moraines in northern Dickinson and southern Marquette Counties. The dominant Natural Communities are mesic northern forest, poor conifer swamps, and dry mesic northern forest. Major forest cover types include Aspen, Northern Hardwoods, and Mixed Lowland Conifers. Almost every cover type and associated species can be found within the management area including several deer wintering complexes. This management area provides some of the finest grouse and woodcock hunting in the Midwest and this is a wildlife management priority that will continue. Wildlife management issues in the management area are: early successional forest conditions (associated with alder, riparian zones, or forested wetlands); mast (hard and soft); habitat fragmentation; mature forest (upland deciduous, especially aspen and mixed forest with little understory); coarse woody debris; and deer wintering complexes.

The following have been identified as featured species for Ralph Ground Moraine Management Area: American woodcock, black bear, Northern goshawk, ruffed grouse, and whitetail deer.

**Mineral Resource and Development Concerns and/or Restrictions**

Sections 22 - 24, T44N-R26W, Marquette County. Surface sediments consist of medium-textured till. There is insufficient data to determine the glacial drift thickness. The Cambrian Trempealeau Formation subcrops below the glacial drift. The Trempealeau could be used for stone. Gravel pits are located in Section 27, and potential is good on the drumlins.

Abandoned iron mines are located six miles to the northeast. This area has not been previously leased. There is no economic oil and gas production in the UP.

**Vehicle Access:**

Vehicle access to the compartment is excellent via county road 438, Perrin Bros. road, and numerous 2-tracks.

**Survey Needs:**

**Recreational Facilities and Opportunities:**

Compartment 51 is influenced by and provides for several recreational activities. The original hunter walking trails established years ago have been renamed and expanded into a part of the southern Marquette County GEMS. It is also heavily hunted for whitetail deer. Perron Bros. road serves as a State designated snowmobile trail in the winter. Mushroom hunting is also popular in this compartment.

**Fire Protection:**

This compartment has a low risk for wildfire.

**Additional Compartment Information:**

The following reports from the Inventory are attached:

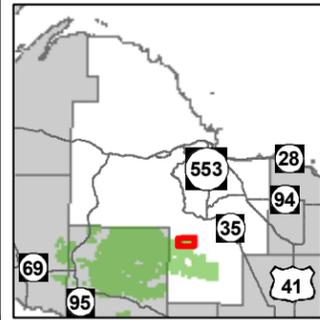
- Total Acres by Cover Type and Age Class
- Cover Type by Harvest Method
- Proposed Treatments – No Limiting Factors
- Proposed Treatments – With Limiting Factors
- Stand Details (Forested and Nonforested)
- Dedicated and Proposed Special Conservation Areas
- Site Condition Details

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

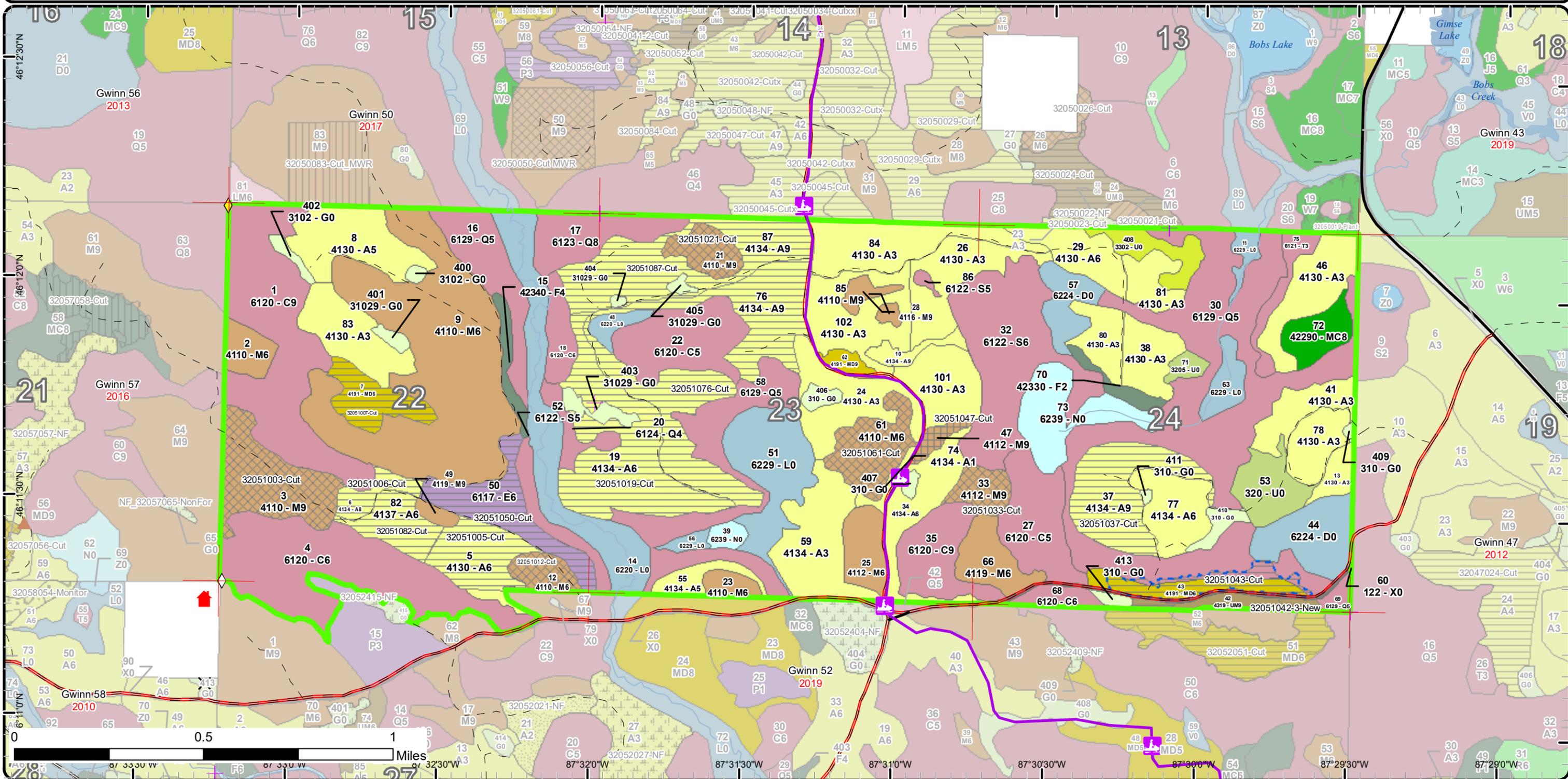
- Base feature information, stand boundaries, cover types, and numbers
- Proposed treatments
- Site condition boundaries
- Details on the road access system

# Cover Type & Treatments Map

Compartment: 51  
 T44N, R26W, Sec: 22, 23, 24  
 County: Marquette  
 Unit: Gwinn  
 Mgmt Area: Ralph Ground  
 Moraine  
 YOE: 2018  
 Acres: 1936.8 GIS Calculated  
 Examiner: Kevin LaBumbard  
 Map Revised: 2/8/2017  
 Map Phase: Post-Review

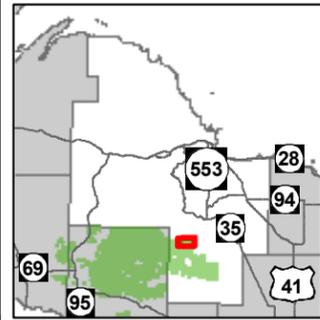


- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- X Gate
- ▲ Berms
- ▲ Cabin
- ♿ Snowmobile Trails
- Designated Snowmobile Trails
- Paved Roads
- County Gravel Roads
- Gravel Roads
- - Poor Dirt Roads
- Rivers
- Compartment Boundary
- Treatments with Site Conditions
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Seed Tree (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- Lakes

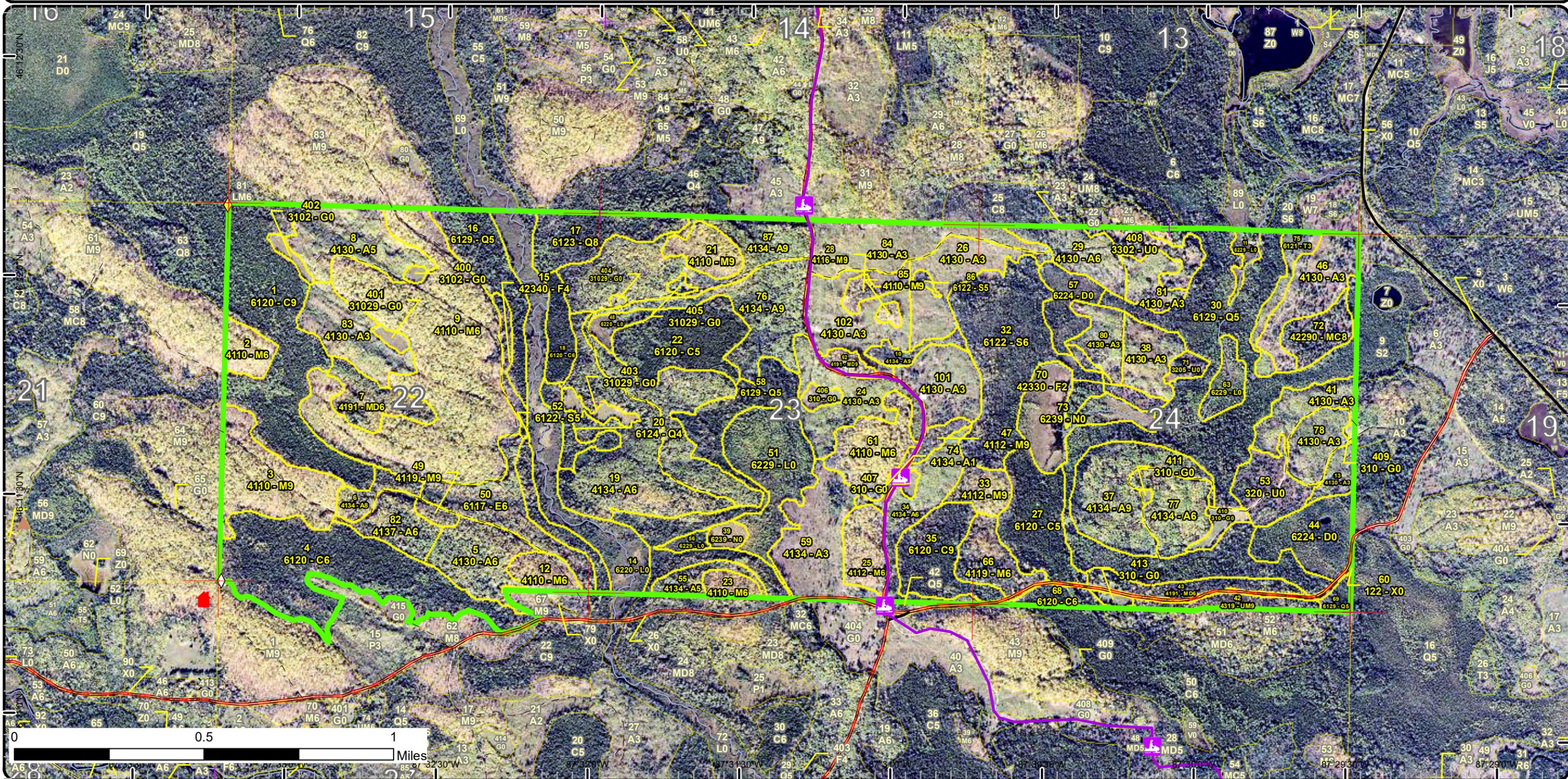


# Stand Boundary Map

Compartment: 51  
 T44N, R26W, Sec: 22, 23, 24  
 County: Marquette  
 Unit: Gwinn  
 Mgmt Area: Ralph Ground  
 Moraine  
 YOE: 2018  
 Acres: 1936.8 GIS Calculated  
 Examiner: Kevin LaBumbard  
 Map Revised: 2/8/2017  
 Map Phase: Post-Review

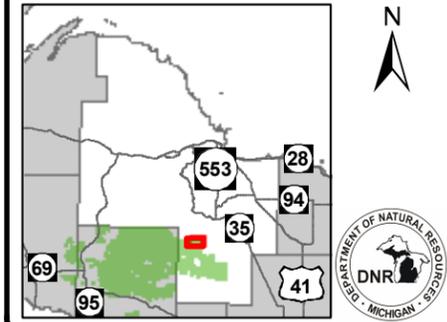


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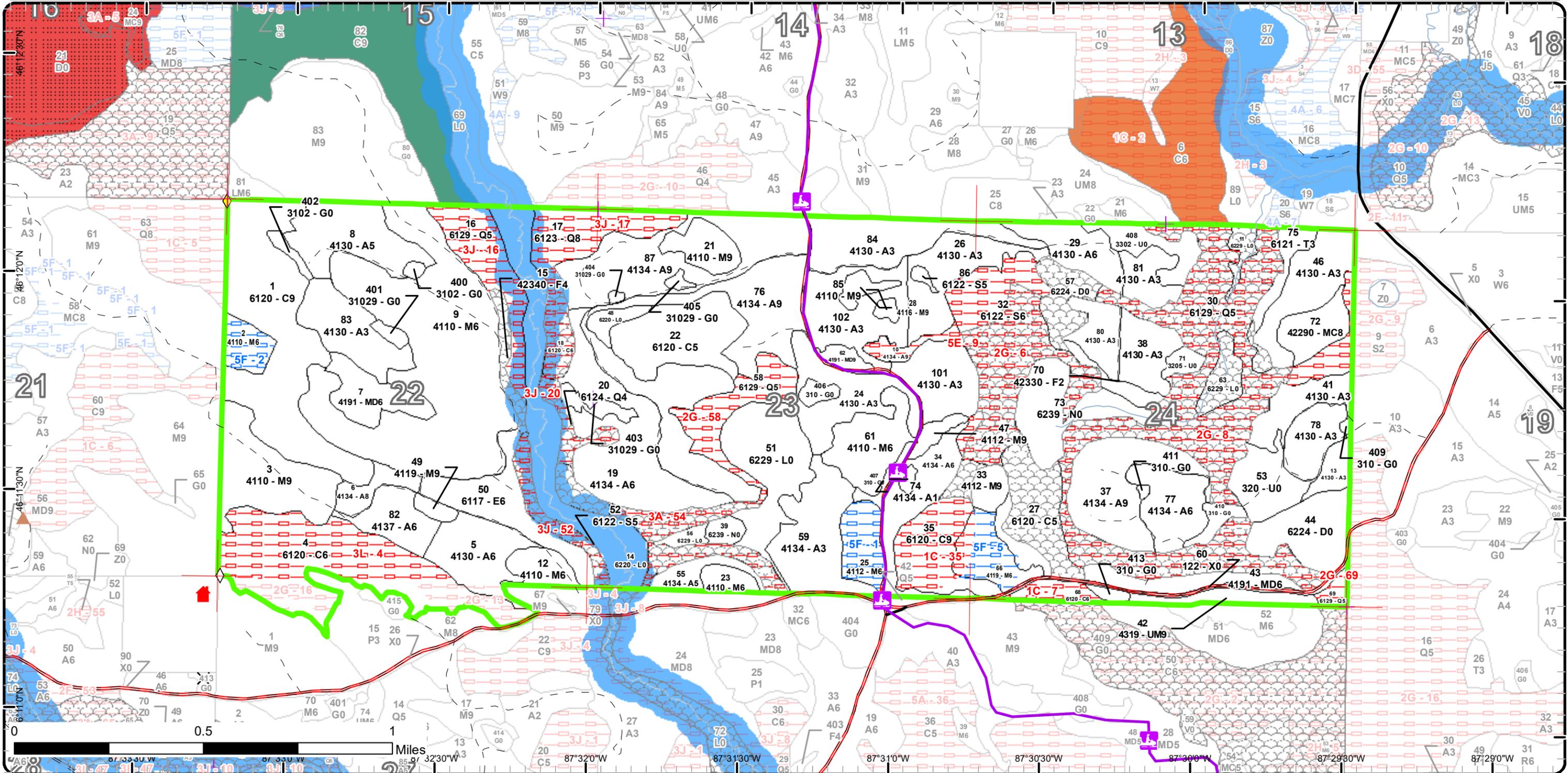


# Special Conservation Areas & Site Conditions Map

Compartment: 51  
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 County: Marquette  
 Unit: Gwinn  
 Mgmt Area: Ralph Ground  
 Moraine  
 YOE: 2018  
 Acres: 1936.8 GIS Calculated  
 Examiner: Kevin LaBumbard  
 Map Revised: 2/8/2017  
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- ⬇ Snowmobile Trails
- Designated Snowmobile Trails
- Paved Roads
- County Gravel Roads
- Gravel Roads
- - - Poor Dirt Roads
- Rivers
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 1C: Other dept or div proc/practices
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Potential old growth / biodiversity
- 3J: Water quality / BMPs (stream, river, or lake)
- 3L: Other wildlife concerns
- 5E: Long-Term Retention
- Stand Boundaries
- Ecological Reference Areas
- Cold Water Streams
- High Priority Trout Stream Buffer
- Habitat Corridor
- Other Habitat Area



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

Gwinn Mgt. Unit

Compartment 51

Year of Entry 2018

Kevin LaBumbard : 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	150	77	103	48	127	16	6	0	0	0	157	0	0	0	0	0	0	683
Cedar	0	0	0	0	0	0	0	0	0	0	81	66	0	0	0	11	115	0	273
Herbaceous Openland	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
Low-Density Trees	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	165	72	0	4	0	9	0	0	250
Lowland Deciduous	0	0	0	0	0	0	0	0	0	0	0	28	0	0	0	0	0	0	28
Lowland Shrub	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	79	0	0	0	0	0	0	79
Marsh	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	19	41
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	13
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	44	0	0	0	0	10	235	289
Tamarack	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Treed Bog	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
Upland Mixed Forest	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10
Upland Shrub	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Upland Spruce/Fir	0	0	7	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Urban	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
<b>Total</b>	<b>250</b>	<b>150</b>	<b>94</b>	<b>109</b>	<b>48</b>	<b>127</b>	<b>16</b>	<b>6</b>	<b>10</b>	<b>0</b>	<b>259</b>	<b>468</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>20</b>	<b>125</b>	<b>254</b>	<b>1939</b>



## Report 2 – Treatment Summary

Gwinn Mgt. Unit

Compartment 51

Year of Entry: 2018

Acres of Harvest

Total Compartment Acres: 1,937

Commercial Harvest - 414  
 Harvests with Site Condition - 0  
 Next Step Harvest - 15  
 Habitat Cut - 15

### Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	265	0	0	0	0	0	0	0	0	265
Lowland Deciduous	28	0	0	0	0	0	0	0	0	28
Mixed Upland Deciduous	17	0	0	0	0	0	0	0	0	17
Northern Hardwood	0	96	0	4	0	0	0	0	0	100
Upland Mixed Forest	4	0	0	0	0	0	0	0	0	4
<b>Total</b>	<b>314</b>	<b>96</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>414</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	414	0	0	0	0	0	0	0	0	414
Next Step	15	0	0	0	0	0	414	0	0	429
<b>Total</b>	<b>429</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>414</b>	<b>0</b>	<b>0</b>	<b>843</b>



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
3	32051003-Cut	37.2	4110 - Sugar Maple Association	Sawtimber Well	180	81-110	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. Release advanced regeneration where present, especially where overstory quality is low. Target residual basal area of 80. Promote yellow birch, cherry, basswood; promote and retain all cedar.

Next Step Monitoring, Natural Regen (Intermediate)

Acceptable Regen: Sugar maple, yellow birch, basswood, cherry, red maple

Other Comment: The seep on the southeast end of the stand, south of road may limit operability; consider excluding this area. Mostly upland and relatively dry stand, but access roads may be influenced by frequency of seeps in the area.

Retain all white cedar (3% of stand) – Deer; Treatment will promote Deer and Bear (State Game Fund) (Within GEM) I am not sure large gaps is the best treatment with northern goshawk as a featured species.

Proposed Start Date: 10/01/2016

5	32051005-Cut	23.1	4130 - Aspen	Poletimber Well	100	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription This stand is part of the South Marquette County Grouse Enhanced Management Site (SMC GEMS). Include the following management practices (and specs in proposal): Drumming log retention, and conifer component retention. Retain spruce > 26" DBH.

Next Step Monitoring, Natural Regen (Intermediate)

Acceptable Regen: Aspen, birch, patches of conifer regeneration for wildlife habitat.

Other Comment: Harvest in next 5 years to capture mortality of aspen and birch, SBW, and prevent conversion. GEM plan harvest date is 2027; harvest earlier to achieve aspen objective.

10-30% slope on north side of stand along road; operability should not be limited. Upland and dry stand, but access roads may be influenced by frequency of seeps in the area. Access road should be graded and maintained post-harvest.

GEM Stand Cut in 2027, because of current forest conditions this stand will be changed to a 2017 cut. (State Game Fund)

Proposed Start Date: 10/01/2016

6	32051006-Cut	8.6	4134 - Aspen, Spruce/Fir	Sawtimber Medium	100	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription This stand is part of the South Marquette County Grouse Enhanced Management Site (SMC GEMS). Include the following management practices (and specs in proposal): Drumming log retention, and conifer component retention.

Due to small stand size and lowland aspen objective, do not retain larger trees or patches.

Next Step Monitoring, Natural Regen (Intermediate)

Acceptable Regen: Balsam poplar, birch, aspen.

Other Comment: Portions of this stand are wet with multiple seeps and mucky soils. This ground will be more operable with a deep freeze of the muck layer. Harvest now to capture mortality of aspen, birch, SBW, and prevent conversion to northern hardwood.

GEM Stand Cut in 2017 because of current forest conditions this stand will be changed to a 2022 cut. (State Game Fund)

Proposed Start Date: 10/01/2021



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
7	32051007-Cut	17.2	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	100	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

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

Prescription This stand is part of the South Marquette County Grouse Enhanced Management Site (SMC GEMS). Include the following management practices (and specs in proposal): Drumming log retention, and conifer component retention.  
Specs: Retain large (>26"DBH) spruce and cedar.

Next Step Monitoring, Natural Regen (Intermediate)  
Treatments:

Acceptable Aspen, birch, balsam poplar, conifer patches for wildlife cover.  
Regen:

Other GEMS plan has a target harvest date of 2032, but harvest in the next 0-5 years to capture mortality, SBW, and prevent conversion to sugar maple.  
Comment:

Wet area with seeps. Hard freeze may be needed for winter harvest.

GEM Stand Cut in 2032 because of current forest conditions this stand will be changed to a 2017 cut. (State Game Fund)

Proposed Start Date: 10/01/2016

12	32051012-Cut	10.2	4110 - Sugar Maple Association	Poletimber Well	100	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Improve quality of stems with selection cut to 80 BA for average residual density. Promote yellow birch, basswood, cherry. Release advanced regeneration where present, especially where overstory quality is low.  
Specs:

Next Step Monitoring, Natural Regen (Intermediate)  
Treatments:

Acceptable Sugar maple, basswood, yellow birch, long-lived conifers (white pine, hemlock. Red maple may be acceptable if other hardwoods are not meeting stocking levels.  
Regen:

Other Upland and dry stand, but access roads may be influenced by frequency of seeps in the area.  
Comment:

Small stand; combine with adjacent aspen stands' harvest.

(State Game Fund) (Within GEM) I am not sure large gaps is the best treatment with northern goshawk as a featured species.

Proposed Start Date: 10/01/2016

19	32051019-Cut	59.0	4134 - Aspen, Spruce/Fir	Poletimber Well	41	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription The western and southern edges of the stand can be used as conifer retention area.  
Specs:

This stand is part of the South Marquette County Grouse Enhanced Management Site (SMC GEMS). Include the following management practices (and specs in proposal): Drumming log retention, and conifer component retention.

Next Step Monitoring, Natural Regen (Intermediate)  
Treatments:

Acceptable Aspen, conifer patches for wildlife cover.  
Regen:

Other Harvest in the next 5 years to capture aspen mortality, and get close to GEM harvest year target of 2022.  
Comment:

GEM Stand Cut in 2022 because of current forest conditions this stand will be changed to a 2017 cut. (State Game Fund) (access road to be grade reasonable smooth)

Proposed Start Date: 10/01/2016



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
21	32051021-Cut	14.8	4110 - Sugar Maple Association	Sawtimber Well	100	51-80	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary

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

Prescription Stand can use an improvement thinning. Favor yellow birch, basswood. Stocking can be patchy in this stand but average BA is about 110.  
Specs: Release advanced regeneration where present, especially where overstory quality is low. Combine this harvest with stand 87 harvest (surrounds this stand).

Next Step Monitoring, Natural Regen (Intermediate); Harvest, Single Tree Selection

Treatments:

Acceptable Sugar maple, red maple, yellow birch, basswood, long-lived conifers (hemlock, white pine)

Regen:

Other Ground in this area typically has lots of seeps, but this stand and 87 were not wet. (State Game Fund) (Within GEM) I am not sure large gaps is the best treatment with northern goshawk as a featured species.

Comment:

Proposed Start Date: 10/01/2016

33	32051033-Cut	10.1	4112 - Maple, Beech, Cherry Association	Sawtimber Well	180	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Favor yellow birch and other mid-tolerant species, basswood, and long-lived conifers. Selection harvest to improve quality of stems and release advanced regeneration. Release advanced regeneration where present, especially where overstory quality is low. Use 0.5-1 ac gaps and scarification for yellow birch seed trees. Target residual basal area of 80.

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Yellow birch, sugar maple, paper birch, basswood, hemlock, white pine, cherry, red maple.

Regen:

Other (State Game Fund) (Within GEM) I am not sure large gaps is the best treatment with northern goshawk as a featured species.

Comment:

Proposed Start Date: 10/01/2016

37	32051037-Cut	37.9	4134 - Aspen, Spruce/Fir	Sawtimber Well	44	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription This stand is part of the South Marquette County Grouse Enhanced Management Site (SMC GEMS). Include the following management practices (and specs in proposal): Drumming log retention, and conifer component retention. Retain large (>26" DBH) spruce for wildlife.

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Aspen, balsam poplar, birch, conifer patches for wildlife cover

Regen:OtherComment:

Proposed Start Date: 10/01/2016

42	32051042-3-New	4.0	4319 - Mixed Upland Forest	Sawtimber Well	79	111-140	Harvest	Clearcut	411 - Northern Hardwood	Two-Aged	Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Remove all spruce and fir greater than 3" dbh as well as all maple and any white birch.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, maple, birch, spruce, fir.

Regen:

Other SBW Salvage

Comment:

Proposed Start Date: 01/14/2016

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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
47 32051047-Cut	4.3	4112 - Maple, Beech, Cherry Association	Sawtimber Well	100	111-140	Harvest	Seed Tree	4190 - Mixed Upland Deciduous with Cedar	Even-Aged	Draft Field Boundary

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

**Prescription** Manage for yellow and paper birch. Some good yellow birch saplings are present; these should be released. Large healthy birch should be targeted as seed trees. Final prescription may be a combination of seed tree and group selection harvest. If feasible, scarify ground up to 50% mineral soil exposure for seed bed prep.

May have to be a winter harvest, since it is surrounded by GEMS stands. If so, try to scarify the growing season immediately after harvest.

**Next Step** Monitoring, Natural Regen (Intermediate)  
**Treatments:**

**Acceptable Regen:** Yellow birch, paper birch, white cedar, white pine, red oak, cherry, black ash.

**Other Comment:** A wet swale of cedar and black ash runs through this stand. Prescription can be limited to upland portion of stand.

Agree with treatment it could be a spring or summer harvest - pileated woodpecker (State Game Fund)

**Proposed Start Date:** 10/01/2016

50 32051050-Cut	27.9	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	100	81-110	Harvest	Clearcut with Retention	6112 - Lowland Aspen	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

**Prescription** This stand is part of the South Marquette County Grouse Enhanced Management Site (SMC GEMS). Include the following management practices (and specs in proposal): Drumming log retention, and conifer component retention.

**Next Step** Monitoring, Natural Regen (Intermediate)  
**Treatments:**

**Acceptable Regen:** Balsam poplar, birch, aspen. Lowland conifers for wildlife cover.

**Other Comment:** This stand is wet: a low swale runs through the middle, and there are seeps and mucky soils. Swale through middle of stand may be excluded if too wet. This ground will be more operable with a deep freeze of the muck layer.

GEM Stand Cut in 2017 because of current forest conditions this stand will be changed to a 2022 cut. (State Game Fund) Retain all white cedar (10% of stand) – Deer

Stand has good woodcock habitat potential.

**Proposed Start Date:** 10/01/2021

61 32051061-Cut	23.5	4110 - Sugar Maple Association	Poletimber Well	100	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. Focus on recruitment of another age class especially where stand is obviously two-aged. Aim to release advanced regeneration where present, especially where overstory quality is low. Target residual basal area of 80.

Favor yellow birch, basswood, cherry and long-lived conifers.

Protect patches of advanced regeneration.

Retain some overmature aspen stems for wildlife.

**Next Step** Monitoring, Natural Regen (Intermediate)  
**Treatments:**

**Acceptable Regen:** Yellow birch, basswood, sugar maple, red maple, long-lived conifers (white pine, hemlock)

**Other Comment:** South-facing portion of stand has heavy browse on sugar maple. Leave large tops or conifer advanced regeneration over patches of sugar maple regen to discourage further browse.

(State Game Fund) (Within GEM) I am not sure large gaps is the best treatment with northern goshawk as a featured species.

**Proposed Start Date:** 10/01/2016



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
76	32051076-Cut	73.6	4134 - Aspen, Spruce/Fir	Sawtimber Well	100	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

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

Prescription Mature to overmature aspen, initial stages SBW. Harvest soon. This stand is part of the South Marquette County Grouse Enhanced Management Site (SMC GEMS). Include the following management practices (and specs in proposal): Drumming log retention, and conifer component retention. Retain spruce >26" DBH.

Next Step Monitoring, Natural Regen (Intermediate)

Acceptable Regen: Aspen, conifer patches for wildlife cover

Other Comment: Post-harvest work: Access road from northeast portion of stand across cedar, to central portion of stand should be graded and converted to hunter walking trail. GEM Stand Cut in 2017 because of current forest conditions this stand will be changed to a 2022 cut.

Proposed Start Date: 10/01/2021

82	32051082-Cut	16.2	4137 - Aspen, Birch	Poetimber Well	57	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Harvest soon to capture mortality, SBW, and prevent conversion to northern hardwood.

Specs: This stand is part of the South Marquette County Grouse Enhanced Management Site (SMC GEMS). Include the following management practices (and specs in proposal): Drumming log retention, and conifer component retention.

Next Step Monitoring, Natural Regen (Intermediate)

Acceptable Regen: Aspen, birch, conifer patches for wildlife cover

Other Comment: GEM Stand Cut in 2022 because of current forest conditions this stand will be changed to a 2017 cut. (State Game Fund)

Proposed Start Date: 10/01/2016

87	32051087-Cut	46.3	4134 - Aspen, Spruce/Fir	Sawtimber Well	100	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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**Habitat Cut: No****Site Condition:**

Prescription Overmature aspen, spruce, and fir is falling out of stand. SBW, initial stages. Harvest soon. This stand is part of the South Marquette County Grouse Enhanced Management Site (SMC GEMS). Include the following management practices (and specs in proposal): Drumming log retention, and conifer component retention.

Next Step Monitoring, Natural Regen (Intermediate)

Acceptable Regen: Aspen, and conifers for cover

Other Comment: Harvest date not synchronized with GEMS plan, but received approval from Wildlife Biologist (B. Roell) to harvest ASAP to retain and promote aspen in stand. Post-harvest: grade skid trail going north to convert to hunter walking trail. GEM Stand Cut in 2027 because of current forest conditions this stand will be changed to a 2017 cut. (State Game Fund)

Proposed Start Date: 10/01/2016

**Total Treatment Acreage Proposed: 413.9**

## Report 4 – Site Conditions

Gwinn Mgt. Unit

Kevin LaBumbard : Examiner

Compartment: 51

Year of Entry: 2018

### Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions							
		With Condition	Not Available		5F	1C	2G	3A	3J	3L	5E	
682	674	0	8	Aspen			2					6
273	159	1	113	Cedar	1	30	21		11	50		
26	26	0	0	Herbaceous Openland								
13	13	0	0	Low-Density Trees								
249	0	0	249	Lowland Conifers			166	24	59			
28	28	0	0	Lowland Deciduous								
111	111	0	0	Lowland Shrub								
79	1	0	78	Lowland Spruce/Fir			67		11			
32	32	0	0	Marsh								
41	36	0	5	Mixed Upland Deciduous			5					
13	13	0	0	Natural Mixed Pines								
289	250	36	4	Northern Hardwood	36	4						
10	10	0	0	Tamarack								
39	39	0	0	Treed Bog								
10	10	0	0	Upland Mixed Forest								
22	22	0	0	Upland Shrub								
13	13	0	0	Upland Spruce/Fir								
6	6	0	0	Urban								
1,936	1,443	37	456	Total Forested Acres	37	34	261	24	82	50	6	
	75%	2%	24%	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	Available	5F: Evaluated for Forest Health Considerations	15	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 4 – Site Conditions

Gwinn Mgt. Unit

Kevin LaBumbard : Examiner

Compartment: 51

Year of Entry: 2018

2	Available	5F: Evaluated for Forest Health Considerations	10	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
4	Unavailable	3L: Other wildlife concerns	50	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Deer yard and general wildlife winter habitat.							
5	Available	5F: Evaluated for Forest Health Considerations	12	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	67	3J: Water quality / BMPs (stream, river, or lake)	3I: Historical / archeological (add locked comments)	Unspecified	Unspecified
<b>Comments:</b> Possible old logging camp noted on higher island knob, in OPIC inventory. Not observed on the ground during last inventory cycle.							
7	Unavailable	1C: Other dept or div proc/practices	7	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	143	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 4 – Site Conditions

Gwinn Mgt. Unit

Kevin LaBumbard : Examiner

Compartment: 51

Year of Entry: 2018

9	Unavailable	5E: Long-Term Retention	6	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Stand is low swale, surrounded by trees, retained from previous harvests.							
16	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	27	2G: Too wet (sensitive soils, does not include access issues)	1C: Other dept or div proc/practices	Unspecified	Unspecified
<b>Comments:</b>							
17	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	24	2G: Too wet (sensitive soils, does not include access issues)	1C: Other dept or div proc/practices	Unspecified	Unspecified
<b>Comments:</b>							
20	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	20	2G: Too wet (sensitive soils, does not include access issues)	1C: Other dept or div proc/practices	Unspecified	Unspecified
<b>Comments:</b>							
35	Unavailable	1C: Other dept or div proc/practices	27	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
52	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	11	2G: Too wet (sensitive soils, does not include access issues)	1C: Other dept or div proc/practices	Unspecified	Unspecified
<b>Comments:</b>							

## Report 4 – Site Conditions

Gwinn Mgt. Unit

Kevin LaBumbard : Examiner

Compartment: 51

Year of Entry: 2018

54	Unavailable	3A: Potential old growth / biodiversity	24	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
58	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	24	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
69	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

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
<b>Comments</b>				



## 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 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	Gwinn Mgt. Unit		Report 7 – Forested Stands			Compartment: 51 Year of Entry: 2018
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6120 - Lowland Cedar	Sawtimber Well	80.8	98	51-80	OPIC - FMD: Nice cedar stand.
2	4110 - Sugar Maple Association	Poletimber Well	9.6	100	81-110	OPIC - FMD: Part of a 1996 sale, permit # 25-96-01. Sale was completed 01/1999. Understory contains a significant amount of raspberry and elderberry. Heavy moose browse on the elderberry. Manage with stand 61 of compartment 57.
3	4110 - Sugar Maple Association	Sawtimber Well	37.2	180	81-110	OPIC - FMD: Cut under permit # 25-96-01. Like stand 2, the understory contains a significant amount of raspberry and elderberry. Heavy moose browse on the elderberry. There are occasional pockets of 6-10' tall sugar maple regeneration in "old gaps".  5/25/16 Field Notes: Moderate quality sugar maple sawlogs over poles. Good sapling regeneration, especially south of road. Some XL Log sugar maples >22" dbh. Occasional dense ironwood patches. Low spot/seeep south of road.
4	6120 - Lowland Cedar	Poletimber Well	80.8	165	111-140	OPIC - FMD: Dense cedar.5/25/16: Mostly cedar pole stand. Low and wet, muck soils.
5	4130 - Aspen	Poletimber Well	25.4	100	111-140	OPIC - FMD: Aspen stand growing on a small ridge. Stand is healthy, with scattered white spruce and white birch.5/26/2016 Field Notes: Overmature aspen, paper birch, and white spruce declining and stand is converting to northern hardwood type. SBW initial stages. 10-30% slope on the north end of this stand along road.
6	4134 - Aspen, Spruce/Fir	Sawtimber Medium	8.6	100	51-80	OPIC - FMD: A wet stand of white birch, tamarack, aspen and fir over tag alder, willow, and soft maple whips.  5/25/16 Field Notes: Overmature aspen and paper birch falling out of stand. SBW initial stages. Portions of low ground/seeeps. Good sugar maple sapling/sdlg regeneration.
7	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	17.2	100	81-110	OPIC - FMD: This is a narrow 2-3 chain wide stand of aspen, spruce/fir and mixed hardwoods. Regeneration is mostly hard maple, with a significant portion of it quite advanced with 1-2" diameters and 10'-20' in height. The aspen is very large but most of it is down due to windthrow.  5/26/16 Field notes: Abundant sugar maple regeneration under poor quality, wolfy maple trees. Overmature aspen, birch, and white spruce. Low, wetter patches (seeeps).
8	4130 - Aspen	Poletimber Medium	30.0	38	81-110	2015 - W32698 - installed gate, limed, mowed. It was decided only to plant a portion of the trail to clover. 2014 - W32698 - planted 25 red baron apple trees, 25 nannyberry, 25 highbush cranberry, 4 mountain ash, and 7 seedling apple trees. Hunter walking trail was herbicided and disked.  OPIC - FMD: Cut under permit # 23-88-1. Aspen is 1-3" dbh, 15-20' tall. 2015-Contains narrow drainage.  5/26/16 Field notes: Aspen coming into pole class. Moderate-good stocking. Roads coming into this stand from northern hardwood stand to southeast are soft and wet. Have some gravel, need more. Roads in rough shape due to seeeps, shallow bedrock. Winter ground.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
9	4110 - Sugar Maple Association	Poletimber Well	135.2	180	81-110	OPIC - FMD: FDF cut under permit #9-98-01 in 2001 ORO logging. Excellent elderberry regeneration on the eastern slopes.  5/27/16 Field Notes: Typical northern hardwood stand with small aspen component on southern edge of stand. Good sugar maple sapling regeneration throughout, ironwood in patches. Larger skid trails/old roads going northwest up the slope are low, wet, and lots of evidence of past erosion. Gravel on these trails, but not enough; ground is soggy with seeps. Winter ground.
10	4134 - Aspen, Spruce/Fir	Sawtimber Well	5.8	66	81-110	2015 - Planted hunter walking trail to clover. Planted 9 dolgo crabapples. 2014 - installe gate, planted 50 crabapples, 5 apple trees, 10 nannyberry, 5 red oak, 4 mountain ash. Mowed hunter walking trail. 2016-Above comments relate to stands 102, 263, 103, 84. This stand was a part of the retention for the original sale, and consisits of a small swale with surrounding trees.
12	4110 - Sugar Maple Association	Poletimber Well	10.2	100	81-110	OPIC - FMD: Stand was select cut with stand 81 of Cmpt. 52 under permit # 011-98-01. Some elderberry in the understory.  5/26/2016 Field notes: Abundant, good sugar maple regeneration as seedlings and patches of saplings. Medium quality logs and poles. N-NE facing, 10-25% slope.
13	4130 - Aspen	Sapling Well	6.9	24	Immature	
15	42340 - Upland Spruce/Fir	Poletimber Poor	6.7	17	1-50	OPIC - FMD: SCA- Stand was partially cut in 2001 by ORO logging permit #9-98-01. Fir seedlings are abundant. Include as biodiversity maintenance area to protect the riparian values along Chandler Brook.  5/26/16 Field: SBW present, initial stages. Parts of stand sugar maple-dominated.
16	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	26.6	92	81-110	OPIC - FMD: SCA-Retain as biodiversity maintainance area to protect the riparian zone along Chandler Brook.  5/26/2016 Field notes: Lowland. Poor quality timber, high quality habitat and stream buffer.
17	6123 - Lowland Fir	Sawtimber Medium	24.1	100	51-80	OPIC - FMD: SCA-Retain as biodiversity maintainance area to provide riparian corridor along Chandler Brook.
18	6120 - Lowland Cedar	Poletimber Well	11.3	147	141-170	OPIC - FMD: SCA-Nice cedar stand. Retain as biodiversity maintainance corrridor along Chandler Brook.
19	4134 - Aspen, Spruce/Fir	Poletimber Well	59.0	41	111-140	OPIC - FMD: Nice 2-3 stick aspen with fir and spruce. Eastern edge of this stand abuts the retention portion of stand 28 which is not to be harvest with stand 19 in the future.
20	6124 - Lowland Spruce-Fir	Poletimber Poor	8.6	147	1-50	OPIC - FMD: SCA-Small stand of cedar and mixed hardwoods. Retain as biodiversity maintainance corridor along Chandler Brook. Mixed hardwoods are a blend of Balm, white birch and soft maple.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4110 - Sugar Maple Association	Sawtimber Well	12.1	100	51-80	OPIC - FMD: Thinned 2002 by C.J. logging permit #8-98-01.  Moderate quality sugar maple, basswood. BA can be patchy but average 110.: 130, 50,100. Ready for improvement selection cut if harvest nearby.
22	6120 - Lowland Cedar	Poletimber Medium	34.7	105	1-50	OPIC - FMD: Very wet, somewhat sparse cedar stand.
23	4110 - Sugar Maple Association	Poletimber Well	6.0	100	81-110	OPIC - FMD: Good quality hardwoods growing on ridge which falls away to the north down to a Q stand. High site quality. There is a fair amount of large woody debris on the ground from a windthrow event. Scattered throughout the stand are large 20"+ dbh sugar maple with large yellow birch along the north edge. All yellow birch in this stand will be retained along with most of the larger sugar maple. Cut adjacent stand from compartment 52 at the same time. 2012-Stand treated by C.J Logging under contract #003-08-01 fall and winter of 2011-2012. 2016-lots of sugar maple seedlings 1-2' tall especially on the east side.
24	4130 - Aspen	Sapling Well	27.9	18	Immature	OPIC - FMD: Cut under permit 12-98-01 in 1999. Good aspen regeneration.  2016 inventory: aspen saplings transitioning to pole size.
25	4112 - Maple, Beech, Cherry Association	Poletimber Well	14.8	100	81-110	OPIC - FMD: Poor quality hardwood, lots of clumps, twins and triples. The stand is quite variable, the aspen component runs throughout the stand with average dbh over 12". There are pockets of fir poles and much of the hardwood is 2 aged with big remnant hardwoods over smaller poles. Retain the fir pockets. Harvest will be scheduled for the summer months. 2011-Cut by Jim Carey Logging under contract # 002-08-01.  2016 inventory: moderate quality hardwood. Maple regen<3', browsed heavily. Heavy Rubus spp. on north end, patchy fir saplings throughout.
26	4130 - Aspen	Sapling Well	25.8	6	Immature	2015 - Planted hunter walking trail to clover. Planted 9 dolgo crabapples. 2014 - installe gate, planted 50 crabapples, 5 apple trees, 10 nannyberry, 5 red oak, 4 mountain ash. Mowed hunter walking trail. OPIC - FMD: High volume high quality aspen stand. East part of stand is almost pure aspen, west portion contains the mix of the other species. This part also contains pockets of fairly good maple regeneration. Due to the proximity to another final harvest in the adjacent compartment, harvesting plans will be modified to satisfy "green up" requirements for certification. 2008- That portion of the stand west of PBR is not included in the sale and will serve as retention. "Green up" requirements for certification (see above comments) have been satisfied with the rapid growth of aspen regeneration on the adjacent sale so the sale does not need to be modified along the northern boundary. 2011-Treated by Minerick under contract # 01-08-01. Fully regenerated to aspen.  2016 inventory: fully stocked 7' aspen stand.
27	6120 - Lowland Cedar	Poletimber Medium	31.6	100	111-140	Lowland cedar stand with transition zone of fir on western edge, wet.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
28	4116 - Mixed N. Hardwood - Aspen	Sawtimber Well	4.6	100	81-110	Small pocket of cedar with hardwood upland. Retain pocket for unique habitat.
29	4130 - Aspen	Poletimber Well	17.7	35	51-80	OPIC - FMD: Cut under permit # 19-88-1. Aspen is 2-4" dbh, 20-30' tall. 5/26/2016 Field notes: Becoming a pole stand. Low ground and seeps, especially along access trail. Old trail has big ruts. Winter ground.
30	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	138.5	98	51-80	OPIC - FMD: SCA-This is a new SCA consisting of a low, wet, conifer swamp with small flowage. Retain as biodiversity maintenance zone to protect riparian values along the small stream.
31	4191 - Mixed Upland Deciduous with Conifer	Sapling Poor	17.2	1	Immature	
32	6122 - Black Spruce	Poletimber Well	66.7	100	81-110	
33	4112 - Maple, Beech, Cherry Association	Sawtimber Well	10.1	180	111-140	OPIC - FMD: This is a two-aged stand with large remnant white pine, yellow birch, sugar maple, and hemlock over mixed hardwood poles-mainly soft maple and sugar maple. Regeneration carpets the forest floor at a height of 12"-18" but does not get any taller.
34	4134 - Aspen, Spruce/Fir	Poletimber Well	23.8	18	Immature	OPIC - FMD: Cut under permit 12-98-01 in 1999. Good aspen regeneration 15-20' tall. 2016 inventory: Aspen stand transitioning to pole size.
35	6120 - Lowland Cedar	Sawtimber Well	26.6	177	81-110	OPIC - FMD: OI Stand Year Origin was 1840
37	4134 - Aspen, Spruce/Fir	Sawtimber Well	37.9	44	51-80	Planted numerous shrubs, planted to rye in 2013, planted to clover in 2014. Installed gates. Annual mowing, fertilize, and frost seeding. CR438 Hunter Walking Trail. OPIC - FMD: Nice aspen with BA running from 70-130, average of 80. 3-4 sticks tall. Stand shares a hunter walking trail with stand 41 which is need of maintainance. 2016-stand ready for harvest. Aspen and fir quite large.
38	4130 - Aspen	Sapling Well	16.2	26	Immature	OPIC - FMD: Cut under permit # 19-88-1. Aspen is 2-4" dbh, 20-30' tall.  5/27/16 Field notes: Low seeps on north side. Road is low, full of tag alder and standing water. Access road to 29, 81, 80, 38 has one creek/tributary crossing to the west (stand 29), and one to south of this stand (stand 30). Winter ground.
41	4130 - Aspen	Sapling Well	16.0	24	Immature	Planted numerous shrubs, planted to rye in 2013, planted to clover in 2014. Installed gates. Annual mowing, fertilize, and frost seeding. CR438 Hunter Walking Trail. OPIC - FMD: Cut under permit # 38-88-1, aspen has regenerated nicely and is 15-25' tall. Stand shares a hunter walker trail with stand 37 which is in need of maintainance.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	4319 - Mixed Upland Forest	Sawtimber Well	10.2	79	111-140	OPIC - FMD: Cut under permit # 012-99 in 2000 with stand 52 of Cmpt. 52. Aspen regenerating where harvested from the stand. Some hardwood regeneration. 2016-Stand cruised and ready for sale. #32-009-16-01
43	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	1.8	91	51-80	OPIC - FMD: Poor quality soft maple and white birch over balsam fir. The stand has just converted from an M5 stand to F6. 2016-Stand cruised and ready for sale..# 32-009--16-01 438 SBW.
46	4130 - Aspen	Sapling Well	25.3	15	1-50	OPIC - FMD: Former white birch, aspen, and red and white pine stand. Stand was treated with a seed tree cut in 2001 and 2002 by Usher under permit #007-98-01. 2016-There is a fair amount of white birch regen 5-15' tall especially on disturbed soil areas, but much of the stand has regenerated to quaking and bigtooth aspen.
47	4112 - Maple, Beech, Cherry Association	Sawtimber Well	4.3	100	111-140	OPIC - FMD: Stand is a mix of poor quality hardwoods, aspen, and a few spruce and fir. Northern border with stand 28 is very indistinct. 2016 inventory: wetter, poor quality red maple. White cedar and black ash swale down middle. Moderate quality yellow birch.
49	4119 - Mixed Northern Hardwoods	Sawtimber Well	3.1	100	51-80	OPIC - FMD: Small patch of hardwood growing along aspen ridge.  5/26/16 Field notes: somewhat wolfy sugar maple and overmature aspen. Good sugar maple regen. Average BA 80.
50	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	27.9	100	81-110	OPIC - FMD: Stand is quite variable, also contains cedar. Soils are saturated almost throughout the entire stand. Almost a P type. There is a strip of tag alder running through the center of the stand with some kind of flowage.  5/26/16 Field notes: Overmature aspen, paper birch, and white spruce are declining. SBW in the area. Good sugar maple regeneration: patches of seedlings and poles. Stand converting to northern hardwoods. Gentle slope (<10%) to creek. Seeps/very wet spots occur in spots.
52	6122 - Black Spruce	Poletimber Medium	11.1	100	51-80	OPIC - FMD: SCA-Retain as biodiversity maintenance corridor along Chandler Brook. Mixed conifers consist of fir, black spruce, tamarack.  5/26/16 Field Notes: Mostly lowland stream buffer. SBW initial stages observed in the area.
55	4134 - Aspen, Spruce/Fir	Poletimber Medium	8.5	41	141-170	OPIC - FMD: Slow growing aspen stand, much of it with wet feet. 2016-Decent aspen on the side slope, smaller at the bottom.
58	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	47.5	106	51-80	OPIC - FMD: OI Stand Year Origin was 1911



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
59	4134 - Aspen, Spruce/Fir	Sapling Well	36.1	6	Immature	<p>2014 &amp; 2015 - installed kiosk for grouse gem and improved turnaround parking area. SE corner of this stand.</p> <p>OPIC - FMD: Stand is composed of white birch, upland black spruce, fir, poor quality soft maple and a few aspen. A lot of fir is dead and down. Most of the regeneration is black spruce and fir. Remove overstory. The stand should regenerate primarily to spruce/fir, with a mix of aspen, red maple, and possibly white pine. Aspen and white pine are both acceptable regeneration alternatives. Harvesting will be scheduled for the summer months. 2011-Cut by Jim Carey Logging under contract # 002-08-01.</p> <p>2016 inventory: WP/conifer retention islands, moderate RM regen, and poor aspen regen on east (west-facing slope) side of stand. Good aspen regen in remainder (2/3 of total area) of stand.</p>
61	4110 - Sugar Maple Association	Poletimber Well	23.5	100	111-140	<p>OPIC - FMD: Cut under permit 12-98-01 in 1999. Stand is even-aged with very little regeneration, mostly ironwood. Dense raspberry regen. Some knee high pockets of sugar maple seedlings, but these are heavily browsed.</p> <p>2016 inventory: Richer site. Moderate quality sugar maple logs. South-facing slope has very little, &lt;3' browsed sugar maple regen. North-facing slope has almost continuous 6' tall, beautiful sugar maple regen.</p>
62	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	4.5	100	51-80	Small patch of aspen and hardwoods.
66	4119 - Mixed Northern Hardwoods	Poletimber Well	16.7	180	81-110	OPIC - FMD: Stand was cut hard last treatment period, regenerating very well to soft maple.
68	6120 - Lowland Cedar	Poletimber Well	7.4	153	141-170	OPIC - FMD: OI Stand Year Origin was 1864
69	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	3.8	125	51-80	OPIC - FMD: Low, wet, conifer swamp with small flowage.
70	42330 - Upland Fir	Sapling Medium	5.8	26	Immature	OPIC - FMD: Originally part of stand 38, this is a fringe of fir and white spruce that did not regenerate to aspen. Si from stand 38.
72	42290 - Natural Mixed Pine	Sawtimber Medium	13.4	98	81-110	OPIC - FMD: Former white birch, aspen, and red and white pine stand. Stand was treated with a seed tree cut in 2001 and 2002 by Usher under permit #007-98-01. There is a fair amount of white birch regen 6-12" tall especially on disturbed soil areas, but much of the stand has regenerated to quaking and bigtooth aspen. 2016-Heavier component of pine. Decent mix pine regen where soil was disturbed. White birch along the main dirt road. Nice stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
74	4134 - Aspen, Spruce/Fir	Sapling Poor	3.6	6	Immature	<p>2014 &amp; 2015 - installed kiosk for grouse gem and improved turnaround parking area. SE corner of this stand.</p> <p>OPIC - FMD: Stand is composed of white birch, upland black spruce, fir, poor quality soft maple and a few aspen. A lot of fir is dead and down. Most of the regeneration is black spruce and fir. Remove overstory. The stand should regenerate primarily to spruce/fir, with a mix of aspen, red maple, and possibly white pine. Aspen and white pine are both acceptable regeneration alternatives. Harvesting will be scheduled for the summer months. 2011-Cut by Jim Carey Logging under contract # 002-08-01.</p> <p>2016 inventory: same age as stand 34.</p>
75	6121 - Tamarack	Sapling Well	9.6	16	Immature	OPIC - FMD: Former S6 stand treated under permit # 007-98-01, it has regenerated to tamarack and black spruce.
76	4134 - Aspen, Spruce/Fir	Sawtimber Well	72.2	100	111-140	OPIC - FMD: Nice 2-3 stick aspen with fir and spruce. Eastern edge of this stand abuts the retention portion of stand 28 which is not to be harvest with stand 19 in the future.
77	4134 - Aspen, Spruce/Fir	Poletimber Well	21.4	44	51-80	<p>Planted numerous shrubs, planted to rye in 2013, planted to clover in 2014. Installed gates. Annual mowing, fertilize, and frost seeding. CR438 Hunter Walking Trail.</p> <p>OPIC - FMD: Nice aspen with BA running from 70-130, average of 80. 3-4 sticks tall. Stand shares a hunter walking trail with stand 77 which is need of maintainance. 2016-Scheduled for harvest under GEMS plan in 2022.</p>
78	4130 - Aspen	Sapling Well	14.9	24	Immature	<p>Planted numerous shrubs, planted to rye in 2013, planted to clover in 2014. Installed gates. Annual mowing, fertilize, and frost seeding. CR438 Hunter Walking Trail.</p> <p>OPIC - FMD: Cut under permit # 38-88-1, aspen has regenerated nicely and is 15-25' tall. Stand shares a hunter walker trail with stand 37 which is in need of maintainance.</p>
80	4130 - Aspen	Sapling Well	12.6	26	Immature	<p>OPIC - FMD: Cut under permit # 19-88-1. Aspen is 2-4" dbh, 20-30' tall.</p> <p>5/27/16 Field Notes: Becoming aspen pole stand. Higher ground than aspen stands to north. Road and creek crossing to north of the stand are low. Seeps common.</p>
81	4130 - Aspen	Sapling Well	11.4	26	Immature	<p>OPIC - FMD: Cut under permit # 19-88-1. Aspen is 2-4" dbh, 20-30' tall.</p> <p>5/27/16 Field notes: Becoming an aspen pole stand. Open areas, especially to the south, with low aspen stocking and open-growing fir, spruce. Road is low, full of tag alder and standing water. Winter ground. Access road has one creek/tributary crossing to the west (stand 29 w boundary), and one to south of this stand (stand 30). Each creek is 3' wide at bank-full width, running full now.</p>
82	4137 - Aspen, Birch	Poletimber Well	16.2	57	81-110	<p>OPIC - FMD: Aspen stand growing on a small ridge. Stand is healthy, with scattered white spruce and white birch.</p> <p>5/25/16 Field notes: Overmature aspen, balsam fir, white spruce, paper birch starting to decline. Good birch component, good sugar maple sapling regeneration in patches; converting to northern hardwood.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
83	4130 - Aspen	Sapling Well	24.7	28	Immature	<p>2015 - W32698 - installed gate, limed, mowed. It was decided only to plant a portion of the trail to clover.</p> <p>2014 - W32698 - planted 25 red baron apple trees, 25 nannyberry, 25 highbush cranberry, 4 mountain ash, and 7 seedling apple trees. Hunter walking trail was herbicided and disked.</p> <p>OPIC - FMD: Cut under permit # 23-88-1. Aspen is 1-3" dbh, 15-20' tall.</p>
84	4130 - Aspen	Sapling Well	31.9	8	Immature	<p>2015 - Planted hunter walking trail to clover. Planted 9 dolgo crabapples. 2014 - installed gate, planted 50 crabapples, 5 apple trees, 10 nannyberry, 5 red oak, 4 mountain ash. Mowed hunter walking trail. OPIC - FMD: High volume high quality aspen stand. East part of stand is almost pure aspen, west portion contains the mix of the other species. This part also contains pockets of fairly good maple regeneration. Due to the proximity to another final harvest in the adjacent compartment, harvesting plans will be modified to satisfy "green up" requirements for certification. 2008- That portion of the stand west of PBR is not included in the sale and will serve as retention. "Green up" requirements for certification (see above comments) have been satisfied with the rapid growth of aspen regeneration on the adjacent sale so the sale does not need to be modified along the northern boundary. 2011-Treated by Minerick under contract # 01-08-01. Fully regenerated to aspen.</p>
85	4110 - Sugar Maple Association	Sawtimber Well	2.0	100	81-110	Small island of hardwoods left as retention patch.
86	6122 - Black Spruce	Poletimber Medium	1.3	100	1-50	Low spot, retain for habitat
87	4134 - Aspen, Spruce/Fir	Sawtimber Well	50.1	100	81-110	<p>OPIC - FMD: Nice 2-3 stick aspen with fir and spruce. Eastern edge of this stand abuts the retention portion of stand 28 which is not to be harvest with stand 19 in the future.</p> <p>90-140 BA. Harvest now. Big patches of spruce fir. SBW. Overmature Fir, spruce, and aspen falling out of stand. Can bump harvest line north into stand 17, following aspen and spruce/fir well into stand 17.</p>
101	4130 - Aspen	Sapling Well	22.0	6	Immature	<p>2015 - Planted hunter walking trail to clover. Planted 9 dolgo crabapples.</p> <p>2014 - installed gate, planted 50 crabapples, 5 apple trees, 10 nannyberry, 5 red oak, 4 mountain ash. Mowed hunter walking trail.</p> <p>OPIC - FMD: High volume high quality aspen stand. East part of stand is almost pure aspen, west portion contains the mix of the other species. This part also contains pockets of fairly good maple regeneration. Due to the proximity to another final harvest in the adjacent compartment, harvesting plans will be modified to satisfy "green up" requirements for certification. 2008- That portion of the stand west of PBR is not included in the sale and will serve as retention. "Green up" requirements for certification (see above comments) have been satisfied with the rapid growth of aspen regeneration on the adjacent sale so the sale does not need to be modified along the northern boundary. 2011-Treated by Minerick under contract # 01-08-01. Fully regenerated to aspen.</p>



S t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
102	4130 - Aspen	Sapling Well	30.3	6	Immature	<p>2015 - Planted hunter walking trail to clover. Planted 9 dolgo crabapples.</p> <p>2014 - installe gate, planted 50 crabapples, 5 apple trees, 10 nannyberry, 5 red oak, 4 mountain ash. Mowed hunter walking trail.</p> <p>OPIC - FMD: High volume high quality aspen stand. East part of stand is almost pure aspen, west portion contains the mix of the other species. This part also contains pockets of fairly good maple regeneration. Due to the proximity to another final harvest in the adjacent compartment, harvesting plans will be modified to satisfy "green up" requirements for certification.</p> <p>2008- That portion of the stand west of PBR is not included in the sale and will serve as retention. "Green up" requirements for certification (see above comments) have been satisfied with the rapid growth of aspen regeneration on the adjacent sale so the sale does not need to be modified along the northern boundary. 2011-Treated by Minerick under contract # 01-08-01. Fully regenerated to aspen.</p> <p>2016 inventory: Super-canopy of white and yellow birch residual. Fully stocked aspen stand, 7' tall.</p>



Stand	Cover Type	Acres	Managed Site	General Comments:
11	6229 - Mixed lowland shrub	4.4	No	OPIC - FMD: SCA- New SCA. Include as biodiversity maintenance area to provide riparian values. Tag alder, willow.
14	6220 - Alder/willow	51.3	No	OPIC - FMD: SCA-Tag Alder along Chandler Brook. Retain as biodiversity maintainance area for the protection of highly erodabe riparian area.
39	6239 - Mixed Emergent Wetland	3.9	No	OPIC - FMD: Beaver Flooding 2016-former beaver flooding.
44	6224 - Treed Bog	25.4	No	OPIC - FMD: Black spruce and tamarack bog.
48	6220 - Alder/willow	5.1	No	OPIC - FMD: Beaver Flooding
51	6229 - Mixed lowland shrub	37.8	No	OPIC - FMD: Tag alder and willow
53	320 - Upland Shrub	18.0	No	Dry knobs of cherry, sugar plum, small balsam fir.
56	6229 - Mixed lowland shrub	3.1	No	OPIC - FMD: Tag alder and willow
57	6224 - Treed Bog	14.2	No	OPIC - FMD: SCA-Tag alder and willow. Retain as biodiversity maintenance area to protect riparian values.
60	122 - Road/Parking Lot	5.9	No	OPIC - FMD: CR 438
63	6229 - Mixed lowland shrub	9.6	No	OPIC - FMD: SCA- New SCA. Include as biodiversity maintenance area to protect riparian values. Mostly tag alder.
71	3205 - Mixed Upland Shrub	3.9	No	OPIC - FMD: High knob of stand 38 that did not regenerate to aspen. U is mostly cherry brush, small fir and raspberry.
73	6239 - Mixed Emergent Wetland	27.8	No	OPIC - FMD: Beaver Flooding 2016-Former beaver flooding
400	3102 - Grass	1.3	Yes	2015 - W32698 - installed gate, limed, mowed. It was decided only to plant a portion of the trail to clover. 2014 - W32698 - planted 25 red baron apple trees, 25 nannyberry, 25 highbush cranberry,4 mountain ash, and 7 seedling apple trees. Hunter walking trail was herbicided and disked. 5/26/2016 Field notes: raspberry 20% cover, mostly grass. Some wildlife trees observed.
401	31029 - Grass (OI)	2.3	Yes	2015 - W32698 - installed gate, limed, mowed. It was decided only to plant a portion of the trail to clover. 2014 - W32698 - planted 25 red baron apple trees, 25 nannyberry, 25 highbush cranberry,4 mountain ash, and 7 seedling apple trees. Hunter walking trail was herbicided and disked.



Stand	Cover Type	Acres	Managed Site	General Comments:
402	3102 - Grass	2.6	Yes	2015 - W32698 - installed gate, limed, mowed. It was decided only to plant a portion of the trail to clover. 2014 - W32698 - planted 25 red baron apple trees, 25 nannyberry, 25 highbush cranberry, 4 mountain ash, and 7 seedling apple trees. Hunter walking trail was herbicided and disked.  6/25/2016 Field notes: Verified, some cherry encroaching.
403	31029 - Grass (OI)	4.9	Yes	OPIC - FMD: Natural opening
404	31029 - Grass (OI)	0.7	Yes	OPIC - FMD: Grass opening.
405	31029 - Grass (OI)	1.5	No	OPIC - FMD: Grass opening
406	310 - Herbaceous Openland	3.3	No	
407	310 - Herbaceous Openland	1.5	No	
408	3302 - Low Density Conifer Trees	12.6	No	OPIC - FMD: Natural opening  5/26/2016 Field notes: Verified, open sandy spot with conifers: balsam fir, white spruce, white pine, jack pine. Mostly sapling size, encroaching, but big, open-growing conifers as well.
409	310 - Herbaceous Openland	0.7	Yes	OPIC - FMD: Grass opening along hunter walking trail.
410	310 - Herbaceous Openland	4.8	Yes	Planted numerous shrubs, planted to rye in 2013, planted to clover in 2014. Installed gates. Annual mowing, fertilize, and frost seeding. CR438 Hunter Walking Trail. OPIC - FMD: Grass opening along hunter walking trail.
411	310 - Herbaceous Openland	0.6	Yes	OPIC - FMD: Grass opening along hunter walking trail.
413	310 - Herbaceous Openland	2.1	No	OPIC - FMD: Natural opening along Co Rd 438