Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32057
Entry Year 2016
Acreage: 1911.91380000
County Marquette
Management Area: Ralph Ground Moraine

Revision Date: 2014-09-16

Stand Examiner: Theresa Sysol

Legal Description:

T44N R26W Section(s) 19, 20, 21

Identified Planning Goals:

To maintain the health and sustainability of the forest while providing for recreational, wildlife and fisheries concerns and needs.

Soil and topography:

Terrain is relatively level swamp to slightly rolling uplands with soils ranging from mucks in the bog areas to well-drained sands in the southwest portion of the compartment. Major soils associations include: Sagola-Rubicon, Emmet-Escanaba, Paquin-Finch and Rubicon sands.

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

Lies within a large block of land entirely owned by the State.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

Potential for climbing fumitory, goblin fern, large toothwort, ginseng, showy orchis, and Assiniboia sedge in mature hardwoods. Potential for pine drops, purple clematis, and rayless mountain ragwort in mature pines. Potential for calypso orchid, Ram's-head orchid, limestone oak fern, and rayless mountain ragwort in cedar swamps. Potential for submergent and emergent marsh species in small lake and creeks: auricled tway-blade, autumnal water starwort, alternate-leaved water-milfoil, Farwell's water-milfoil, alga pondweed, small yellow water-lily, American shore-grass, linear-leaved gentian and veiny meadow-rue.

Watershed and Fisheries Considerations:

Contains Bryan Creek and branch of the Big West Branch of the Escanaba River.

Wildlife Habitat Considerations:

Compartment 57 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); course woody debris; and deer wintering complexes.

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

Mineral Resource and Development Concerns and/or Restrictions

Sections 19 - 21, T44N-R26W, Marquette County
Surface sediments consist of peat and muck and 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. A gravel pit is located in Section 18, and potential is good on the uplands. Abandoned iron mines are located eight

miles to the northeast. Section 18 was previously leased for metallic exploration. There is no economic oil and gas production in the UP.

Vehicle Access:

Compartment is spilt by Kate's Grade, which provides good year-round access. Several two-track road systems provide access through most of the remaining areas. Some roads have become less accessible, due to beaver activity flooding roadway.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

No formal facilities, but area is heavily used for hunting and fishing.

Fire Protection:

Low risk for wildfres.

Additional Compartment Information:

State gravel pit on Kate's Grade just north of this compartment.

The following reports from the Inventory are attached:

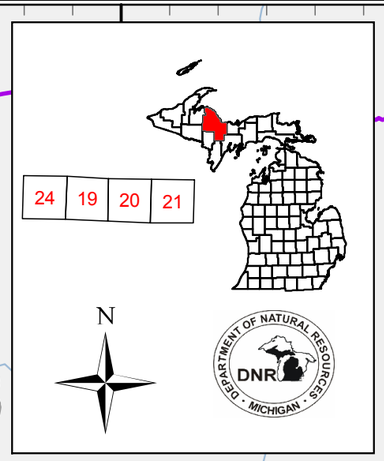
- **Total Acres by Cover Type and Age Class**
- **Cover Type by Harvest Method**
- **Proposed Treatments – No Limiting Factors**
- **Proposed Treatments – With Limiting Factors**
- **Stand Details (Forested and Nonforested)**
- **Dedicated and Proposed Special Conservation Areas**
- **Site Condition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

Compartment: 057
T44N R26W Sec. 19, 20, 21
T44N R27W Sec. 24
County: Mitte
Unit: Gwin
YOE: 2016
Acres: 1,912 GIS Calculated
Examiner: Theresa Sysol
Map Revised: 09/19/2014
Map Phase: Pre-Review



Stand # 23
Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code

Legend

- Remonumented Section Corners
- Miris Corners
- Survey Grade
- PLSS Corner
- Iron Post
- GPS Point
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Recreation
- Culverts
- Gate
- Berms
- Stream
- Intermittent Stream
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Shelter Wood (w/Reserves)
- Selection (Group, Single Tree)
- Other Treatment - See Comments

Forest Stands

Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

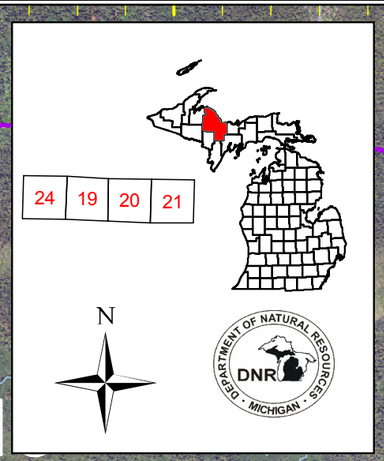
Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland

Stand Boundary Map

Compartment: 057
T44N R26W Sec. 19, 20, 21
T44N R27W Sec. 24
County: Marquette
Unit: Gwinn
YOE: 2016
Acres: 1,912 GIS Calculated
Examiner: Theresa Sysol
Map Revised: 05/22/2014
Map Phase: Pre-Review



Stand # 23
Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code

87°35'0"W 87°34'0"W 87°33'0"W
46°13'0"N 46°12'0"N 46°11'0"N

1 4119-M8
2 4134-A5
3 6122-S5
4 4130-A3
5 6121-T3
6 310-G0
7 6124-Q2
8 310-G0
9 310-G0
10 310-G0
11 4112-M9
12 4130-A6
13 4220-W8
14 4130-A6
15 4130-A3
16 6122-S5
17 6120-C6
18 6124-Q2
19 4191-MD8
20 622-L0
21 4220-W7
22 4130-A3
23 4119-M9
24 4130-A3
25 6120-C5
26 4134-A5
27 6120-C8
28 6129-Q4
29 4199-MD8
30 6122-S6
31 622-L0
32 310-G0
33 330-U0
34 4136-A3
35 4319-UM3
36 4130-A6
37 4119-M9
38 310-G0
39 622-L0
40 6121-T6
41 310-G0
42 4110-M9
43 6120-C9
44 310-G0
45 4110-M9
46 6120-C5
47 4112-M6
48 6117-E5
49 310-G0
50 622-L0
51 622-L0
52 6120-C8
53 4130-A3
54 4130-A3
55 622-D0
56 4199-MD9
57 4130-A3
58 4238-MC8
59 4130-A6
60 6120-C9
61 4110-M9
62 623-N0
63 6128-Q8
64 4110-M9
65 310-G0

24 19 20 21 1 17 16 25 30 29

Kates Grade Rd
County Road 581
County Road 438
County Road 438

1 0.5 0 1 Miles

Legend

- Remonumented Section Corners
- Miris Corners
- PLSS Corner
- Iron Post
- GPS Point
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
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- County Poor Dirt Roads
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- Recreation
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- Stand Boundaries

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Special Conservation Areas & Site Conditions Map

Compartment: 057
T44N R26W Sec. 19, 20, 21
T44N R27W Sec. 24
County: Marquette
Unit: Gwinn
YOE: 2016
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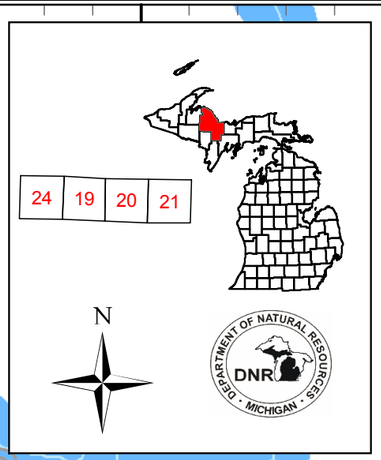


Stand # 23
Stocking Density
(412)0) - A7
Level 3
Level 4
OI Code
Cover Type Code

Legend

- Remonumented Section Corners
- Miris Corners
- Stand Boundaries

Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)

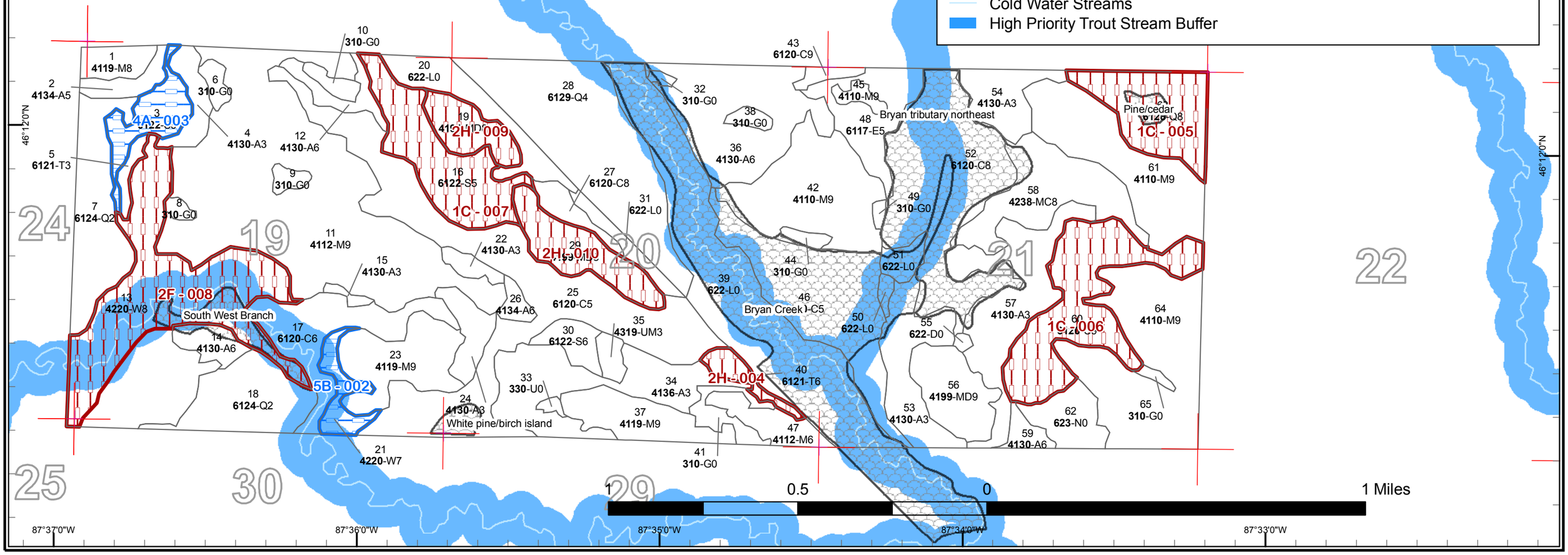
Site Condition Type

Available Factors W/ Constraints
- 4A: No merchantable products (see product standards)
- 5B: Retention for regeneration purposes

Unavailable Factors
- 1C: Other dept or div proc/practices
- 2F: Too steep
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)

Reviewable SCAs
- SCA Removal

Special Conservation Areas
- Cold Water Streams
- High Priority Trout Stream Buffer



Report 1 – Total Acres by Cover Type and Age Class

Gwinn Mgt. Unit **Compartment 057 Year of Entry 2016**

Theresa Sysol : Examiner

Age Class

	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 +	Uneven Age	Total
Aspen	12	170	77	15	4	0	0	0	0	0	0	0	0	0	**279**
Cedar	0	0	0	0	0	0	0	0	0	0	0	226	167	0	**393**
Herbaceous Openland	34	0	0	0	0	0	0	0	0	0	0	0	0	0	**34**
Low-Density Trees	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Lowland Conifers	0	0	0	35	0	0	0	0	0	0	0	40	0	132	**207**
Lowland Deciduous	0	0	26	0	0	0	0	0	0	0	0	0	0	0	**26**
Lowland Shrub	150	0	0	0	0	0	0	0	0	0	0	0	0	0	**150**
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	74	0	0	0	0	0	**74**
Marsh	17	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Mixed Upland Deciduous	0	0	0	0	0	0	26	0	0	0	0	0	0	46	**71**
Northern Hardwood	0	0	0	0	0	0	0	0	10	449	0	0	0	0	**459**
Tamarack	0	0	5	0	0	0	0	0	8	0	0	0	0	0	**12**
Treed Bog	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	43	**43**
Upland Mixed Forest	0	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
White Pine	0	0	0	0	0	0	0	0	0	0	140	0	0	0	**140**
Total	**215**	**170**	**113**	**51**	**4**	**0**	**26**	**0**	**91**	**449**	**140**	**266**	**167**	**221**	**1912**

Report 2 – Proposed Treatment Summaries

Gwinn Mgt. Unit
Year of Entry 2016

Compartment 057
Total Compartment Acres: 1,912

Acres by Treatment Type

Commercial Harvest - 73	Tree Planting - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 92	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen Types	4	0	0	0	0	0	**4**
Lowland Coniferous Forest	9	0	0	0	0	0	**9**
Mixed Upland Deciduous	0	26	0	0	0	0	**26**
Natural Pines	0	0	0	34	0	0	**34**
Total	**14**	**26**	**0**	**34**	**0**	**0**	**73**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
13	32057013-Cut	34.0	42200 - Natural White Pine	Medium Density Log	100	81-110	Harvest	Shelter Wood with Reserves	4220 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: Thin red and white pine to encourage natural regeneration of mixed pine. Remove as much mature and submerchantable balsam fir as possible.

Other Comments: Treatment will leave a no-cut river buffer, following fisheries division and BMP guidelines.

Next Steps: Monitor for successful regeneration of white and red pine. Possibly follow up with mechanical treatment, exposing to mineral soil to prepare natural seedbed.

Proposed Start Date: 10/01/2015

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
26	32057026-Cut	4.3	4134 - Aspen, Spruce/Fir	High Density Pole	46	51-80	Harvest	Clearcut	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal

Prescription Specs: Older, overmature aspen with some hardwood. Cut all aspen, paper birch, balsam poplar, maple, and balsam fir. Leave small cherry and any windfirm white spruce.

Other Comments: No retention due to small stand size. Possibly access and treat with stand 30 to the east in order to create marketable sale. May still be too small to sell.

Next Steps: Monitor for successful regeneration of aspen, spruce/fir.

Proposed Start Date: 10/01/2015

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30	32057030-Cut	9.4	6122 - Black Spruce	High Density Pole	87	81-110	Harvest	Clearcut	6122 - Black Spruce	Cmpt. Review Proposal

Prescription Specs: Quite a bit of blowdown has occurred. Some slightly higher patches within with old red and white pine - retain pine and any cedar. Also retain some large aspen along edges if possible.

Other Comments: Clearcut no reserve due to small stand size; adjacent stand will provide seed source. Treat with stand 26, if possible, for more marketable sale. May still be too small to sell.

Next Steps: Monitor for successful regeneration of spruce/fir. Additional regeneration of cedar, pine, aspen and birch

Proposed Start Date: 10/01/2015

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
56	32057056-Cut	25.5	4199 - Other Mixed Upland Deciduous	High Density Log	61	81-110	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Selectively mark stand using marking guidelines. Target more of the older, unhealthy birch for removal while still trying to perpetuate some in stand. Leave white pine, white spruce. Residual BA of 50 - 80.

Other Comments: Stand is slowly being converted from birch type towards northern hardwoods. Stand is heavier to paper birch (40-50 BA average) with some maple. Some nice maple stems noted, but quality issues (forks, seams, cankers) still present. Leave a few of the larger, older birch if cavity nesters within.

Next Steps: Monitor for successful regeneration of northen hardwoods. Maple regeneration <3' noted was heavy, but also browsed.

Proposed Start Date: 10/01/2015

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
53	32057053-NonFor	31.7	4130 - Aspen	High Density Sapling	16		Non-Forest Management	Other - Specify	413 - Aspen	Cmpt. Review Proposal

Prescription Specs: Part of the proposed S. Marquette Grouse Enhancement Management System (GEMS). Creation of a hunter walking trail in Std. 53 and 57. Two gates will be placed in entrances within Stand 53. Two track road will be planted to wildife mix and converted to a hunter walking trail. Mechanical treatment may include chainsaw work, hand tools, a bulldozer, disking, and any acceptable equipment operation not described. Once the trail is created, an annual rye planting may occur to enhance the trail. If a perennial mix is chosen, then herbicide use will be needed to reduce competition from undesirable weed plants. Planting of trees/shrubs listed to enhance forage for game species.

Other Comments:

Next Steps: Once aspen matures, may want to divide stands into several smaller units to maximize age diversification and young aspen forest edge.

Proposed Start Date: Unspecified

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
57	32057057-NonFor	50.2	4130 - Aspen	High Density Sapling	16		Non-Forest Management	Other - Specify	413 - Aspen	Cmpt. Review Proposal

Prescription Specs: Part of the proposed S. Marquette Grouse Enhancement Management System (GEMS). Creation of a hunter walking trail in Std. 53 and 57. Two gates will be placed in entrances within Stand 53. Two track road will be planted to wildife mix and converted to a hunter walking trail. Mechanical treatment may include chainsaw work, hand tools, a bulldozer, disking, and any acceptable equipment operation not described. Once the trail is created, an annual rye planting may occur to enhance the trail. If a perennial mix is chosen, then herbicide use will be needed to reduce competition from undesirable weed plants. Planting of trees/shrubs listed to enhance forage for game species.

Other Comments: Discussed at pre-review: South Marquette GEM area and prescribed hunter walking trail in 57 and 53 to make a loop and the ability to plant hard/soft mast tree/shrubs gates will need road closures Director's Order for the GEMS to put the gates in.

Next Steps: Once aspen matures, may want to divide stands into several smaller units to maximize age diversification and young aspen forest edge.

Proposed Start Date: Unspecified

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
32	NF_32057032-NonFor	1.3	3102 - Grass				Non-Forest Management	Other - Specify	3102 - Grass	Cmpt. Review Proposal

Prescription Specs: S. Marquette Grouse GEM work. Chainsaw work and planting of hard/soft mast trees/shrubs to benefit featured species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
38	NF_32057038-NonFor	3.2	3102 - Grass				Non-Forest Management	Other - Specify	3102 - Grass	Cmpt. Review Proposal

Prescription Specs: S. Marquette Grouse GEM work. Chainsaw work and planting of hard/soft mast trees/shrubs to benefit featured species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
44	NF_32057044-NonFor	2.8	3102 - Grass				Non-Forest Management	Other - Specify	3102 - Grass	Cmpt. Review Proposal

Prescription Specs: S. Marquette Grouse GEM work. Chainsaw work and planting of hard/soft mast trees/shrubs to benefit featured species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
49	NF_32057049-NonFor	1.4	3102 - Grass				Non-Forest Management	Other - Specify	3102 - Grass	Cmpt. Review Proposal

Prescription Specs: S. Marquette Grouse GEM work. Chainsaw work and planting of hard/soft mast trees/shrubs to benefit featured species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
65	NF_32057065-NonFor	1.7	3104 - Degraded				Non-Forest Management	Other - Specify	3102 - Grass	Cmpt. Review Proposal

Prescription Specs: S. Marquette Grouse GEM work. Chainsaw work and planting of hard/soft mast trees/shrubs to benefit featured species.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

Total Treatment Acreage Proposed: 165.7

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
		#Type!	#Type!							

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Type!

Limiting Factor

Total Treatment Acreage Proposed: 0.0

Report 5 – Site Conditions

Gwinn Mgt. Unit | **Compartment 057**

Theresa Sysol : Examiner | **Year of Entry 2016**

Availability for Management

Total Acres	Acres Available	Acres Not Available		Dominant Site Conditions No	5B	4A	2H	2F	1C
279	279		**Aspen**	279					
393	330	63	**Cedar**	330					63
207	167	40	**Lowland Conifers**	167					40
26	26		**Lowland Deciduous**	26					
74	44	30	**Lowland Spruce/Fir**	26		19			30
71	71		**Mixed Upland Deciduous**	71					
459	459		**Northern Hardwood**	459					
12	5	8	**Tamarack**	5			8		
43	43		**Upland Conifers**	43					
5	5		**Upland Mixed Forest**	5					
140	46	94	**White Pine**	35	11			94	
1,709	1,475	234	Total Forested Acres	1,446	11	19	8	94	132
	86%	14%	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
002		**Available**	**5B: Maintain for regeneration purposes**	11				
Comments:								
003		**Available**	**4A: No merchantable products (see product standards)**	19				
Comments: Low site index stand; small diameters								

004	**Not Available**	**2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)**	8			

Comments:

005	**Not Available**	**1C: Other dept or div proc/practices**	40			

Comments:
Wildlife Division cedar restraints.

006	**Not Available**	**1C: Other dept or div proc/practices**	63			

Comments:
Wildlife Division cedar cutting restraints.

007	**Not Available**	**1C: Other dept or div proc/practices**	46	2G: Too wet (sensitive soils, does not include access issues)		

Comments:
Areas adjacent to upland ridges should be treated if access becomes possible.

008	**Not Available**	**2F: Too steep**	94	3D: Recreational / Scenic values	3J: Water quality / BMPs (stream, river, or lake)	5B: Maintain for regeneration purposes

Comments:
North finger of site is for regeneration purposes - delay for now, but will be possible to treat.

009	**Not Available**	**2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)**	18			

Comments:
May be possible with extreme work.

010	**Not Available**	**2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)**	28

Comments:

May be possible with extreme work.

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
Pine/cedar	Potential Old Growth		**SCA Removal**	4.0

Comments

NICE PINE AND BIG CEDAR,UPLAND.THICK FIR UNDERSTORY STAND. Last examiner recommendation - island stand which will probably never be harvested.

White pine/birch island	Potential Old Growth		**SCA Removal**	4.7

Comments

REMOTE SMALL STAND. SOME LARGE SCATTERED W.PINE. Last examiner recommendation - pine definitely old, but, due to isolation, will probably never be harvested.

South West Branch	Potential Old Growth		**SCA Removal**	16.2

Comments

Protected by Static SCA (Springs, wetland, riparian)

Bryan tributary northeast	Potential Old Growth		**SCA Removal**	84.5

Comments

Riparian protected by static SCA

Bryan Creek	Potential Old Growth		**SCA Removal**	195.4

Comments

Protected by Static SCA. Mostly tag alder w/occasional clump of swamp conifers. Retain as riparian zone along Bryan Creek and Big W. Branch Escanaba R. to protect the wetland and wildlife values.

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	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4119 - Mixed Northern Hardwoods	Medium Density Log	10.0	85	51-80	Select cut with compartment to the north under t. sale #013-84 "Kate's Grade Block" (unit 2) - 1988 and "Kate's Grade Big Pit Sale" #030-03 (unit 6) - Fall, 2005- Jan, 2006.
2	4134 - Aspen, Spruce/Fir	Medium Density Pole	8.6	25		Quite diverse - patchy thick and thin aspen clones with semi open areas with more conifers. Just transitioning into pole stand. Weeviled young white pine. Timber sale #013-84 "Kate's Grade Block" (unit 3) - cut 1987.
3	6122 - Black Spruce	Medium Density Pole	18.5	85	51-80	Still fairly small diameters overall. Contains pocket of white pine. Cedar dispersed throughout. Ground cover of sphagnum, lab tea, grasses.
4	4130 - Aspen	High Density Sapling	11.8	4		"Jerry's Trespass" sale #009-06 (unit 4) - cut Dec, 2009. Trace amount of balsam fir, lower edges with more balsam poplar. Aspen ~10-16' hts.
5	6121 - Tamarack	High Density Sapling	4.6	22		Narrow strip of tamarack, white pine and spruce/fir. Tamarack ~ 20-30' hts. Part of "Big West Branch Hardwood" sale #034-86 (part of unit 3) - cut Oct, 1991. Ground cover of some bracken fern, bunchberry, grasses, lab tea.
7	6124 - Lowland Spruce-Fir	Medium Density	42.5	Uneven Age		Wet, lowland conifers with trace amount of birch, aspen, maple.
11	4112 - Maple, Beech, Cherry Association	High Density Log	180.6	98	81-110	Stand has been treated under several sales - west 1/2 of stand was treated as"Big West Branch Hardwood" #034-86 - cut 1987-1991 and "Jerry's Trespass" #009-06 - cut Dec., 2009; east 1/2 of stand was treated as "Big West Branch Sale" #021-96 (unit 1-4) - 1997-99. In the more recent cut (west side), subcanopy is heavier to raspberry brush yet and some small maple seedlings (5-10' hts) and ironwood 10-20' hts. BA is 70 - 90. The older, east side cut contains heavier maple regen stocking,10-20' hts and ironwood 20-30' hts. It could possibly use another light thinning - BA is not all that high (100 average), but a few log trees could be removed to enhance regeneration, or delay another cycle. Some dead black cherry noted. There is a heavier white pine component along the hardwood/pine transition area.
12	4130 - Aspen	High Density Pole	9.4	25		"Kate's Grade Block" #013-84 (unit 3) - cut Su, 1987. Just transitioning into pole stand. Lower portions of stand with conifers.
13	42200 - Natural White Pine	Medium Density Log	128.8	100	81-110	W. Branch Escanaba River splits stand; north portion treated under "Big West Branch Hardwood" sale #034-86 (unit 3) - thinned Oct., 1991, south portion treated 1975-77 "South-West Branch Block" #6/75A and "West Branch Pine Sale" #023-96 - thinned fall,1996 and summer 1997. Very nice, tall pine. Some white pine snags. South of river could use another light thinning, mainly removing red pine logs; no white or red pine regeneration noted here - heavy to fir,maple understory. Ground cover of club moss, princess pine noted. Very steep banks to river.
14	4130 - Aspen	High Density Pole	9.7	38		"South-West Branch Block" #6/75A - cut 1975-77. Stand transitioning from saplings to poles.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
15	4130 - Aspen	High Density Sapling	2.0	15		"Big West Branch Sale" #021-96 (unit 6) - cut Fall, 1998. Stand slopes into lowland cedar type.
16	6122 - Black Spruce	Medium Density Pole	45.9	87	51-80	Some better quality spruce where adjacent to upland types; tall with little understory noted. Blowdown and snapped timber occurring - these portions should be harvested. No retention required, since remainder of stand will provide seed source, although white pine and cedar should be left. Stand transitions into smaller diameter (6" dbh) black spruce clumps, scattered tamarack, with hummicky grounds full of tagalder, lab tea.
17	6120 - Lowland Cedar	High Density Pole	38.0	122		Includes W. Branch Escanaba River.
18	6124 - Lowland Spruce-Fir	Medium Density	35.2	38		"South-West Branch Block" #6/75A - cut 1975-77. Aspen, maple mainly along stand edges. Stand drops into heavier tagalder; sparser stand with residual cedar, spruce, tamarack.
19	4191 - Mixed Upland Deciduous with Conifer	Medium Density Log	17.6	Uneven Age	51-80	Stand is old and difficult to access - going through natural succession process. Numerous dead standing and blowdown paper birch, aspen, with succession to spruce/fir, pine, and on the higher grounds to red maple. Large diameter white pine, red pine present, with some of the white pine showing flagging tops. Lower stand edges heavier to black spruce with some cedar, pine. Leave white and red pine, white spruce, cedar (trace present). May need to mark leave tree red maple, leaving some of the oversized for wildlife and crop trees where better stems are present. (Determine during sale prep best method for retention.)
21	42200 - Natural White Pine	Low Density Log	11.3	105	1-50	part of "Big West Branch Sale" #021-96 (unit 8) - harvested Dec., 1996 - Feb., 1997. Residual pine, maple with heavy aspen, fir regeneration, but also white and red pine regeneration.
22	4130 - Aspen	High Density Sapling	5.0	15		"Big West Branch Sale" #021-96 (unit 6) - cut fall, 1998. Trace amount of paper birch, most notably along old road edges.
23	4119 - Mixed Northern Hardwoods	High Density Log	34.7	93	81-110	"Big West Branch Sale" #021-96 (unit 5, 8) - cut August, 1998. Includes a small aspen clearcut area, also trace amounts of black cherry, yellow birch poles/logs. Extremely rolling terrain and stand diversity, with good pine regeneration in old roadbed, numerous wildlife "legacy" trees/snags. Maple regeneration is somewhat spotty, ranging from 3 - 10' in height most places; numerous seedlings <3' noted.
24	4130 - Aspen	High Density Sapling	12.2	16		"Big West Branch Sale" #021-96 (unit 7) - cut 1997. Includes some lower grounds. Trace amount of residual red and sugar maple poles.
25	6120 - Lowland Cedar	Medium Density Pole	126.6	117	81-110	Stand contains nicer areas of cedar with trace amounts of other mixed species (esp along stand transition edges), before becoming sparser with a heavier tagalder component.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
26	4134 - Aspen, Spruce/Fir	High Density Pole	4.3	46	51-80	Older, overmature aspen with some hardwood. Small amount of cherry noted. Dead/down older balsam fir with heavy pole/sapling regeneration mixed with aspen poles. Harvest will rotate stand back into even-aged management.
27	6120 - Lowland Cedar	Medium Density Log	8.4	114	1-50	Primarily older, large diameter cedar with heavy fir understory. Trace amount of birch, maple, balsam poplar along upland edge.
28	6129 - Mixed Coniferous Lowland Forest	Low Density Pole	89.3	Uneven Age		Extremely wet, low ground with heavy tagalder, willow subcanopy. Mixed ages, due to natural reproduction.
29	4199 - Other Mixed Upland Deciduous	Medium Density Log	28.2	Uneven Age	51-80	Stand is going through natural succession/conversion process. Numerous dead/snapped birch, aspen and white spruce noted. Spruce appears to have bark beetle damage ongoing and most should be removed. Not much older balsam fir present; previous budworm killed. Where aspen died out, lower quality residual red maple stems remain, and there are also portions of the stand which have pockets of thicker maple/aspen/birch regeneration established (notably 1 - 3" average dbh and 20-30' hts). A slightly higher interior knob is heavier to both red and sugar maple (old OI stand 51), with bore damage and black stain noted. Heavy browse noted on seedling maples.
30	6122 - Black Spruce	High Density Pole	9.4	87	81-110	Quite a bit of blowdown has occurred - harvest now, if possible. Some slightly higher patches within with old red and white pine - retain pine and any cedar. Surrounding spruce will provide seed source - clearcut no reserve. Sphagnum ground cover.
34	4136 - Aspen, Mixed Conifer	High Density Sapling	49.6	17		Stand was originally prescribed and set-up as one sale, but harvested as two separate sales ~5-6 yrs apart after contractor went out of business. West half "Erickson Camp Sale" #022-96 (unit 2,3) - cut 1996. Contains patches of fir/spruce with young aspen interspersed. East portion "Erickson Camp Sale" #030-99 - cut Nov., 2001 - Jan, 2002. Contains more balsam poplar and some supercanopy white and red pine. Trace amount of red maple. Ground cover of raspberries, bracken fern, lichen and some hazel on the higher portions throughout.
35	4319 - Mixed Upland Forest	High Density Sapling	4.9	28		Good quantity of paper birch present; residual red maple poles. Lower stand edges with black spruce, tamarack - tagalder swale separates stand from nearby uplands to the south.
36	4130 - Aspen	High Density Pole	59.2	29		"North Branch Block" #027-83 - cut with adjacent compartment 56 ~ 1985. Trace amount of fir present. Some pockets of stem breakage; hypoxylon present. Stand is transitioning from saplings to poles.
37	4119 - Mixed Northern Hardwoods	High Density Log	25.1	90	81-110	"Erickson Camp Sale" #022-96 (unit 4,5,6) - thinned 1996. Also thinned in the 70's. BA is not all that high, but there are portions that could use another light thinning. If so, any mature balsam fir should be harvested also. Leave white pine, white spruce and hemlock. Some maple regeneration, but more ironwood than anything.
40	6121 - Tamarack	High Density Pole	7.7	83		Small stand - no retention.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	4110 - Sugar Maple Association	High Density Log	56.8	95	81-110	"North Branch Block" #24/76A - select cut 1977 (removing mostly elm) and "Bryan Creek Sale" #024-96 - select cut summer, 1999. Stain, forks, seams, cankers and breakage all noted. Trace fir, hemlock. Raspberry, burdock noted. FTP W32-590: Underplanted 7,900 hemlock 9/25/2001.
43	6120 - Lowland Cedar	High Density Log	3.8	117		Adjoins larger block of cedar complex to the north.
45	4110 - Sugar Maple Association	High Density Log	3.8	95		Island of hardwood within aspen type. Thinned in 1977, and 1985 under permit #027-83 "North Branch Block". Trace fir, hemlock.
46	6120 - Lowland Cedar	Medium Density Pole	65.6	140	51-80	Spruce, tamarack overtopping cedar. Variable stocking levels.
47	4112 - Maple, Beech, Cherry Association	High Density Pole	13.5	90	81-110	"Erickson Camp Sale" #022-96 (unit 6) - thinned 1996. Also thinned in the 1970's. Some mature conifers and aspen, birch within which could be harvested. Mainly low quality, multi-forked maple sawlogs. Trace amount of cherry noted. Not much maple regeneration success; mainly ironwood. Ground cover of princess pine, leatherwood.
48	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	26.5	29		"North Branch Block" #027-83 - cut 1985. Patchy clones - variable lowland aspen/balsam poplar with spruce/tamarack and alder/willow. Trace white pine along edge.
52	6120 - Lowland Cedar	Medium Density Log	87.6	117	81-110	Large diameter cedar with paper birch component; scattered spruce, tamarack. Understory mainly balsam fir. Fringes with higher component of birch, balsam poplar, fir. Contains drainage/creek through center of stand.
53	4130 - Aspen	High Density Sapling	31.7	16		"Bryan Creek Sale" #024-96 (unit 1,2) - cut July, 1998. Some lowland aspen, tamarack along lower edges of stand. Some red maple saplings.
54	4130 - Aspen	High Density Sapling	19.4	19		Cut with C. 56 to the north under #031-93 - 1995. Some patchy, open areas and lowland aspen. Aspen ~30 ft hts now. Trace amount of cherry, paper birch within.
56	4199 - Other Mixed Upland Deciduous	High Density Log	25.5	61	81-110	"Bryan Creek Sale" #024-96 (unit 4) - select cut in August, 1998. Stand is slowly being converted from birch type towards northern hardwoods. Stand is heavier to paper birch (40-50 BA average) with some maple. Some nice maple stems noted, but quality issues (forks, seams, cankers) still present. Regeneration is mainly maple, with a few pockets of fir regeneration. Rolling hills.
57	4130 - Aspen	High Density Sapling	50.2	16		"Bryan Creek Sale" (units 3,5,6) - cut July, 1998 and August, 1999. Stand contains some residual pine/spruce patches as well as areas of lowland aspen, tamarack.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
58	42380 - Non Pine Upland Conifer, Mixed Deciduous	Medium Density Log	43.2	Uneven Age	81-110	Transition stand between upland hardwoods and lowland cedar. Very mixed and variable as to sizes, ages and species composition. Quite a bit of the older fir, spruce, aspen and paper birch are dead/dying. Lots of small S/F regeneration starting. Small balsam fir clumps along hardwood edges. Ground cover of princess pine, club moss into sphagnum, snowberry.
59	4130 - Aspen	High Density Pole	5.6	33	51-80	Stand harvested summer,1980 with adjacent compartment - sale #8/80A. Still a bit small, but some decline/breakup noted.
60	6120 - Lowland Cedar	High Density Log	62.9	151	141-170	Stand has some upland edges heavier to fir/spruce/tamarack and birch/aspen which transitions into more pure cedar (250 BA) with little understory. Possibly treat edges, where feasible - some dead/dying spruce/fir. Access may be an issue.
61	4110 - Sugar Maple Association	High Density Log	54.7	95	81-110	Select cut Dec,1998 - Jan, 1999 under permit #025-96 "Prudom's Camp Sale". Trace amount of fir, spruce and ironwood pole/saplings within. Maple with black stain, cankers, cavities, forks; fair amount of wildlife snags. Ground cover of raspberry, club moss noted.
63	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Log	39.6	118	51-80	Some of the west side is slightly higher upland with dead balsam fir and thick regeneration patches (against hardwood grounds). Numerous blowdown. E. side grades into more cedar; wetter grounds. Small island of large white pine, cedar also included within.
64	4110 - Sugar Maple Association	High Density Log	79.8	95	81-110	"Francis Hardwood" #010-06 - thinned Sept, 2009. Some areas cut in the 1970's also. Rolling topography with paper birch primarily noted on ridges (more of a pole stand here) and stand fringes, swales with some conifers, especially along grass type. Quite a few basswood clumps throughout. Trace amount of black cherry, ash, cedar, balsam poplar. Northern portion with higher concentration of older maple saplings. Visible ground cover includes: burdock, raspberry.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
6	3102 - Grass	4.2	Yes	Medium	
8	3102 - Grass	2.2	Yes	Medium	
9	3102 - Grass	3.4	Yes	Medium	
10	3102 - Grass	4.4	Yes	Medium	A few white pine, spruce along edges only.
20	6220 - Alder/willow	24.1	No	Unspecified	Some thicker tamarack patches within.
31	6220 - Alder/willow	8.2	No	Unspecified	Dead cedar snags within; heavy blowdown, uprooting.
32	3102 - Grass	1.3	Yes	Low	
33	3303 - Mixed Low Density Trees	1.5	Yes	Low	
38	3102 - Grass	3.2	Yes	Low	
39	6220 - Alder/willow	109.3	No	Unspecified	Tagalder swamp containing Bryan Creek
41	3102 - Grass	8.9	Yes	Medium	Little to no encroachment - looks good. Fresh deer droppings.
44	3102 - Grass	2.8	Yes	Low	Timber along fringes
49	3102 - Grass	1.4	Yes	Low	Some fringe spruce/fir and aspen.
50	6220 - Alder/willow	2.1	No	Unspecified	Numerous dead cedar snags within.
51	6220 - Alder/willow	6.2	No	Unspecified	
55	6224 - Treed Bog	1.2	No	Unspecified	Small depression fringed with pine.
62	6239 - Mixed Emergent Wetland	16.6	No	Unspecified	
65	3104 - Degraded	1.7	No	Unspecified	Small natural opening within hardwood stand. Milkweed, raspberry noted.