Compartment Review Presentation

Roscommon Forest Management Unit

Compartment 165
Entry Year 2015
Acreage: 1,899
County Roscommon
Management Area: Upper Muskegon

Revision Date: 08/07/2013

Stand Examiner: Ben Wiese

Legal Description:

21N R03W Sec 22, 27 and 34

Identified Planning Goals:

Provide for sustainable ecosystem based management including forest products, wildlife and recreation. Maintain healthy and diverse forested stands. Forest management goals for this year of entry include 192 acres of aspen regeneration and 188 acres of thinning in northern hardwoods, oak and white pine.

Soil and topography:

The compartment is part of the highplains of the Grayling Outwash plain. There are wetlands, flat uplands and small hills and ice contact ridges. Much of the compartment is sand with a variety of soil type which include Graycalm, Croswell, Graycalm-Grayling, Otisco, Klacking, Pere Cheney, Grayling and Rubicon. There is Tawas-Lupton and Tawas-Leafrivermuck soils located in the central part of the compartment

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

The compartment is surrounded on three side by state-owned land. The south side is the Roscommon county line. There is asnowmobile trail and an ATV trail. There is a illegal ATV use on the forest roads.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

There are known concerns within the compartment. All proposed management activities have taken these concerns into consideration.

Special Management Designations or Considerations:

None noted.

Watershed and Fisheries Considerations:

No comments or aquatic concerns.

Wildlife Habitat Considerations:

None noted.

Mineral Resource and Development Concerns and/or Restrictions

Roscommon County Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift are the Pennsylvanian Grand River and Saginaw Formations. The Saginaw is quarried for clay elsewhere in the State. Most of the good gravel pits are associated with upland areas. There mat be some potential in the Compartment. Part of Headquarters Field is located inn Section 34. The field has produced over 11.3 million BO and 4.2 Bcf gas primarily from the Devonian Richfield Formation. It is in secondary recovery operations currently. The entire Compartment is leased for oil and gas development.

Vehicle Access:

Vehicle access is excellent with numerous forest roads and Pond Rd which is seasonally maintained by the county.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

There are no facilities but opportunites exist for hunting, hiking, foraging, and dispersed camping.

Fire Protection:

None noted

Additional Compartment Information:

The compartment forest cover types were historicallt red/white pine, hemlock/whitepine, and jack pine.

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**

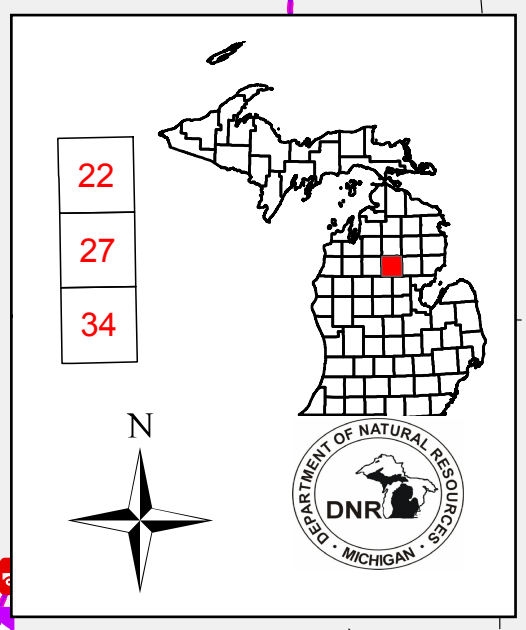
The following information is displayed, where pertinent, on the attached compartment maps:

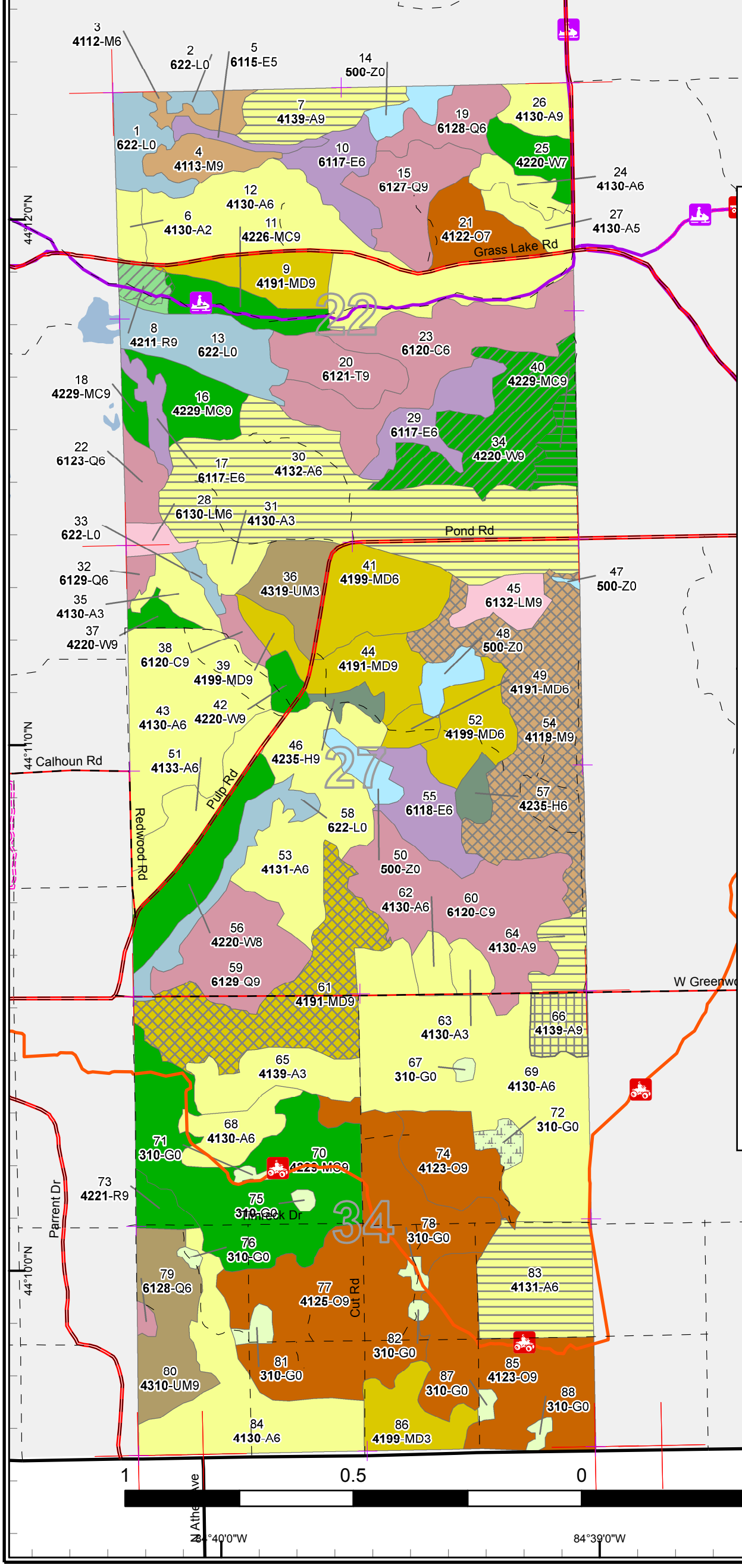
- **Base feature information, stand boundaries, cover types, and numbers**
- **Proposed treatments**
- **Site condition boundaries**
- **Details on the road access system**

Cover Type & Treatment Map

Compartment: 165
T21N R03W
Sections 22, 27, 34
County: Roscommon
Unit: Roscommon
YOE: 2015
Acres: 1,899 GIS Calculated
Examiner: Ben Wiese
Map Revised: 12/12/2013
Map Phase: Web Post

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





Legend

- Miris Corners
- Remonumented Section Corners
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Lakes and Rivers
- Snowmobile Trail
- ORV Trail
- ORV Route
- ORV Trails
- ORV Routes
- Snowmobile Trails

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Other Treatment - See Comments
- Treatments w/ Site Condition

Forest Stands

Level 3

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

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- State Forest Land

1 0.5 0 1 Miles

Stand Boundary Map

Compartment: 165
T21N R03W
Sections 22, 27, 34
County: Roscommon
Unit: Roscommon
YOE: 2015
Acres: 1,899 GIS Calculated
Examiner: Ben Wiese
Map Revised: 12/12/2013
Map Phase: Web Post

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

22
27
34

N

DEPARTMENT OF NATURAL RESOURCES · MICHIGAN · DNR

Legend
- Miris Corners
- Remonumented Section Corners
- Snowmobile Trail
- ORV Trail
- ORV Route
- ORV Trails
- ORV Routes
- Snowmobile Trails
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Stand Boundaries

1 3 4112-M6
2 622-L0
3 5 6115-E5
4 14 500-Z0
5 7 4139-A9
6 19 6128-Q6
7 26 4130-A9
8 1 622-L0
9 4 4113-M9
10 6117-E6
11 15 6127-Q9
12 25 4220-W7
13 24 4130-A6
14 12 4130-A6
15 6 4130-A2
16 11 4226-MC9
17 21 4122-O7
18 27 4130-A5
19 9 4191-MD9
20 8 4211-R9
21 13 622-L0
22 23 6120-C6
23 20 6121-T9
24 40 4229-MC9
25 18 4229-MC9
26 16 4229-MC9
27 29 6117-E6
28 22 6123-Q6
29 34 4220-W9
30 17 6117-E6
31 30 4132-A6
32 28 6130-LM6
33 31 4130-A3
34 33 622-L0
35 32 6129-Q6
36 41 4199-MD6
37 4319-UM3 45 6132-LM9
38 47 500-Z0
39 35 4130-A3
40 37 4220-W9
41 38 6120-C9
42 39 4199-MD9
43 44 4191-MD9
44 48 500-Z0
45 49 4191-MD6
46 43 4130-A6
47 42 4220-W9
48 52 4199-MD6
49 54 4119-M9
50 51 4133-A6
51 46 4235-H9
52 55 6118-E6
53 57 4235-H6
54 58 622-L0
55 53 4131-A6
56 50 500-Z0
57 62 4130-A6
58 60 6120-C9
59 64 4130-A9
60 56 4220-W8
61 59 6129-Q9
62 61 4191-MD9
63 66 4139-A9
64 63 4130-A3
65 65 4139-A3
66 67 310-G0
67 69 4130-A6
68 72 310-G0
69 71 310-G0
70 74 4123-O9
71 73 4221-R9
72 75 310-G0
73 78 310-G0
74 76 310-G0
75 83 4131-A6
76 79 6128-Q6
77 77 4125-O9
78 82 310-G0
79 85 4123-O9
80 87 310-G0
81 88 310-G0
82 84 4130-A6
83 86 4199-MD3
84 80 4310-UM9
85 81 310-G0

22
27
34

Boyce Rd
Grass Lake Rd
Pond Rd
Calhoun Rd
Redwood Rd
Pulp Rd
Panda Dr
Everett Rd
W Greenwood Rd
Claroskee Rd
Parrent Dr
Tunreck Dr
Cut Rd

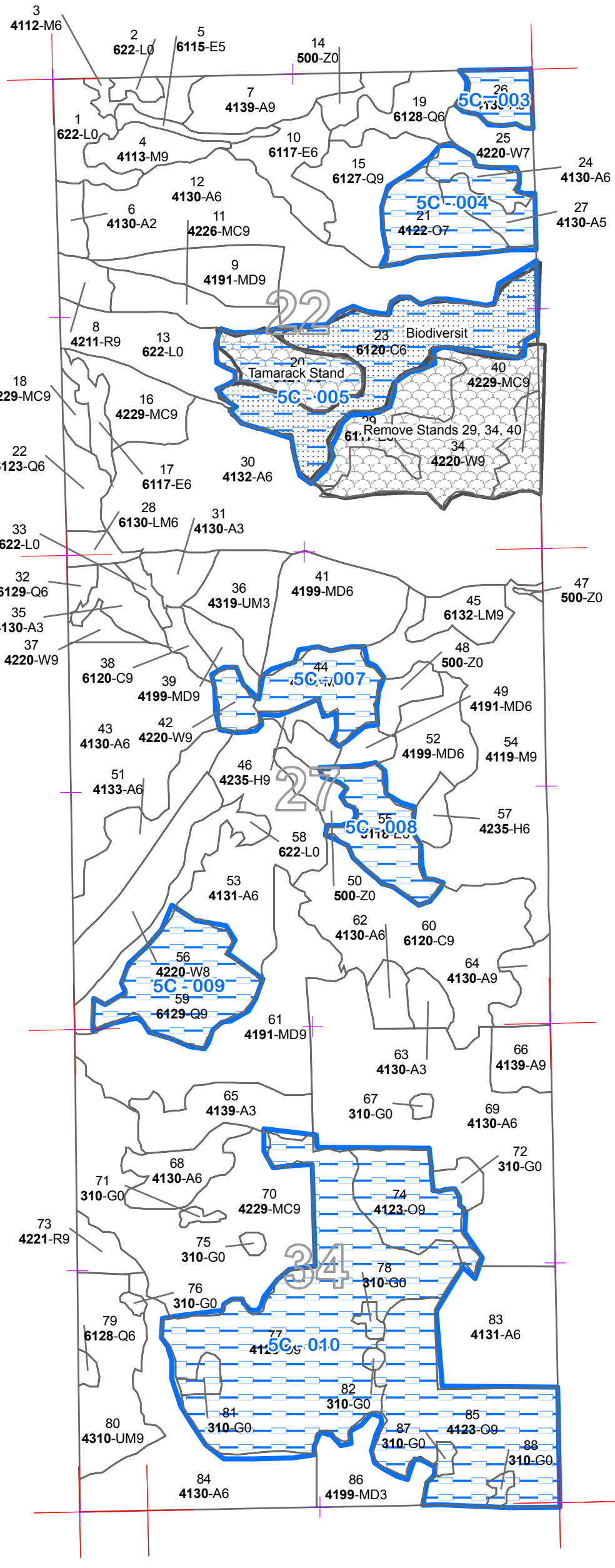
84°40'0"W
84°39'0"W
84°38'0"W
44°12'0"N
44°11'0"N
44°10'0"N

0 0.5 1 Miles

Special Conservation Areas & Site Conditions Map

84°40'0"W 84°39'0"W 84°38'0"W

44°12'0"N 44°11'0"N 44°10'0"N



Legend

- Miris Corners
- Remonumented Section Corners

Site Condition Available

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

Reviewable SCAs

- Proposed SCA
- SCA Removal
- Stand Boundaries

Report 1 – Total Acres by Cover Type and Age Class

Roscommon Mgt. Unit **Compartment 165 Year of Entry 2015**

Benjamin Wiese : 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	24	0	208	259	148	0	21	11	0	0	0	0	0	**682**
Cedar	0	0	0	0	0	0	0	0	0	63	0	0	60	0	**124**
Hemlock	0	0	0	0	0	0	0	0	4	0	6	0	0	0	**10**
Herbaceous Openland	19	0	0	0	0	0	0	0	0	0	0	0	0	0	**19**
Lowland Conifers	0	0	0	0	9	0	16	0	0	38	2	0	0	26	**90**
Lowland Deciduous	0	0	0	0	25	0	23	0	21	0	0	0	0	0	**68**
Lowland Mixed Forest	0	0	0	0	5	0	0	0	0	11	0	0	0	0	**17**
Lowland Shrub	65	0	0	0	0	0	0	0	0	0	0	0	0	0	**65**
Mixed Upland Deciduous	19	0	0	0	31	27	7	19	62	19	0	0	0	0	**185**
Natural Mixed Pines	0	0	0	0	0	0	98	24	0	0	0	0	4	0	**126**
Northern Hardwood	0	0	0	0	0	0	0	0	0	19	82	0	0	0	**101**
Oak	0	0	0	0	0	0	0	0	63	24	112	0	19	0	**219**
Red Pine	0	0	0	0	0	0	0	7	0	0	7	0	0	0	**13**
Tamarack	0	0	0	0	0	0	0	0	0	0	19	0	0	0	**19**
Upland Mixed Forest	0	0	0	0	19	0	0	0	0	0	31	0	0	0	**50**
Water	22	0	0	0	0	0	0	0	0	0	0	0	0	0	**22**
White Pine	0	0	0	0	0	16	0	24	44	0	0	6	0	0	**90**
Total	**137**	**24**	**0**	**208**	**348**	**190**	**144**	**95**	**205**	**176**	**258**	**6**	**83**	**26**	**1899**

Report 2 – Proposed Treatment Summaries

Roscommon Mgt. Unit
Year of Entry 2015

Compartment 165
Total Compartment Acres: 1,899

Acres by Treatment Type

Commercial Harvest - 405	Tree Planting - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 5	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
	0	0	0	0	6	0	**6**
Aspen Types	192	0	11	0	0	0	**203**
Mixed Upland Deciduous	0	62	0	0	0	0	**62**
Natural Pines	9	0	0	0	44	0	**53**
Northern Hardwood	0	82	0	0	0	0	**82**
Total	**201**	**143**	**11**	**0**	**50**	**0**	**405**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
	71165_OutOfYOE-Cut	5.7					Harvest	Low Thinning	42260 - Natural Pine, Mixed Deciduous	Fld. Tr. Bdy. - Pending Approval

Prescription Specs: thin to 90-120 SF/Acre so as to enhance old growth/bio-diversity characteristics

Other Comments: stand has a dense A/RM understory which will need to be addressed with appropriate sale specs, save W3 understory where possible, treat with stand to the west in 71163 (same stand)

Next Steps:

Proposed Start Date: 10/01/2012

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
7	**71165007-Cut**	20.7	4139 - Aspen, Mixed Deciduous	High Density Log	75		Harvest	Clearcut with Reserves	413 - Aspen	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Final harvest, clearcut with reserves to a 2" diameter. The reserves should be the red and white pine monarchs and pole size red maple and white pine with healthy crowns. The average basal area should be less than 10 square feet per acre.

Other Comments: This stand is seasonally wet and access is difficult. A road will have to be built from the North through compartment 140 stand 95.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30	**71165030-Cut**	121.6	4132 - Aspen, Jack Pine	High Density Pole	51		Harvest	Clearcut with Reserves	413 - Aspen	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Clearcut with reserves to 2" diameter. Leave conifer 4" and less mark some healthy oak to leave. To benefit wildlife create one brush pile per two acres at least eight feet in diameter and four feet high.

Other Comments: Consider leaving one or more retention pockets along Pond Rd.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
34	**71165034-Cut**	44.3	42200 - Natural White Pine	High Density Log	84	171-200	Harvest	Low Thinning	4220 - Natural White Pine	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Thin from below to increase residual stem diameter and canopy growth. Promote the growth of pole and log, single stem, quality red maple. Leave the healthiest and best formed trees. Residual basal area of 90-110.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
40	**71165040-Cut**	8.8	42290 - Natural Mixed Pine	High Density Log	74	111-140	Harvest	Clearcut with Reserves	429 - Mixed Upland Conifers	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Clearcut and plant red pine. Do not cut the aspen. Protect white pine saplings as practical, expect some damage. Leave some jack pine for a seed source.

Other Comments: The stand should regenerate to mixed pine with deciduous. This stand should be cut before the harvest of stand 34 and used as a landing.

Next Steps: Trench and plant red pine, sight prep as needed.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
54	71165054-Cut	81.5	4119 - Mixed Northern Hardwoods	High Density Log	107	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Continue uneven-aged management. Thin to a resisual basal area of 80.

Other Comments: Manage with stand 5 in compartment 167 to the east. Set up in 2014 along with stand 5.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
61	71165061-Cut	61.8	4191 - Mixed Upland Deciduous with Conifer	High Density Log	85	111-140	Harvest	Single Tree Selection	4191 - Mixed Upland Deciduous with Conifer	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Thin to maintain an uneven-aged, mixed upland stand by leaving the best formed and healthy trees regardless of species or diameter to a residual basal area of 70-90. Leave most of the beech to promote diversity. Leave some den or potential den trees.

Other Comments: Use an understory protection spec. but expect damage.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
64	71165064-Cut	10.1	4130 - Aspen	High Density Log	47	111-140	Harvest	Clearcut with Reserves	413 - Aspen	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Final harvest, clearcut with reserves. Leave healthy large crown oak, maple and pine as reserve trees.

Other Comments: Harvest in 2014 with adjacent stand 13 in cmopartment 167.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
66	71165066-Cut	10.8	4139 - Aspen, Mixed Deciduous	High Density Log	85	81-110	Harvest	Seed Tree with Reserves	413 - Aspen	Fld. Tr. Bdy. - Incomplete

Prescription Specs: The harvest will be part seedtree with reserves and part clearcut with reserves. Seedtree harvest leaving 20-40 BA of oak, red maple and basswood in the north part of the stand. Clearcut with reserves in the rest of the stand where the aspen is dense. Leave some of the better quality red maple poles.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
83	71165083-Cut	39.3	4131 - Aspen, Oak	High Density Pole	36	111-140	Harvest	Clearcut with Reserves	413 - Aspen	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Final harvest, clearcut with reserves to a 2" diameter. Mark to leave some good formed potential sawlog oak and maple, in clumps if possible.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
72	NF_71165072-NonFor	4.6	3102 - Grass				Non-Forest Management	Other - Specify	3102 - Grass	Fld. Tr. Bdy. - Incomplete

Prescription Specs: WLD managed opening for rye. Maintain as needed.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

Total Treatment Acreage Proposed: 409.4

Report 4 -- Treatments Prescribed with a Limiting Factor

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

Roscommon Mgt. Unit | **Compartment 165**

Ben Wiese : Examiner | **Year of Entry 2015**

Availability for Management

Total Acres	Acres Available	Acres Not Available	Dominant Site Conditions	No	5C
681	681		**Aspen**	646	36
123	123		**Cedar**	68	55
10	10		**Hemlock**	9	1
90	90		**Lowland Conifers**	54	36
68	68		**Lowland Deciduous**	46	22
17	17		**Lowland Mixed Forest**	17	
185	185		**Mixed Upland Deciduous**	161	23
126	126		**Natural Mixed Pines**	124	2
101	101		**Northern Hardwood**	100	1
218	218		**Oak**	0	218
13	13		**Red Pine**	13	
19	19		**Tamarack**		19
50	50		**Upland Mixed Forest**	50	
89	89		**White Pine**	83	6
1,790	1,790		Total Forested Acres	1,372	418
	100%		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
003		**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	10				
Comments:								
004		**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	37				
Comments:								

005	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	78
Comments:			
007	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	27
Comments:			
008	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	22
Comments:			
009	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	37
Comments:			
010	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	218
Comments:			

Report 6 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Biodiversit	Potential Old Growth		**SCA**	54.7
Comments				
Tamarack Stand	Spring-Seeps, Riparian Areas	Spring Seep	**SCA Removal**	18.8
Comments				
Does not meet sca criteria				
Remove Stands 29, 34, 40	Potential Old Growth		**SCA Removal**	73.5
Comments				

Report 7 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

Conservation Area	Type	Description

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
3	4112 - Maple, Beech, Cherry Association	High Density Pole	7.3	97	81-110	Seasonally wet red maple and conifer stand. Scattered low spots. Trace ammounts of paper birch and aspen.
4	4113 - R.Maple, Conifer	High Density Log	11.9	95	81-110	Red maple mixed with white pine and a small percentage of aspen which is senescing and trace ammounts of paper birch and oak. The red maple age is based on the stand to the north. The white pine is uneven aged, some poles are just entering the canopy. There are super canopy red and white pine.
5	6115 - Lowland Ash	Medium Density Pole	4.6	61	1-50	Stand is lowland ash and maple, water flows from the southeast. Understory is balsam fir and alder.
6	4130 - Aspen	Medium Density	5.8	7		Aspen with oak, chery, maple and jack pine. Regen is
7	4139 - Aspen, Mixed Deciduous	High Density Log	20.7	75		Mature aspen stand with red maple, pit and mound topography wetter to the north the pine is very good. White pine of various heights is well developed in the understory, in some places just reaching into the canopy. The aspen is beginning to senesce the east part of the stand has more aspen in the canopy and the west side has more red maple in the canopy. White pine is mostly super canopy. The white pine understory density is full in some places and low in others.
8	42110 - Planted Red Pine	High Density Log	6.6	102	141-170	Mature red pine stand that is pasrt of a larger stand to the west. The stand has nice cabin logs and utility poles, the understory is fully stocked.
9	4191 - Mixed Upland Deciduous with Conifer	High Density Log	19.3	79	81-110	Mised stand with red maple and white pine. The red maple is two-aged and is the dominant canopy species. There are trace red pine and white oak log size trees. There is very little subcanopy development.
10	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	17.4	49	51-80	Mixed lowland deciduous with some conifer.
11	42260 - Natural Pine, Mixed Deciduous	High Density Log	15.2	70	51-80	Mixed upland stand that borders a lowland white pine age and size is variable and difficult to age. The understory is well develpoed.
12	4130 - Aspen	High Density Pole	83.9	30	51-80	Quaking aspen stand that looks like it was diamter limit cut in the past. Aspen is of various ages and diamters. The aspen is of poor quality. Oak is present but the stocking is low. White pine saplings are scattered throughout the understory.
15	6127 - Lowland Pine	High Density Log	26.1	Uneven Age	81-110	Uneven aged vigorous white pine stand with scattered deciduous. Balam fir understory is dense in places. Fire scarred white pine stumps.
16	42290 - Natural Mixed Pine	High Density Log	16.9	60	81-110	Mixed pine mostly red pine with white pine and jack pine. The red pine is growing very well, good potential for power poles excellent red pine site. Fire scarred white pine stumps present.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	7.2	40	51-80	Lowland red maple and white pine, the red maple is at least two aged. There is a beaver pond ni the middle of the stand.
18	42290 - Natural Mixed Pine	High Density Log	4.0	136	111-140	Small natural mixed pine stand surrounded by wetland. White pine and red pine are mixed and 90 plus feet tall. The subcanopy is well developed with white pine and balsam fir. Age was estimated because the increment borer was to small.
19	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	15.5	65		
20	6121 - Tamarack	High Density Log	19.0	101	81-110	Tamarack with some red maple and balsam fir. Lowland stand with variable density.
21	4122 - Oak, Pine	Low Density Log	19.0	125	1-50	Stand was harvested in clearcut 2007 by harvesting all trees except white oak, white pine and black cherry. Trace balsam fir.
22	6123 - Lowland Fir	High Density Pole	9.1	47	51-80	Lowland balsam fir and red maple. Part of stand has a small pond made from a beaver dam and is non forested.
23	6120 - Lowland Cedar	High Density Pole	55.7	178	111-140	Lowland mixed conifer with super canopy white pine and a dense subcanopy.
24	4130 - Aspen	High Density Pole	8.2	50	81-110	Medium to poor quality quaking aspen stand with white pine in the understory in the west part of the stand.
25	42200 - Natural White Pine	Low Density Log	11.5	53	1-50	Stand was clearcut in 2007 by cutting all trees except white oak, white pine and black cherry. Regen height and density is variable, stocking is adequate. Trace ammount of red pine.
26	4130 - Aspen	High Density Log	9.7	50	111-140	Aspen stand with a strip of red maple and oak running east and west through the center of the stand. Age is based on aspen to the south. Trace ammount of white oak.
27	4130 - Aspen	Medium Density Pole	8.4	50	81-110	Aspen stand with jack pine isolated to the north.
28	6130 - Fir, Aspen, Maple	High Density Pole	5.1	40	81-110	Lowland stand with balsam fir and red maple. The fir is of variable age and diameters.
29	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	18.6	62	51-80	Lowland red maple and conifer. The red maple is mostly single stem poles and is multi aged.
30	4132 - Aspen, Jack Pine	High Density Pole	121.6	51		Quaking aspen stand with semi open areas and areas with white pine and jack pine.
31	4130 - Aspen	High Density Sapling	8.1	18		Aspen stand approximately 15-20 years old, mixed with cherry, white pine and balsam fir.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
32	6129 - Mixed Coniferous Lowland Forest	High Density Pole	3.1	91		
34	42200 - Natural White Pine	High Density Log	44.3	84	171-200	Natural white pine stand, with some red pine. The basal area is high in many places, the trees are crowded. This site grows excellent pine. The stand would benefit from thinning. There are at least two cohorts of white pine in the canopy, there is the log/pole size which is 84 years old and a x size of older larger trees.
35	4130 - Aspen	High Density Sapling	9.6	18		Aspen stand year of origin 1995.
36	4319 - Mixed Upland Forest	High Density Sapling	18.6	47		Stand is two-aged with white pine being the dominant canopy species. Harvest in 2006 by cutting all trees 5" or more dbh except white oak, white pine and black cherry.
37	42200 - Natural White Pine	High Density Log	4.2	57	51-80	
38	6120 - Lowland Cedar	High Density Log	4.7	143	111-140	Lowland mixed conifer, mostly cedar and red maple. A small creek flows north through the stand. 17" beech growing in the middle of the stand along the creek.
39	4199 - Other Mixed Upland Deciduous	High Density Log	7.1	62	111-140	Mixed upland stand with aspen that is senescing, Oak is healthy and growing well but sawlog quality is medium to poor. Balsam fir is present but mostly to the north.
40	42290 - Natural Mixed Pine	High Density Log	8.8	74	111-140	Mixed pine with scattered quaking aspen. Red pine log size trees are scattered throughout. White pine understory.
41	4199 - Other Mixed Upland Deciduous	High Density Pole	31.4	44	81-110	Mixed aspen with deciduous. The stand density is variable, there are some open areas. The aspen is in patches interspersed with oak and maple. The stand appears to have beeen harvested roughly 30 years ago, by removing merchantable pulp.
42	42200 - Natural White Pine	High Density Log	5.7	117	141-170	Very nice mature white pine stand with a creek that flows to the north. Oak is mostleto the east part of the stand where the elevation is slightly higher.
43	4130 - Aspen	High Density Pole	62.7	37		
44	4191 - Mixed Upland Deciduous with Conifer	High Density Log	19.1	98	111-140	Mixed upland stand with medium quality oak sawlogs and super canopy white and red pine. The sub canopy is well developed.
45	6132 - Mixed Lowland Forest with Cedar	High Density Log	11.5	95	111-140	Lowland mixed conifer with deciduous, with scattered super canopy white pine.
46	42350 - Upland Hemlock	High Density Log	4.3	82	111-140	Hemlock stand that is seasonally wet with super canopy white pine, trace paper birch and oak and a red maple understory.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
49	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	5.3	51	81-110	Aspen and red maple. The red maple is mostly multi stemmed and looks like it was cut in the past. There is a dense balsam fir understory and super canopy red pine. There is a hemlock pocket south of the two trail.
51	4133 - Aspen, Mixed Pine	High Density Pole	21.8	37	51-80	Mixed deciduous with pine. Clones of bigtooth aspen scattered through stand. Stocking is variable. There is a pocket of red and white pine logs in the north part of the stand.
52	4199 - Other Mixed Upland Deciduous	High Density Pole	21.4	51	111-140	This stand is mostly two-aged. There is beech scattered in the canopy and sub-canopy. There is scattered super canopy red oak and scattered ash log trees. There is trace paper birch and some yellow birch. The red maple is both single and multi stemmed of good quality, the poles should develop into good sawlogs.
53	4131 - Aspen, Oak	High Density Pole	54.3	44	81-110	This stand is mostly aspen with oak and red maple of various diameters. It looks like the red maple was removed sometime in the past because there is a cohort of muli stemmed red maple. There are paper birch poles growing mostly on old white pine stumps.
54	4119 - Mixed Northern Hardwoods	High Density Log	81.5	107	81-110	This is a northern hardwoods stand that was thinned in 1998. It consists of large dominant red oak, sugar maple, red maple, beech birch, basswood, and ash. The ash has emerald ash borer. There is more red maple in the northwest part of the stand and also balsam fir in the understory. There are some wet runs with cedar in the north pasrt of the stand. The beech is unevenly distributed. The slash from the previous harvest is mostly decayed.
55	6118 - Lowland Deciduous with Cedar	High Density Pole	20.8	85	81-110	Mostly quaking aspen with a balsam fir understory, there is also red maple and white pine. The stand is seasonally wet in areas and there is some cedar, mostly along the southwest edge.
56	42200 - Natural White Pine	Medium Density Log	24.0	77	51-80	This stand was harvested in 2006 by clearcutting and leaving all trees except white oak, white pine, and black cherry with a 5" or more dbh. The stand has at least three cohorts, a cohort of white oak, one of white pine and one of recently regenerated oak and maple. The oak and maple regenerated in 2006 is considered the understory.
57	42350 - Upland Hemlock	High Density Pole	5.6	105	111-140	Hemlock stand with red oak.
59	6129 - Mixed Coniferous Lowland Forest	High Density Log	34.9	97	171-200	Stand is hemlock and white pine with some maple and a small ammount of oak and some scattered quaking aspen. This site is unique there are low wet areas low hills or upland ridges.
60	6120 - Lowland Cedar	High Density Log	63.5	99	111-140	This stand is lowland cedar mixed with other conifer and deciduous.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
61	4191 - Mixed Upland Deciduous with Conifer	High Density Log	61.8	85	111-140	Stand was thinned in 1999. The canopy is upland deciduous with white pine and scattered red pine. The white pine is mostly log sized in dense pockets that need to be thinned and also unevenly distributed within the stand. the understory is well developed and dense in some areas. There is some beech in the understory mostly in the north and east part of the stand. There is an old grade that runs SW-NE through the stand.
62	4130 - Aspen	High Density Pole	6.6	14		Aspen stand regenerated in 1998.
63	4130 - Aspen	High Density Sapling	6.0	5		Aspen stand that was regenerated in 2007.
64	4130 - Aspen	High Density Log	10.1	47	111-140	Bigtooth aspen stand entering log size.
65	4139 - Aspen, Mixed Deciduous	High Density Sapling	22.8	45		This stand was harvested in 1997 by cutting all trees 2" or more in diamter except green marked trees.
66	4139 - Aspen, Mixed Deciduous	High Density Log	10.8	85	81-110	This stand is mostly upland but transitions to lowland north of the road where there are some wet areas. The aspen is mostly located in the south part of the stand. There is some white ash and basswood north of the road. The red maple sub canopy is dense in the south part of the stand, the heights are variable and some of the vigorous trees are reaching into the canopy.
68	4130 - Aspen	High Density Pole	15.6	42	141-170	Aspen stand stand just reaching log size. There is some scattered white pine. The subcanopy is of variable density.
69	4130 - Aspen	High Density Pole	104.6	45	141-170	Large aspen stand mostly big tooth, mixed with red maple and oak.
70	42290 - Natural Mixed Pine	High Density Log	81.3	65	1-50	This stand was harvested in 2009 by cutting all merchantable trees except white oak, red pine and white pine. The age and diameter is variable. There is an ORV trail that runs through tthe stand. The canopy density is variable it ranges from low stocking to overstocked.
73	42211 - Natural Red Pine, Mixed Deciduous	High Density Log	6.6	70	111-140	This stand is mostly red pine and is likely representative of the adjacent stand before it was harvested. The aspen is senescing. The sub-canopy is well develpoed, mostly red maple and white pine the white pine is reaching into the canopy in some places.
74	4123 - Red Oak	High Density Log	24.3	95	111-140	This is a nice red oak stand on a good site that was previously harvested by removing the aspen. This is the quality long-lived red oak, the core showed that there was a growth response to the harvest. These trees are healthy.
77	4125 - Black, N. Pin Oak	High Density Log	112.0	103	81-110	This stand is mixed oak with white pine. The oak is med. to poor sawlog quality. The pine is growing very well. The subcanopy is mostly white pine, it is very well established in the west part of the stand. There is a ~3 acre pocket of red and white pine in the east part of the stand. This stand is converting to white pine.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
79	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	1.7	103		
80	4310 - Pine, Oak Mix	High Density Log	31.3	103	51-80	
83	4131 - Aspen, Oak	High Density Pole	39.3	36	111-140	Aspen stand, both quaking and bigtooth with some oak and red maple.
84	4130 - Aspen	High Density Pole	51.5	44	111-140	Bigtooth aspen stand mixed with red oak an dred maple, the aspen just entereing log class. There is red maple in the understory but it is unevenly distributed. White oak is present but in trace ammounts.
85	4123 - Red Oak	High Density Log	63.3	87	81-110	This stand was harvested in 1996 by cutting all of the aspen and red maple with at least one pulp stick. The canopy species are primarily red oak of good quality. Where the basal area is currently 100 or less there was a good growth response to the thinning, it took about three years for the annual diameter growth to increase. Two dominant trees were cored from this stand, the ages were 87 and 97. The aspen and maple sub-canopy is well developed and growing vigorously.
86	4199 - Other Mixed Upland Deciduous	High Density Sapling	19.3	5		This stand was regenerated in 2007. It is fully stocked with patches of open areas, that will likely fill in. The stump sprout red maple and aspen are 10-15 feet in height. The oak regen is both single stem and stump sprout, the single stem is less than 5 ftt tall and the stump sprouts are 5-10 ft tall.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6220 - Alder/willow	14.4	No	Unspecified	
2	6220 - Alder/willow	3.0	No	Unspecified	
13	6220 - Alder/willow	27.4	No	Unspecified	
14	50 - Water	6.8	No	Unspecified	
33	6220 - Alder/willow	3.4	Unspecified	Unspecified	Scattered white pine.
47	50 - Water	0.4	No	Unspecified	
48	50 - Water	7.2	Unspecified	Unspecified	Old beaver pond with standing dead and wind thrown trees.
50	50 - Water	7.5	No	Unspecified	flooded beaver pond with standing dead trees.
58	6220 - Alder/willow	16.4	No	Unspecified	Grass and alder.
67	3102 - Grass	1.3	Unspecified	Unspecified	
71	3102 - Grass	1.4	No	Unspecified	
72	3102 - Grass	4.6	No	Unspecified	
75	3102 - Grass	1.3	No	Unspecified	
76	3102 - Grass	1.1	No	Unspecified	Cover is an estimate because conditions were snowy at the time of inventory. Looks like an old landing.
78	3102 - Grass	1.9	No	Unspecified	
81	3102 - Grass	3.2	No	Unspecified	Looks like there is sand grass and knapweed.
82	3102 - Grass	1.1	No	Unspecified	Site of old fire tower.
87	3102 - Grass	1.5	No	Unspecified	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
88	3102 - Grass	1.6	No	Unspecified	May have been used as a landing to harvest the adjacent stands.