



Compartment Review Presentation

Escanaba Forest Management Unit

Compartment 33086

Entry Year 2020

Acreage: 838

County Delta

Management Area: Dead Horse Moraines

Revision Date: 2018-06-25

Stand Examiner: Dan Racine

Legal Description:

T41N, R23W Sections 21, 22, and 28

Identified Planning Goals:

The compartment has a mix of lowland with upland ridges. The major lowland cover type is tamarack and the major upland cover type is aspen. There are 294 acres proposed for treatment within this compartment for this year of entry. The majority of these treatments are designed to address forest health issues of Eastern Larch Beetle (ELB) within the tamarack cover type. The harvests within the aspen cover type are designed to continue to distribute the age classes. All harvests will require the access through private property.

Soil and topography:

The topography within this compartment is mostly level. The soils within this compartment consist of Carbondale, Cathro, Charlevoix, Ensley, and Trenary.

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

The compartment is small and isolated from other state lands. Private property surrounds this compartment with some agricultural land holdings.

Unique Natural Features:

None

Archeological, Historical, and Cultural Features:

None known

Special Management Designations or Considerations:

None

Watershed and Fisheries Considerations:

NLMMU - Northern Lake Michigan Management Unit. No Fisheries Concerns.

Wildlife Habitat Considerations:

The majority of this small compartment is wet tamarack forest and mixed swamp conifer. Although wildlife species richness is not high in this type of forest community, some wildlife species are adapted to these conditions, including several types of warblers, snowshoe hare, and spruce grouse. Access to the public is very limited. A parking lot was constructed on Co. Rd. 519 in 2000 using a grant from Wildlife Unlimited of Delta County. This provides a place to park and penetrate into the southern portion of the area, but for all practical purposes, this compartment is accessible only by surrounding landowners. Several aspen stands were harvested and regenerated in past decades providing habitat for early successional wildlife. Aspen stands will be regenerated this year of entry to maintain a diverse age class of aspen. This decade, several acres of tamarack stands are mature and dying out due to Eastern Larch Beetle and will likewise be regenerated. Two upland brush stands in the northern portion of the compartment will be retained for wildlife use. They will function as woodcock singing and roosting grounds, turkey and grouse brood range, deer foraging areas, and other wildlife purposes.

Mineral Resource and Development Concerns and/or Restrictions

Active sand/gravel pits are located in the area. There appears to be gravel and bedrock limestone potential within the compartment. No economic oil and gas production has been found in the UP. There has been historical iron ore exploration in the region associated with magnetic anomalies. Past drilling efforts did find iron formations, but at true vertical depths of greater than 1000 feet, it is unlikely to be economical to develop (if it were even of sufficient quality). There is no history of mineral leasing within the compartment.

Vehicle Access:

There is a quarter mile of frontage along county road 519 on the west side with a designated parking lot. There is no access for vehicles into the interior of the compartment.

Survey Needs:

Additional corners may need to be requested for proposed treatments.

Recreational Facilities and Opportunities:

A parking lot was created off county road 519 for walking access to the interior of the compartment. The major recreational pursuit within this compartment is hunting. Also, camping and hiking opportunities exist.

Fire Protection:

There are no hazard fuels in this area.

Additional Compartment Information:

**** Cover type details, proposed treatments and stands designated as FDF are listed in the attached reports:

Cover Type by Age Class

Cover Type by Management Objective

Compartment Volume Summary

Proposed Treatments – No Limiting Factors

Proposed Treatments – With Limiting Factors

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

Base feature information, stand numbers, cover types

Proposed treatments

Proposed road access system

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

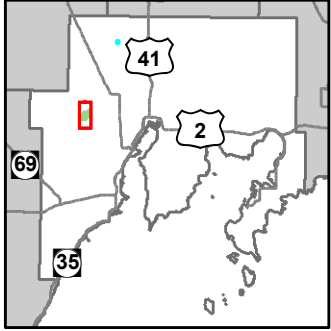
Proposed treatments

Site condition boundaries

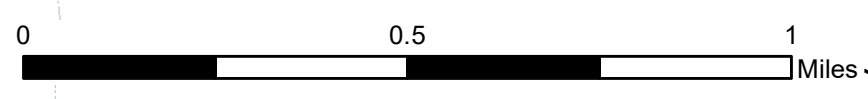
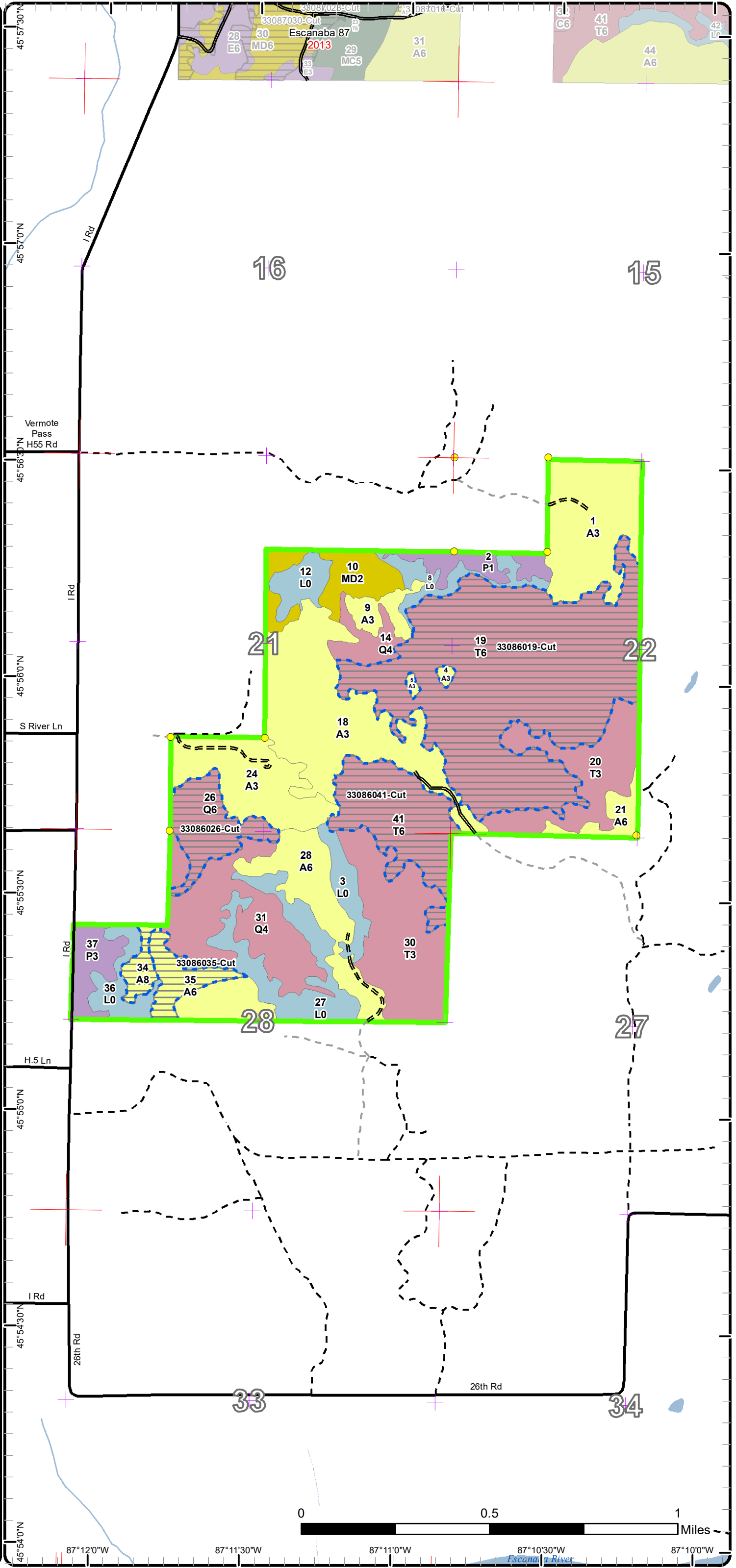
Details on the road access system

Cover Type & Treatments Map

Compartment: 86
 T41N - R23W Sec. 21, 22, 28
 County: Delta
 Unit: Escanaba
 Mgmt Area: Dead Horse Moraines
 YOE: 2020
 Acres: 838 GIS Calculated
 Examiner: Dan Racine
 Map Revised: 6/26/2018
 Map Phase: Web - Post



- Miris Corners
- ⊕ Remonumented Section Corners
- Survey Grade Corners
- ▭ Compartment Boundary
- ▭ Treatments with Site Conditions
- ▭ Clearcut (w/Reserves)
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 622 - Lowland Shrub
- Lakes



45°54'0"N 87°12'0"W 87°11'30"W 87°11'0"W 87°10'30"W 87°10'0"W
 Escanaba River

Report 1 – Total Acres by Cover Type and Age Class



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	92	95	0	46	29	0	0	0	7	0	0	0	0	0	0	0	0	269
Lowland Aspen/Balsam Poplar	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Lowland Conifers	0	0	0	0	0	0	0	0	30	61	0	0	0	0	0	0	0	0	91
Lowland Shrub	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83
Mixed Upland Deciduous	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Tamarack	0	0	0	0	98	0	0	0	247	0	0	0	0	0	0	0	0	0	345
Total	83	92	95	51	144	29	0	0	277	68	0	0	0	0	0	0	0	0	839



Report 2 – Treatment Summary

Escanaba Mgt. Unit

Year of Entry: 2020

Acres of Harvest

Compartment 86

Total Compartment Acres: 838

Commercial Harvest -
 Harvests with Site Condition - 294
 Next Step Harvest - 0
 Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	21	0	0	0	0	0	0	0	0	21
Lowland Conifers	26	0	0	0	0	0	0	0	0	26
Tamarack	247	0	0	0	0	0	0	0	0	247
Total	294	0	0	0	0	0	0	0	0	294

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	294	0	0	0	0	0	0	0	0	294
Next Step	0	0	0	0	0	0	294	0	0	294
Total	294	0	0	0	0	0	294	0	0	588



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
19	33086019-Cut	199.5	6121 - Tamarack	Poletimber Well	75	81-110	Harvest	Clearcut with Retention	6121 - Tamarack	Even-Aged	Proposal

Habitat Cut: No **Site Condition: Unknown Access**

Prescription Specs: Clearcut with retention: Cut all trees except leave retention patches throughout the stand. This area is being harvested due to tamarack past mature age and signs of Eastern Larch Beetle throughout the stand.

Next Step Treatments: Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Tamarack, black spruce, and acceptable regeneration of aspen, balm, and spruce fir in the upland islands.

Other Comment: This stand is limited factor: Requiring access through private property. The retention patches may vary in size. Approximately 1 acre and spread throughout the stand but these patches may be larger and total approximately 15-20 acres in total. Retention for all areas of aspen regeneration and any pockets of minor component species. The amount of retention within the stand may be higher than the typical 3-10%.

Proposed Start Date: 10/01/2019

26	33086026-Cut	25.7	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	75	81-110	Harvest	Clearcut with Retention	612 - Lowland Coniferous Forest	Even-Aged	Proposal
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Habitat Cut: No **Site Condition: Unknown Access**

Prescription Specs: Clearcut with retention: Cut all trees except leave retention of the cedar along the southwest portion of the stand. This stand is being harvested due to eastern larch beetle and spruce budworm concerns. The tamarack and spruce are mature.

Next Step Treatments: Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Tamarack, Spruce, and mixed conifer species. Acceptable regeneration of mixed deciduous.

Other Comment: Limited factor: This stand will require private access.

Proposed Start Date: 10/01/2019

34	33086034-Cut	6.9	4134 - Aspen, Spruce/Fir	Sawtimber Medium	83	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No **Site Condition: Unknown Access**

Prescription Specs: Clearcut: Cut all trees. This stand will be harvested with stand 35 to regenerate this stand to aspen and allow for the age diversity within the aspen types within this compartment.

Next Step Treatments: Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Aspen, mixed upland conifers

Other Comment: Limited factor: This stand access is best through the private landowner to the south, potentially from the landowner to the north using the northwest/southeast grade. Not very feasible but potential access from the state to the west. This stand did have a treatment prior inventory cycle but was not harvested.

Proposed Start Date: 10/01/2019

35	33086035-Cut	14.4	4130 - Aspen	Poletimber Well	43	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No **Site Condition: Unknown Access**

Prescription Specs: Clearcut with retention: Cut all trees except leave retention along the boundary line. This stand will be harvested along with stand 34 to continue to distribute the ages of the aspen acreage within the compartment.

Next Step Treatments: Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Acceptable regeneration of aspen, balm, mixed upland deciduous and conifer species.

Other Comment: This stand will be limited factor due to unknown if access through private property. Access through the state is not a good option but may be possible if necessary.

Proposed Start Date: 02/20/2018



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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
41 33086041-Cut	47.6	6121 - Tamarack	Poletimber Well	71	81-110	Harvest	Clearcut with Retention	6121 - Tamarack	Even-Aged	Proposal

Habitat Cut: No Site Condition: Unknown Access

Prescription Clearcut with retention: Cut all trees except leave interior retention patches of about 1 acre leaving a mix of trees and seed trees. This stand has signs of Eastern Larch Beetle along with the other mature tamarack stands within this compartment.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Regen: Tamarack, Black Spruce

Other Comment: Limit factor: Access will require permission through the private land owners. The best access is from the southeast. The number of the retention patches will be determined at time of sale prep. Retention may be higher than the 3-10% requirement.

Proposed Start Date: 10/01/2019

Total Treatment Acreage Proposed: 294.1

Report 4 – Site Conditions

Escanaba Mgt. Unit
Dan Racine : Examiner

Compartment: 86
Year of Entry: 2020

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	2B	5C	3G
		With Condition	Not Available				
269	248	21	0	Aspen	21		
28	28	0	0	Lowland Aspen/Balsam Poplar			
90	0	40	49	Lowland Conifers	30	11	49
83	83	0	0	Lowland Shrub			
23	23	0	0	Mixed Upland Deciduous			
345	98	247	0	Tamarack	247		
838	479	309	49	Total Forested Acres	298	11	49
	57%	37%	6%	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	2B: Unknown if access through adjacent landowner(s) is possible	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
2	Available	2B: Unknown if access through adjacent landowner(s) is possible	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	3G: Other Influence zones - See comments	50	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Sparse timber with significant Lowland brush and poor quality.							

Report 4 – Site Conditions

Escanaba Mgt. Unit
 Dan Racine : Examiner

Compartment: 86
 Year of Entry: 2020

4	Available	2B: Unknown if access through adjacent landowner(s) is possible	200	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	2B: Unknown if access through adjacent landowner(s) is possible	48	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Available	2B: Unknown if access through adjacent landowner(s) is possible	30	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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
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Comments

Mgt. Unit

Compartment:

Year of Entry



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
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	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4130 - Aspen	Sapling Well	52.9	16	Immature	This stand was harvested during the winter of 2002 under contract #33-010-01-01 "Highstepping Aspen". Some open low areas with cattails, tag alder, willow, and tamarack.
2	6111 - Lowland Balsam Poplar	Sapling Poor	13.1	26	Immature	Two stands combined to one with an upland brush type and sparse aspen stand. Portion of the stand are low ground with no timber and low ground with scattered balm. The east is more to aspen.
4	4139 - Aspen, Mixed Deciduous	Sapling Well	1.2	6	Immature	This stand was cut under the Hanson Ridge sale. There is a trace amount of hemlock in the cover type. The west/southwest portion is heavier to balm and lowland ash and the northwest portion is the same. These may be broken off as separate stands over time. Pockets of 25-50% timber with tag alder. Some is big tooth aspen on the ridge. Trace amounts of cedar along with black spruce as well.
5	4139 - Aspen, Mixed Deciduous	Sapling Well	1.0	6	Immature	This stand was cut under the Hanson Ridge sale. There is a trace amount of hemlock in the cover type. The west/southwest portion is heavier to balm and lowland ash and the northwest portion is the same. These may be broken off as separate stands over time. Pockets of 25-50% timber with tag alder. Some is big tooth aspen on the ridge. Trace amounts of cedar along with black spruce as well.
9	4139 - Aspen, Mixed Deciduous	Sapling Well	9.1	6	Immature	This stand was cut under the Hanson Ridge sale. Composed mostly of aspen and balm regeneration.
10	4199 - Other Mixed Upland Deciduous	Sapling Medium	22.6	26	Immature	Northwest portion is more of a G type on the NW corner with a mix of apen and balm surrounding a marsh. This stand is open in some places. Ground bumpy, hummocks, grass, sedge. Somewhat wet soil.
14	6124 - Lowland Spruce-Fir	Poletimber Poor	10.9	83	1-50	Very wet sparse timber site. The tamarack is mostly dead here now. Limited factor poor quality site.
18	4139 - Aspen, Mixed Deciduous	Sapling Well	80.6	6	Immature	This stand was cut under the Hanson Ridge sale. There is a trace amount of hemlock in the cover type. The west/southwest portion is heavier to balm and lowland ash and the northwest portion is the same. These may be broken off as separate stands over time. Pockets of 25-50% timber with tag alder. Some is big tooth aspen on the ridge. Trace amounts of cedar along with black spruce as well.
19	6121 - Tamarack	Poletimber Well	199.5	75	81-110	Tamarack stand with signs of ELB. The ELB appears along the edge and within pockets of the stand. There are ridges within the stand, some were cut under the hanson ridge timber sale and a few ridges were not harvested. Minor component of red maple, aspen, and balm in the overstory.
20	6121 - Tamarack	Sapling Well	39.9	36	Unspecified	Was cut in 1982. TS 46-80-1. Seed trees left. Seed trees along the western portion along with pockets of tag alder and lowland brush to the east.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4130 - Aspen	Poletimber Well	12.7	37	81-110	Cut in 1981. TS 47-80-1. 2010 update=> Dan North fire in eastern portion of stand. The western island is a little smaller and a few years younger. Ready next treatment period.
24	4130 - Aspen	Sapling Well	42.0	14	Immature	A patch of hemlock along the north line about half way across. Minor component of cedar and paper birch along with the hemlock. Significant browse in the red maple saplings. This stand was harvested winter of 2004 under contract #33-017-00-01 "I Road Aspen"
26	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	29.5	75	81-110	More tamarack in this stand than other species. Pockets in the northern portion of the stand are more to Q type. Access through private. Difficult sale with skid road needed into stand through state unless able to access through private property.
28	4130 - Aspen	Poletimber Well	33.7	35	51-80	
30	6121 - Tamarack	Sapling Well	58.0	36	Unspecified	Cut in 1982. TS 46-80-1. Cedar was left. Overall mostly a mix of tamarack and tag alder.
31	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Poor	49.5	82	1-50	The upland portion is a couple of small islands of timber. Not enough timber to go after here. Scattered tamarack that is more dead than alive and significant L type areas.
34	4134 - Aspen, Spruce/Fir	Sawtimber Medium	6.9	83	51-80	The balsam fir is dead or dying. There is spotty cedar here with some dead aspen. The understory is F and A and L. The best access is through private property.
35	4130 - Aspen	Poletimber Well	29.2	43	81-110	This stand was cut in 1975. TS 35-74A/86. The stand will be treated along with stand 34, which is an older stand that is falling apart. The best access will be through private property, either the north or south side of stand with the access through the state not really feasible through the L type to the west.
37	6112 - Lowland Aspen	Sapling Well	15.0	24	Immature	This stand was part of the old grad aspen sale. Lot of browse by deer of the balm and aspen regeneration. Pockets along road are heavier to aspen. There is black ash throughout with some in the overstory and some in the understory. Parking lot was incorporated into this stand on the southwest corner.
41	6121 - Tamarack	Poletimber Well	47.6	71	81-110	Signs of ELB along the stand line to the south and spotty interior signs.



Stand	Cover Type	Acres	Managed Site	General Comments:
3	6229 - Mixed lowland shrub	11.7	No	Lowland shrub type to the west of tamarack regeneration. Some scattered trees.
8	6229 - Mixed lowland shrub	12.6	No	There is some scattered trees within this stand but mostly tag alder and willow and lowland shrub type.
12	6229 - Mixed lowland shrub	10.7	No	Lowland shrub stand with tag alder, willow, balm balsam fir aspen and black ash.
27	6229 - Mixed lowland shrub	34.7	No	There is scattered trees here with tamarack, birch, spruce, and fir. Overall this is majority an L stand with the scattered trees.
36	6229 - Mixed lowland shrub	13.2	No	There is some scattered balm, balsam fir, and black ash. Overall an Lowland shrub stand here.