Sault Forest Management Unit
Compartment Review Presentation

Compartment #31 **Entry Year: 2012**
Compartment Acreage: 2,253 **County: Chippewa**

Revision Date: 06/22/2010

Stand Examiner: Jeff Wise

Legal Description: T42N R1W Secs 13-15, 22-26

Identified Planning Goals ('Management Area' or 'RMU', if applicable): Huron Patterned Outcrop

Management Goals: Management this YOE will focus on selectively harvesting approximately half the hardwood acreage. This will enable the remaining half to be treated in ten years providing full rotation of hardwood management in the comp. Even-aged management will focus on several hard to access areas that were attempted in past YOE. Cover types include aspen, birch, spruce, and fir with a cedar component and will be restricted to winter treatments due to deer yards nearby, and sensitive soils.

Soil and Topography: Markey and Carbondale mucks in the north part where winter treatments will take place. The middle area with hardwoods and upland aspen consist of Kalkaska sands. The remaining portions of the comp have a varied array of soil types along with rocky ledges.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Generally, the compartment is a contiguous block of State ownership with many parcels of private land extending into the block from the east and west, making survey needs extensive. These consist of permanent and seasonal homes and cabins. The land to the north is Compartment 30. Hessell airport is on the western boundary and that facility has been maintaining a glide path on State land for many years. Land use is mainly hunting, trail riding, and snowmobiling. Mushrooms have been located here but activity is unknown.

Unique, Natural Features: MNFI has been referenced in relation to treatments. Peek-A-Boo Hill, a steep ridge running NW/SE, mostly through the private land in Section 23, provides spectacular views of the Les Chenaux Islands.

Archeological, Historical, and Cultural Features: None known at this time.

Special Management Designations or Considerations: None at this time.

Watershed and Fisheries Considerations: This compartment contains portions of Pearson Creek, Hessel Creek (mislabeled as Mackinac Creek on map), and McKay Creek (mislabeled as Pollard Creek on map), all of which are cold-transitional trout streams. The proposed treatments are appropriate for the protection of these streams.

Wildlife Habitat Considerations: Compartment 31 is located northeast of Hessel and just inland from Lake Michigan in the Les Cheneaux Island area. Cedar and other mixed conifer stands, both upland and lowland, are common here. Some areas of northern hardwoods, and mixed deciduous and lowland deciduous stands are also present. The compartment provides habitat for species such as white-tailed deer, ruffed grouse, snowshoe hare, bobcat, beaver, muskrat, and a number of migratory birds. This site is located in an important place for numerous bird species that migrate through this area, providing an area to rest and

feed. Most of the compartment lies within deer yard, providing important cover for wintering white-tailed deer. Several hardwood stands will be thinned to promote age class and structural diversity. Buffers will be placed along wetlands and other waterbodies. Timber harvests will take place during the winter months, allowing residual tops to be available as browse for wintering deer. Oak, hemlock, cedar, yellow birch, and large white pine will be left as well as some large wolfy trees and a component of beech (typically 2-5 per acre where present) in hardwood stands. Cedar stands will be protected to provide cover for deer and other species. Marsh and other wetland habitat will be protected to provide habitat for beaver, muskrat, and waterfowl.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of a mixture of lacustrine (lake) sand and gravel, glacial outwash sand and gravel postglacial alluvium and thin to discontinuous glacial deposits over bedrock. The glacial drift thickness varies between 10 and 50 feet. The Silurian Engadine Group subcrops below the glacial drift. This formation is quarried for stone/dolomite four miles to the east. There are many gravel pits to the east, and portions of the compartment should have good potential. There is no economic oil and gas production in the UP, currently.

Vehicle Access: The compartment is sandwiched between M-129 to the east, and Three Mile Rd to the west with no State owned frontage. Linderman/Norwhich Rd bisects the comp, connecting the two highways (m-129 & Three Mile Rd.). Several logging spurs allow limited access to other portions of the compartment. The snowmobile trail follows the Lindernman /Norwich Rd and an additional snow trail extends north via an old winter road which is impassable in summer.

Survey Needs: Secs 15 and 23. See map for treatment details.

Recreational Facilities and Opportunities: The snowmobile trail runs through the compartment connecting the Bay City lake area to M-129 and Cedarville. No ORV trails but trail riding on forest roads is common. Hunting and dispersed camping are the main activities. Some mushrooming may take place as morels have been found here. The Les Cheneaux Nordic Ski trail loop is on an old logging road off the Blind Line Rd in Section 25.

Fire Protection: Access is generally good. However, the bridge over Hessel Creek will not hold fire equipment. Until the bridge is replaced the compartment can be accessed from Three Mile Rd as well as Linderman/Norwich Rd. There is also an access on the snowmobile trial from Blind Line Rd through the treatment ponds. Water sources are limited but Hessell Creek can be access in a few locations, and Lake Huron is a few miles away.

Additional Compartment Information: None.

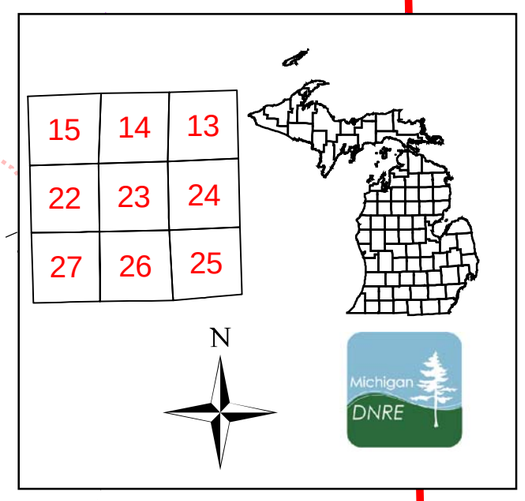
- **The following reports from the Inventory are attached:**
  - **Total Acres by Cover Type and Age Class**
  - **Proposed Treatment Summary**
  - **Proposed Treatments – No Limiting Factors**
  - **Proposed Treatments – With Limiting Factors**
  - **Stand Details (Forested and Nonforested)**
  - **Dedicated and Proposed Special Conservation Areas**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - **Base feature information, stand boundaries, cover types, and numbers**
  - **Proposed treatments**
  - **Details on the road access system**

Cover Type & Treatment Map

Compartment 031
T42N, R01W, Sec. 13 - 15, 22 - 27
County: Mackinac
Unit: Sault Ste. Marie
YOE: 2012
Acres: 2,253 GIS Calculated
Stand Examiner: Jeffrey Wise
Map Revised: 8/13/2010
Map Phase: Pre-Review

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



84°26'0"W 84°25'0"W 84°24'0"W 84°23'0"W 84°22'0"W
46°3'0"N 46°2'0"N 46°1'0"N 46°0'0"N

Chard Rd
Dandelion Trl
Swede Rd
Bay City Lake Rd
Nordquist Rd
Nye Rd
Pollard Creek
Pollock Lake
Mud Lake
Pearson Creek
Ospry Ln
Peek A Boo Hill Rd
S Plank Ln
Rudd Rd
Blind Line Rd
State Ave
4 Mile Block Rd
Meridian Rd
Club Rd
Mary L Ln
Weston Ave
Hodeck St
Alley
Cedar St
Isington Rd
Wilson Ave

15 14 13 22 23 24 27 26 25

1 4136-A2
2 4226-MC6
3 4199-MD6
4 4115-M9
5 6132-LM6
6 6128-Q6
7 4116-M3
8 4119-M6
9 622-L0
10 622-L0
11 4139-A3
12 4134-A6
13 6139-LM6
14 6124-Q2
15 4191-MD6
16 6120-C6
17 6118-E6
18 6120-C6
19 623-N0
20 4191-MD6
21 622-L0
22 429-MC8
23 623-N0
24 6112-P3
25 4134-A2
26 6120-C6
27 4139-A6
28 6120-C6
29 429-MC6
30 6120-C6
31 4319-UM6
32 6120-C6
33 4191-MD1
34 6120-C6
35 4115-M9
36 6117-E6
37 622-L0
38 4319-UM6
39 6128-Q6
40 4136-A2
41 4319-UM6
42 4139-A6
43 6120-C6
44 4115-M9
45 4319-UM6
46 4238-MC6
47 6132-LM9
48 4229-MC6
49 4134-A5
50 6139-LM6
51 6120-C6
52 623-N0
53 500-Z0
54 622-L0
55 622-L0
56 4238-MC6
57 4119-M5
58 623-N0
59 622-L0
60 6128-Q6
61 500-Z0
62 623-N0
63 310-G0
64 4119-M6
65 6128-Q6
66 6112-P6
67 622-L0
68 4238-MC5
69 6139-LM6
70 4199-MD6
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72 4319-UM9
73 4236-C6
74 500-Z0
75 4136-A3
76 6139-LM1
77 622-L0
78 500-Z0
79 6120-C6
80 6128-Q6
81 622-L0
82 4199-MD6
83 6120-C6
84 622-L0
85 6111-P3
86 622-L0
87 429-MC9
88 6120-C6

Legend

- Miris Corners
- Remonumented Section Corners
- Bridges
- Structures
- RLS Corners
- Highway
- Paved Roads
- Poor Dirt Roads
- Closed Roads
- Trails
- ORV Trails
- Privately Maintained Ski Trail
- Motorcycle Trails
- Snowmobile Trails
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers

Treatments
- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)

Forest Stands
Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed 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
- 623 - Emergent Wetland

1 0.5 0 1 Miles

Stand Boundary Map

Compartment 031
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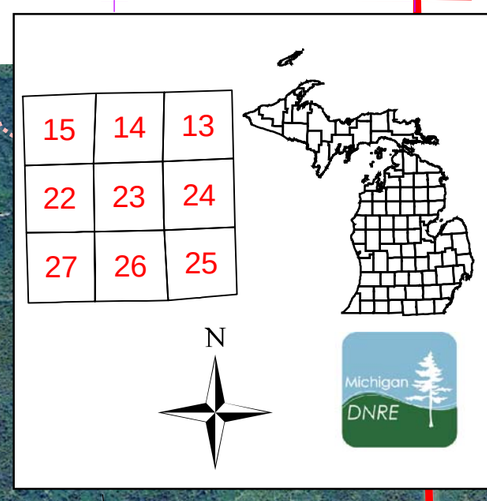

Legend

- Miris Corners
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- Structures
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- Privately Maintained Ski Trail
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- Intermittent Stream/Drain
- Stream
- Stand Boundaries

Forest Stands

Level 3

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

Non-Forest Stands

Level 3

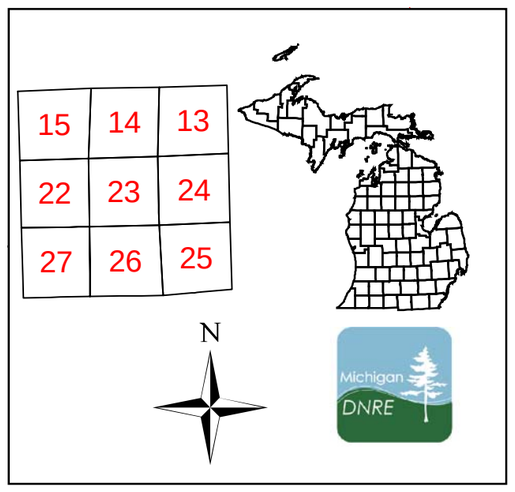
310 - Herbaceous Openland
500 - Water
622 - Lowland Shrub
623 - Emergent Wetland

1 0.5 0 1 Miles

Dedicated & Proposed Special Conservation Area Map

Compartment 031
T42N, R01W, Sec. 13 - 15, 22 - 27
County: Mackinac
Unit: Sault Ste. Marie
YOE: 2012
Acres: 2,253 GIS Calculated
Stand Examiner: Jeffrey Wise
Map Revised: 8/13/2010
Map Phase: Pre-Review

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



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19 623-N0
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70 4199-MD6
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83 6120-C6
84 622-L0
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15 14 13 22 23 24 27 26 25

1 0.5 0 1 Miles

Legend

- Miris Corners
- Remonumented Section Corners
- Stand Boundaries

Proposed Special Conservation Areas

- SCA - Special Conservation Area

Great Lakes Islands

- Great Lakes Islands
- Deer Wintering Areas
- Cold Water Streams
- Boat Access Sites
- Coastal Environmental Areas
- Ecological Reference Areas

Forest Stands

Level 3

411 - Northern Hardwood
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Non-Forest Stands

Level 3

310 - Herbaceous Openland
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Table 1 – Total Acres by Cover Type and Age Class

Sault Ste. Marie Mgt. Unit **Compartment 031 Year of Entry 2012**

Data updated before 2:00 PM

Age Class

	Non-Forested	1-9	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	0	0	37	129	46	0	0	0	0	0	0	0	0	0	0	**213**
Cedar	0	0	0	0	0	0	0	0	0	11	33	349	0	198	0	**591**
Herbaceous Openland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
Lowland Aspen/Balsam Poplar	0	0	11	58	0	0	0	0	0	0	0	0	0	0	0	**69**
Lowland Conifers	0	0	0	0	0	10	0	0	0	0	23	94	0	48	0	**174**
Lowland Deciduous	0	0	0	0	0	0	0	0	0	0	0	19	0	14	0	**33**
Lowland Mixed Forest	0	0	0	0	102	0	0	0	0	0	22	15	25	38	0	**202**
Lowland Shrub	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**195**
Marsh	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**46**
Mixed Upland Deciduous	0	21	0	67	0	0	0	10	0	0	18	17	0	0	0	**134**
Natural Mixed Pines	0	0	0	0	0	0	0	5	0	0	0	29	0	0	0	**34**
Northern Hardwood	0	10	0	0	0	0	0	0	9	0	0	264	0	10	0	**293**
Upland Conifers	0	0	0	0	0	0	0	0	14	0	30	0	0	57	0	**100**
Upland Mixed Forest	0	0	0	0	0	0	0	0	9	0	86	6	0	45	0	**147**
Water	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**18**
Total	**263**	**31**	**48**	**254**	**147**	**10**	**0**	**16**	**31**	**11**	**211**	**793**	**25**	**410**	**0**	**2253**

Table 2 – Proposed Treatment Summaries

Data updated before 2:00 PM

Sault Ste. Marie Mgt. Unit
Year of Entry 2012

Compartment 031
Total Compartment Acres: 2253

Acres by Treatment Type

Commercial Harvest - 474	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Lowland Conifers	15	88	0	0	0	0	**103**
Lowland Deciduous	33	0	0	0	0	0	**33**
Lowland Mixed Forest	37	0	0	0	0	0	**37**
Mixed Upland Deciduous	41	0	0	0	0	0	**41**
Natural Mixed Pines	0	5	0	0	0	0	**5**
Northern Hardwood	0	178	0	0	0	0	**178**
Upland Conifers	68	0	0	0	0	0	**68**
Upland Mixed Forest	9	0	0	0	0	0	**9**
Total	**203**	**271**	**0**	**0**	**0**	**0**	**474**

Table 3 -- Treatments Prescribed with No Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
4	45031004-Cut	16.2	4115 - Y.Birch, Hemlock NH	High Density Log	100	Harvest	Single Tree Selection	Y.Birch, Hemlock NH	Cmpt. Review Proposal

Prescription Specs: Mark to 80 BA, except do not mark hemlock, pine, yellow birch, or aspen.

Other Comments:

Next Steps: Follow up treatment with regeneration survey as per work instructions. Regenerationof present speicies accceptable.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
8	45031008-Cut	79.8	4119 - Mixed Northern Hardwoods	High Density Pole	100	Harvest	Single Tree Selection	Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Mark to 80 Basal Area. Do not mark oak, hemlock, cedar, pine, or yellow birch, leave some big wolfy dead/dying beech for wildlife but mark according to presence of BBD.

Other Comments: Survey needed. Winter cut- deer yard.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Regeneration of present species acceptable.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
13	45031013-Cut	8.4	6139 - Mixed Lowland Forest	High Density Pole	97	Harvest	Clearcut with Reserves	Mixed Lowland Forest	Cmpt. Review Proposal

Prescription Specs: Harvest all species except oak, cedar, hemlock, white pine sawlogs, and yellow birch if present. Some white pine pulp may need to be harvested for operational efficiency.

Other Comments: No survey needed, but would be useful. Winter cut - deer yard

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Regeneration of present species acceptable.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
15	45031015-Cut	18.2	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	97	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal

Prescription Specs: Harvest all species except oak, cedar, hemlock, pine, and yellow birch if present.

Other Comments: No survey needed. Winter cut - deer yard.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Regeneration of present species acceptable.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
20	45031020-Cut	12.6	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	108	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal

Prescription Specs: Harvest all species except cedar, oak, pine, hemlock, and yellow birch if present.

Other Comments: Winter cut - deer yard, access from snow trail, frozen conditions needed to access.

Next Steps: Follow up treatment with regeneration survey as per work instructions. Regeneration of present species acceptable.

Table 3 -- Treatments Prescribed with No Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
36	**45031036-Cut**	18.7	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	107	Harvest	Clearcut with Reserves	Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal

Prescription Specs: Harvest all species except oak, cedar, hemlock, pine, and yellow birch if present.

Other Comments: Survey needed. Winter cut - deer yard.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Regeneration of present species acceptable

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
38	**45031038-Cut**	9.0	6130 - Fir, Aspen, Maple	High Density Pole	74	Harvest	Clearcut with Reserves	Fir, Aspen, Maple	Cmpt. Review Proposal

Prescription Specs: Harvest all species except pine, oak, hemlock, cedar, and yellow birch if present.

Other Comments: Winter cut - deer yard

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Regeneration of present species acceptable

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
39	**45031039-Cut**	9.2	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	96	Harvest	Clearcut with Reserves	Lowland Coniferous, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Harvest all species except cedar, oak, hemlock, pine, and yellow birch if present.

Other Comments: winter cut -deer yard

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Regeneration of present species acceptable.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
46	**45031046-Cut**	13.6	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Pole	74	Harvest	Clearcut with Reserves	Non Pine Upland Conifer, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Harvest all species except oak, hemlock, pine, cedar, and yellow birch if present.

Other Comments:

Next Steps: Follwow up treatment with a regeneration survey as per work instructions. Regeneration of present species acceptable.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
64	**45031064-Cut**	72.5	4119 - Mixed Northern Hardwoods	High Density Pole	100	Harvest	Single Tree Selection	Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Mark to 80 Basal Area, do not mark oak, pine, hemlock, cedar, or yellow birch and leave some big wolfy dead/dying beech, but mark according to presence of BBD.

Other Comments: No survey needed but would be useful. Winter cut - deer yard

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Regeneration of present species acceptable.

Table 3 -- Treatments Prescribed with No Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
65	**45031065-Cut**	5.9	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	102	Harvest	Clearcut with Reserves	Lowland Coniferous, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Harvest all species except cedar, oak, hemlock, pine, and yellow birch if present.

Other Comments: winter cut-deer yard.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Regeneration of present species acceptable.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
71	**45031071-Cut**	9.7	4119 - Mixed Northern Hardwoods	High Density Pole	100	Harvest	Single Tree Selection	Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Mark to 80 Basal area, do not mark oak, pine, hemlock, cedar, or yellow birch, and leave some big wolfy dead/dying beech, but mark according to presence of BBD.

Other Comments: No survey needed. Winter cut - deer yard.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Regeneration of present soecies acceptable.

Total Treatment Acreage Proposed: 273.7

Table 4 -- Treatments Prescribed with a Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
2	**45031002-Cut**	5.2	42260 - Natural Pine, Mixed Deciduous	High Density Pole	60	Harvest	Single Tree Selection	Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Mark pine as needed to thin and release crop trees. Leave large wolfy trees for aesthetics. Recommend to allow cutting in snow free season...its pine.

Other Comment: deer yard, survey needed.

Next Steps: Follow up treatment with regeneration harvest as per work instructions. Regeneration and release of pine desired but will accept any other species present.

Limiting Factor and No Treatment Reason: 2H: Survey needed

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	**45031003-Cut**	10.5	4199 - Other Mixed Upland Deciduous	High Density Pole	60	Harvest	Clearcut with Reserves	Other Mixed Upland Deciduous	Cmpt. Review Proposal

Prescription Specs: Harvest all species except oak, hemlock, pine , cedar, and yellow birch if present.

Other Comment: Winter cut - deer yard survey needed.

Next Steps: Follow up treatment with regeneration survey as per work instructions. Regeneration of present speices acceptable.

Limiting Factor and No Treatment Reason: 2H: Survey needed

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	**45031005-Cut**	14.0	6132 - Mixed Lowland Forest with Cedar	High Density Pole	91	Harvest	Clearcut with Reserves	Mixed Lowland Forest with Cedar	Cmpt. Review Proposal

Prescription Specs: Harvest all species except cedar, oak, hemlock, pine and yellow birch if present.

Other Comment: Survey good but wet and wet access through State would be off snow trail, very frozen conditons only.

Next Steps: Follow up treatment with regeneration survey as per work instructions. Regeneration of present species acceptable.

Limiting Factor and No Treatment Reason: 2F: Too wet
Also wet access, and snow trail through State, private access may not be possible, very frozen conditions only.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
17	**45031017-Cut**	14.0	6118 - Lowland Deciduous with Cedar	High Density Pole	124	Harvest	Clearcut with Reserves	Lowland Deciduous with Cedar	Cmpt. Review Proposal

Prescription Specs: Harvest all species except oak, pine, cedar, hemlock, and yellow birch if present.

Other Comment: Access from snow trail in winter only, very frozen conditons needed to freeze road in, winter cut - deer yard.

Next Steps: Follow up treatment with regeneration survey as per work instructions. Regeneration ofm present species acceptable.

Limiting Factor and No Treatment Reason: 2F: Too wet
Aslo need road frozen in.

Table 4 -- Treatments Prescribed with a Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
50	**45031050-Cut**	15.1	6139 - Mixed Lowland Forest	High Density Pole	104	Harvest	Clearcut with Reserves	Mixed Lowland Forest	Cmpt. Review Proposal

Prescription Specs: Harvest all species except cedar, oak, hemlock, pine, and yellow birch if present.

Other Comment: Wintert cut - deer yard, wet and has a lot of cedar, access would be through private with frozen conditions only.

Next Steps: Follow up treatment with regeneration survey as per work instructions. Regeneration of present species acceptable.

Limiting Factor and No Treatment Reason: 2H: Survey needed
Also too wet and has a lot of cedar.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
60	**45031060-Cut**	88.0	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	104	Harvest	Group Selection	Lowland Coniferous, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Harvest all species except oak, hemlock, pine, yellow birch, and some cedar.

Other Comment: Not deer yard but this stand could only be harvested in frozen conditions and woulld requrie cedar cutting to be operationally feasible, or clumps left uncut, which means lots of retention. No cut recommended.

Next Steps: Follow up treatment with regeneration survey as per work instructions. Regeneration of present species acceptable.

Limiting Factor and No Treatment Reason: 1E: Cedar or hemlock restraints
All of them... actually, its wet, and would require a lot of frozen road though cedar stands to access. Typed in OI as cedar.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
87	**45031087-Cut**	54.1	429 - Mixed Upland Conifers	High Density Log	138	Harvest	Clearcut with Reserves	Mixed Upland Forest	Cmpt. Review Proposal

Prescription Specs: Harvest all species except cedar, oak pine, hemlock, and yellow birch. Highly recommend cutting in snow free season due to ski trail.

Other Comment: Deer yard, only problem with winter cutting is the ski trail. Upland type and could be cut in snow free season if an exception could be made.

Next Steps: Follow up treatment with regeneration survey as per work instructions. Regeneration of present species acceptable.

Limiting Factor and No Treatment Reason: 3D: Recreational site
Ski trail, if cut, highly recommend to cut in snow free season.

Total Treatment Acreage Proposed: **200.8**

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4136 - Aspen, Mixed Conifer	Medium Density	37.4	17		Cut in 1993
2	42260 - Natural Pine, Mixed Deciduous	High Density Pole	5.2	60		Nice natural pine stand with aspen under story, age is from aspen, large oaks as well.
3	4199 - Other Mixed Upland Deciduous	High Density Pole	10.5	60		New stand type from west end of 6.
4	4115 - Y.Birch, Hemlock NH	High Density Log	16.2	100	111-140	Not much understory, mostly bare ground, has a little of everything but mostly hemlock, red maple, and yelow birch.
5	6132 - Mixed Lowland Forest with Cedar	High Density Pole	14.0	91		Lines and corners are in, corner has not been monumented, just metal post and transit lines.
6	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	13.3	91		"A river runs through it"...Hessell Creek, plus other drainages from stand 26, boulders and gullys, was part of old sale -never cut.
7	4116 - Mixed N. Hardwood - Aspen	High Density Sapling	10.4	5		Glide path for Hessel airport, like an M3 type
8	4119 - Mixed Northern Hardwoods	High Density Pole	79.8	100	111-140	Nice stand , many poles, beech does not show scale here, Understory has a little of everything but is open and bare ground in many places.
11	4139 - Aspen, Mixed Deciduous	High Density Sapling	5.3	25		Cut in 1985, just becoming pole size, some larger trees left on steep hillsides.
12	4134 - Aspen, Spruce/Fir	High Density Pole	10.9	33		Cut in 1977, just becoming pole size
13	6139 - Mixed Lowland Forest	High Density Pole	8.4	97		Corners are in
14	6124 - Lowland Spruce-Fir	Medium Density	10.2	40		40 year old cedar cut strips, took just a quick look, still in sapling stage.
15	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	18.2	97		Corner on north end needs re-witnessing, no monument, only post with K tag, south west end has a bit of lowland, may paint out of sale area.
16	6120 - Lowland Cedar	High Density Pole	20.6	127		Valley of lowland with Hessell Creek and where bridge over Hessell Creek needs replacing, cannot drive through sometimes,
17	6118 - Lowland Deciduous with Cedar	High Density Pole	14.0	124		Looks like stand 4, 19, or 35 on the imagery so its probably aspen, balm, birch, fir, spruce, and cedar.
18	6120 - Lowland Cedar	High Density Pole	43.5	127		About the same as 26,

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
20	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	12.6	108		OI says its birch, fir and cedar, but I suspect it has some aspen and spruce as well,
22	429 - Mixed Upland Conifers	Medium Density Log	3.3	127		Understory was cut some years ago and white pine reserved.
24	6112 - Lowland Aspen	High Density Sapling	44.5	26		Wet, wet, wet, and its on top of the hill. stand 20 is draining through this stand and down the road.
25	4134 - Aspen, Spruce/Fir	Medium Density	19.3	22		Cut in 1988, old comments say oak planted but survival unsure, deer yard and heavy browsing.
26	6120 - Lowland Cedar	High Density Pole	21.3	100		Wet, swampy, brushy type of cedar.
27	4139 - Aspen, Mixed Deciduous	High Density Pole	16.0	28		Cut in 1982, approaching pole size
28	6120 - Lowland Cedar	High Density Pole	194.2	100		Not really low and boggy or swampy but has drainages flowing into 5 and Hessell Creek, never forund the source but could walk around, very thick with cedar.
29	429 - Mixed Upland Conifers	High Density Pole	11.9	96		Nice stand of mature pine for the public
30	6120 - Lowland Cedar	High Density Pole	11.7	98		Thick, thick, thick, more "swampy" than 31
31	4319 - Mixed Upland Forest	High Density Pole	80.2	96		
32	6120 - Lowland Cedar	High Density Pole	31.9	102		More wet and swampy cedar with some regen.
33	4191 - Mixed Upland Deciduous with Conifer	Low Density Sapling	20.9	7		Cut in 2003, thimble berries and raspberries abound
34	6120 - Lowland Cedar	High Density Pole	17.1	127		Hessell Creek runs through stand.
35	4115 - Y.Birch, Hemlock NH	High Density Log	85.5	100	81-110	Select cut in 2002-3, deer browsing.
36	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	18.7	107		Wet and low but there is a nice ridge of aspen and an old road up through it.
38	4319 - Mixed Upland Forest	High Density Pole	9.0	74		Mature, ready for treatment,
39	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	9.2	96		Stand has less cedar and could be managed, was part of an old sale - never cut, red lines still good.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
40	4136 - Aspen, Mixed Conifer	Medium Density	36.6	22		Deer browsing, some parts still open with raspberries and thimbleberries
41	4319 - Mixed Upland Forest	High Density Pole	5.6	96		
42	4139 - Aspen, Mixed Deciduous	High Density Pole	24.2	37		deer browse, becoming pole size, full regen, not much understory, can walk though/under quite easliy, trace of cherry
43	6120 - Lowland Cedar	High Density Pole	21.1	98		wet cedar stand with running and standing water.
44	4115 - Y.Birch, Hemlock NH	High Density Log	10.0	150	81-110	Huge trees, steep on the east side, left when stand 41 was cut. large maple, yellow birch, hemlock and cedar, good old growth candidate.
45	4319 - Mixed Upland Forest	High Density Pole	6.4	100	81-110	Aspen cc around it 37 years ago, parts picked over when stand 41 was cut, other parts too steep.
46	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Pole	13.6	74		Deer browse, old seed tree cut, regen is OK but looks "picked over"
47	6132 - Mixed Lowland Forest with Cedar	High Density Log	25.3	110		Aspen, birch, and fir cut in 2003 along east side.
48	42290 - Natural Mixed Pine	High Density Pole	28.8	106		Rocks-rocks -rocks, nice pine though
49	4134 - Aspen, Spruce/Fir	Medium Density Pole	10.8	37		Cut in 1973, deer browse, but most regen has reached past the deer and is fully stocked, becoming pole size.
50	6139 - Mixed Lowland Forest	High Density Pole	15.1	104		North tip is more or less an island, really an extension of stand 26 with what looks like a little more wetland deciduous types.
51	6120 - Lowland Cedar	High Density Pole	101.7	102		Vast stand of almost pure cedar, not really low, can walk through easily quite open, hemlock is on north boundary.
56	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Pole	10.4	95		One of the coolest stand I ever saw, Probably what stand 39 looked like before cutting. Semi-open with mature aspen, spruce and thimbleberries with a fringe of cedar along the south. I measured a 30" aspen still alive.
57	4119 - Mixed Northern Hardwoods	Medium Density Pole	8.5	74		Steep slope to drainage to Pearson creek, looks cut from the past.
60	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	88.0	104		West part is more or less islands of aspen and other mix of species, looks like mostly cedar.
64	4119 - Mixed Northern Hardwoods	High Density Pole	72.5	100	111-140	Snowmobile trail through stand, some deer browse in places, no regen in places (bare ground)

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
65	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	5.9	102		Not too much cedar to manage.
66	6112 - Lowland Aspen	High Density Pole	13.6	23		SE area was cut in 1987
68	42380 - Non Pine Upland Conifer, Mixed Deciduous	Medium Density Pole	7.3	96		Large boulders,some aspen was cut out years ago when 65 and 75 were cut.
69	6139 - Mixed Lowland Forest	High Density Pole	38.0	138		
70	4199 - Other Mixed Upland Deciduous	High Density Pole	66.8	28		Cut in 1982, approaching pole size, Peek-A-Boo Ski Trail
71	4119 - Mixed Northern Hardwoods	High Density Pole	9.6	100	111-140	Deer browse, access through pvt but road goes into stand.
72	4319 - Mixed Upland Forest	High Density Log	45.4	138		HUGE trees, cedar and sugar maple, Peek-A-Boo Ski Trail loops through, very steep on south end, good old growth candidate.
73	42360 - Upland Cedar	High Density Pole	11.4	89		Storage barn trespass from land owner to west
75	4136 - Aspen, Mixed Conifer	High Density Sapling	52.3	24		Illegal ORV trails on old skid trails,
76	6139 - Mixed Lowland Forest	Low Density Sapling	101.6	30		Age varies as some areas were cut in the early '90's, deer exclosures were installed then but most have been destroyed, one or two still function and WD monitors them for cedar and white pine regen...which has been reasonbly successful, much of this stand remains open and grassy/wet.
79	6120 - Lowland Cedar	High Density Pole	32.0	138		Borders State Rd and M-134.
80	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	47.6	138		Surrounds Mac County garage on State Rd and includes the fingers of timber left after the" Great Experiment of 1980" when Stand 77 was cut. Pretty much like stand 80
82	4199 - Other Mixed Upland Deciduous	High Density Pole	4.8	100		Small isolated hardood stand, probably never to be cut
83	6120 - Lowland Cedar	High Density Pole	66.8	138		More cedar and less wet and swampy than 32.
85	6111 - Lowland Balsam Poplar	High Density Sapling	11.0	15		2009 aquisition
87	429 - Mixed Upland Conifers	High Density Log	54.1	138		Semi open with BIG white pine, very scenic, Peek-A-Boo ski trail / hiking trail in summer, on old logging road blocked to vehicles. North part of stand new aquisitionin 2008.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
88	6120 - Lowland Cedar	High Density Pole	17.8	138		New aquisition 2009

Stand	Cover Type	Acres	Gen Cmts:
9	6223 - Inundated Shrub Swamp	2.0	
10	6223 - Inundated Shrub Swamp	5.3	
19	6239 - Mixed Emergent Wetland	2.4	
21	6223 - Inundated Shrub Swamp	5.1	
23	6239 - Mixed Emergent Wetland	5.5	
37	6223 - Inundated Shrub Swamp	11.0	
52	6239 - Mixed Emergent Wetland	28.5	
53	50 - Water	3.1	
54	6223 - Inundated Shrub Swamp	3.3	
55	6223 - Inundated Shrub Swamp	74.1	
58	6239 - Mixed Emergent Wetland	2.4	
59	6229 - Mixed lowland shrub	17.0	
61	50 - Water	1.7	
62	6239 - Mixed Emergent Wetland	7.0	
63	310 - Herbaceous Openland	4.0	
67	6223 - Inundated Shrub Swamp	44.0	
74	50 - Water	10.2	
77	6223 - Inundated Shrub Swamp	8.1	

Stand	Cover Type	Acres	Gen Cmts:
78	50 - Water	3.2	
81	6223 - Inundated Shrub Swamp	1.5	
84	6229 - Mixed lowland shrub	2.1	
86	6229 - Mixed lowland shrub	21.6	

7 – 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.

Data updated before 2:00 PM

Stand	SCA Type	SCA Name	Acres	Comments

8 – 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.

Data updated before 2:00 PM

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

Conservation Area	Type	Description
HCVA	Coastal Environmental Areas	The public designation process is defined by Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the Michigan Department of Environmental Quality (DEQ). This is an inactive program with no new areas currently under consideration by the DEQ.
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.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.