Newberry Forest Management Unit
Compartment Review Presentation
Compartment 035 Entry Year: 2012
Compartment Acreage: 2945 County: Luce

Revision Date: October 27, 2010

Stand Examiner: Richard Stevenson

Legal Description: T49N, R10W, P/O Sec 13, 24, 25 and 36
T49N, R09W, P/O Sec 18, 19, 30 and 31

Identified Planning Goals ('Management Area' or 'RMU',if applicable): Compartment 35 is located within the Deer Park Management Area. For further description of this management area, to to the following web site: http://www.midnr.com/publications/pdfs/forestslandwater/Ecosystem/EUP/final-MAsummaries/09_Deer_Park_MA_summary.pdf

Management Goals: Maintain or enhance the forest health, productivity, and diversity of the area through proper management. Enhance age class diversity. Jack Pine management on the west side is the focus this entry. Another focus is re-shaping the potential old growth Special Conservation Area to an Area of Interest as a Unique Area. Conform to the Two-Hearted Natural River Plan.

Soil and Topography: This area has sandy flat uplands with organic lowlands. There are short, steep slopes along the old drainage route for the East Branch of the Two-Hearted, and along the current position of the stream. The compartment is in the Rubicon-Dawson Association.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This is a well blocked-in portion of State Forest land. There are a few recreational properties along the East Branch of the Two-Hearted River. It would be useful to pursue acquisition where possible.

Unique, Natural Features: There is a lowland conifer area that is made up of several communities including bog and poor conifer swamp. A portion of this area was placed into the potential old growth Special Conservation Area during the last inventory cycle. In this inventory cycle, an Area of Interest has been created to include the lowland portion, and part of the upland near the East Branch of the Two Hearted. A Michigan Natural Features Inventory is desired in the AOI. There are also some bog features outside of the AOI. It is quite possible this area has never had any survey, other than the Kirtland Warbler Survey in stand 1. Black-backed woodpecker and Red-shouldered hawk nest in the lowland. Boreal Chickadee is found here in winter, and was heard here on the opening day of trout season 2010.

Archeological, Historical, and Cultural Features: There are no known sites here, but since the river corridor was used by native tribes, and later by logging interests, it is quite possible there are sites along the river that are not listed in the state's data base.

Special Management Designations or Considerations: East Branch Two-Hearted River is part of the designated Two-Hearted Natural River. Potential Old Growth designation is changing to a Unique Area of Interest.

Watershed and Fisheries Considerations: Fisheries Values
Excellent. Fisheries Division does not actively manage any waters in this compartment. But the East Branch Two-Hearted River is classified Type 1. It contains an excellent native brook trout population. Although steelhead are present during spring and chinook and pink salmon show up in good numbers during the fall season, they are generally not present during the regular trout season. This branch is not part of the extended season section of river. Chris Brown Lake, along the west side of the compartment, contains northern pike and perch, as well as lots of bullheads.

Wildlife Habitat Considerations: Compartment 35 lies in north central Luce county and is in the Grand Marais Sandy End Moraine and Outwash ecological sub-subsection. The west side of the compartment is comprised of jack pine stands with some scattered small aspen stands while the east side is more diverse with a variety of conifer stands including hemlock, mixed lowland conifer, mixed upland conifer, a fairly large spruce stand and several small non-forested wetlands. The East Branch of the Two-hearted river makes up most of the eastern boundary of the compartment.

Wildlife use will be enhanced by retaining some mature aspen in harvested stands to provide winter food sources for grouse as well as future den sites for cavity nesters. Scattered conifers will also be retained to provide cover and structural diversity in the stand. Mature trees of various species will be retained post harvest in jack pine stands to increase wildlife use. Wildlife species expected to use this compartment include ruffed grouse, white-tailed deer, black bear, moose, otter, mink, coyotes, gray wolves, snowshoe hare, fisher, and marten.

Mineral Resource and Development Concerns and/or Restrictions:
Sections 18, 19, 30 & 31, T49N-R9W, and Sections 24, 25 and 36, T49N-R10W Luce County
Surface sediments consist of lacustrine (lake) sand and gravel and coarse-textured glacial till. There is insufficient data to determine the glacial drift thickness. The Cambrian Munising Formation and the Precambrian Jacobsville Sandstone subcrop below the glacial drift. The Jacobsville has been used as a building stone in the past. Gravel pits are located six miles to the southeast. Potential may be good in Sections 31 and 36. There is no economic oil and gas production in the UP.

Vehicle Access: Access is generally good. County Road 414 runs along the north part of the compartment. Forest Trails Cris Brown Lake Road, the Shamrock Road, and a few other un-named trails offer further access. Cris Brown Lake Road and the Shamrock Road is used to access the three camps on the west side of the river.

Survey Needs: No survey needs at this time.

Recreational Facilities and Opportunities: Dispersed camping occurs at several locations. There is an ORV route that touches a small portion of the northeast edge of this compartment.

Fire Protection: This compartment is in the Two Hearted Zone Dispatch Area. It has a moderate potential for large fire growth because of the fragmented fuel types. Risk to private properties bordered by Pine types would be moderate. Modified suppression tactics may need to be considered for activities in the Two Hearted River riparian zone.

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 035
T49N, R10W, Sec. 13, 24, 25, 36
T49N, R09W, Sec. 18, 19, 30-32
County: Luce
Unit: Newberry
YOE: 2012
Acres: 2,945 GIS Calculated
Stand Examiner: Richard Stevenson
Map Revised: 10/29/2010
Map Phase: Pre-Review

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

13	18	
24	19	
25	30	
36	31	32

N

Michigan DNRE

East Branch Two Hearted River
Connor Lakes
Chris Brown Creek
Cris Brown Lake
County Road 410 East
County Road 414
County Road 435
Unnamed # 3 Luce Co

1 **4222**-J3
2 **4222**-J6
3 **4221**-R8
4 **622**-V0
5 **622**-D0
6 **622**-D0
7 **622**-D0
8 **6121**-T5
9 **4221**-R9
10 **622**-D0
11 **4212**-J5
12 **6120**-C5
13 **4222**-J1
14 **429** -MC1
15 **4112**-M1
16 **622**-V0
17 **4130**-A3
18 **6125**-Q5
19 **4222**-J6
20 **6122**-S6
21 **6122**-S4
22 **6128**-Q9
23 **6122**-S5
24 **622**-L0
25 **4133**-A3
26 **6127**-LM6
27 **6120**-C6
28 **4191**-MD6
29 **4136**-A6
30 **429** -MC6
31 **4222**-J6
32 **500**-Z0
33 **6125**-Q5
34 **500**-Z0
35 **622**-V0
36 **4132**-A6
37 **4130**-A3
38 **330**-U0
40 **4133**-A2
41 **4220**-W9
42 **330**-U0
43 **4133**-A3
44 **429** -MC1
45 **4130**-A3
46 **4133**-A6
47 **4220**-W9
48 **4312**-H9
49 **4212**-J6
50 **4115**-M6
51 **4222**-J6
52 **330**-U0
53 **4212**-J6
54 **330**-U0
55 **4112**-M6
56 **4133**-A3
57 **4311**-UM1
58 **330**-U0
59 **6129**-Q6
60 **330**-U0
61 **429** -MC2
62 **429** -MC5

13 18 24 19 25 30 36 31 32

Legend

- Miris Corners
- Remonumented Section Corners
- Berms
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Trails
- ORV Trails
- Motorcycle Trails
- Snowmobile Trails
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers
- Clearcut (w/Reserves, Patch/Strip)

Forest Stands

Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub

1 0.5 0 1 Miles

85°31'0"W 85°30'0"W 85°29'0"W 85°28'0"W 85°27'0"W
46°39'0"N 46°38'0"N 46°37'0"N 46°36'0"N 46°35'0"N

Stand Boundary Map

Compartment 035
T49N, R10W, Sec. 13, 24, 25, 36
T49N, R09W, Sec. 18, 19, 30-32
County: Luce
Unit: Newberry
YOE: 2012
Acres: 2,945 GIS Calculated
Stand Examiner: Richard Stevenson
Map Revised: 10/29/2010
Map Phase: Pre-Review

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

13 18 24 19 25 30 36 31 32

Legend

- Miris Corners
- Remonumented Section Corners
- Berms
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Trails
- ORV Trails
- Motorcycle Trails
- Snowmobile Trails
- Intermittent Stream/Drain
- Stream
- Stand Boundaries

Forest Stands

Level 3

411 - Northern Hardwood
413 - Aspen Types
419 - Mixed Upland Deciduous
421 - Planted Pines
422 - Natural Pines
429 - Mixed Upland Conifers
431 - Upland Mixed Forest
612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

330 - Low-Density Trees
500 - Water
622 - Lowland Shrub

1 0.5 0 1 Miles

Dedicated & Proposed Special Conservation Area Map

Compartment 035
T49N, R10W, Sec. 13, 24, 25, 36
T49N, R09W, Sec. 18, 19, 30-32
County: Luce
Unit: Newberry
YOE: 2012
Acres: 2,945 GIS Calculated
Stand Examiner: Richard Stevenson
Map Revised: 10/29/2010
Map Phase: Pre-Review

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

13 18
24 19
25 30
36 31 32
N

Michigan DNRE

Legend
- Miris Corners
- Remonumented Section Corners
- Stand Boundaries

Proposed Special Conservation Areas
- SCA - Special Conservation Area
- SCA Removal

Dedicated Special Conservation Areas
- Cold Water Streams
- Natural Rivers Zoning District
- Natural Rivers Vegetative Buffer

Forest Stands

Level 3
411 - Northern Hardwood
413 - Aspen Types
419 - Mixed Upland Deciduous
421 - Planted Pines
422 - Natural Pines
429 - Mixed Upland Conifers
431 - Upland Mixed Forest
612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3
330 - Low-Density Trees
500 - Water
622 - Lowland Shrub

1 1 **4222**-J3
2 2 **4222**-J6
3 3 **4221**-R8
4 4 **622**-V0
5 5 **622**-D0
6 6 **622**-D0
7 7 **622**-D0
8 8 **6121**-T5
9 9 **4221**-R9
10 10 **622**-D0
11 11 **4212**-J5
12 12 **6120**-C5
13 13 **4222**-J1
14 14 **429** -MC1
15 15 **4112**-M1
16 16 **622**-V0
17 17 **4130**-A3
18 18 **6125**-Q5
19 19 **4222**-J6
20 20 **6122**-S6
21 21 **6122**-S4
22 22 **6128**-Q9
23 23 **6122**-S5
24 24 **622**-L0
25 25 **4133**-A3
26 26 **6127**-LM6
27 27 **6120**-C6
28 28 **4191**-MD6
29 29 **4136**-A6
30 30 **429** -MC6
31 31 **4222**-J6
32 32 **500**-Z0
33 33 **6125**-Q5
34 34 **500**-Z0
35 35 **622**-V0
36 36 **4132**-A6
37 37 **4130**-A3
38 38 **330**-U0
39 39 **4222**-J3
40 40 **4133**-A2
41 41 **4220**-W9
42 42 **330**-U0
43 43 **4133**-A3
44 44 **429** -MC1
45 45 **4130**-A3
46 46 **4133**-A6
47 47 **4220**-W9
48 48 **4312**-H9
49 49 **4212**-J6
50 50 **4115**-M6
51 51 **4222**-J6
52 52 **330**-U0
53 53 **4212**-J6
54 54 **330**-U0
55 55 **4112**-M6
56 56 **4133**-A3
57 57 **4311**-UM1
58 58 **330**-U0
59 59 **6129**-Q6
60 60 **330**-U0
61 61 **429** -MC2
62 62 **429** -MC5

13 18 24 19 25 30 36 31 32

1 0.5 0 1 Miles

85°30'0"W 85°29'0"W 85°28'0"W 85°27'0"W
46°39'0"N 46°38'0"N 46°37'0"N 46°36'0"N

Table 1 – Total Acres by Cover Type and Age Class

Newberry Mgt. Unit **Compartment 035 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	56	47	31	0	0	36	32	0	0	0	0	0	0	0	**202**
Bog	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
Cedar	0	0	0	0	0	0	0	3	0	0	0	104	0	0	0	**108**
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	249	**249**
Jack Pine	0	29	60	40	0	64	329	72	412	0	0	0	0	0	0	**1007**
Low-Density Trees	309	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**309**
Lowland Conifers	0	0	0	0	0	12	18	0	0	137	0	0	0	0	93	**261**
Lowland Shrub	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**18**
Lowland Spruce/Fir	0	0	0	0	9	0	0	0	92	0	0	127	0	0	0	**228**
Mixed Upland Deciduous	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	**17**
Northern Hardwood	0	3	0	0	0	0	0	78	0	0	0	0	0	0	0	**81**
Red Pine	0	0	0	0	0	0	0	0	0	12	14	0	0	0	0	**26**
Tamarack	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	**31**
Treed Bog	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
Upland Conifers	0	5	94	46	0	0	0	15	0	0	0	0	0	0	86	**246**
Upland Mixed Forest	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	**12**
Water	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
White Pine	0	0	0	0	0	0	0	26	0	0	0	0	0	0	98	**124**
Total	**354**	**93**	**213**	**117**	**40**	**76**	**383**	**243**	**504**	**149**	**14**	**231**	**0**	**0**	**525**	**2945**

Table 2 – Proposed Treatment Summaries

Data updated before 2:00 PM

Newberry Mgt. Unit
Year of Entry 2012

Compartment 035
Total Compartment Acres: 2945

Acres by Treatment Type

Commercial Harvest - 752	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
Aspen	32	0	0	0	0	0	**32**
Jack Pine	720	0	0	0	0	0	**720**
Total	**752**	**0**	**0**	**0**	**0**	**0**	**752**

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
2	**42035002-Cut**	71.7	42220 - Natural Jack Pine	High Density Pole	67	Harvest	Clearcut with Reserves	Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: Along east west riidge leave scattered red pine and white pine. Leave buffers along spring hole to south and steep slope to the east. Otherwise clearcut. Leave scattered snags. Leave oak if exists.

Other Comments: Recommend closing east west road into stand. There is a corner to the northeast to protect.

Next Steps: Stand may need scarification later for natural seeding. It might need to be planted if natural regeneration fails. Acceptable regen would be jack pine with mixed pine. Regeneration survey per work instruction.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
31	**42035031-Cut**	236.0	42220 - Natural Jack Pine	High Density Pole	58	Harvest	Clearcut with Reserves	Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: This stand had some red pine, on the eastern side-previously typed as seperate stand; but it was difficult to find areas not holding jack pine. The red pine looks short and wolfy. The stand has some areas that may be seasonally wet. Suggest harvesting in a canopy removal with stand 29, which is mostly aspen. Suggest avoiding wet periods for logging, using instead a window-of summer or winter logging. This stand had some jack pine bud worm in the past. Leave retention as agreed to including some scattered red and white pine and a few aspen and birch. Leave some spruce adn oak if they occur.

Other Comments: Consider culvert on road by Cris Brown Lake.

Next Steps: Scarification may be needed after sale for jack pine regeneration. Acceptable regeneration will be jack pine mixed with lowland shrubs on north end and other wise mixed pine and mixed confier. Regeneration survey per work instruction.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
51	**42035051-Cut**	412.3	42220 - Natural Jack Pine	High Density Pole	77	Harvest	Clearcut with Reserves	Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: Clear cut. Leave no more than 10 square feet of residual, but consider leaving uncut residual pockets on steep slopes or wet areas. Leave some large white pine, some large aspen (especially on the northern half of the stand) and some scattered spruce and fir.

Other Comments: There is an east west road that gives access to at least two cabins on the river.

Next Steps: Scarification may be needed for natural regeneration of jack pine. Acceptable regeneration is jack pine mixed with aspen and mixed conifer. Regeneration Survey as per work instruction.

Total Treatment Acreage Proposed: **720.1**

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
			#Error						

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: **0**

Data updated before 2:00 PM

Out of YOE -- Treatments Prescribed with No Limiting Factor

Year of Entry: 2012

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status

Prescription Specs:

Other Comments:

Next Steps:

Total Treatment Acreage Proposed: **0**

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42220 - Natural Jack Pine	High Density Sapling	60.5	16		Cut in 1994 by Rick Russell FP, in the Corner Jack Pine Sale. Scarified under FTP C-42-328. Natural Regeneration. It has scattered overstory of Red Pine, especially on the east side, where the topography is steep and falls off into the bog complex.
2	42220 - Natural Jack Pine	High Density Pole	71.7	67	51-80	J6. Some mortality, standing dead and some down trees. 16 year stand to the north and recently cut stand to the west. Suggest clear cut harvest, scarification and natural regeneration. Secondary method of regen would be planting to jack pine.
3	42210 - Natural Red Pine	Medium Density Log	12.1	85	81-110	Species thin to remove aspen and spruce in East Branch Sale completed in 2003. 7 years later there is some aspen, jack and spruce regen, but more white pine regen.
8	6121 - Tamarack	Medium Density Pole	31.3	35		This stand is Tamarack and Black Spruce in the low areas with tag alder in wet areas and it has red pine poles on low sand ridges (1-3 ft above water table)
9	42210 - Natural Red Pine	High Density Log	14.3	91	81-110	Red Pine White Pine mix along Co rd 414. Stand was part of stand 4, before harvest took out the join. This stand was species thinned for spruce and aspen in 2003.
11	42120 - Planted Jack Pine	Medium Density Pole	19.4	45		Consider harvest in 10 years if regen comes in to the north in stand 12. Records say part of this is planted in 1973, and part was older from a cut and scarification, the density is not high, and there is little mortality. It has an open understory.
12	6120 - Lowland Cedar	Medium Density Pole	3.1	65	51-80	Water feature in an upland setting. It has pine edges grading quickly to northern white cedar.
13	42220 - Natural Jack Pine	Low Density Sapling	28.7	7		This stand was harvested in 2003, leaving red and white pine retention. Regeneration call is a bit tough on 3 feet of snow, but some jack pine and black spruce is above the snow.
14	429 - Mixed Upland Conifers	Low Density Sapling	5.4	7		This was harvested with pine residual reserved in 2003. Hard to tell if there was a berm on this trail road or not. Suggest checking with snow off for pine regeneration.
15	4112 - Maple, Beech, Cherry Association	Low Density Sapling	2.7	7		This was harvested in the East Branch Sale; completed in 2003. It has mostly red maple regen, with a little jack pine and spruce showing above the snow. There is a small bog at the southern end, which tends to extend to the southeast. There is no outlet drainage to the river, so any flow must be sub-surface.
17	4130 - Aspen	High Density Sapling	8.7	26		Harvested in sale 10-84-1 with some white pine residual remaining. An adjacent sale in compartment to the west has a similar harvest. Trail to Cris Brown Lake runs past this stand.
18	6125 - Lowland Black Spruce, Jack Pine	Medium Density Pole	12.4	47		Review in 2020 years; consider harvest with stand19 or 11, buffering near the bogs.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	42220 - Natural Jack Pine	High Density Pole	93.3	51	51-80	Part of this may have been planted in 1973, but it was interplant with existing natural regen, so it is hard to determine, expecially with deep snow. There is more spruce to the northeast and more jack pine to the middle. In the south, spruce once again shows up. Basal area is variable. Check in 2020 for harvest.
20	6122 - Black Spruce	High Density Pole	126.9	100		This was called a poor swamp with a no cut call last time. It was also called variable from low-stocked treed bog to spruce-cedar-fir. I concur. Has a great deal of complexity and structure. Evaluate again in 10 years.
21	6122 - Black Spruce	Low Density Pole	8.9	34		Low area that seems to have subterranean drainage to Cris Brown Lake. Quit a lot of alder and small diameter spruce and fir on hummocks.
22	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	60.2	Uneven Age		This stand is complex. It has large White pine, hemlock, spruce coniferous-both upland and lowland. It also has lowland hardwood/tag alder areas. It also has various levels of canopy, more so than is usual in this area. This is part of the buffer of the East Branch of the Two-Hearted-a designated Natural River.
23	6122 - Black Spruce	Medium Density Pole	92.1	70		Variable swamp conifer stand. Just above water table. Density varies.
25	4133 - Aspen, Mixed Pine	High Density Sapling	11.6	6		Stand cut in Cris Brown Aspen sale 2004; Mostly aspen regen with some conifer.
26	6127 - Lowland Pine	High Density Pole	137.3	80		Part of Proposed Old growth. White pine scattered over a wide range of species from hardwood to cedar. Complex stand. Good wildlife use.
27	6120 - Lowland Cedar	High Density Pole	104.5	100	111-140	This portion of stand 23 has more cedar and more wildlife use in winter.
28	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	17.1	60		Stand is recovering from loss of beech trees from Beech Bark Disease. Looks like good regeneration is occurring. Most of aspen will be in broken out into stand to the west, next to jack pine. Birch is past prime and falling over. Check this in 2020.
29	4136 - Aspen, Mixed Conifer	High Density Pole	10.7	60		This is a pocket of old small diameter aspen. Proposed canopy removal would help to regenerate younger age class for use of animals as in adjacent stand 24.
30	429 - Mixed Upland Conifers	High Density Pole	85.9	Uneven Age		This is in the old growth corridor along the river. It is a mixed stand with white pine over the top of white birch, red maple, spruce and some jack pine. It is a transistional stand between upland and lowland. Two track to river access. Reevaluate in 2020.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	42220 - Natural Jack Pine	High Density Pole	236.0	58		This stand had some red pine, on the eastern side-previously typed as seperate stand; but it was difficult to find areas not holding jack pine. The red pine looks short and wolfy. The stand has some areas that may be seasonally wet. Suggest harvesting in a canopy removal with stand 28 E, which is mostly aspen. Suggest avoiding wet periods for logging, using instead a window-of summer or winter logging. This stand had some jack pine bud worm in the past. There is evidence of mortality. There is a small lower stocked area to the southwest, which was denoted as an opening in the past. It could be broken out and left as the sale is layed out for retention. It has less canopy closure and is probably sandy. Following the harvest, scarification and natural regeneration for jack pine is proposed. A regeneration alternative would be to trench and plant jack pine.
33	6125 - Lowland Black Spruce, Jack Pine	Medium Density Pole	18.0	57		This is a treed bog associated with stands 30 and 31. It is also in the old growth corridor, which should be re-shaped to include the eastern side of this stand. Sale number 26-84-12 intruded into this type, but did not regenerate to aspen as intended.
36	4132 - Aspen, Jack Pine	High Density Pole	36.0	50		Jack pine may be slightly more common that white pine in this dry site aspen. It may be a glacial esker. It is a long narrow ridge of sandy soil. Check in 2020.
37	4130 - Aspen	High Density Sapling	21.8	23		This was harvested in sale 26-84-1. This is high density aspen regeneration about 3 inches in average diameter. It will be an "A6" next time. There is some hare use and some conifer associated with the aspen. This has an access trail that is bermed closed in stand 41.
39	42220 - Natural Jack Pine	High Density Sapling	40.1	23		This area was cut in 26-84-1, completed April of 1987. It was formerly stand 23. Regeneration has been slow on this sandy site, although it is filling in. It is a mix of White and Red pine residual, white pine regen, aspen regen and jack pine-with most of the canopy in jack pine saplings.
40	4133 - Aspen, Mixed Pine	Medium Density	38.4	17		White pine residual over aspen almost pole size. This stand was harvested in the Little White Pine sale. It was completed in 09/93. This was a Mackinaw Mix before the sale, with white pine predominant.
41	42200 - Natural White Pine	High Density Log	26.5	68	81-110	White pine stand that had either a prescribed burn. It has control lines.
43	4133 - Aspen, Mixed Pine	High Density Sapling	8.7	17		This was cut in the Little Pine sale, closed in 09/93. It is white pine residual over aspen. This was a white pine/mackinaw mix before the sale.
44	429 - Mixed Upland Conifers	Low Density Sapling	46.1	23		This stand was cut in 2004 as part of the Pine Road Mix sale. It is within the 1/4 mile zone of the natural river's act. It is within the 300 foot distance regarding road placement. It is within the 100 to 300 ft buffer for white pine management. See natural rivers document for other information.
45	4130 - Aspen	High Density Sapling	5.1	6		This was unit two in the Chris Brown Aspen sale, completed in 7/04. unblocked two track goes through the stand.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
46	4133 - Aspen, Mixed Pine	High Density Pole	20.9	61		This stand contains merchantable and medium to low quality aspen poles on an esker, or similar feature. It has some white pine logs and jack pine poles on edges mostly. Some understory white and jack pine are seen, but more probably under the 3 foot snow line.
47	42200 - Natural White Pine	High Density Log	97.8	Uneven Age	81-110	Had a partial cutting in the Big White Pine Sale 1993, a pulp/log thinning.
48	4312 - Hemlock, Mixed Deciduous	High Density Log	248.5	Uneven Age	81-110	check in 2020. This stand is one of the few hardwood areas in the compartment. It is probably a better producer of hemlock and white pine than quality sugar maple. It has advanced BBD. Formerly beech, hemlock, white pine, yellow birch, red maple and sugar maple. The stand is variable is composition and stocking.
49	42120 - Planted Jack Pine	High Density Pole	10.4	42		Planted in 1968. Good density. Has an old trail to stand that is getting brushed in.
50	4115 - Y.Birch, Hemlock NH	High Density Pole	45.9	60	81-110	In Two-hearted management influence zones-see natural rivers plan. White pine and deciduous mix. Stands to the north were cut in Pine camp mix completed in 9/04. Many Beech have passed over due to BBD, a few potentially resistant remain.
51	42220 - Natural Jack Pine	High Density Pole	412.3	77		This is a variable stand dominated by jack pine. There is some quaking aspen pockets, and some areas with a higher component of red or white pine. Deferred from harvest last time.
53	42120 - Planted Jack Pine	High Density Pole	34.2	42		Planted jack pine. Very good density control. Planted in 1968. Occasional white pine or quaking aspen.
55	4112 - Maple, Beech, Cherry Association	High Density Pole	32.2	60	51-80	Topo variable, several short steep slopes. Hardwood mix with a good bit of spruce and fir regeneration.
56	4133 - Aspen, Mixed Pine	High Density Sapling	39.7	6		This was Unit 1 of the Shamrock Mix sale, completed in May 2004. Jack pine, red maple and aspen formerly. Quaking aspen regen now with red pine and white pine residual. Some white pine regen above snow depth.
57	4311 - Pine, Aspen Mix	Low Density Sapling	12.1	16		Harvested in Shamrock Mix sale, completed in 9/1994. Left Red Pine residual and trees smaller than one stick. Red pine over mix now.
59	6129 - Mixed Coniferous Lowland Forest	High Density Pole	32.7	Uneven Age		Area near river with very steep slopes. In the special management area of the natural river plan. Has a mixture of lowland conifer, white pine and lowland hardwood species. Transitional between upland and lowland.
61	429 - Mixed Upland Conifers	Medium Density	93.7	14		This was harvested in the Jack Pine Vista Sale, completed in 1996. Jack Pine and aspen regeneration is thicker in the north, but filling in elsewhere.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
62	429 - Mixed Upland Conifers	Medium Density Pole	15.3	60		This is retention from when stand 53 was cut. Residual trees are on a steep, complex slope. The parent stand was harvested in the Jack Pine Vista sale, completed in February of 1996.

Stand	Cover Type	Acres	Gen Cmts:
4	6225 - Bog	1.6	
5	6224 - Treed Bog	8.9	
6	6224 - Treed Bog	2.2	
7	6224 - Treed Bog	2.7	
10	6224 - Treed Bog	1.0	
16	6225 - Bog	2.2	
24	6220 - Alder/willow	18.2	This was a timber stand before harvest in 2004. It now has about 19% tree canopy. Tag alder dominates the canopy now. It may be a good stand to check for woodcock use. There is a two track that goes to it, but it is brushed in when you get to this stand. There is some coyote and hare use.
32	50 - Water	1.6	
34	50 - Water	2.1	
35	6225 - Bog	5.4	
38	3302 - Low Density Conifer Trees	85.3	Harvested in the Pine Camp Road Sale. Completed in 11/04. Red and Jack pine residual. Looks to have been scarified. In 2020 the regeneration should be above the snow.
42	3302 - Low Density Conifer Trees	62.5	This was harvested in the Pine Camp Mix sale. It was completed in 09/04. There were three small areas not harvested due to slope, wet conditions, or a wildfire (stand 42).
52	3302 - Low Density Conifer Trees	4.3	
54	3302 - Low Density Conifer Trees	5.6	
58	3301 - Low Density Deciduous Tree	115.4	
60	3301 - Low Density Deciduous Tree	35.5	

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
30	**Unique Site - SCA**	42035_SCA	722.9	Previously Potential Old Growth in OIPC. Would like it to remain as a uniique site. There are a mix of community types here from bogs to marginal uplands. Black backed wood pecker and red-shouldered hawk nest here. Boreal chickadee may nest here. The area should be checked with an MNFI Survey. Michigan Botanical Club identified several Michigan big trees in this East Branch of the Two Hearted river Corridor. E. Br. Two Hwarted is in the natural rivers system and has a river buffer in this AOI.

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
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.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.