



**XXXX Forest Management Unit
Compartment Review Presentation
Compartment #72 Entry Year: 2012
Compartment Acreage: 3148 County: Dickinson**

Revision Date: 6/16/2010

Stand Examiner: Cynthia Cooper

Legal Description: T41N, R29W, Sec. 3, 4, 5, 8, 9, 10
T 42N, R29W, Sec. 32

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

Management Goals: Improve and maintain aspen, pine and hardwood components and recreational values.

Soil and Topography: Highly varied terrain throughout this compartment. There are low, flat mine tailings areas containing ponds in the lower areas and fair to good reproduction of tree species such as paper birch that prefer disturbed soils on the drier areas. The compartment also has lowland areas with mucky soils and rolling hills to rock outcrops with well drained soils.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment has eight private 40's with camps scattered within its boundaries. The remainder is currently State Forest managed for timber and recreation (the main road is a designated snowmobile trail).

Unique, Natural Features: The majority of this compartment is being proposed for a biodiversity Stewardship Area.

Archeological, Historical, and Cultural Features: The northern one quarter of this compartment is mine tailings left over from the old Hanna Mine. The old mine building ruins are just north of the compartment boundary.

Special Management Designations or Considerations: Most of this compartment is a Proposed Biodiversity Stewardship Area.

Watershed and Fisheries Considerations: The mine ponds are to the west of this compartment.

Wildlife Habitat Considerations: Compartment 72 is in the middle of the Camp Suicide Deeryard. Original LTA maps suggested that hemlock was dominant in the uplands though out this entire area, but

white pine stumps are the major remnant in this area. A large area was scarified by Wildlife Division in 1996 following a sale in what is now Stand 55. At the time of the sale, pine was left with a MO of pine for the stand. The management objective for this stand should remain pine. Hemlock and cedar should be protected during any harvest. Travel corridors should remain intact and drainages should be buffered to insure their integrity.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of thin to discontinuous glacial sediments over bedrock. The Cambrian Munising Formation and Precambrian Archean granite/gneiss outcrop at or near the surface. There is not an economic use for these rocks, although some might have dimension stone potential. The Groveland Iron mine is located just to the northwest. There has been no previous metallic leasing in this compartment. A gravel pit is located one mile to the north and there may be some potential. There is no economic oil and gas production in the UP.

Text

Vehicle Access: Good to the western half of the compartment. The eastern half has access roads but they are poor to very poor condition.

Survey Needs: None at this time

Recreational Facilities and Opportunities: A designated snowmobile trail follows the main north/south road on the west side of the compartment.

Fire Protection:

Additional Compartment Information: Much of the harvestable area of this compartment was cut in 1992 and 2004. One small area each of red pine, white pine and cedar were planted on the mine tailings area in section 5 in 2004.

➤ **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

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

Compartment 072
 T41N, R29W, Sec. 3 - 5, 8 - 10
 T42N, R29W, Sec. 32
 County: Dickinson
 Unit: Crystal Falls
 YOE: 2012
 Acres: 3,148 GIS Calculated
 Stand Examiner: Cynthia Cooper
 Map Revised: 07/28/2010
 Map Phase: Pre-Review

- Legend**
- Miris Corners
 - Cable
 - Pipe
 - Power
 - Highway
 - Paved Roads
 - Poor Dirt Roads
 - 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
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 429 - Mixed Upland Conifers
 - 431 - Upland Mixed Forest
 - 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3
- 310 - Herbaceous Openland
 - 500 - Water
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland
 - 790 - Other Bare/Sparsely Vegetated

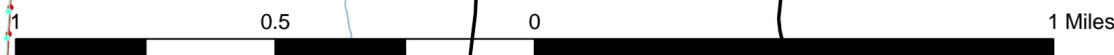
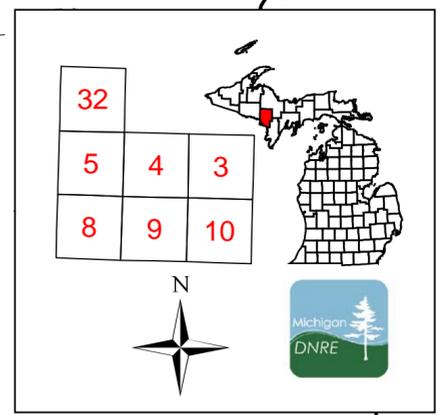
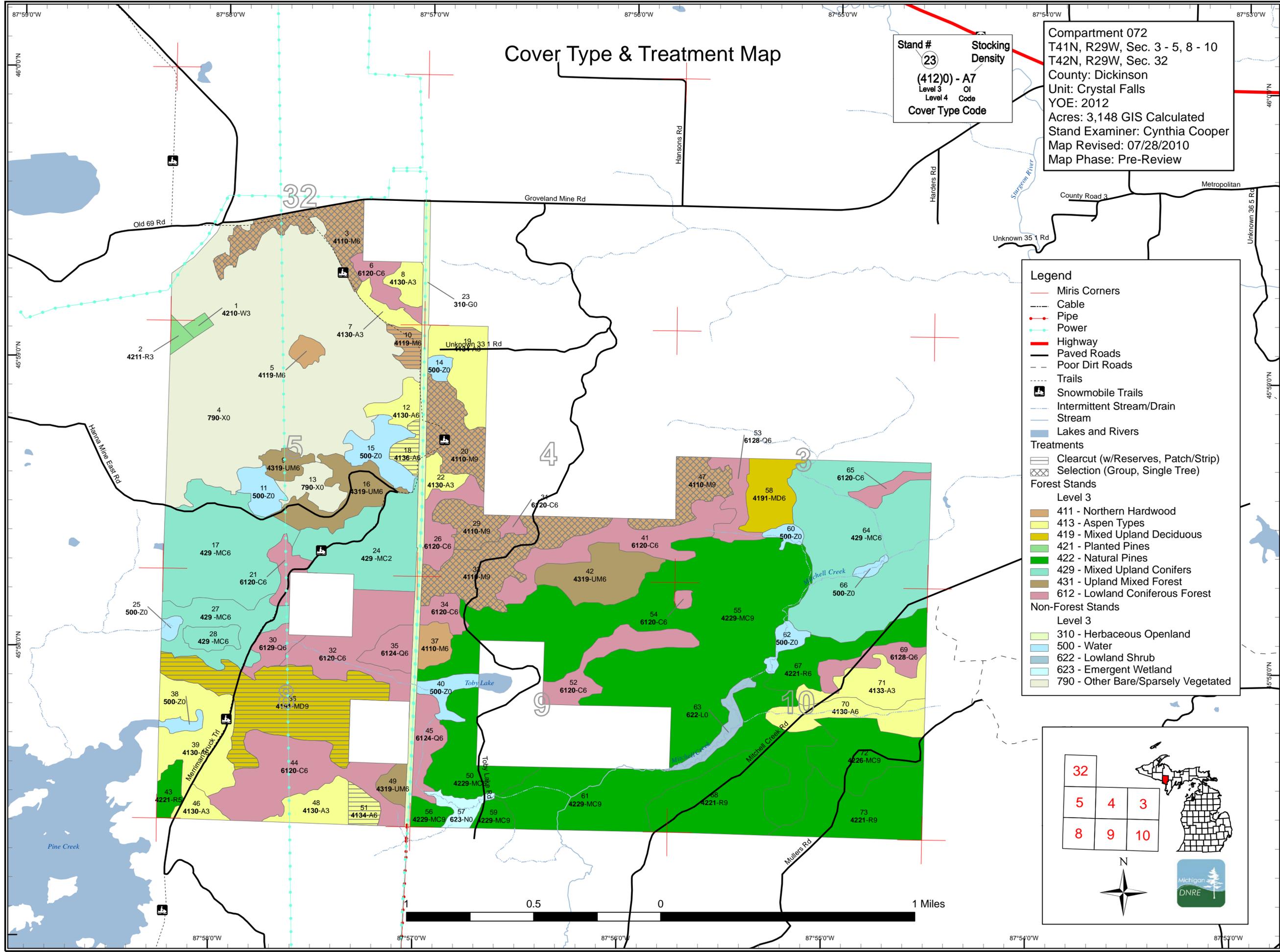


Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total	
	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
Aspen	0	71	72	36	68	23	0	0	0	11	0	0	0	0	0	280
Bare/Sparsely Vegetated	464	0	0	0	0	0	0	0	0	0	0	0	0	0	0	464
Cedar	0	0	0	0	0	0	0	0	0	0	0	328	0	0	0	328
Herbaceous Openland	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	60	36	0	0	96
Lowland Shrub	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Marsh	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	115	0	0	33	0	0	148
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	225	10	412	0	0	0	646
Northern Hardwood	0	0	0	0	0	0	0	0	52	41	144	0	0	0	0	237
Red Pine	0	5	0	0	0	11	0	0	0	75	122	0	0	0	0	213
Upland Conifers	0	82	0	0	12	0	0	0	0	204	0	168	0	0	0	467
Upland Mixed Forest	0	0	0	0	0	9	0	0	53	0	0	48	0	0	0	110
Water	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88
White Pine	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	619	162	72	36	80	44	0	0	104	671	276	1015	69	0	0	3148



Table 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2012

Compartment 072
Total Compartment Acres: 3148

Acres by Treatment Type

Commercial Harvest - 351	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

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Aspen	20	0	0	0	0	0	20
Mixed Upland Deciduous	115	0	0	0	0	0	115
Northern Hardwood	10	206	0	0	0	0	216
Total	145	206	0	0	0	0	351



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	12072003-Cut	44.1	4110 - Sugar Maple Association	High Density Pole	78	Harvest	Single Tree Selection	Mixed N. Hardwood - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Select harvest to remove poorer hardwoods and older aspen. Retain nicest paper birch. Use area along north end of road as retention.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u> Regeneration survey.									
10	12072010-Cut	10.1	4119 - Mixed Northern Hardwoods	High Density Pole	90	Harvest	Clearcut	Aspen	Cmpt. Review Proposal
<u>Prescription</u> Clear cut retaining younger aspen in portion of stand to the south.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u> Regeneration survey.									
18	12072018-Cut	9.3	4136 - Aspen, Mixed Conifer	High Density Pole	45	Harvest	Clearcut with Reserves	Aspen, Mixed Conifer	Cmpt. Review Proposal
<u>Prescription</u> Clear cut reserving pine and spruce/fir two inches and under at breast height.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u> Regeneration survey.									
20	12072020-Cut	41.2	4110 - Sugar Maple Association	High Density Log	82	Harvest	Single Tree Selection	Mixed Northern Hardwoods	Cmpt. Review Proposal
<u>Prescription</u> Thin to 80 BA. Retain hemlock and white pine. May also use portion of area west of road as retention.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u>									
29	12072029-Cut	23.0	4110 - Sugar Maple Association	High Density Log	95	Harvest	Single Tree Selection	Mixed Northern Hardwoods	Cmpt. Review Proposal
<u>Prescription</u> Select harvest down to 80 BA. Retain hemlock.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u> Regeneration survey.									
33	12072033-Cut	68.7	4110 - Sugar Maple Association	High Density Log	95	Harvest	Single Tree Selection	Mixed Northern Hardwoods	Cmpt. Review Proposal
<u>Prescription</u> Select harvest down to 80 BA. Retain hemlock. May also reserve small areas of high sapling regeneration to avoid damage.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u> Regeneration survey.									



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
36	12072036-Cut	115.3	4191 - Mixed Upland Deciduous with Conifer	High Density Log	81	Harvest	Clearcut with Reserves	Aspen, Mixed Conifer	Cmpt. Review Proposal
<u>Prescription:</u> Clearcut retaining all pine, oak and spruce/fir two inches and under DBH. Also retain (or just thin) the area high to nice hardwoods just east of where the road cuts through the stand. <u>Specs:</u> <u>Other Comments:</u> Due to the highly varied terrain, all of this stand may not be accessible, especially on the west side. <u>Next Steps:</u> Regeneration survey.									
47	12072047-Cut	28.7	4110 - Sugar Maple Association	High Density Log	95	Harvest	Single Tree Selection	Mixed Northern Hardwoods	Cmpt. Review Proposal
<u>Prescription:</u> Select harvest to a BA of 80. Retain hemlock and cedar. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Regeneration survey.									
51	12072051-Cut	10.6	4134 - Aspen, Spruce/Fir	High Density Pole	86	Harvest	Clearcut with Reserves	Aspen, Mixed Conifer	Cmpt. Review Proposal
<u>Prescription:</u> Clear cut retaining red pine and cedar. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Regeneration survey.									
Total Treatment Acreage Proposed:		351.0							

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

Prescription
Specs:

Other
Comment:

Next
Steps:

Limiting Factor and No
Treatment Reason

Total Treatment
Acreage Proposed: 0

Stand	Crystal Falls Mgt. Unit		5 – Forested Stands			Compartment: 072	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
1	42100 - Planted White Pine	High Density Sapling	3.7	5			
2	42110 - Planted Red Pine	High Density Sapling	4.7	5			
3	4110 - Sugar Maple Association	High Density Pole	44.1	78	111-140		Paper birch nice. Mostly hard maple poles. Overall stand in good condition.
5	4119 - Mixed Northern Hardwoods	High Density Pole	7.4	75	81-110		Some oak in stand.
6	6120 - Lowland Cedar	High Density Pole	16.4	109			
7	4130 - Aspen	High Density Sapling	10.3	16			
8	4130 - Aspen	High Density Sapling	12.0	16			
9	4319 - Mixed Upland Forest	High Density Pole	11.7	74			
10	4119 - Mixed Northern Hardwoods	High Density Pole	10.1	90	111-140		Most of stand large old basswood and hard maple. SW end younger aspen included.
12	4130 - Aspen	High Density Pole	14.0	43			
16	4319 - Mixed Upland Forest	High Density Pole	41.1	74	111-140		Much fairly young aspen and paper birch along trail running along edge of mine tailings. Most of stand highly mixed terrain and tree species. Mostly patchy aspen with more evenly distributed white and red pine with much spruce/fir understory, scattered hardwoods.
17	429 - Mixed Upland Conifers	High Density Pole	119.9	100	141-170		Highly mixed terrain and tree species. Red pine and white pine super canopy with red maple and paper birch, upland and lowland cedar, some oak.
18	4136 - Aspen, Mixed Conifer	High Density Pole	9.3	45			
19	4134 - Aspen, Spruce/Fir	High Density Sapling	39.4	16			
20	4110 - Sugar Maple Association	High Density Log	41.2	82	111-140		
21	6120 - Lowland Cedar	High Density Pole	13.1	109			
22	4130 - Aspen	High Density Sapling	9.8	16			



Stand	Crystal Falls Mgt. Unit		5 – Forested Stands			Compartment: 072	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
24	429 - Mixed Upland Conifers	Medium Density	82.1	6			aspen less than 1 inch with cedar, spruce/fir and large white pine scattered in stand.
26	6120 - Lowland Cedar	High Density Pole	23.3	109			
27	429 - Mixed Upland Conifers	High Density Pole	48.6	100	141-170		
28	429 - Mixed Upland Conifers	High Density Pole	12.1	32			Most of aspen is around outer edges of stand. Center is grass and mixed pine saps/poles with young spruce /fir saplings.
29	4110 - Sugar Maple Association	High Density Log	23.0	95	141-170		Portions of this stand are truly uneven aged with large old maple and basswood averaging 90-95 years, maple poles averaging 35-45 years , maple saps and some seedlings.
30	6129 - Mixed Coniferous Lowland Forest	High Density Pole	14.3	119			Some minor cedar reproduction (seedlings) in open areas. Cedar has been cut previously in small gaps and narrow strips. Area is wet. South end of stand is mostly tag alder with some larger balsam poplar and a little spruce/fir will north end includes more cedar.
31	6120 - Lowland Cedar	High Density Pole	3.9	109			
32	6120 - Lowland Cedar	High Density Pole	63.6	109			
33	4110 - Sugar Maple Association	High Density Log	68.7	95	141-170		hilly,rocky.
34	6120 - Lowland Cedar	High Density Pole	12.4	109			
35	6124 - Lowland Spruce-Fir	High Density Pole	16.6	104			
36	4191 - Mixed Upland Deciduous with Conifer	High Density Log	115.3	81	141-170		Large white pine and aspen west of road. Good white pine reproduction 1-3 feet tall. Hard maple clumps poor, birch dead or dying. East of road had hard maple saps 10-15 feet tall, much more birch, again in poor condition. There is an old road south of stands 29/30.
37	4110 - Sugar Maple Association	High Density Pole	13.4	95			Hilly and rocky.
39	4130 - Aspen	High Density Pole	67.7	32			Birch falling out.
41	6120 - Lowland Cedar	High Density Pole	60.9	109			

Stand	Crystal Falls Mgt. Unit		5 – Forested Stands			Compartment: 072	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
42	4319 - Mixed Upland Forest	High Density Pole	47.7	109			Mostly low and wet with some rock outcrops. Northern half of stand has more coniferous species, southern half more deciduous.
43	42210 - Natural Red Pine	Medium Density Pole	11.4	42	141-170		aspen clumps in some areas 1-2" DBH
44	6120 - Lowland Cedar	High Density Pole	85.2	109			
45	6124 - Lowland Spruce-Fir	High Density Pole	22.7	109			Typical low,wet cedar black spruce mix.
46	4130 - Aspen	High Density Sapling	10.7	6			
47	4110 - Sugar Maple Association	High Density Log	28.7	95	141-170		Hilly, rocky.
48	4130 - Aspen	High Density Sapling	24.3	6			
49	4319 - Mixed Upland Forest	High Density Pole	9.2	45			
50	42290 - Natural Mixed Pine	High Density Pole	52.6	80	200+		
51	4134 - Aspen, Spruce/Fir	High Density Pole	10.6	86			
52	6120 - Lowland Cedar	High Density Pole	35.5	109			
53	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	20.3	109			
54	6120 - Lowland Cedar	High Density Pole	3.0	109			
55	42290 - Natural Mixed Pine	High Density Log	356.6	100	141-170		Harvestable portions cut in 1992. Area is now mostly 10-18 inch DBH white pine, red pine with much spruce/fir. Aspen and white pine, red pine regen in understory. Very rough terrain. Hilly and rocky to low and wet with cedar and balsam poplar.
56	42290 - Natural Mixed Pine	High Density Log	9.5	80	111-140		
58	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	32.5	110			
59	42290 - Natural Mixed Pine	High Density Log	9.6	90	141-170		



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Crystal Falls Mgt. Unit

5 – Forested Stands

Compartment: 072

Inventory Method: IFMAP

Year of Entry: 2012



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
61	42290 - Natural Mixed Pine	High Density Log	162.6	80	171-200	
64	429 - Mixed Upland Conifers	High Density Pole	204.3	80	141-170	Large red and white pine overstory with other mixed conifers and hardwoods throughout stand. Terrain varies from rock tops to low ravines. Few operable areas between.
65	6120 - Lowland Cedar	High Density Pole	10.0	109		
67	42210 - Natural Red Pine	High Density Pole	44.0	90		Treacherous terrain! Basically a ridge snaking through a a lowland. No access.
68	42210 - Natural Red Pine	High Density Log	78.4	90	141-170	Cut in 1992
69	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	22.2	119		
70	4130 - Aspen	High Density Pole	36.1	26		
71	4133 - Aspen, Mixed Pine	High Density Sapling	36.3	6		
72	42260 - Natural Pine, Mixed Deciduous	High Density Log	55.5	100	141-170	Nice stand overall. Could remove older paper birch, aspen and spruce/fir but prefer to hold.
73	42210 - Natural Red Pine	High Density Log	74.9	80	171-200	



Stand	Cover Type	Acres	Gen Cmts:
4	790 - Other Bare/Sparsely Vegetate	445.5	
11	50 - Water	15.9	
13	790 - Other Bare/Sparsely Vegetate	18.9	
14	50 - Water	5.3	
15	50 - Water	25.9	
23	310 - Herbaceous Openland	41.3	
25	50 - Water	4.0	
38	50 - Water	5.2	
40	50 - Water	13.0	
57	6230 - Cattail	11.8	
60	50 - Water	5.8	
62	50 - Water	9.2	
63	622 - Lowland Shrub	13.9	
66	50 - Water	3.7	



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.

Inventory Method: IFMAP

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.

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.
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.