



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 131

Entry Year 2016

Acreage: 1,116

County Iron

Management Area: Net River

Revision Date: 07/24/2014

Stand Examiner: Ed Rice

Legal Description:

T46N R33W sec 20, 21, 28 - 30, 32

Identified Planning Goals:

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Continue to sustainably balance the aspen age class acres. Get the hardwood stands on a 20 year alternating cutting cycle towards regulation. Protect the riparian areas and transition zones during management activity.

Soil and topography:

Soils are overall very fine sandy loams. The bog and lowland areas are mucks and peat.

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

The compartment is fairly isolated in state ownership. Large blocks of industrial forest surround the compartment. A large private landholding borders the west side. Active forest management has occurred and will continue within and surrounding the compartment. Deer hunting by far dominates the recreational use patterns.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

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

Special Management Designations or Considerations:

None identified

Watershed and Fisheries Considerations:

The East Branch of the Net River and a feeder creek flows through the compartment. These are classed as cold water streams. Any forest management regenerating aspen should apply 300 foot buffers to these water courses.

Wildlife Habitat Considerations:

This compartment consists of parcels in and around Spies Lake Road Area. The largest block is a square mile of good hardwood with lowland and mesic softwood and lowland hardwood inclusions. The diversity of the hardwood should be maintained to provide the life requisites of the a variety of wildlife species.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and coarse-textured till. There is insufficient data to determine the glacial drift thickness. The Precambrian Michigamme Formation subcrops below the glacial drift. The Michigamme does not have a current economic use. Abandoned iron mines are located eight miles to the south. This compartment was previously leased for metallic exploration, and previous leases are located to the north and west. A gravel pit is located in Section 20 and there is good potential. There is no economic oil and gas production in the UP

Vehicle Access:

Access is poor to much of the compartment. The Spies Lake road is a maintained gravel road that provides access to only a portion of the compartment. There area multiple logging roads throughout, but these are for the most part winter roads.

Survey Needs:

T46N R33,34W N 1/16 sec 30, 25. T46N R33W sec 20: SW 1/16, S 1/16. sec 32: witness corner NW 1/16, NE 1/16. sec 29, 32: E 1/16. sec 32, 33: witness corner N 1/16. sec 29: SE 1/16

Recreational Facilities and Opportunities:

None

Fire Protection:

Low fire risk. Much of the compartment is northern hardwoods with many low lying wet areas. A small acreages of spruce.fir in section 29 and 32 may pose a fire risk. However, these are scheduled for harvest. Access for trucks is overall extremely poor with very wet roads throughout.

Additional Compartment Information:

The following reports from the Inventory are attached:

- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

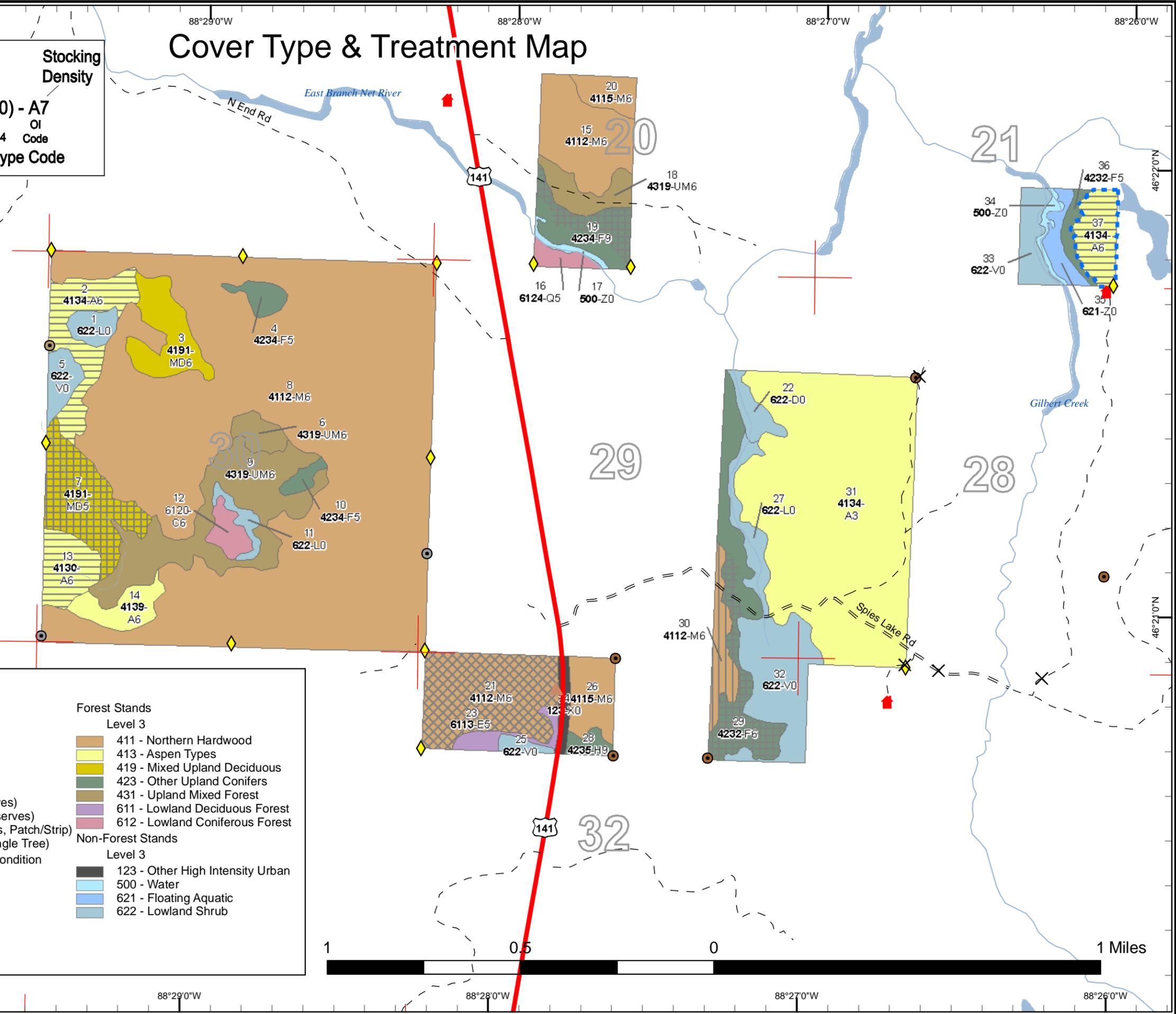
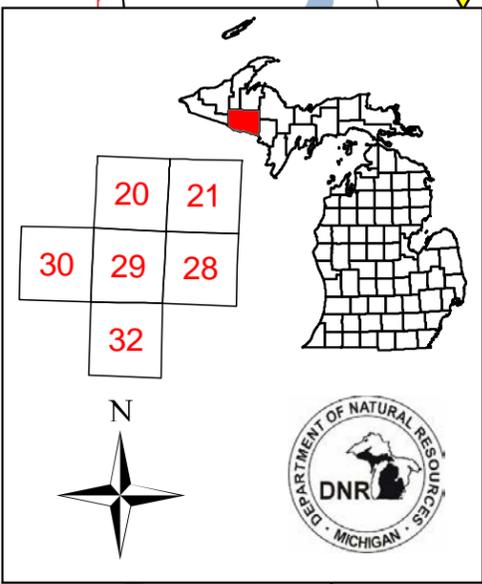
The following information is displayed, where pertinent, on the attached compartment maps:

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

Cover Type & Treatment Map

Compartment: 131
 T46N R33W Sections 20, 21, 28-30, 32
 County: Iron
 Unit: Crystal Falls
 Management Area: Net River
 YOE: 2016
 Acres: 1,116 GIS Calculated
 Examiner: Ed Rice
 Map Revised: 08/27/2014
 Map Phase: Pre-Review

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



Legend

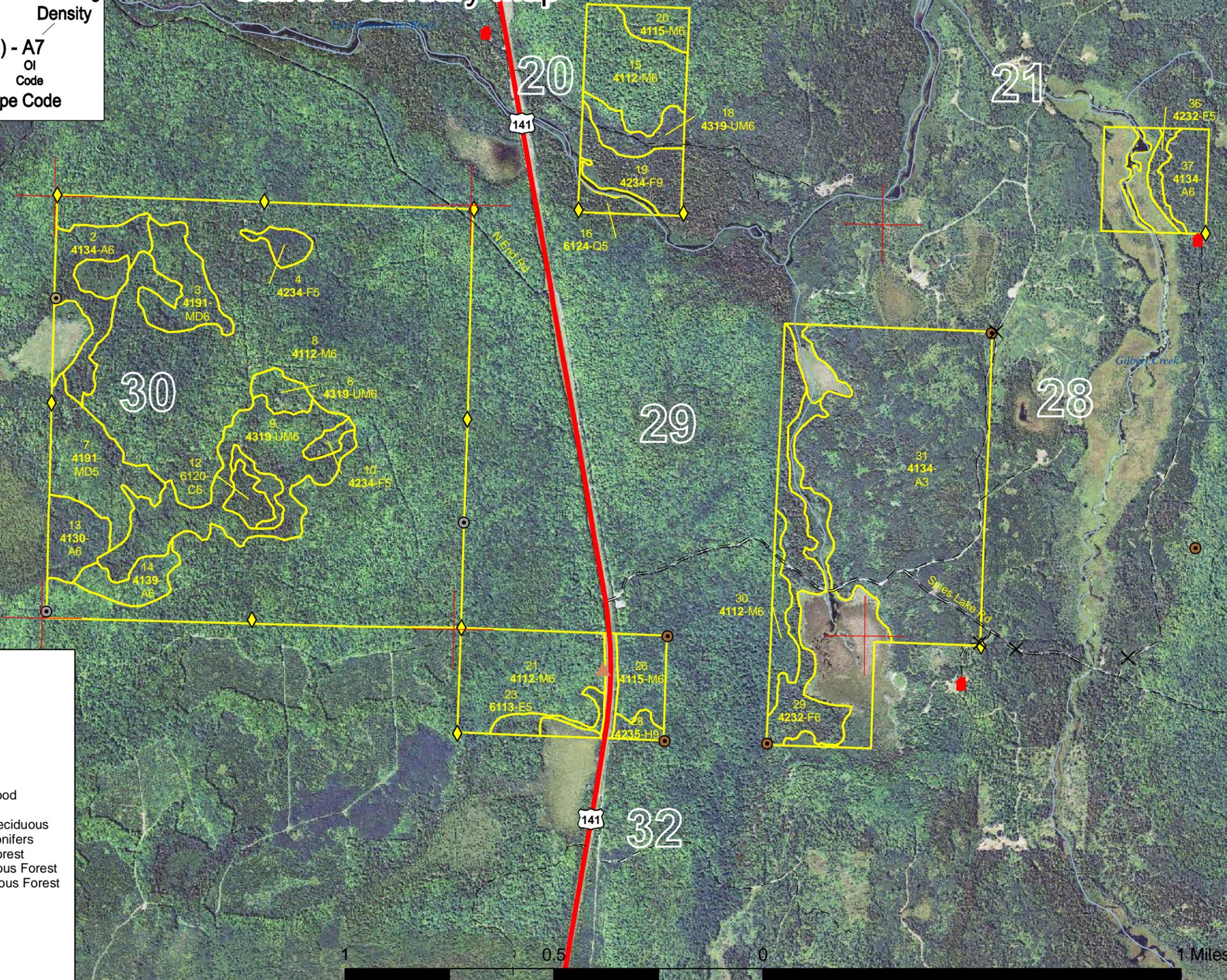
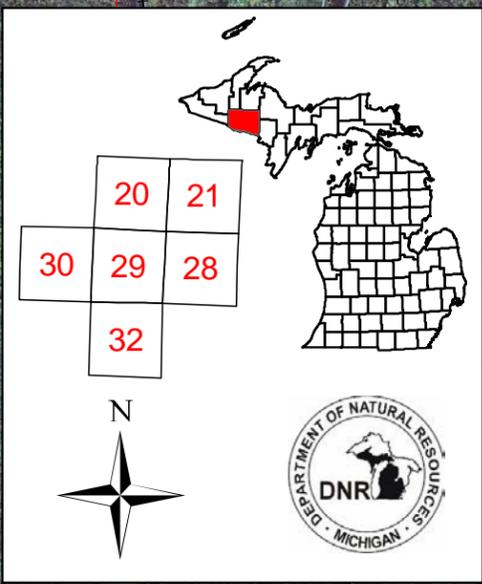
—+— Miris Corners	—+— Railroads	■ Forest Stands
—+— Remonumented Section Corners	—+— Stream	Level 3
◆ PLSS Corner	—+— Intermittent Stream	■ 411 - Northern Hardwood
● Iron Post	■ Lakes and Rivers	■ 413 - Aspen Types
● Wood Post	■ State Forest Land	■ 419 - Mixed Upland Deciduous
● Witness Tree		■ 423 - Other Upland Conifers
× Gate	Treatments	■ 431 - Upland Mixed Forest
▲ Berms	▨ Seed Tree (w/Reserves)	■ 611 - Lowland Deciduous Forest
▲ Cabin	▨ Shelter Wood (w/Reserves)	■ 612 - Lowland Coniferous Forest
— Highway	▨ Clearcut (w/Reserves, Patch/Strip)	Non-Forest Stands
— County Paved Roads	▨ Selection (Group, Single Tree)	Level 3
— Paved Roads	▨ Treatments w/ Site Condition	■ 123 - Other High Intensity Urban
— County Gravel Roads		■ 500 - Water
— Gravel Roads		■ 621 - Floating Aquatic
— Poor Dirt Roads		■ 622 - Lowland Shrub
— County Poor Dirt Roads		
— Trail (Non-Recreation)		



Stand Boundary Map

Compartment: 131
 T46N R33W Sections 20, 21, 28-30, 32
 County: Iron
 Unit: Crystal Falls
 Management Area: Net River
 YOE: 2016
 Acres: 1,116 GIS Calculated
 Examiner: Ed Rice
 Map Revised: 08/27/2014
 Map Phase: Pre-Review

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



Legend

—●— Miris Corners	—+— Railroads
—+— Remonumented Section Corners	—+— Stream
◆ PLSS Corner	—+— Intermittent Stream
● Iron Post	—+— Stand Boundaries
● Wood Post	
● Witness Tree	
× Gate	
▲ Berms	
■ Cabin	
— Highway	
— County Paved Roads	
— Paved Roads	
— County Gravel Roads	
— Gravel Roads	
— Poor Dirt Roads	
— County Poor Dirt Roads	
— Trail (Non-Recreation)	

Forest Stands

Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

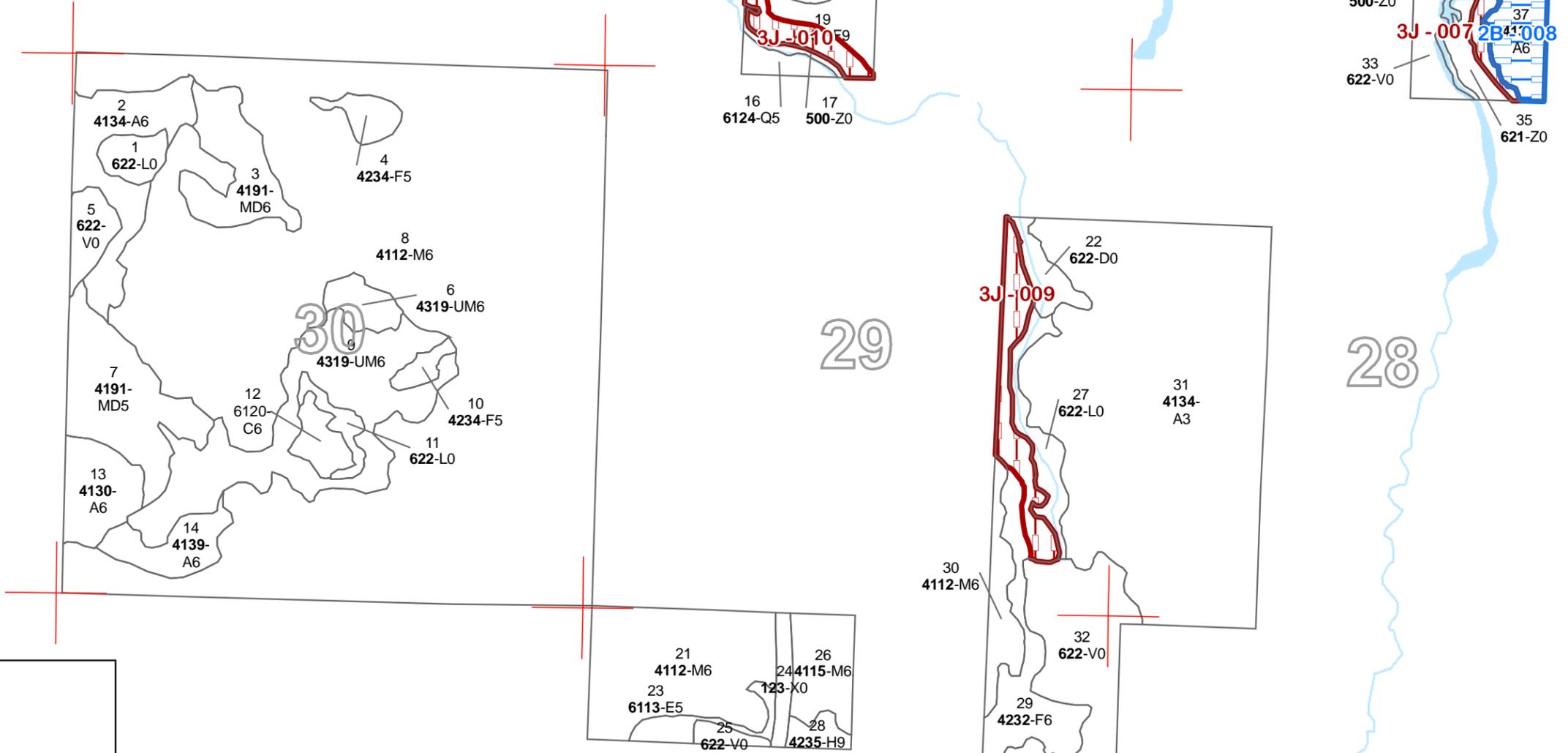
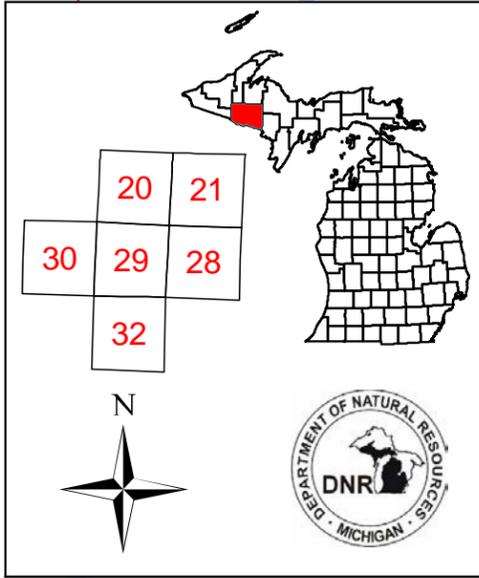
- 500 - Water
- 621 - Floating Aquatic
- 622 - Lowland Shrub



Special Conservation Areas & Site Conditions Map

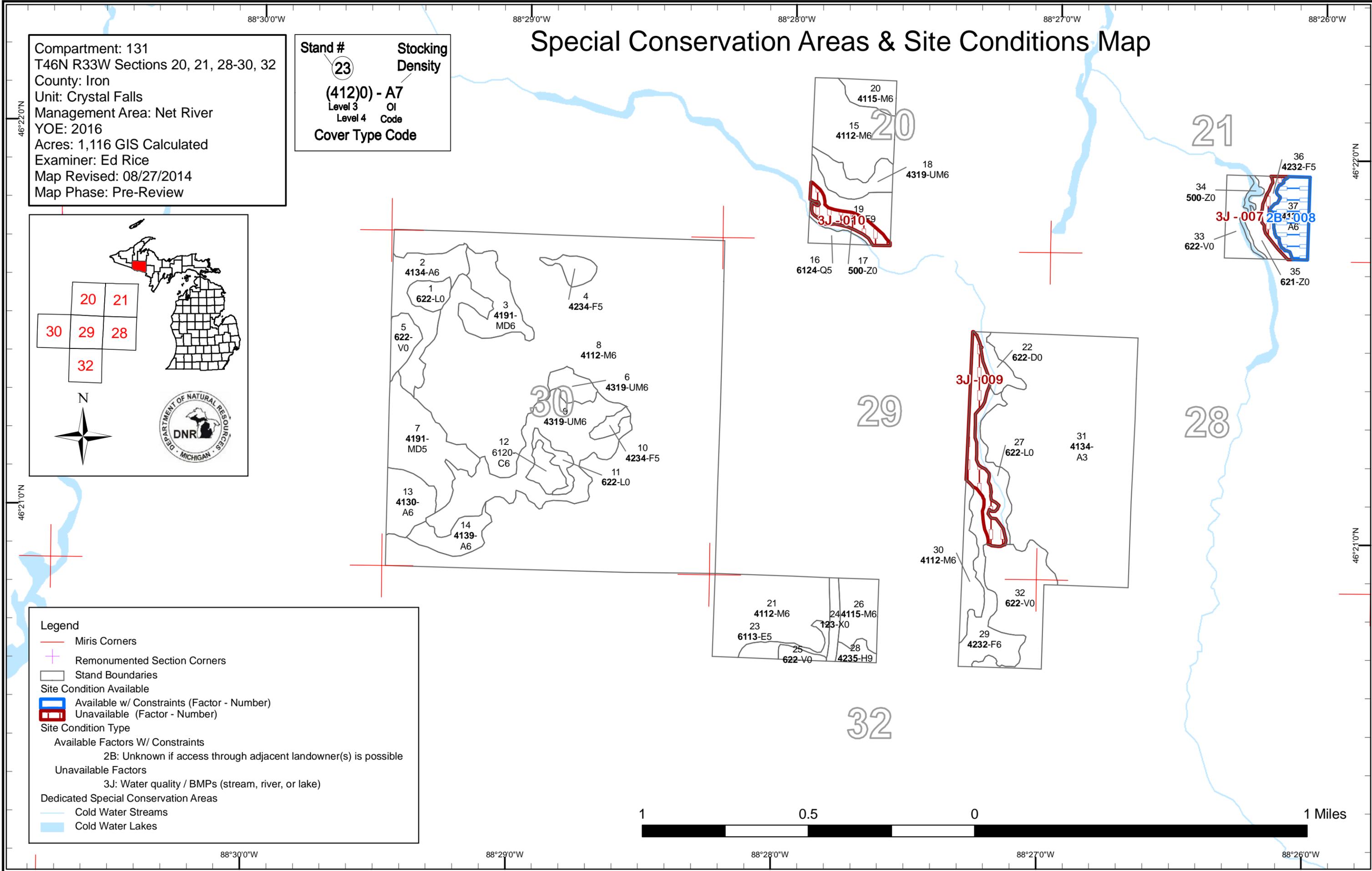
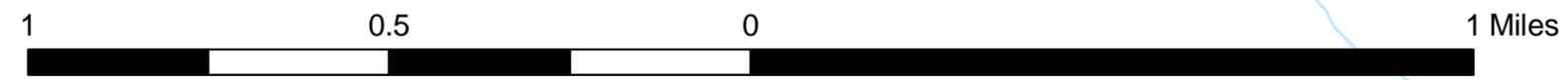
Compartment: 131
 T46N R33W Sections 20, 21, 28-30, 32
 County: Iron
 Unit: Crystal Falls
 Management Area: Net River
 YOE: 2016
 Acres: 1,116 GIS Calculated
 Examiner: Ed Rice
 Map Revised: 08/27/2014
 Map Phase: Pre-Review

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



Legend

- Miris Corners
- Remonumented Section Corners
- Stand Boundaries
- Site Condition Available
 - Available w/ Constraints (Factor - Number)
 - Unavailable (Factor - Number)
- Site Condition Type
 - Available Factors W/ Constraints
 - 2B: Unknown if access through adjacent landowner(s) is possible
 - Unavailable Factors
 - 3J: Water quality / BMPs (stream, river, or lake)
- Dedicated Special Conservation Areas
 - Cold Water Streams
 - Cold Water Lakes



Report 1 – Total Acres by Cover Type and Age Class



	Age Class													Total	
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Uneven Age
Aspen	0	0	0	192	0	29	25	0	0	0	0	0	0	0	247
Bog	56	0	0	0	0	0	0	0	0	0	0	0	0	0	56
Cedar	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6
Hemlock	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
Lowland Conifers	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
Lowland Deciduous	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
Lowland Shrub	21	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Mixed Upland Deciduous	0	0	0	0	0	20	32	0	0	0	0	0	0	0	52
Northern Hardwood	0	0	0	0	0	8	504	11	32	0	0	0	0	0	556
Treed Bog	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Upland Mixed Forest	0	0	0	7	11	54	0	0	0	0	0	0	0	0	72
Upland Spruce/Fir	0	0	3	5	0	36	19	0	5	0	0	0	0	0	69
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Water	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total	101	0	3	205	11	153	585	11	41	6	0	0	0	0	1116



Report 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2016

Compartment 131
Total Compartment Acres: 1,116

Acres by Treatment Type

Commercial Harvest - 176 Tree Planting - 0 Other - 0
 Habitat Cut - 0 Opening Maintenance - 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 Types	54	0	0	0	0	0	54
Mixed Upland Deciduous	0	0	32	0	0	0	32
Northern Hardwood	0	47	0	11	0	0	58
Other Upland Conifers	0	0	32	0	0	0	32
Total	54	47	64	11	0	0	176



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
2	12131002-Cut	24.8	4134 - Aspen, Spruce/Fir	High Density Pole	66	1-50	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<p><u>Prescription</u> cut merchantable aspen and r maple. spruce/fir larger than 8" stump. leave pine, cherry, y birch, cedar, hemlock. buffer any lowground type</p> <p><u>Specs:</u> change found. road access is winter only</p> <p><u>Other</u> large aspen with higher concentrations of spruce/fir along swamp edge. spruce/fir 6 - 12" dbh with scattered b cherry. high incidence of windthrow</p> <p><u>Comments:</u></p> <p><u>Next</u> monitor regen next inventory cycle</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										
7	12131007-Cut	32.1	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	68	51-80	Harvest	Seed Tree with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> seed tree/shelterwood. leave 30 - 40 BA. concentrate leave trees to be best available r maple. cut all merchantable aspen and spruce/fir larger</p> <p><u>Specs:</u> than 8" stump. protect submerchantable fir. leave h maple, hemlock, y birch, cherry, w pine. buffer vernal areas and intermittent creek/drainage. winter cut only. MO is r maple, aspen, spruce/fir</p> <p><u>Other</u> very low quality r maple poletimber and sawtimber sized trees. large w spruce 12 - 14" dbh. widely scattered hemlock, y birch and cherry.</p> <p><u>Comments:</u> pockets of vernal areas throughout - notably as stand progresses S. intermittent creek through these vernal areas. small component of cedar. N central in stand has multiple tag alder runs transitioned by lower ground cedar. widely scattered w pine</p> <p><u>Next</u> monitor regen next inventory cycle</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										
13	12131013-Cut	15.0	4130 - Aspen	High Density Pole	51	1-50	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> cut merchantable aspen and maple. leave all conifers. leave cherry, h maple 14" dbh and larger. reserve/buffer any wet/low areas. road access</p> <p><u>Specs:</u> is winter only</p> <p><u>Other</u> well formed aspen 6 - 9" with scattered 12 - 14" dbh. fairly open understory</p> <p><u>Comments:</u></p> <p><u>Next</u> monitor regen next inventory cycle</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										
19	12131019-Cut	11.2	42340 - Upland Spruce/Fir	High Density Log	69		Harvest	Seed Tree with Reserves	429 - Mixed Upland Conifers	Cmpt. Review Proposal
<p><u>Prescription</u> cut merchantable tamarack, aspen, r maple, cherry. spruce/fir larger than 6" stump. leave windfirm spruce 20 - 30 BA for seed source. leave w</p> <p><u>Specs:</u> birch, w pine, cedar and 1/ac cherry. protect advanced regen. MO is conifer with aspen component</p> <p>buffer Net River 300 feet. very little sign of wintering deer. access is through pvt land</p> <p><u>Other</u> aspen is large and over mature 14"+ dbh. scattered fir 10 - 12" dbh with dense fir small poletimber. widely scattered b cherry. small low ground</p> <p><u>Comments:</u> inclusions with tag alder, sphagnum and cedar. very nice sawtimber sized tamarack in groves. semi - upland site, high water table with rock. large amounts of windthrow throughout. w pine component. overall E end is more heavily stocked to large, semi - upland tamarack and W half spruce/fir with w birch component.</p> <p><u>Next</u> scarification</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
21	12131021-Cut	47.2	4112 - Maple, Beech, Cherry Association	High Density Pole	65	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal

Prescription thin to 70 - 80 BA, cut no cherry, y birch, hemlock, basswood. do not enter hemlock groves and reserve/buffer wet - vernal areas. winter or dry
Specs: summer cut only

Other good h maple saplings. seasonal vernal ponds throughout. fir saplings present, though mainly along transitional edges. very minor component
Comments: of basswood sawtimber 12 - 14" dbh. small hemlock groves. NW corner very wet ground with small diameter timber

Next monitor regen next inventory cycle
Steps:

Proposed
Start Date: 10/01/2015

29	12131029-Cut	20.6	42320 - Upland Spruce	High Density Pole	55		Harvest	Seed Tree with Reserves	429 - Mixed Upland Conifers	Cmpt. Review Proposal
----	--------------	------	--------------------------	-------------------------	----	--	---------	----------------------------	--------------------------------	--------------------------

Prescription no evidence of wintering deer. 300' buffer to cold water creek removes roughly half of stand from timber management.

Specs: In area outside of 300' buffer: cut spruce/fir larger than 8" stump. cut merchantable aspen, tamarack and r maple. leave 10 - 20 BA of windfirm spruce. leave w pine, r pine, cherry, y birch and cedar if found along the edges. buffer any lowland inclusions. protect submerchantable trees. MO is spruce/fir/pine. expect small pockets of aspen regen.

Other overall spruce is 5 - 10" dbh with scattered 18"+. aspen is over mature, 16" dbh. fir 5 - 10". small inclusions of wet lowland - tamarack/b spruce
Comments: with sphagnum. tamarack 8 - 10" dbh. heavy incidence of windthrow on spruce/fir throughout. N quarter of stand not as heavily stocked - high % of windthrow areas growing into hazel and h maple saplings 10'+ tall. very scattered cedar along very S edge of stand

Next scarification
Steps:

Proposed
Start Date: 10/01/2015

30	12131030-Cut	11.0	4112 - Maple, Beech, Cherry Association	High Density Pole	75	51-80	Harvest	Shelterwood	411 - Northern Hardwood	Cmpt. Review Proposal
----	--------------	------	---	-------------------------	----	-------	---------	-------------	----------------------------	--------------------------

Prescription shelterwood to 40 - 50 BA. concentrate leaving h maple with large crowns and/or well formed. target removals on r maple. leave cherry,
Specs: conifers, y birch. buffer vernal areas. protect advanced h maple regen. MO is N. hdwd

Other N of road has high % of small poletimber and h maple saplings 20 - 30' tall. scattered log sized h maple 18 - 24", especially near road. S of road
Comments: has better diameters 8 - 14". widely scattered large w pine 18 - 22" dbh. very high amounts of defect on maple. small vernal pond inclusions.

Next monitor regen next inventory cycle
Steps:

Proposed
Start Date: 10/01/2015

**Total Treatment
Acreage Proposed: 161.9**

S
t
a
n
d

Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
37 12131037-Cut	14.4	4134 - Aspen, Spruce/Fir	High Density Pole	55		Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal

Prescription cut merchantable aspen and maple. spruce/fir larger than 6" stump. leave cherry, pine, and w birch.

Specs:

access may be a problem - only access is directly through pvt land and camp yard.

Other

well formed aspen 8 - 12" dbh. associated h maple poletimber is low quality - crooked, limby. scattered small vernal ponds. large w spruce

Comment:

heavily impacted by SBW

Next

if cut, monitor regen next inventory cycle

Steps:Proposed

Start Date: 10/01/2015

Limiting Factor

2B: Unknown if access through adjacent landowner(s) is possible

**Total Treatment
Acreage Proposed: 14.4**

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment 131

Year of Entry 2016

Availability for Management

Availability for Management			Dominant Site Conditions			
Total Acres	Acres Available	Acres Not Available		No	3J	2B
247	247		Aspen	232		14
6	6		Cedar	6		
4	4		Hemlock	4		
5	5		Lowland Conifers	5		
6	6		Lowland Deciduous	6		
52	52		Mixed Upland Deciduous	52		
556	556		Northern Hardwood	556		
72	72		Upland Mixed Forest	72		
69	40	28	Upland Spruce/Fir	40	28	
1,016	988	28	Total Forested Acres	973	28	14
	97%	3%	Relative Percent			

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
007	Not Available	3J: Water quality / BMPs (stream, river, or lake)	5	2B: Unknown if access through adjacent landowner(s) is possible			
Comments: BMP/transitional buffer. access is directly through camp yard on pvt land							
008	Available	2B: Unknown if access through adjacent landowner(s) is possible	14				
Comments: access is directly through camp yard on pvt land.							
009	Not Available	3J: Water quality / BMPs (stream, river, or lake)	16				
Comments: 300' buffer for cold water feeder creek to Net River removes stand from harvest							

010	Not Available	3J: Water quality / BMPs (stream, river, or lake)	8
-----	---------------	--	---

Comments:

300' buffer to cold water stream



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

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

Conservation Area	Type	Description
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4134 - Aspen, Spruce/Fir	High Density Pole	24.8	66	1-50	large aspen with higher concentrations of spruce/fir along swamp edge. spruce/fir 6 - 12" dbh with scattered b cherry. high incidence of windthrow
3	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	20.1	51	51-80	dense fir understory. very poor r maple. heavy winter use by moose for conifer cover
4	42340 - Upland Spruce/Fir	Medium Density Pole	5.5	35	1-50	seasonally ponded. scattered aspen. near center of stand is semi open with tag alder. small spruce/fir poletimber 3 - 6" dbh, r maple 2 - 4"
6	4319 - Mixed Upland Forest	High Density Pole	6.8	39	51-80	very low quality r maple fir 4 - 8" dbh. many low and wet area inclusions. small openings with rock/boulders in S end
7	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	32.1	68	51-80	very low quality r maple poletimber and sawtimber sized trees. large w spruce 12 - 14" dbh. widely scattered hemlock, y birch and cherry. pockets of vernal areas throughout - notably as stand progresses S. intermittent creek through these vernal areas. small component of cedar. N central in stand has multiple tag alder runs transitioned by lower ground cedar. widely scattered w pine
8	4112 - Maple, Beech, Cherry Association	High Density Pole	442.3	67	81-110	thinned last entry. r maple prevalent in lower quality site areas. h maple/ironwood saplings in pockets. h maple saplings in N end 14 - 25' tall. small fir, hemlock, cedar lowland inclusions throughout - seasonally ponded. very widely scattered oak. hazel understory and scattered aspen limited to more marginal NH edges in transition to spruce/fir. small groves of hemlock and isolated single trees throughout. trace amounts of basswood. better to well formed h maple residual in central part of stand. far SW end has high incidence of ironwood saplings.
9	4319 - Mixed Upland Forest	High Density Pole	53.6	51	1-50	windthrow prevalent in N end on conifers. W1/2 of stand has high incidence of vernal/swamp areas with intermittent creek. r maple low quality
10	42340 - Upland Spruce/Fir	Medium Density Pole	3.3	28		open grown spruce/fir 3 - 7" dbh. old opening growing in - very wet in spring/early summer - standing water
12	6120 - Lowland Cedar	High Density Pole	6.4	91		cedar 10 - 14" dbh. scattered open pockets of r maple/b ash saplings. very wet
13	4130 - Aspen	High Density Pole	15.0	51	1-50	well formed aspen 6 - 9" with scattered 12 - 14" dbh. fairly open understory
14	4139 - Aspen, Mixed Deciduous	High Density Pole	11.6	31		mixed aspen and maple stand. E end heavier to ironwood/h maple. S edge transitions to hardwood saplings
15	4112 - Maple, Beech, Cherry Association	High Density Pole	32.4	81	81-110	fair to good h maple logs - 1 1/2 to 2 log heights clear to first limbs. some defect present. potential exists for producing quality logs/veneer. h maple sawtimber 14 - 18" dbh. scattered h maple saplings with r maple sapling stump sprouts from previous thinning. associated ironwood saplings.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	6124 - Lowland Spruce- Fir	Medium Density Pole	4.7	60		where spruce/fir are falling out of stand - good r maple and fir sapling regen is occurring. scattered pockets of cedar. tag alder along river.
18	4319 - Mixed Upland Forest	High Density Pole	11.3	40		dense fir saplings/small poletimber understory with aspen poletimber 5 - 7" dbh, 2 sticks tall.
19	42340 - Upland Spruce/Fir	High Density Log	19.1	69		aspen is large and over mature 14"+ dbh. scattered fir 10 - 12" dbh with dense fir small poletimber. widely scattered b cherry. small low ground inclusions with tag alder, sphagnum and cedar. very nice sawtimber sized tamarack in groves. semi - upland site, high water table with rock. large amounts of windthrow throughout. w pine component. overall E end is more heavily stocked to large, semi - upland tamarack and W half spruce/fir with w birch component.
20	4115 - Y.Birch, Hemlock NH	High Density Pole	8.4	52	51-80	wet - semi upland site. low quality r maple with heavy fir understory. scattered pockets of aspen regeneration 10' tall from previous cut. r maple stump sprouts 10' tall - stand successfully regenerated
21	4112 - Maple, Beech, Cherry Association	High Density Pole	47.2	65	81-110	good h maple saplings. seasonal vernal ponds throughout. fir saplings present, though mainly along transitional edges. very minor component of basswood sawtimber 12 - 14" dbh. small hemlock groves. NW corner very wet ground with small diameter timber
23	6113 - Lowland Maple	Medium Density Pole	5.6	53	1-50	transitional stand from M6 to swamp/bog. dense fir saplings with very low quality r maple. very scattered hemlock seedlings 2' tall. very wet, 1 - 2' deep standing water. W end has less hemlock, more water and r maple
26	4115 - Y.Birch, Hemlock NH	High Density Pole	14.7	68	51-80	good amounts of h maple saplings/seedlings 10 - 20' tall. much of E half of stand is series of vernal ponds
28	42350 - Upland Hemlock	High Density Log	3.9	82	81-110	good hemlock stand 12 - 20" dbh. semi wet
29	42320 - Upland Spruce	High Density Pole	36.2	55		overall spruce is 5 - 10" dbh with scattered 18"+. aspen is over mature, 16" dbh. fir 5 - 10". small inclusions of wet lowland - tamarack/b spruce with sphagnum. tamarack 8 - 10" dbh. heavy incidence of windthrow on spruce/fir throughout. N quarter of stand not as heavily stocked - high % of windthrow areas growing into hazel and h maple saplings 10'+ tall. very scattered cedar along very S edge of stand
30	4112 - Maple, Beech, Cherry Association	High Density Pole	11.0	75	51-80	N of road has high % of small poletimber and h maple saplings 20 - 30' tall. scattered log sized h maple 18 - 24", especially near road. S of road has better diameters 8 - 14". widely scattered large w pine 18 - 22" dbh. very high amounts of defect on maple. small vernal pond inclusions.
31	4134 - Aspen, Spruce/Fir	High Density Sapling	180.8	36		aspen 3 - 5" dbh with fir throughout. small inclusions of lowland b spruce/tamarack 4 - 6" dbh. small openings throughout.

S
t
a
n
d

Crystal Falls Mgt. Unit

Report 8 – Forested Stands

Compartment: 131
Year of Entry: 2016



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	42320 - Upland Spruce	Medium Density Pole	4.7	81		good upland b spruce 9 - 12" dbh transitioning to marsh. very scattered aspen. windthrow prevalent
37	4134 - Aspen, Spruce/Fir	High Density Pole	14.4	55		well formed aspen 8 - 12" dbh. associated h maple poletimber is low quality - crooked, limby. scattered small vernal ponds. large w spruce heavily impacted by SBW



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6220 - Alder/willow	6.2	No	Unspecified	tag alder with scattered b spruce and cedar. ponded
5	6225 - Bog	7.5	No	Unspecified	tag alder/willow, leatherleaf bog- ponded
11	6220 - Alder/willow	4.4	No	Unspecified	thick tag alder - water/muck
17	50 - Water	2.1	No	Unspecified	Net River
22	6224 - Treed Bog	6.8	No	Low	open marsh/bog. leatherleaf, scattered small trees, water
24	123 - Other High Intensity Urban	4.6	No	Unspecified	Highway 141
25	6225 - Bog	2.8	No	Unspecified	muskeg - leatherleaf, sphagnum. scattered, stunted b spruce and tamarack saplings and dead snags. extreme water.
27	622 - Lowland Shrub	10.7	No	Unspecified	tag alder adjacent to cold water creek. creek flows through stand
32	6225 - Bog	34.6	No	Unspecified	large bog with Gilbert Creek and associated floodings. scattered clumps of b spruce and small tamarack. leatherleaf
33	6225 - Bog	10.8	No	Unspecified	tag alder/swamp grass/small stunted trees in marsh expanse. standing water
34	50 - Water	2.9	No	Unspecified	Gilbert Creek
35	621 - Floating Aquatic	7.0	Unspecified	Unspecified	open marsh - swamp grass, leatherleaf, scattered dead trees. flooded