



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12119

Entry Year 2015

Acreage: 635

County Iron

Management Area: Amasa Plains

Revision Date: 2013-06-17

Stand Examiner:

Legal Description:

T45N R32W Sections 19, 20, 30

Identified Planning Goals:

Optimize sustainable timber production while enhancing and protecting wildlife habitat. The aspen age class acres are heavily weighed to ages 20 years and younger. Protect the riparian areas and transition zones during management activity.

Soil and topography:

Soils are generally silt loams and sandy loams with areas of muck soils in the extensive low ground bog areas. The topography overall is fairly flat to small areas of rolling hills.

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

The compartment is divided into two main areas due to private lands. Parcels of private ownership border all sides of the compartment boundary. 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:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

None identified

Watershed and Fisheries Considerations:

The Deer River (trout stream) runs north – south through the far eastern section of the compartment. It is largely bordered by tag alder flats and mixed swamp conifer. No forest management treatments are scheduled that may impact the river. In addition, Camp 8 Creek runs through the western section of the compartment.

Wildlife Habitat Considerations:

Deer numbers are fair in the area. Wolves also use the compartment and the surrounding area. The compartment falls within deer obligate winter range. Deer and large amounts of deer sign was observed utilizing the compartment for winter range, notably adjacent to the water courses. Lowland conifer stands should be maintained and enhanced to continue to provide good winter cover.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of coarse-textured till, glacial outwash sand and gravel and postglacial alluvium and an end moraine of coarse-textured till. There is insufficient data to determine the glacial drift thickness. The Precambrian Hemlock, Randville Dolomite, Intrusive and Archean Granite/Gneiss subcrop below the glacial drift. The Randville and the Granite/Gneiss could be used for decorative or building stone. Abandoned iron mines are located five miles to the southwest. This compartment was not previously leased for metallic exploration, but leases were located in this general area and potential may exist. The nearest gravel pit is three miles to the west, but there should be potential in the compartment. There is no economic oil and gas production in the UP.

Vehicle Access:

Overall there is good access. Access is severely limited during spring breakup.

Survey Needs:

A corner is needed for the W1/16 of section 20

Recreational Facilities and Opportunities:

None

Fire Protection:

This compartment is at the southern edge of what begins a drier sand, upland spruce/fir fuel type. Fire spread potential to the north is high in this area due to the nature of these fuels and soils. Given the alignment of weather and fuels, a north running fire in this compartment would be extremely difficult to control by direct attack. A half mile to the west and roughly a mile to the east the fuels moderate into hardwoods which would minimize fire spread in those directions. Access for fire suppression is good overall with multiple nearby water sources. There are multiple private camps immediately adjacent to the compartment.

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**

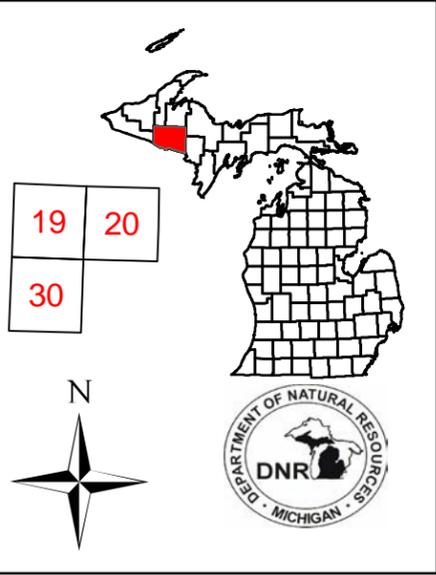
The following information is displayed, where pertinent, on the attached compartment maps:

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

Cover Type & Treatment Map

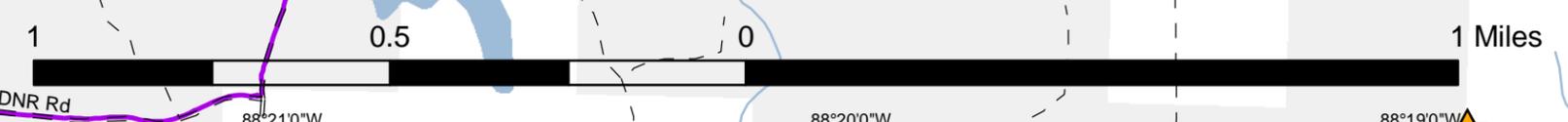
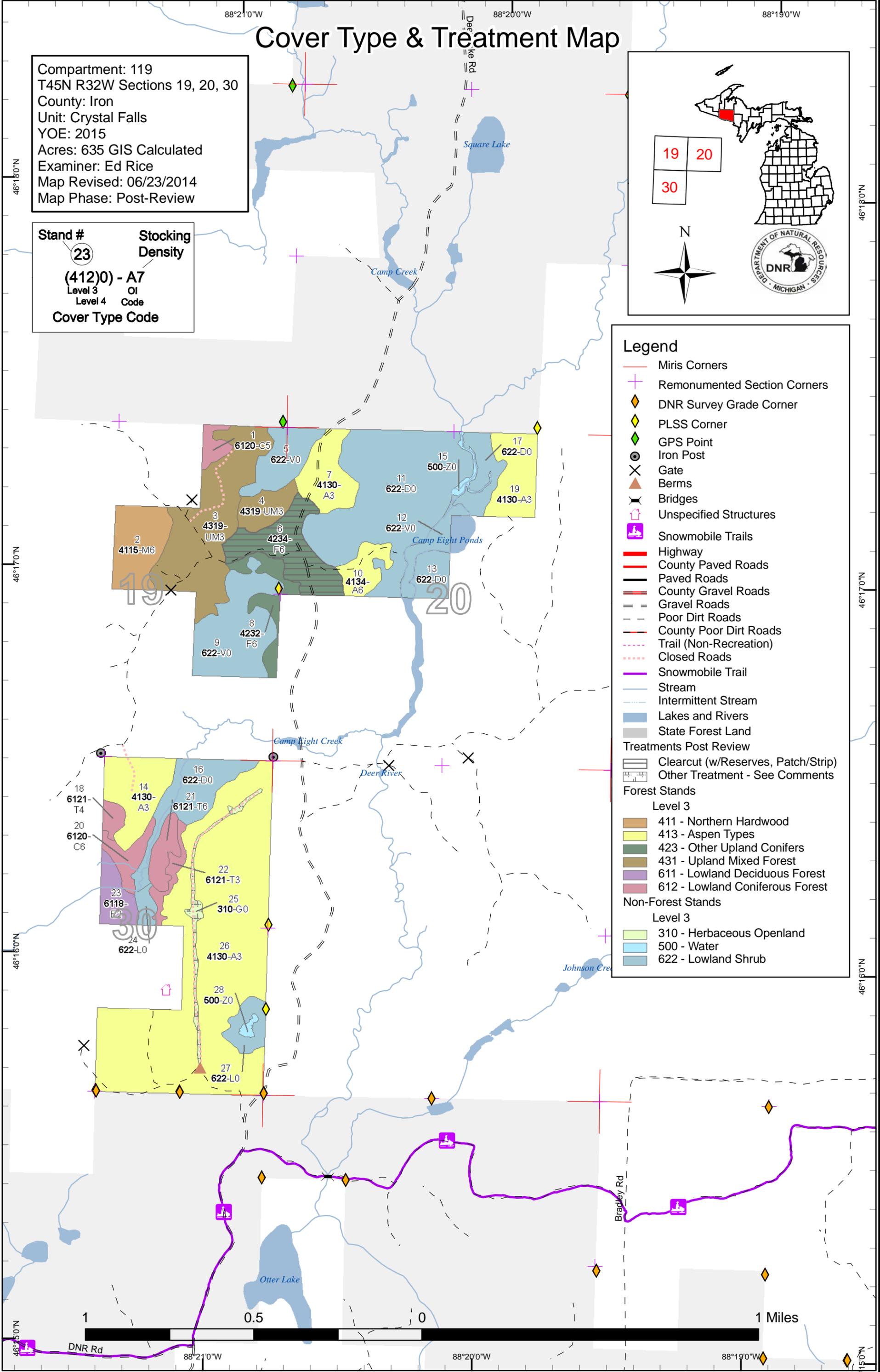
Compartment: 119
 T45N R32W Sections 19, 20, 30
 County: Iron
 Unit: Crystal Falls
 YOE: 2015
 Acres: 635 GIS Calculated
 Examiner: Ed Rice
 Map Revised: 06/23/2014
 Map Phase: Post-Review

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



Legend

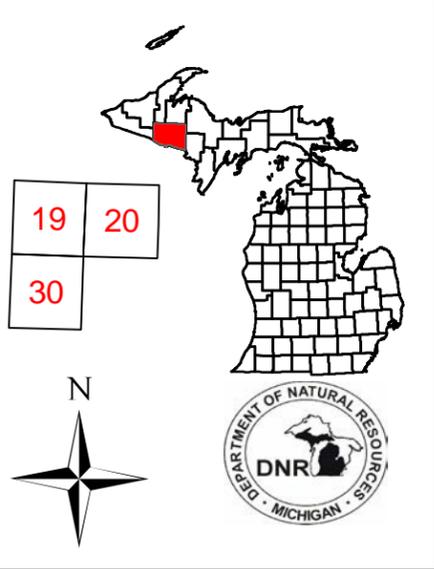
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- + Remonumented Section Corners
- ◆ DNR Survey Grade Corner
- ◆ PLSS Corner
- ◆ GPS Point
- Iron Post
- X Gate
- ▲ Berms
- Bridges
- Unspecified Structures
- Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
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- Gravel Roads
- - - Poor Dirt Roads
- - - County Poor Dirt Roads
- - - Trail (Non-Recreation)
- - - Closed Roads
- Snowmobile Trail
- Stream
- - - Intermittent Stream
- Lakes and Rivers
- State Forest Land
- Treatments Post Review**
- Clearcut (w/Reserves, Patch/Strip)
- Other Treatment - See Comments
- Forest Stands**
- Level 3**
- 411 - Northern Hardwood
- 413 - Aspen Types
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3**
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub



Stand Boundary Map

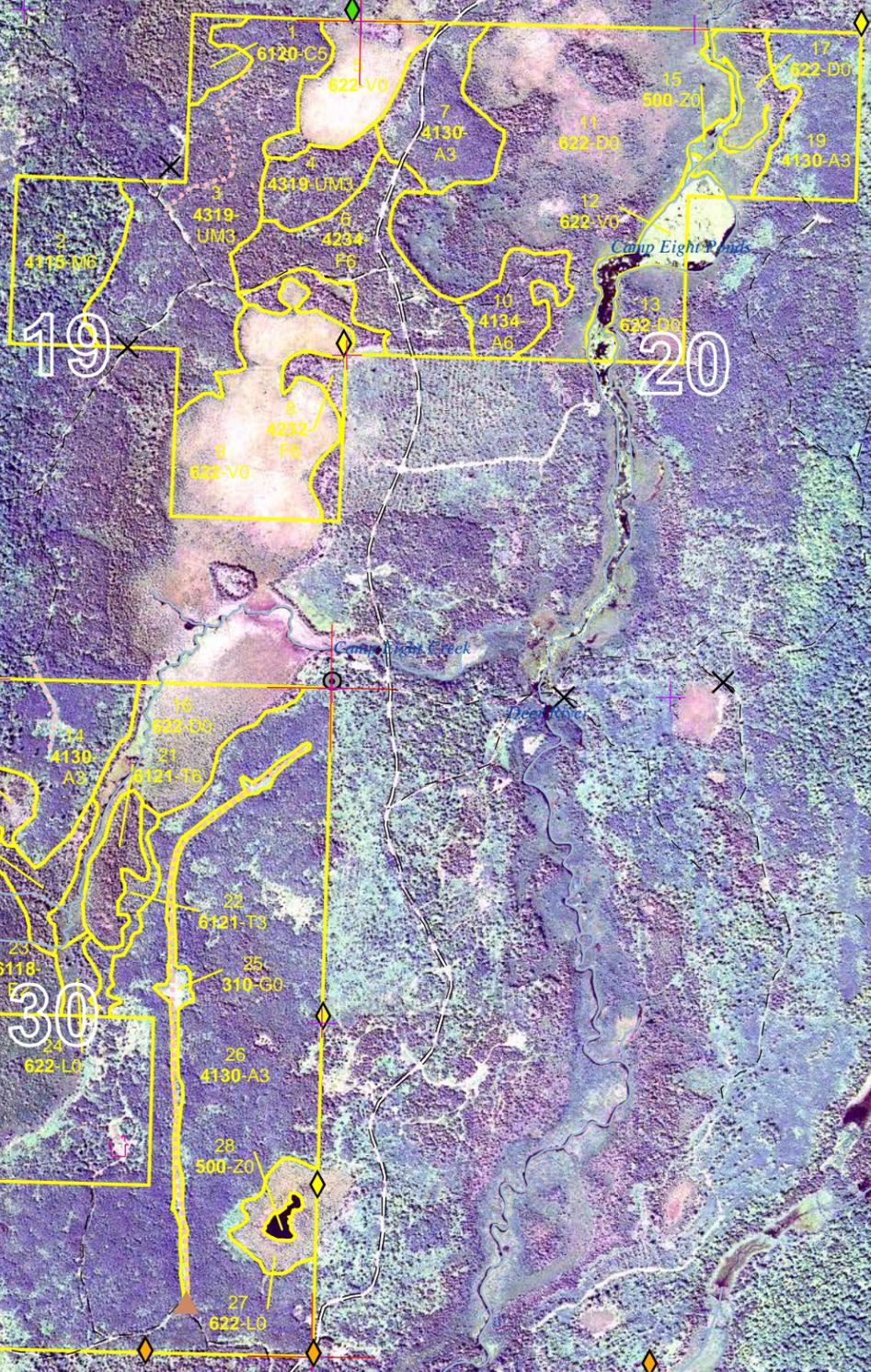
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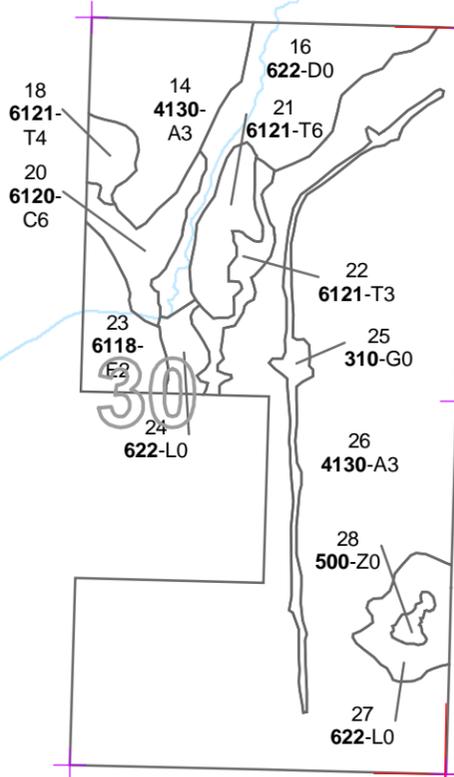
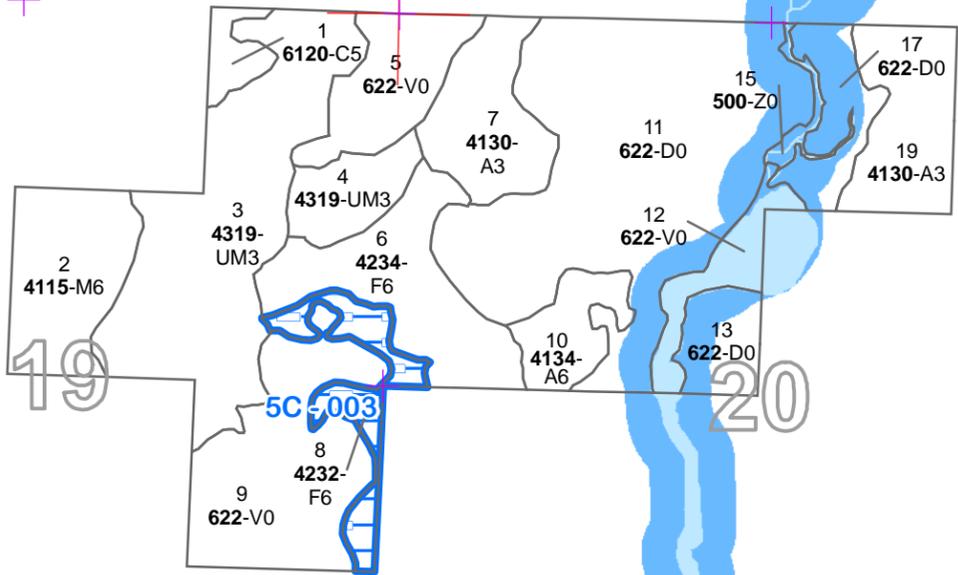
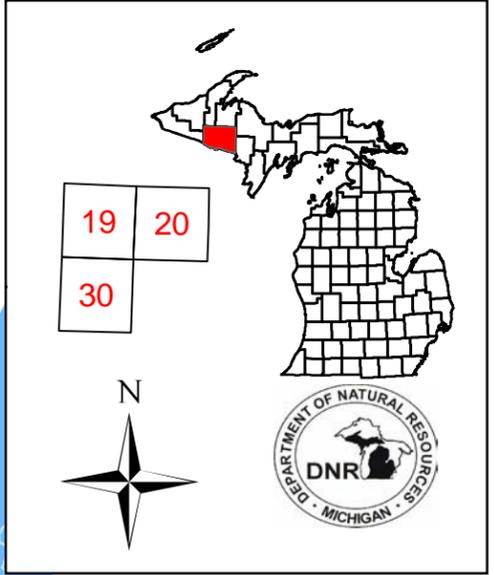
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Special Conservation Areas & Site Conditions Map

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 Level 3 OI
 Level 4 Code
Cover Type Code



Legend

- Miris Corners
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- Stand Boundaries
- Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)
- Site Condition Type
- Available Factors W/ Constraints
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Dedicated Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



88°21'0"W 88°20'0"W 88°19'0"W

46°18'0"N

46°17'0"N

46°16'0"N

46°15'0"N

46°18'0"N

46°17'0"N

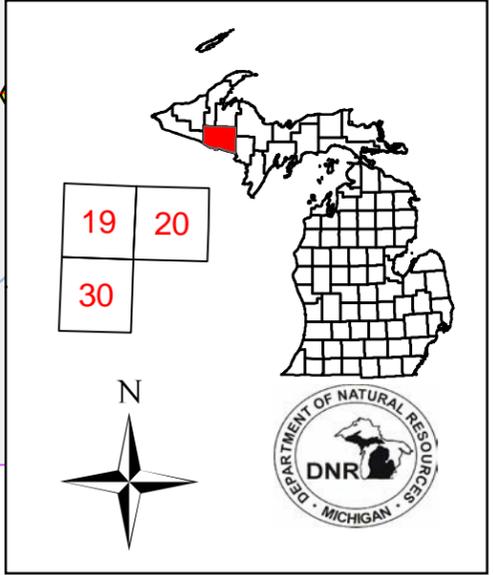
46°16'0"N

46°15'0"N

Cover Type & Treatment Map

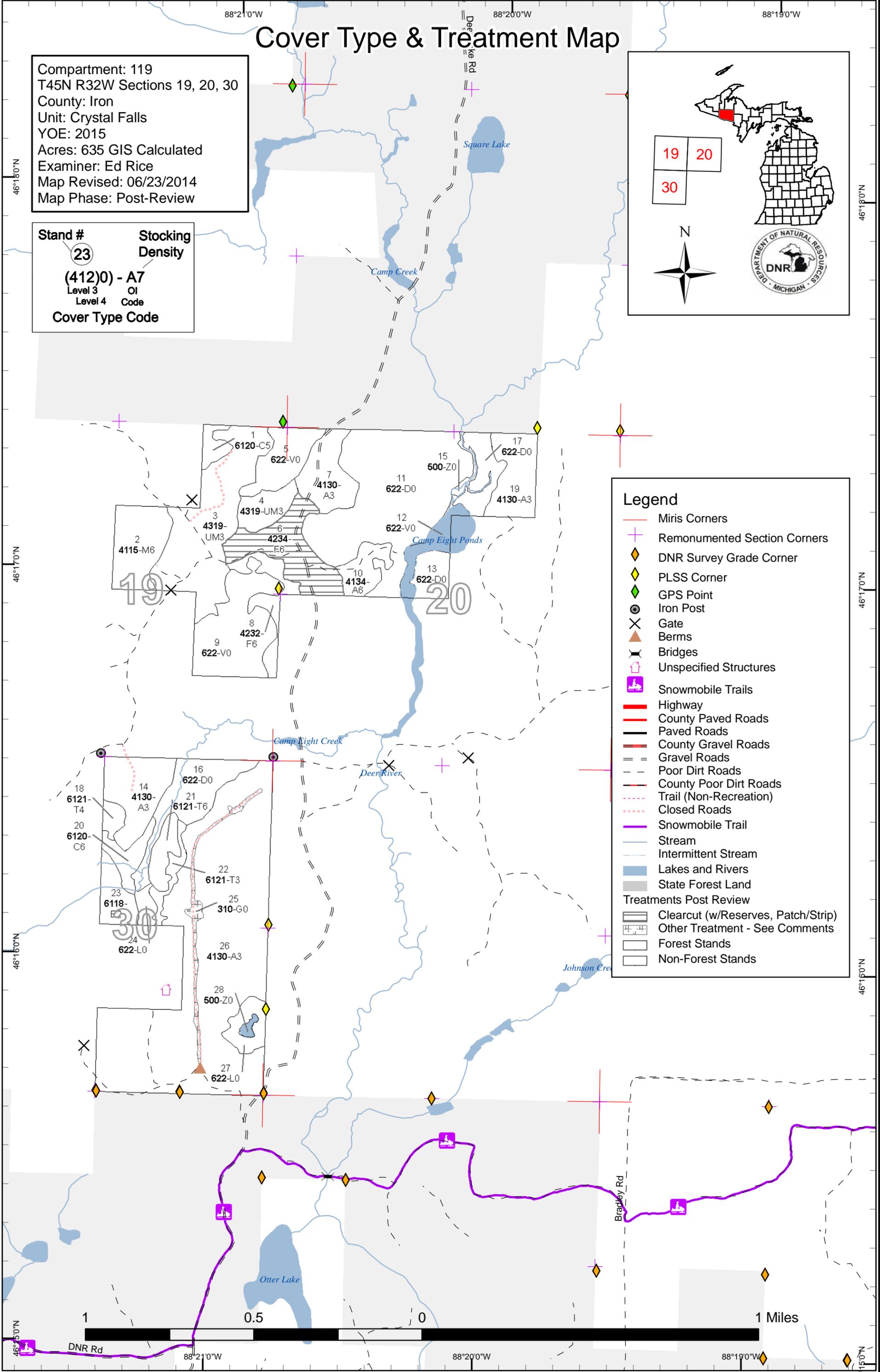
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- Other Treatment - See Comments
- Forest Stands
- Non-Forest Stands



46°15'0"N 88°21'0"W 88°20'0"W 88°19'0"W 46°15'0"N

Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	44	194	10	0	0	0	0	0	0	0	0	0	0	0	0	0	248
Bog	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63
Cedar	0	0	0	0	0	0	0	0	5	0	8	0	0	0	0	0	0	0	13
Herbaceous Openland	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Lowland Deciduous	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Shrub	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Northern Hardwood	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	23
Tamarack	0	0	0	5	0	0	8	0	4	0	0	0	0	0	0	0	0	0	17
Treed Bog	132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	132
Upland Mixed Forest	0	0	0	57	10	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Upland Spruce/Fir	0	0	0	0	28	0	12	0	0	0	0	0	0	0	0	0	0	0	40
Water	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	218	0	44	256	48	10	20	23	9	0	8	0	636						



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2015

Compartment 119
Total Compartment Acres: 635

Acres of Harvest

Commercial Harvest - 28
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 7

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Upland Spruce/Fir	28	0	0	0	0	0	0	0	0	28
Total	28	0	0	0	0	0	0	0	0	28

Proposed and Next Step Treatments by Harvest Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	28	0	0	0	0	0	7	0	0	34
Total	28	0	0	0	0	0	7	0	0	34



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
6	12119006-Cut	27.6	42340 - Upland Spruce/Fir	Poletimber Well	39	Unspec ified	Harvest	Clearcut	42120 - Planted Jack Pine	Even-Aged	Draft Field Boundary

Prescription cut all trees 2" and larger. do not cut w pine or r pine. prep site for planting by prescribed burning and/or follow up by herbicide if needed to
Specs: discourage the majority of aspen regen. occasional aspen regen is acceptable. trench and plant j pine. MO is j pine, no alternative

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2014

Site Condition: None

25	NF_12119025- Other	6.5	310 - Herbaceous Openland	Nonstocked			Other	Unspecified	310 - Herbaceous Openland	Unspecified	Draft Field Boundary
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Prescription seed hunter walking trail for maintenance
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments: close trail to vehicle/ORV access
Comment:

Proposed Start Date: 10/1 /2013

Site Condition: None

**Total Treatment
 Acreage Proposed: 34.1**

Dominant Site Conditions

Aspen
Bog
Cedar
Herbaceous Openland
Lowland Deciduous
Lowland Shrub
Northern Hardwood
Tamarack
Treed Bog
Upland Mixed Forest
Upland Spruce/Fir
Water
Total Forested Acres
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
3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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
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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	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.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6120 - Lowland Cedar	Poletimber Medium	4.7	75	Unspecified	very low cords/acre, most of stand is a poor site, stunted trees. N end heavy to cedar. standing water
2	4115 - Y.Birch, Hemlock NH	Poletimber Well	22.9	63	81-110	fair to poor sawtimber formation. dense H maple regen in pockets. Areas of rock ledge show incidence of windthrow. NW corner of stand has hemlock, cedar, mix softwood inclusion in wet drainage. N end of stand has lower BA with scattered pockets of aspen saplings 16-20' tall
3	4319 - Mixed Upland Forest	Sapling Well	56.6	24	Unspecified	aspen saplings 16-20' tall. very high stocking of associated spruce/fir
4	4319 - Mixed Upland Forest	Sapling Well	10.5	39	Unspecified	1 -2 stick aspen with scattered w pine. R pine sawtimber inclusion at the N end of stand along bog edge - good form. very thick fir understory
6	42340 - Upland Spruce/Fir	Poletimber Well	27.6	39	Unspecified	extremely dense mix of low quality, off site aspen 1 - 2 sticks tall and stunted w spruce and fir. Stand is on a pine site as evidenced from old pine stumps, blueberry, sweet fern and good form to pine that is in the stand. Spruce and fir are of "Christmas tree" form with limbs down to the ground.
7	4130 - Aspen	Sapling Well	18.6	26	Unspecified	Aspen 1 - 4" dbh with scattered trees moving into 1 stick class. upland b spruce and fir throughout with pockets of dense spruce/fir. Stand is of very low quality for aspen forest type - 24 years old with an average dbh of 2".
8	42320 - Upland Spruce	Poletimber Well	11.7	54	Unspecified	upland b spruce poletimber 4 - 5 sticks tall. scattered areas of windthrow. stand is a transition to treed bog
10	4134 - Aspen, Spruce/Fir	Poletimber Well	10.3	39	Unspecified	aspen 2 - 3 sticks. moderate - heavy fir. better quality aspen. Towards the Deer R b cherry is more prevalent due to beavers cutting aspen.
14	4130 - Aspen	Sapling Well	23.7	17	Unspecified	aspen 16 - 20' tall. scattered spruce/fir throughout. isolated large w pine
18	6121 - Tamarack	Poletimber Poor	3.6	77	Unspecified	extensive windthrow throughout stand. fairly open throughout with tag alder and scattered tamarack. good spruce sapling establishment in open areas - natural patch cut occurring. widely scattered cedar
19	4130 - Aspen	Sapling Well	19.9	17	Unspecified	aspen 16 - 20' tall. just about a pure aspen stand. scattered large w pine. N end of stand has higher incidence of fir.
20	6120 - Lowland Cedar	Poletimber Well	8.1	98	Unspecified	widely spaced cedar and tamarack with tag alder. Scattered 1/10th - 1/4 acre pockets of well stocked b spruce 7 - 10" dbh interspersed with F3, tag alder and windthrow. Tamarack heavier on E end of stand in transition to Camp 8 Creek marsh. S end of stand is more heavily stocked to cedar. Camp 8 Creek runs through stand.

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Crystal Falls Mgt. Unit

Report 8 – Forested Stands

Compartment: 119
Year of Entry: 2015

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	6121 - Tamarack	Poletimber Well	8.1	54	Unspecified	good tamarack poletimber. hold for increase in diameter. heavier to b spruce along E edge.
22	6121 - Tamarack	Sapling Well	5.3	26	Unspecified	mix of upland and lowland. very thick tamarack and b spruce regen. Cut in past when adjacent A3 was cut.
23	6118 - Lowland Deciduous with Cedar	Sapling Medium	10.5	45	Unspecified	b ash 1 - 4" dbh. scattered cedar and trace fir. wet - drainages throughout
26	4130 - Aspen	Sapling Well	175.5	26	Unspecified	about a pure aspen stand 2 - 7" dbh with scattered 1 stick trees. small pockets of upland b spruce scattered throughout. widely scattered fir saplings.



Stand	Cover Type	Acres	Managed Site	General Comments:
5	6225 - Bog	16.5	No	treed bog - stunted b spruce and tamarack 4 -10' tall. B spruce poletimber inclusion along N end of stand - heavy windthrow from several years ago
9	6225 - Bog	37.4	No	treed bog - stunted b spruce and tamarack
11	6224 - Treed Bog	87.0	No	stunted b spruce and tamarack. scattered small island inclusions of upland spruce/fir
12	6225 - Bog	9.1	No	Deer River ponds and marsh
13	6224 - Treed Bog	9.1	No	b spruce and tamarack leading to Deer R. edge with open bog. High ground inclusions along extreme E edge of the stand and also W edge - 6 -8" dbh b spruce with occasionallll aspen. little to no acreage.
15	500 - Water	2.4	No	Deer River - multiple channels/marsh slough
16	6224 - Treed Bog	24.1	No	areas of open bog with pockets of scattered poletimber. S end of stand has heavy tag alder with scattered b spruce, cedar and tamarack
17	6224 - Treed Bog	11.9	No	stunted b spruce and tamarack. Inclusion of transitional spruce/fir to uplands.
24	6220 - Alder/willow	3.6	No	tag alder with widely scattered b spruce, tamarack and cedar. drainages leading into Camp 8 Creek
25	310 - Herbaceous Openland	6.5	Yes	old hunter walking trail. many areas growing into spruce/fir saplings
27	622 - Lowland Shrub	8.3	No	stunted b spruce and tamarack. non productive forest land surrounding a small bog pond
28	500 - Water	1.3	No	small bog pond