



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12073

Entry Year 2020

Acreage: 1,715

County Dickinson

Management Area: Groveland

Revision Date: 2018-07-31

Stand Examiner: Jacob Siler

Legal Description:

T41N, R30W, Sections 2, 10, 11, 14, 15, 22-24

Identified Planning Goals:

Goal for this year of entry is to improve Northern Hardwood stands and maintain Aspen component.

Soil and topography:

Mucky soils in lowlands to numerous rock outcrops in highlands.

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

State ownership within compartment used for timber and recreation. Private (mostly residences) and corporate forest surrounds state ownership.

Unique Natural Features:

Mine pond in Sections 2 and 11.

Archeological, Historical, and Cultural Features:

Mine pond in Section 14.

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

This compartment contains West Pond (Groveland Mine Ponds), Headwater area of Pine Creek, Badwater Creek, and Tom King's Creek. All creeks are designated Type 1 trout streams less than 50' in width. A 300' buffer is recommended for the areas susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration (including West Pond), a 100' plus 5' per 1% increase in slope.

Wildlife Habitat Considerations:

Osprey, great blue heron rookery, wood turtle, and bald eagle documented to the east of Section 2. Potential for goshawk, red-shouldered hawk, great blue heron rookery, eagle, osprey, loon, and black-backed woodpecker. Heavy winter deer use so functional cover is crucial. Contains game fund lands.

Mineral Resource and Development Concerns and/or Restrictions

Two active sand/gravel pits are located within two miles of the compartment, and there may be some gravel potential within the compartment. Abandoned iron mines are located in the vicinity, and there may still be some iron ore potential in the far north part of the compartment. There has been past metallic mineral leasing in the area. There is no economic oil and gas production in the UP. The state does not own all of the mineral rights within the compartment. Private mineral rights owners must be allowed reasonable access to the land should they choose to explore and/or develop the minerals.

Vehicle Access:

Access fair except in the south east of section 14 and section 24. Landowner has denied access through private property.

Survey Needs:

Several corners will be needed for timber sales.

Recreational Facilities and Opportunities:

Fishing and hunting in mine pond area.

Fire Protection:

Additional Compartment Information:

The following reports from the Inventory are attached:

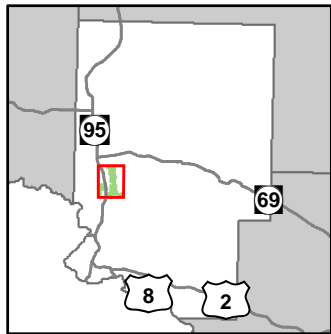
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

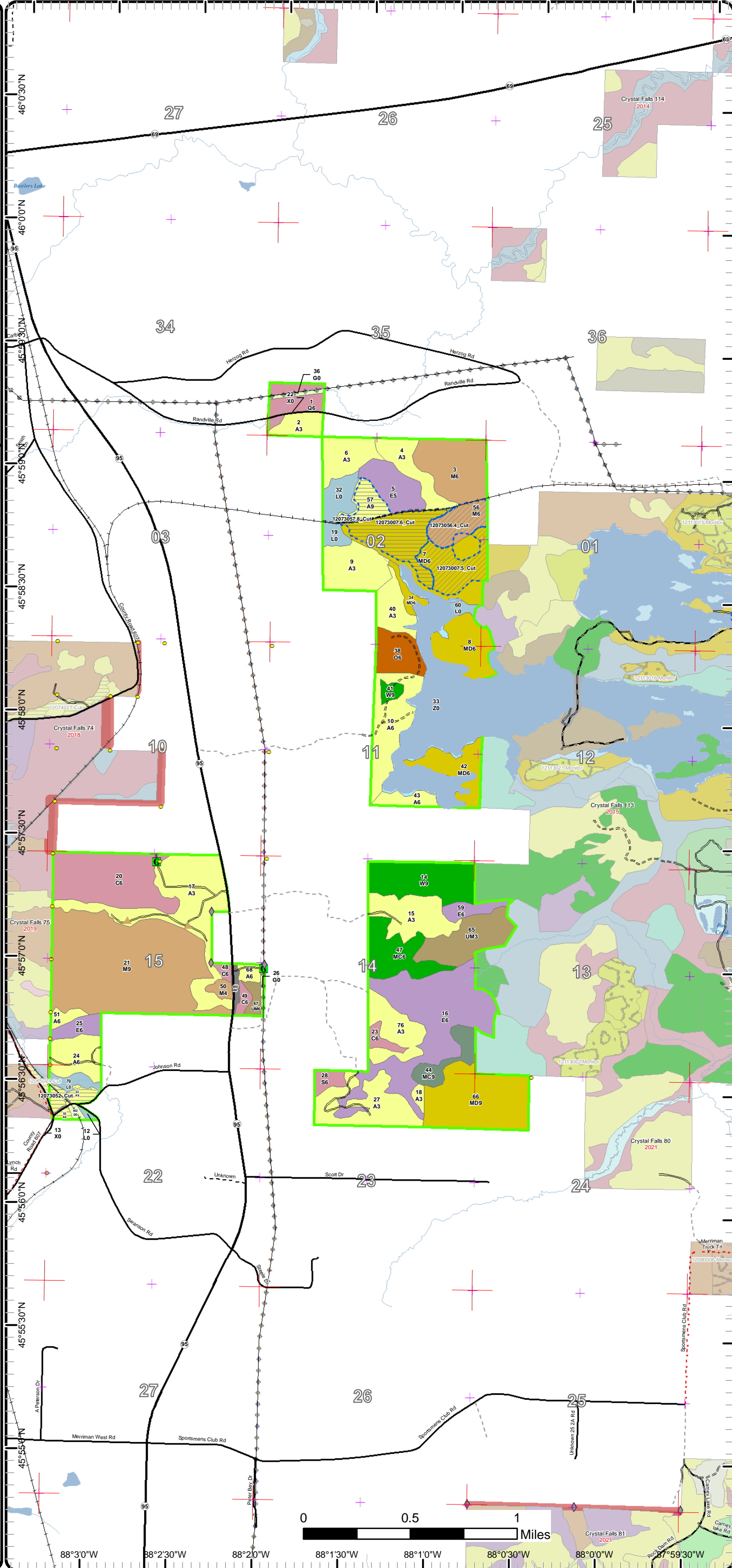
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 73
 T41N, R30W, Sec. 2, 11, 14, 15, 22, 23, 24
 T42N, R30W, Sec. 35
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Groveland
 YOE: 2020
 Acres: 1,715 GIS Calculated
 Examiner: Jacob Siler
 Map Revised: 12/17/2018
 Map Phase: Post-Review

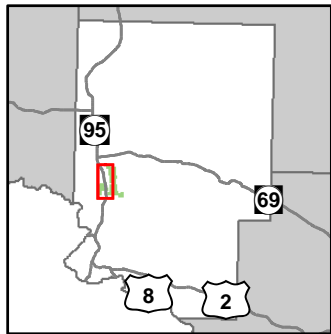


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- DNR - Primary Forest Road
- DNR - Secondary Forest Road
- - - DNR - Forest Access Route
- Federal / State Highway
- Federal / State / County - Paved Road
- - - Federal / State - Dirt / Gravel Road
- - - Private - Dirt / Gravel Road
- Active Railroads
- - - Designated Bicycle Trails
- Island in Lake or River
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- ▲ Berms
- Gate
- Powerline
- Compartment Boundary
- - - Treatments with Site Conditions
- Clearcut (w/Reserves)
- Thinning (Crown, Low, Systematic)
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- Lakes

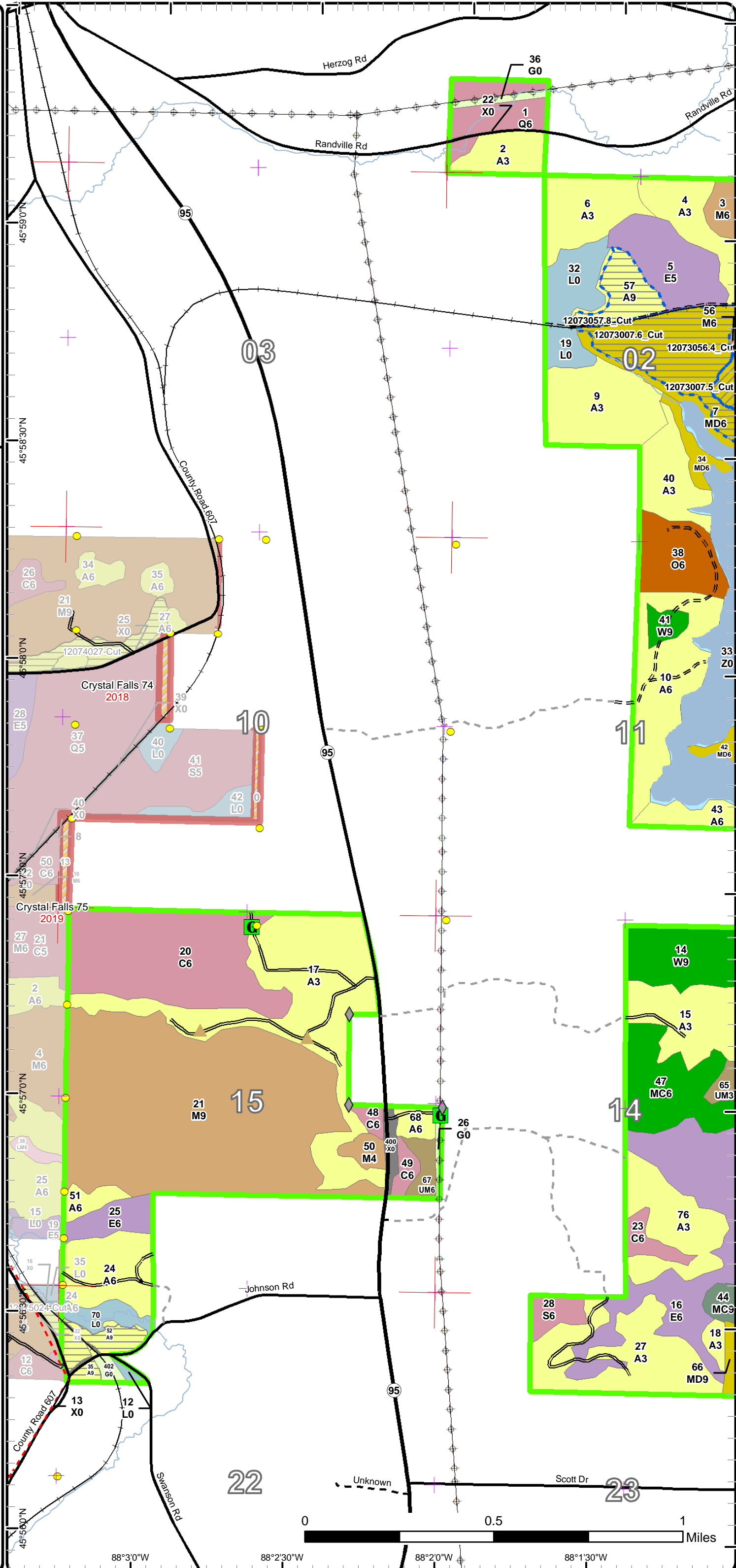


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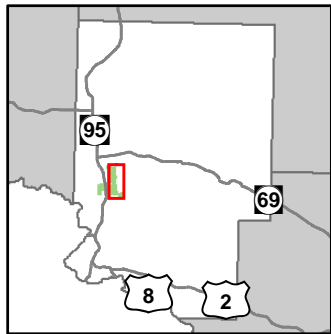


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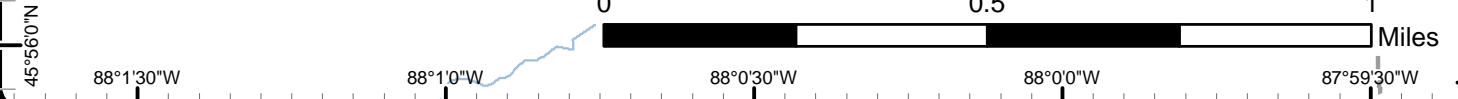
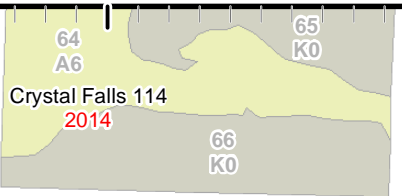
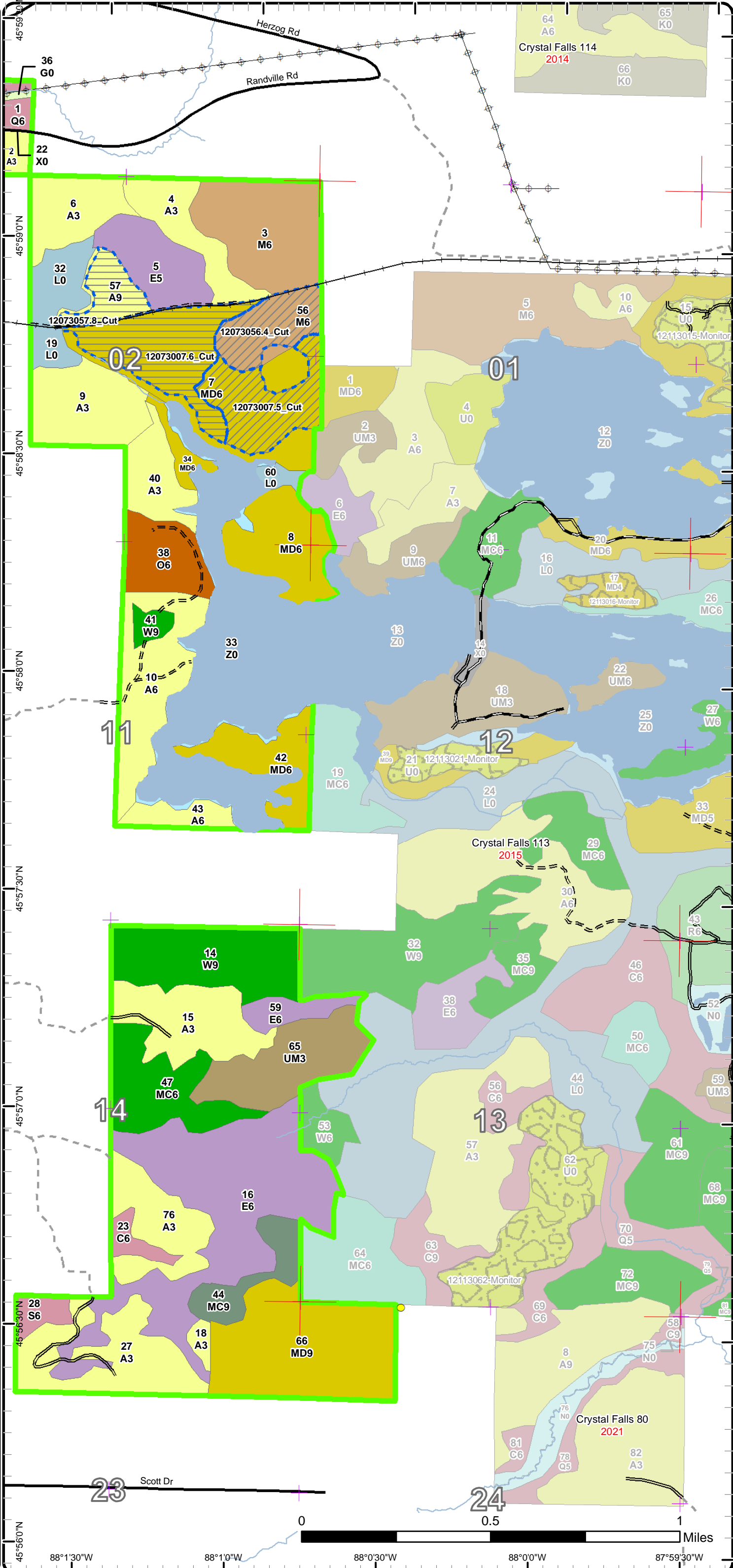


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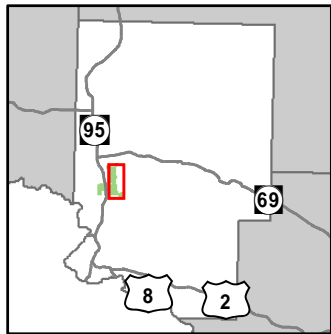


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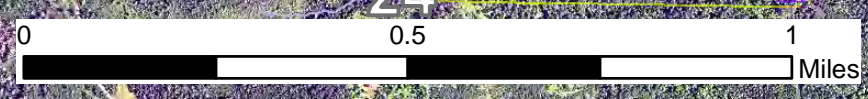
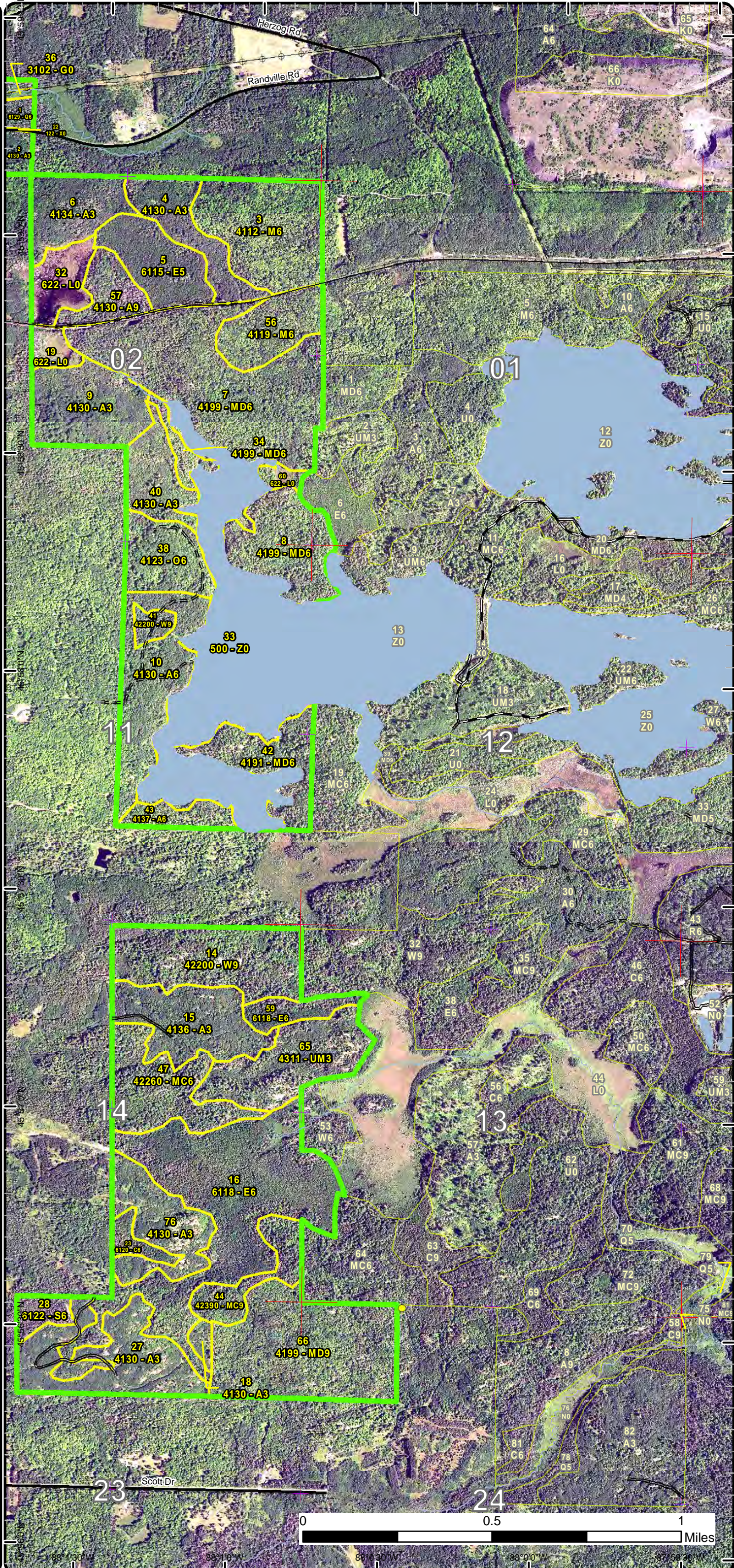


Stand Boundary Map

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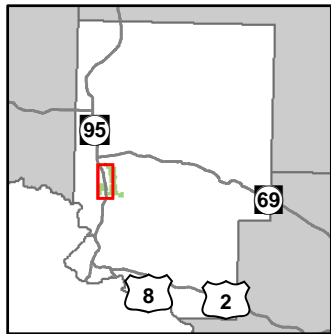
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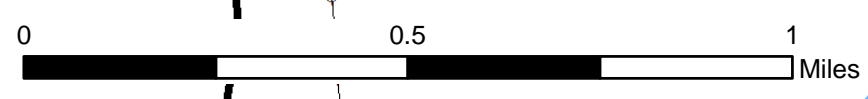
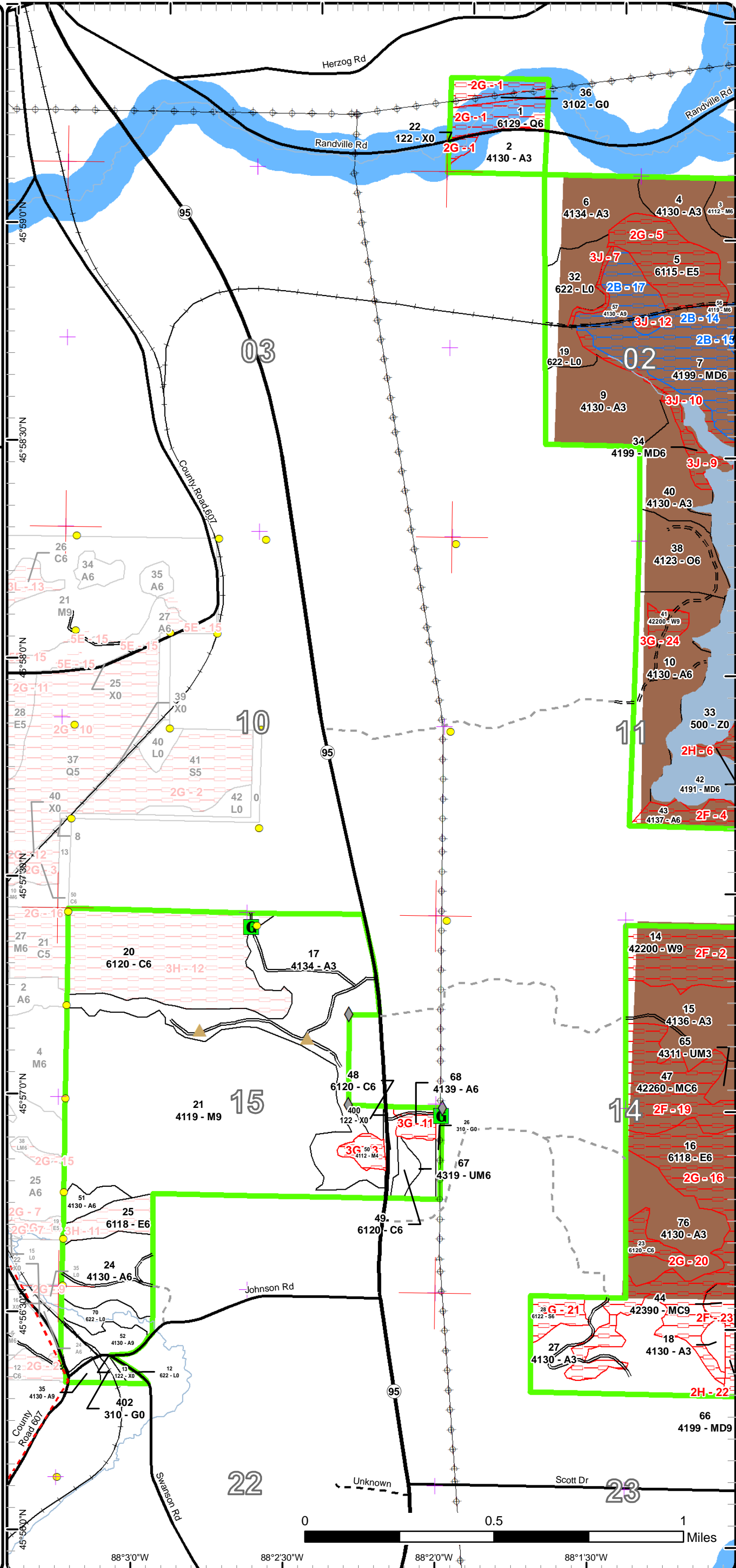
45° 56' 30" N 88° 13' 0" W 45° 58' 30" N 88° 10' 0" W 46° 0' 0" N 88° 0' 0" W 46° 0' 30" N 87° 58' 30" W

Special Conservation Areas & Site Conditions Map

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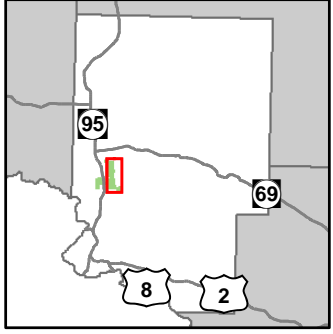
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- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3G: Other Influence zones - See comments
- 3J: Water quality / BMPs (stream, river, or lake)
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Wildlife Management Areas



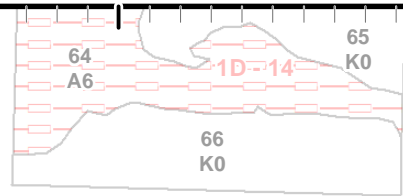
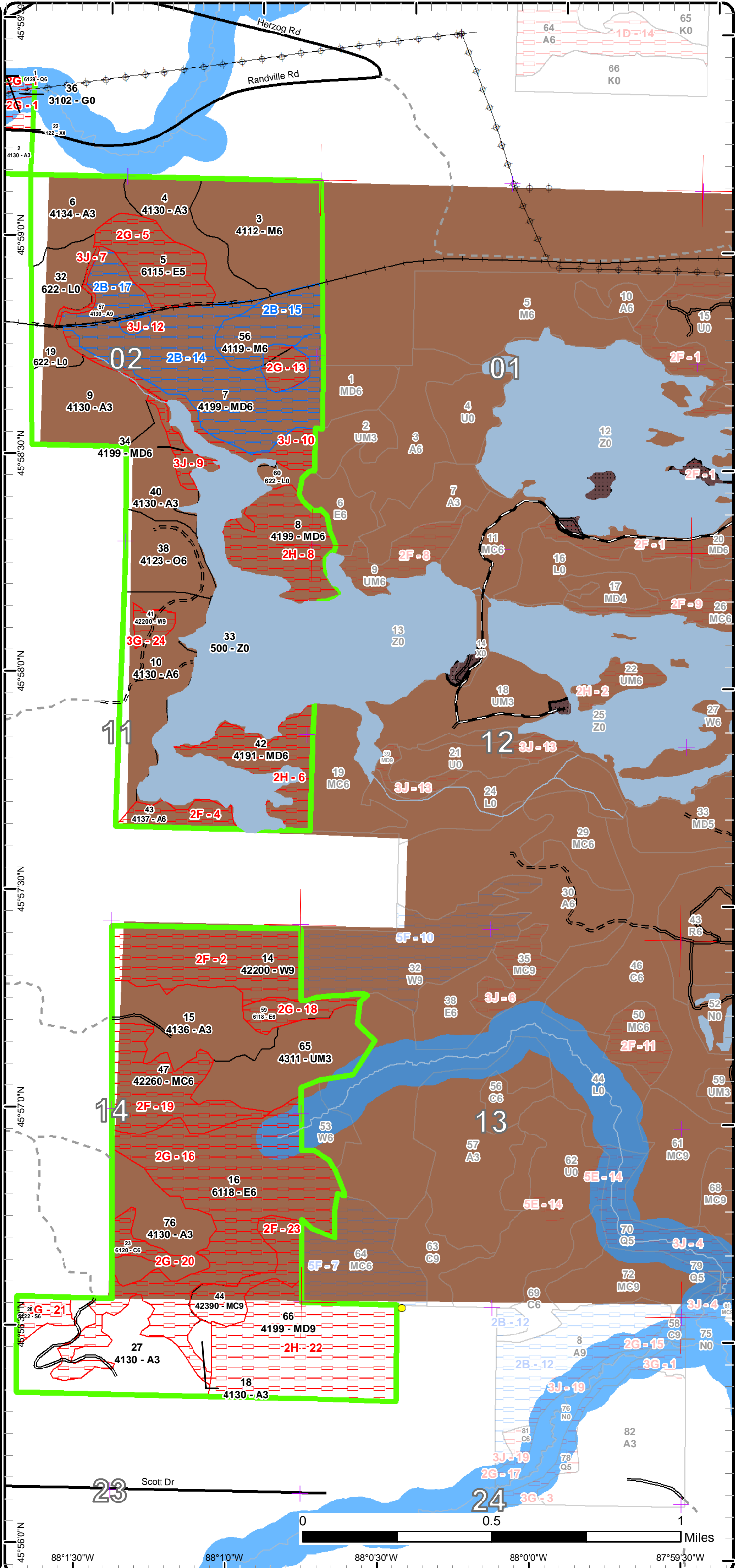
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- Stand Boundaries
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- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Wildlife Management Areas
- Boat Access Site



45°56'0"N 88°1'30"W 88°0'30"W 88°0'0"W 87°59'30"W

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	196	156	35	48	0	6	0	0	42	0	0	0	0	0	0	0	483
Cedar	0	0	0	0	0	0	0	0	0	8	0	7	81	0	0	0	0	0	96
Herbaceous Openland	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	22
Lowland Deciduous	0	0	0	0	0	0	0	0	0	12	164	0	0	0	0	0	0	0	176
Lowland Shrub	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8
Mixed Upland Deciduous	0	0	0	0	0	0	7	0	0	0	143	0	0	0	0	0	0	113	263
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	39	0	0	0	0	0	39
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	84	0	0	0	0	0	0	199	283
Oak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	26
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20
Upland Mixed Forest	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
Urban	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Water	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	138
White Pine	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	53	58
Total	192	0	196	206	35	48	7	6	0	20	460	15	120	0	0	0	0	411	1716



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2020

Acres of Harvest

Compartment 73
Total Compartment Acres: 1,715

Commercial Harvest - 13
Harvests with Site Condition - 120
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	28	0	0	0	0	0	0	0	0	28
Mixed Upland Deciduous	45	0	0	0	0	35	0	0	0	81
Northern Hardwood	0	0	0	0	0	24	0	0	0	24
Total	73	0	0	0	0	60	0	0	0	133

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	133	0	0	0	0	0	0	0	0	133
Next Step	0	0	0	0	0	0	73	0	0	73
Total	133	0	0	0	0	0	73	0	0	206



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
7	12073007.5_Cut	35.2	4199 - Other Mixed Upland Deciduous	Poletimber Well	90	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	Draft Field Boundary

Habitat Cut: No **Site Condition: Unknown Access**

Prescription Cut all aspen and paper birch to 2 inches and greater. Cut all merchantable spruce and fir. Mark down remainder of stand to 60 BA. Do not mark cedar, pine, hemlock and oak. Buffer stream 50 feet.

Next Step
Treatments:

Acceptable Northern Hardwood Associates
Regen:

Other Size of treatment may vary greatly with the size of adjacent clear-cut and low land exclusion.
Comment:

Proposed Start Date: 10/1 /2019

7	12073007.6_Cut	45.4	4199 - Other Mixed Upland Deciduous	Poletimber Well	90	111-140	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition: Unknown Access**

Prescription Clear-cut all species using 2 inch spec. Leave Sub-merchantable spruce and fir. Do not cut oak, pine, hemlock and cedar. Buffer pond/stream 100 feet.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Aspen, maple, oak, spruce, fir
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

35	12073035_Cut	2.2	4130 - Aspen	Sawtimber Well	96	141-170	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition:**

Prescription Cut all trees with one or more pulpwood sticks. Do not cut red and white pine, cedar, hemlock or oak.
Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Mix of aspen, spruce, balsam and hardwood.
Regen:

Other Treat with stand 24 of compartment 75
Comment:

Proposed Start Date: 10/1 /2018

52	12073052_Cut	10.4	4130 - Aspen	Sawtimber Well	96	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition:**

Prescription Cut all trees with one or more pulpwood sticks. Do not cut red pine, white pine, cedar, hemlock and oak. Buffer Creeks 100 feet.
Specs:

Next Step ; Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Mix of aspen, spruce, balsam and hardwood.
Regen:

Other Treat with stand 24 of compartment 75. Buffer creek to the north and creek that runs through stand 52.
Comment:

Proposed Start Date: 10/1 /2018

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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
56 12073056.4_C ut	24.3	4119 - Mixed Northern Hardwoods	Poetimber Well	90	111- 140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven- Aged	Draft Field Boundary

Habitat Cut: No **Site Condition: Unknown Access**Prescription Thin to a basal area of 70. Do not mark hemlock, oak, pine and cedar. Buffer stream 50 feet.Specs:Next StepTreatments:Acceptable northern hardwoods associatesRegen:Other Cut during dry summer or winter; portion of stand is lower ground.Comment:Proposed Start Date: 10/1 /2019

57 12073057.8_C ut	15.2	4130 - Aspen	Sawtimber Well	90	51-80	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition: Unknown Access**Prescription Clear-Cut all species using 2 inch Spec. Leave sub-merchantable spruce and fir. Do not cut cedar, pine and hemlock. Buffer west side of standSpecs: 100 feet where needed.Next Step Monitoring, Natural Regen (Re-Inventory)Treatments:Acceptable Aspen, Mixed ConiferRegen:Other Harvest dry summer or winter. Major Spruce Budworm damage. Red line out black ash pocket.Comment:Proposed Start Date: 10/1 /2019

8 12113008.1_C ut	43.5	4136 - Aspen, Mixed Conifer	Sawtimber Well	78	81-110	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Draft Proposal
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Habitat Cut: No **Site Condition: Unknown Access**Prescription Clear-Cut all species using 2 inch spec. Do not cut cedar, hemlock and oak. Leave sub-merchantable spruce and fir. Cut red and white pineSpecs: marked with orange paint. Only mark red and white pine needed for access within the stand. Buffer creek to the south 300 feet.Next Step Monitoring, Natural Regen (Re-Inventory)Treatments:Acceptable aspen, red pine, white pine balsam fir, spruce, mapleRegen:Other Very little pine will need to be marked for access. Treatment size may vary significantly from original stand size.Comment:Proposed Start Date: 10/1 /2019

**Total Treatment
Acreage Proposed: 176.2**

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Jacob Siler : Examiner

Compartment: 73

Year of Entry: 2020

Availability for Management

Total Acres	Acres Available	Acres Available With Condition	Acres Not Available
482	448	15	19
95	8	0	88
8	8	0	0
22	0	0	22
176	0	0	175
39	39	0	0
8	0	0	8
264	0	79	185
39	0	0	39
283	252	24	7
26	26	0	0
20	0	0	20
50	50	0	0
7	5	0	1
138	138	0	0
59	0	0	59
1,715	974	118	623
	57%	7%	36%

Dominant Site Conditions

	Dominant Site Conditions									
	2B	2F	2G	2H	3G	3H	3J			
Aspen	15	11			6					2
Cedar			7			81				
Herbaceous Openland										
Lowland Conifers			22							
Lowland Deciduous		0	163			12				
Lowland Shrub	0									0
Lowland Spruce/Fir			8							
Mixed Upland Deciduous	79		7	153						26
Natural Mixed Pines		39								
Northern Hardwood	24		1		5					
Oak										
Upland Conifers		20	0							
Upland Mixed Forest			0							
Urban			1							
Water										
White Pine		53			5					
Total Forested Acres	118	124	210	153	16	93				27
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
1	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	22	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stream running through stand.							
2	Unavailable	2F: Too steep	53	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Rough Terrain							

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3	Unavailable	3G: Other Influence zones - See comments	5	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments: Communications tower							
4	Unavailable	2F: Too steep	11	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments: Rough Terrain							
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	30	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	33	Unspecified	Unspecified	Unspecified	Unspecified
Comments: No access to stand for harvest due to surrounding terrain.							
7	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Use buffer as retention when setting sale up.							
8	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	40	Unspecified	Unspecified	Unspecified	Unspecified
Comments: No access to stand for harvest due to surrounding terrain.							

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9	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	17	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments: Look to use as retention.							
11	Unavailable	3G: Other Influence zones - See comments	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Small rocky stand with older aspen and a component of maple. Could be cut as an add on to a nearby sale in the future.							
12	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Small wet area with higher proportion of black ash that should be excluded.							
14	Available	2B: Unknown if access through adjacent landowner(s) is possible	79	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Oaklings Sale was not cut due to lost access.							

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15	Available	2B: Unknown if access through adjacent landowner(s) is possible	24	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Oaklings Sale was not cut due to lost access.							
16	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	122	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Available	2B: Unknown if access through adjacent landowner(s) is possible	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Oaklings Sale was not cut due to lost access.							
18	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Unavailable	2F: Too steep	39	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Rocky ground with lowland most aspen is dead and falling out. SBW damage present.							
20	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	3I: Historical / archeological (add locked comments)	Unspecified	Unspecified	Unspecified
Comments:							

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21	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	81	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments: Rough Terrain							
23	Unavailable	2F: Too steep	20	2G: Too wet (sensitive soils, does not include access issues)	3L: Other wildlife concerns	Unspecified	Unspecified
Comments: Other wildlife consideration: Deer cover							
24	Unavailable	3G: Other Influence zones - See comments	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Hold and treat with surrounding aspen.							

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 5 – 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 6 – 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	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	21.8	97	141-170	Trace amounts of aspen, red maple and black ash.
2	4130 - Aspen	Sapling Well	15.2	16	Immature	OPIC - FMD: Cut in 2002. Hardwood remaining on slope, A3 on flat, red and white pine along road.(2008) Trace amounts of white pine, red pine, cherry and spruce in the super canopy. Red oak is in the super canopy. Small patch of hardwood on slope.
3	4112 - Maple, Beech, Cherry Association	Poletimber Well	53.2	94	81-110	OPIC - FMD: 1924 birch stand cut in 2004. Now fair hardwood. (2008) Trace amounts of hemlock.
4	4130 - Aspen	Sapling Well	26.1	27	Immature	OPIC - FMD: OI Stand Year Origin was 1991
5	6115 - Lowland Ash	Poletimber Medium	29.6	94	81-110	
6	4134 - Aspen, Spruce/Fir	Sapling Well	27.5	24	Immature	OPIC - FMD: ROCKY Trace amounts of maple and spruce.
7	4199 - Other Mixed Upland Deciduous	Poletimber Well	103.6	90	111-140	OPIC - FMD: Much more white birch than plots hit. Remove aspen and birch, larger spruce/fir. Re-enter in 20-30 years and mark hard (to 60 BA) to manage for hardwood pulp (as per TMS). (2008) Was part of Oaklings sale (120-013-10-01) The sale was dropped and not cut. (2018) Trace amounts of white pine, hemlock, and red oak. (2018)
8	4199 - Other Mixed Upland Deciduous	Poletimber Well	39.8	95	111-140	OPIC - FMD: DATA FROM PREVIOUS YOY. HOLD AS OLD GROWTH (SCA) DUE TO WATER INFLUENCE CONCERNS.(2008) Birch falling out. Trace amounts of spruce, sugar maple, cedar, oak and hemlock. Stand 8 of Compartment 113 was merged into stand.
9	4130 - Aspen	Sapling Well	39.1	23	Immature	Small oak patch with some maple saplings located on the south end of the stand against private. Small oak patch was formally Stand 39 that was only a couple acres in size. Low area on north east edge of stand where small creek runs through.
10	4130 - Aspen	Poletimber Well	47.7	42	Unspecified	OPIC - FMD: OI Stand Year Origin was 1976 Trace amounts of cherry, balsam poplar, spruce, and sugar maple.
14	42200 - Natural White Pine	Sawtimber Well	53.3	120	81-110	Trace amounts of black spruce (2018)
15	4136 - Aspen, Mixed Conifer	Sapling Well	40.8	25	Immature	OPIC - FMD: Ridges within stand red and white pine. (2008) Trace amounts of red pine, balsam poplar, white pine, cedar and white spruce.



Stand	Crystal Falls Mgt. Unit		Report 7 – Forested Stands			Compartment: 73 Year of Entry: 2020
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	6118 - Lowland Deciduous with Cedar	Poletimber Well	122.6	96	111-140	Trace amount of paper birch, tamarack, balsam poplar, and yellow birch. Variable basal area.
17	4134 - Aspen, Spruce/Fir	Sapling Well	94.2	14	Immature	OPIC - FMD: OI Stand Year Origin was 2004 (Cut in 2004) Couple of small wet sinks with alder and a trace of cedar, tamarack, and black ash. Also trace amounts of white pine and paper birch. Some older timber along highway from a buffer, about 300 feet.
18	4130 - Aspen	Sapling Well	3.6	14	Immature	OPIC - FMD: OI Stand Year Origin was 2004 Trace amounts of balsam fir, cedar, balsam poplar, black ash, white pine, red pine, and red maple.
20	6120 - Lowland Cedar	Poletimber Well	80.8	114	171-200	
21	4119 - Mixed Northern Hardwoods	Sawtimber Well	198.7	105	81-110	OPIC - FMD: Hilly but mostly operable. Many rock outcrops. Drainage in center of stand. Follow up with regeneration check.(2008). Cut 8/12 under Billy Goat Hardwood sale Steep and rocky terrain with drainages and a few low areas. Trace amounts of cedar. South west corner has a high concentration of Aspen saplings only a few acres in size.
23	6120 - Lowland Cedar	Poletimber Well	7.0	108	201+	OPIC - FMD: OI Stand Year Origin was 1910
24	4130 - Aspen	Poletimber Well	28.7	39	Unspecified	OPIC - FMD: OI Stand Year Origin was 1979 Strip along south side of stand is older and was left as a buffer along stand 70.
25	6118 - Lowland Deciduous with Cedar	Poletimber Well	12.0	84	141-170	Trace amounts of red maple, quaking aspen and black spruce
27	4130 - Aspen	Sapling Well	49.9	14	Immature	OPIC - FMD: OI Stand Year Origin was 2004 Trace amounts of balsam fir, cedar, balsam poplar, black ash, white pine, red pine, and red maple.
28	6122 - Black Spruce	Poletimber Well	8.2	104	81-110	OPIC - FMD: OI Stand Year Origin was 1914
34	4199 - Other Mixed Upland Deciduous	Poletimber Well	7.3	50	51-80	OPIC - FMD: BIRCH LOOKS GOOD, HIGH F REPRO. BORDERS MINE POND, HOLD FOR OLD GROWTH (SCA) DUE TO WATER CONSIDERATIONS.(2008)
35	4130 - Aspen	Sawtimber Well	2.2	96	141-170	OPIC - FMD: Travel influence. Remove aspen and some hardwood.(2008)



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	4123 - Red Oak	Poletimber Well	26.2	104	81-110	OPIC - FMD: ASPEN REMOVED IN 1995. NICE OAK REMAINING. Highly variable stand; some areas are dominated by saplings and poles, and some areas by large timber. West half of stand is primarily saplings.
40	4130 - Aspen	Sapling Well	22.4	23	Immature	OPIC - FMD: OI Stand Year Origin was 1995 Trace amounts of large oak and white pine. Trace amounts of ironwood, cedar, black ash, and black spruce.
41	42200 - Natural White Pine	Sawtimber Well	5.3	99	81-110	OPIC - FMD: Aspen removed in 1994. (2008) Trace amounts of oak.
42	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	32.8	41	51-80	OPIC - FMD: DATA FROM PREVIOUS SURVEY. AREA HAS VERY POOR ACCESS AND BORDERS POND. HOLD AS OLD GROWTH (SCA).(2008) A mix of both pole sized younger aspen and large old aspen. Older aspen and birch are dying out.
43	4137 - Aspen, Birch	Poletimber Well	11.3	99	81-110	OPIC - FMD: DATA FROM PREVIOUS SURVEY. AREA HAS VERY POOR ACCESS AND BORDERS POND. HOLD AS POG (SCA). (2008) Trace amounts of cedar, hemlock and red pine.
44	42390 - Mixed Non- Pine Upland Conifers	Sawtimber Well	19.8	163	171-200	Very rocky. (2018)
47	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	39.2	118	51-80	OPIC - FMD: WAS PART OF STAND 15 NOT CUT WITH NORTHERN PART OF STAND. VERY ROCKY ,HILLY INOPERABLE.(2208) All aspen is almost dead. Variable size pine on rock. Some portions of stand hit hard by SBW. BA is also variable throughout stand. (2018)
48	6120 - Lowland Cedar	Poletimber Well	3.2	80	141-170	
49	6120 - Lowland Cedar	Poletimber Well	4.5	80	141-170	Trace amounts of black spruce, red maple, paper birch, yellow birch, hemlock and aspen. Some larger cedar and hemlock on south end.
50	4112 - Maple, Beech, Cherry Association	Poletimber Poor	5.3	98	81-110	OPIC - FMD: Travel influence. Small stand. (2008) Communication tower surrounded by a mix of hardwoods on rocky terrain.
51	4130 - Aspen	Poletimber Well	6.2	39	Unspecified	Cut in 1979



Stand	Crystal Falls Mgt. Unit		Report 7 – Forested Stands			Compartment: 73 Year of Entry: 2020	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
52	4130 - Aspen	Sawtimber Well	11.1	96	Unspecified	OPIC - FMD: Small stand on road and railroad line with creek running through. If cutting retain conifer. (2008) Railroad cuts through middle of stand. Trace amounts of paper birch, basswood, spruce, cherry and oak.	
56	4119 - Mixed Northern Hardwoods	Poletimber Well	25.7	90	111-140	OPIC - FMD: Stand marked but not cut last YOE. Cut as marked with additional marking down to 70 BA (as per TMS). Follow up with regeneration check. (2008) Trace amounts of white ash, oak, balsam poplar and hemlock. (2017) Small stream runs through the stand. (2017)	
57	4130 - Aspen	Sawtimber Well	17.1	90	51-80	Trace amounts of cedar, white pine, oak, and tamarack. BA is variable; the stand was hit hard by spruce SBW.	
59	6118 - Lowland Deciduous with Cedar	Poletimber Well	11.4	95	111-140		
65	4311 - Pine, Aspen Mix	Sapling Well	43.6	25	Immature	OPIC - FMD: Was part of stand 15. Low areas cut in 1993, ridges inoperable mixed pine. (2008) Trace amounts of white spruce and jack pine. Stand 38 of compartment 113 was merged in with stand 65. (2018)	
66	4199 - Other Mixed Upland Deciduous	Sawtimber Well	80.6	91	81-110	OPIC - FMD: Inoperable. (2008) Rocky and variable stand. Aspen falling out with red maple poles filling in the canopy. (2018)	
67	4319 - Mixed Upland Forest	Poletimber Well	6.2	26	Unspecified	OPIC - FMD: OI Stand Year Origin was 1992	
68	4139 - Aspen, Mixed Deciduous	Poletimber Well	5.5	66	111-140	Trace amounts of yellow birch, oak, and black spruce.	
76	4130 - Aspen	Sapling Well	33.4	14	Immature	OPIC - FMD: Part of stand 27 (2008). Trace amounts of balsam fir, cedar, balsam poplar, black ash, and red maple.	



Stand	Cover Type	Acres	Managed Site	General Comments:
12	622 - Lowland Shrub	1.7	No	OPIC - FMD: TRAVEL INFLUENCE ZONE, HOLD AS OLD GROWTH.
13	122 - Road/Parking Lot	1.4	No	OPIC - FMD: Small stand on road and railroad line with creek running through. If cutting retain conifer. (2008)
19	622 - Lowland Shrub	7.5	No	
22	122 - Road/Parking Lot	0.8	No	OPIC - FMD: Cut in 2002. Hardwood remaining on slope, A3 on flat, red and white pine along road.(2008)
26	310 - Herbaceous Openland	2.2	No	
32	622 - Lowland Shrub	17.4	No	
33	500 - Water	138.0	No	OPIC - FMD: FLOODING FROM MINE OPERATIONS.
36	3102 - Grass	3.1	No	Power line
60	622 - Lowland Shrub	4.0	No	OPIC - FMD: OI Stand Year Origin was 1919
70	622 - Lowland Shrub	8.1	No	
400	122 - Road/Parking Lot	4.7	No	OPIC - FMD: OI Stand Year Origin was
402	310 - Herbaceous Openland	2.4	No	