



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12066

Entry Year 2018

Acreage: 2,159

County Dickinson

Management Area: Ralph Ground Moraine

Revision Date: 2016-08-20

Stand Examiner: Deb Goupell

Legal Description:

T42N R28W Sec 11-14, 23,24

Identified Planning Goals:

Manage all forest types on a healthy, sustainable rotation. Encourage diversity within stands. Protect all bodies of water.

Soil and topography:

Emmet fine sandy loam dominates the uplands.

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

North half of this compartment is mostly private. Some scattered individual 40s in the south and adjacent.

Unique Natural Features:

Skunk Creek and North Br. Skunk Creek

Archeological, Historical, and Cultural Features:

None.

Special Management Designations or Considerations:

Arnold-Ford River Obligate Deer Wintering Area

Watershed and Fisheries Considerations:

Skunk Creek and North Br. Skunk Creek are good quality trout streams.

Wildlife Habitat Considerations:

This compartment is in the Ralph Ground Moraine Management Area which has the following featured species: American woodcock, black bear, northern goshawk, ruffed grouse, and white-tailed deer. Balancing the age classes of aspen to provide early successional habitat through mature aspen forest is a goal in this compartment. This compartment falls within the historic Skunk Creek Deeryard now included in the Arnold-Ford River DWC. Lowland conifers and lowland hardwood types provide winter and summer cover and are essential for travel corridors for a many species of wildlife, most importantly for wintering deer and spring/summer habitat for bears. They also provide essential habitat for riparian species along river systems. Mesic conifer in the uplands is promoted to provide structural diversity within stands which increases habitat value, as cover for wildlife and allow wintering deer to access forage in the uplands. Mast production, such as oak, cherry and raspberry are encouraged to provide valuable forage for bear, deer, grouse and turkey. This compartment has several hunter walking trails and maintained openings that provide herbaceous spring and summer forage particularly important for wildlife, and provide recreational opportunities for consumptive and non-consumptive wildlife users.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of medium and coarse-textured glacial till. The glacial drift thickness varies between 10 and 50 feet. The Cambrian Munising and Precambrian Archean Volcanics and sedimentary rocks subcrop below the glacial drift. There is no current economic use for these rocks. The Groveland Iron mine is located approximately ten miles to the southwest. Sections 11 – 14 are currently leased for metallic exploration. Gravel pits are located to the south and there is potential. There is no economic oil and gas production in the UP.

Vehicle Access:

Limited on north by private land but State forest road cuts through the south portion.

Survey Needs:

Corners will be needed.

Recreational Facilities and Opportunities:

Trapping, hunting, fishing.

Fire Protection:

Felch protection area.

Additional Compartment Information:

The following reports from the Inventory are attached:

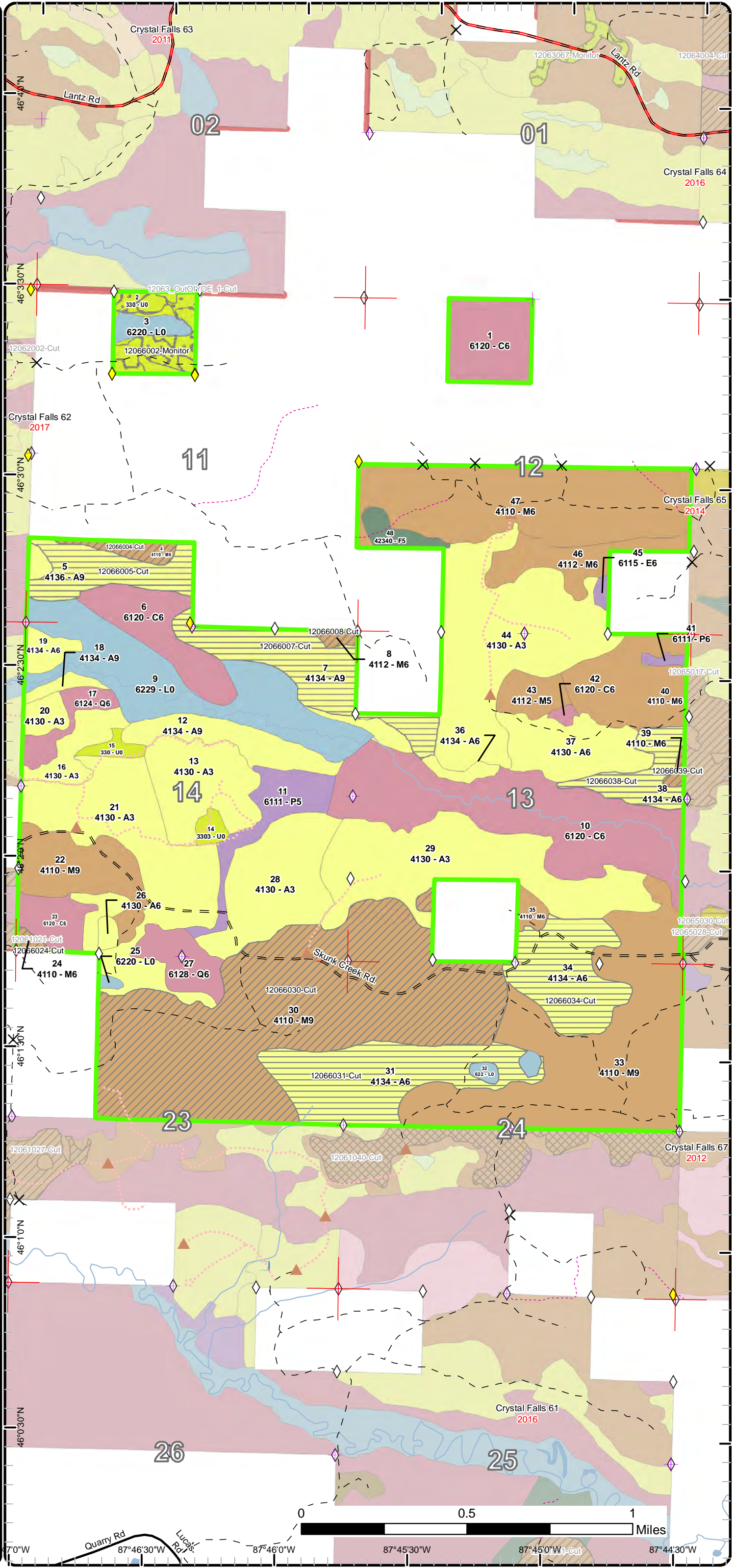
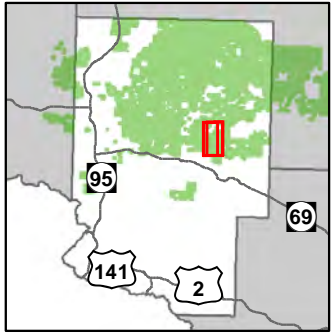
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

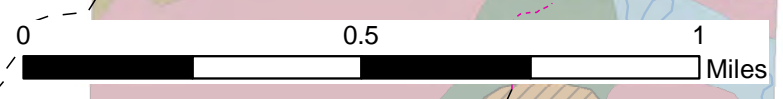
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 66
 T42N R28W Sec. 11-14, 23, 24
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Ralph Ground Moraine
 YOE: 2018
 Acres: 2,159 GIS Calculated
 Examiner: Deb Goupell
 Map Revised: 11/21/2016
 Map Phase: Post-Review



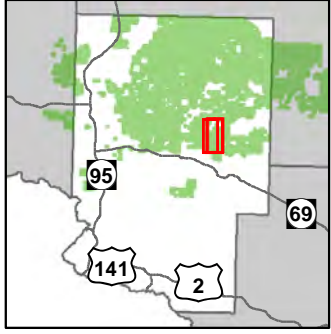
- Miris Corners
- Remonumented Section Corners
- Survey Grade GPS Corners
- Field Grade GPS Corners
- Gate
- Berms
- Culverts
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Rivers
- Compartment Boundary
- Clearcut (w/Reserves)
- Regeneration Survey
- Thinning (Crown, Low, Systematic)
- 411 - Northern Hardwood
- 413 - Aspen
- 423 - Other Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 330 - Low Density Trees
- 622 - Lowland Shrub
- Lakes



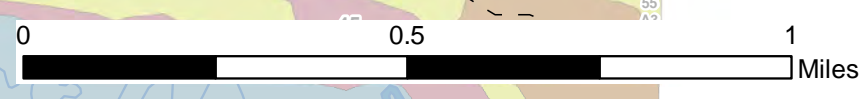
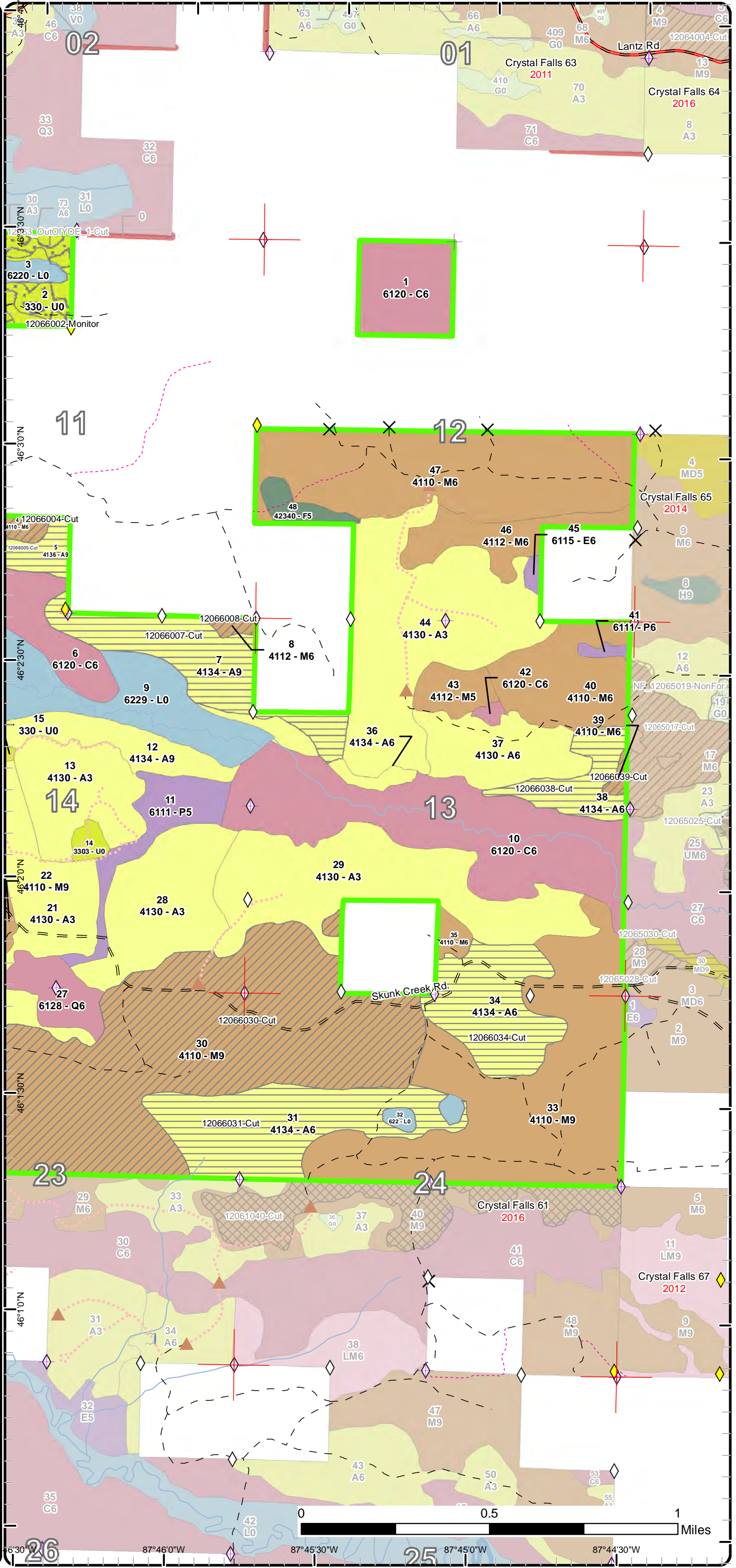
70°W 87°46'30"W 87°46'0"W 87°45'30"W 87°45'0"W 87°44'30"W

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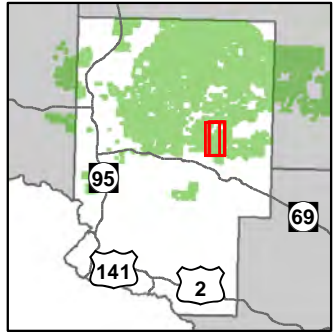
- Miris Corners
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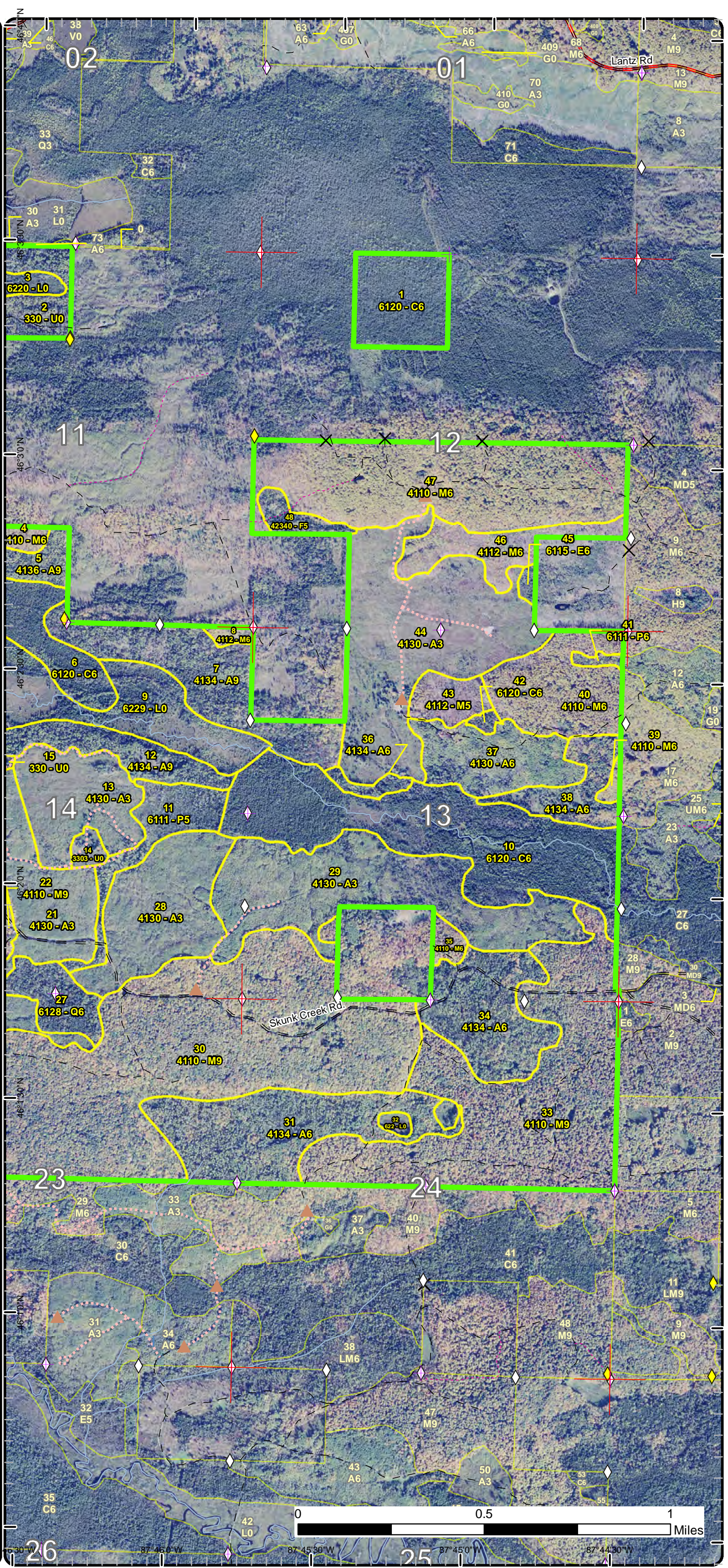
63°30'W 87°46'0"W 87°45'30"W 87°45'0"W 87°44'30"W

Stand Boundary Map

Compartment: 66
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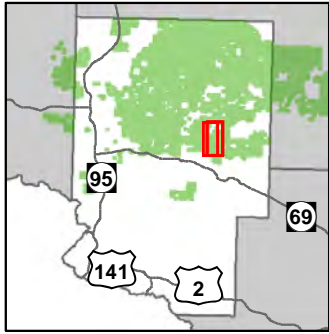


- Miris Corners
- + Remonumented Section Corners
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- ◇ Field Grade GPS Corners
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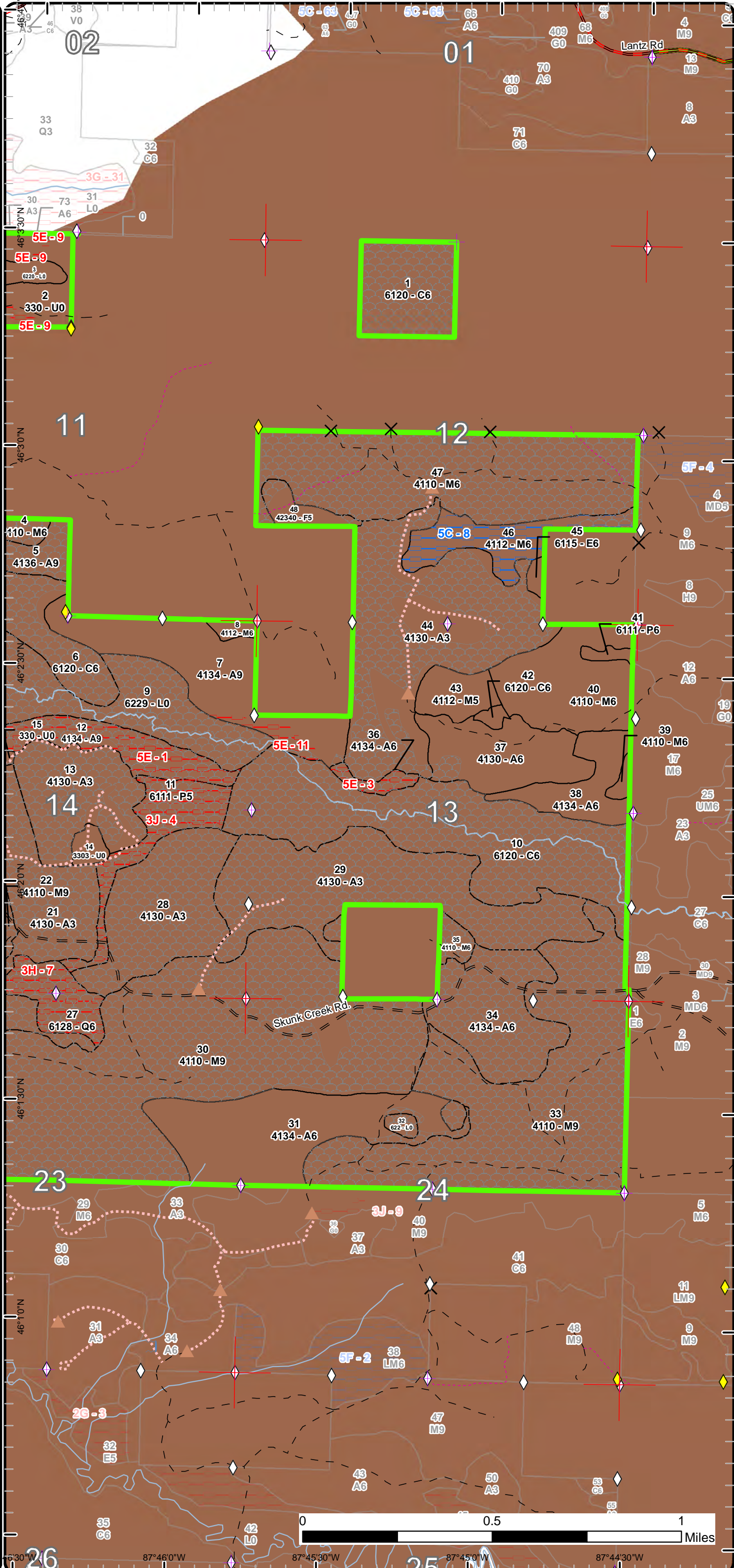


Special Conservation Areas & Site Conditions Map

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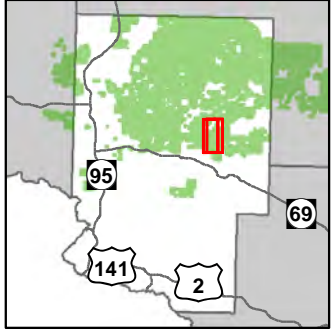


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- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 3H: Deer Wintering Areas
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Natural Beauty Roads
- Cold Water Streams
- Deer Winter Range

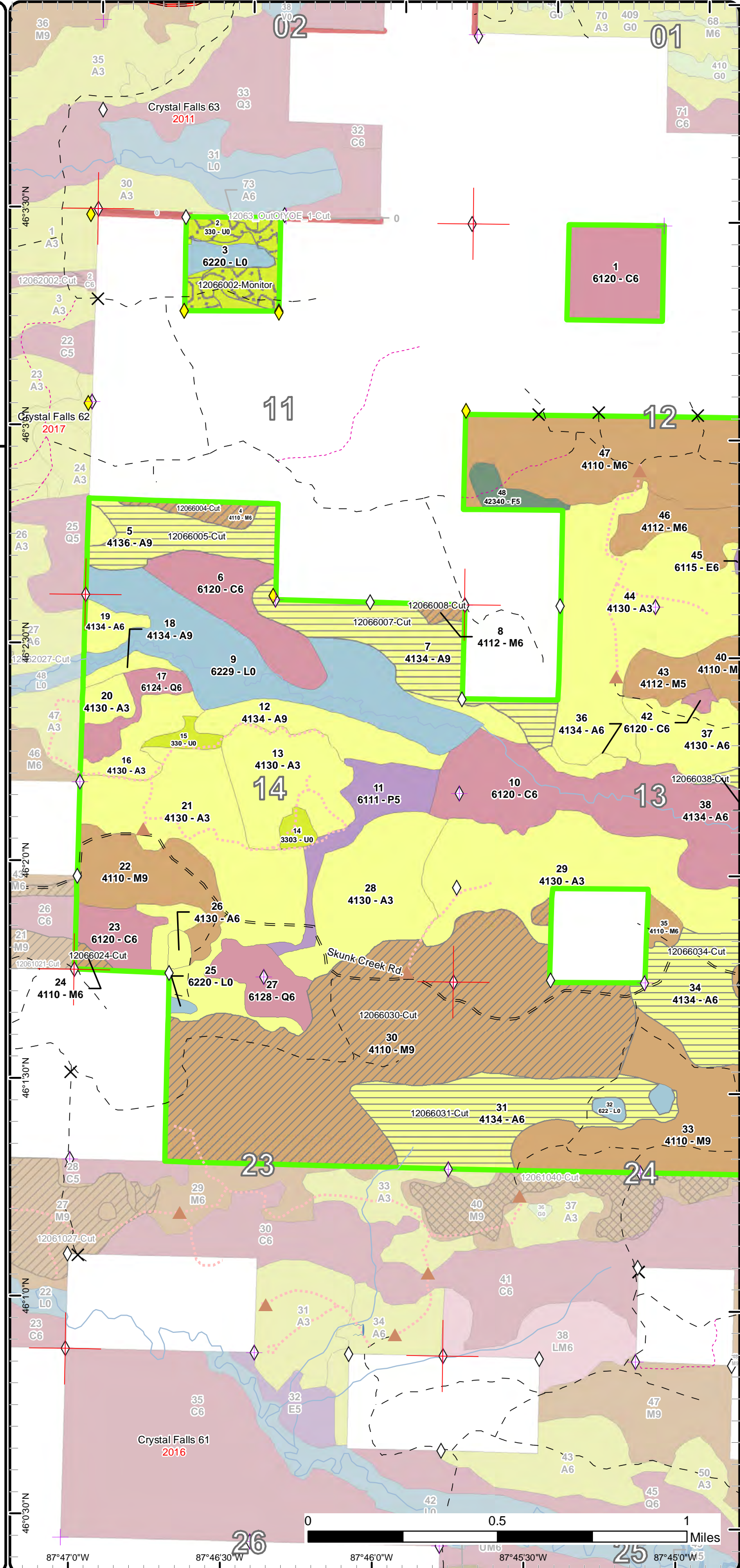


Cover Type & Treatments Map

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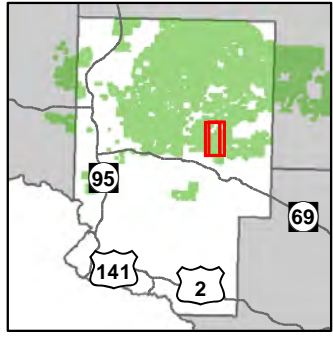


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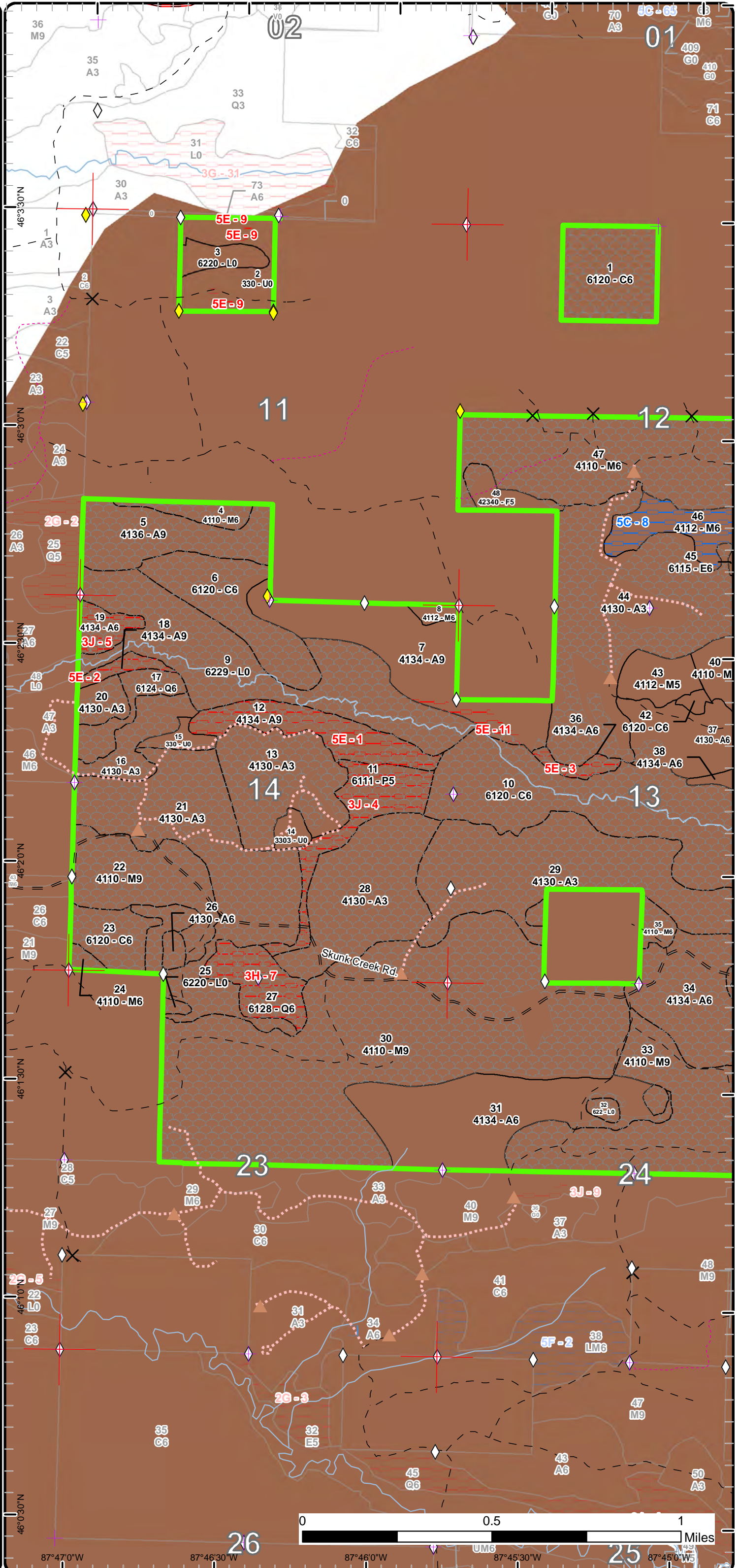


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- 5E: Long-Term Retention
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- Cold Water Streams
- Deer Winter Range



87°47'0"W 87°46'30"W 87°46'0"W 87°45'30"W 87°45'0"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	215	186	115	4	43	0	26	112	150	38	0	0	0	0	0	0	0	889
Cedar	0	0	0	0	0	0	0	0	0	140	101	0	0	0	0	0	0	0	241
Low-Density Trees	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	29	0	0	0	0	0	0	0	0	0	0	3	32
Lowland Conifers	0	0	0	0	0	14	0	0	0	0	23	0	0	0	0	0	0	0	37
Lowland Deciduous	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3
Lowland Shrub	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	118
Northern Hardwood	0	0	0	0	0	0	0	0	15	86	137	0	0	0	0	0	0	552	790
Upland Spruce/Fir	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Total	159	215	186	115	14	57	29	26	127	379	299	0	0	0	0	0	0	555	2161



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2018

Compartment 66
Total Compartment Acres: 2,159

Acres of Harvest

Commercial Harvest - 582
Harvests with Site Condition - 0
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	262	0	0	0	0	0	0	0	0	262
Northern Hardwood	0	0	0	0	321	0	0	0	0	321
Total	262	0	0	0	321	0	0	0	0	582

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	582	0	0	0	0	24	0	11	0	617
Next Step	0	0	302	0	0	262	0	0	0	564
Total	582	0	302	0	0	286	0	11	0	1181



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
2	12066002-Monitor	24.2	330 - Low-Density Trees	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Re-Inventory)	413 - Aspen	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**PrescriptionSpecs:Next StepTreatments:Acceptable aspen, mixed softwood, mixed hardwoodRegen:Other Percent to Treat = 100%Comment:Proposed Start Date: 08/04/2016

4	12066004-Cut	9.3	4110 - Sugar Maple Association	Poletimber Well	93	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**Prescription Mark to BA 70-80, focusing on removal of poor quality stems, releasing crowns of crop trees. Access through privateSpecs:Next StepTreatments:AcceptableRegen:Other WLD- Featured species: deer, bear. Mesic conifer in the uplands is promoted to provide structural diversity within stands which increases habitat value, as cover for wildlife. Mast production, such as oak, cherry and raspberry are encouraged to provide valuable forage for bear, deer, and grouse. Trees showing potential for nesting bird, and providing nesting and denning cavities should be retained.Proposed Start Date: 10/01/2016

5	12066005-Cut	37.2	4136 - Aspen, Mixed Conifer	Sawtimber Well	73	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**Prescription Cut all species 2" and up except cedar and pine. Retention around cedar pocket on west line.Specs:Next StepTreatments: Monitoring, Natural Regen (Re-Inventory)Acceptable mixed conifer, mixed hardwoodRegen:Other Access is through private. may want to consider winter harvest due to shallow soils and private access. may start FY 2017 if corner are in and time permitsComment: WLD-featured species: American woodcock, black bear, northern goshawk, ruffed grouse, and white-tailed deer. Balancing the age classes of aspen to provide early successional habitat through mature aspen forest is a goal in this compartment. . Mesic conifer in the uplands is promoted to provide structural diversity within stands which increases habitat value, as cover for wildlife. Mast production, such as oak, cherry and raspberry are encouraged to provide valuable forage for bear, deer, and grouse. Drainages and associated ash should be protected as critical bear habitat.Proposed Start Date: 10/01/2016



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
7	12066007-Cut	58.4	4134 - Aspen, Spruce/Fir	Sawtimber Well	76	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Cut all tree 2" dbh and up except cedar and pine. Cedar pocket are in south central of stand. Recommend winter cut. Treatment reflects 300' buffer to Skunk Ck, which will serve as retention.

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

Acceptable mixed softwood, mixed hardwood, pine
Regen:

Other May start FY 2017 if corners are in and time permits

Comment: WLD-featured species: American woodcock, black bear, northern goshawk, ruffed grouse, and white-tailed deer. Balancing the age classes of aspen to provide early successional habitat through mature aspen forest is a goal in this compartment. . Mesic conifer in the uplands is promoted to provide structural diversity within stands which increases habitat value, as cover for wildlife. Mast production, such as oak, cherry and raspberry are encouraged to provide valuable forage for bear, deer, and grouse. Drainages and associated ash should be protected as critical bear habitat.

Proposed Start Date: 10/01/2016

8	12066008-Cut	3.6	4112 - Maple, Beech, Cherry Association	Poletimber Well	93	111- 140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Thin to around 90 BA as stand is quite thick. 80 BA in less dense areas. Focus on removing aspen and poor quality stems to release potential

Specs:
Next Step
Treatments:

Acceptable
Regen:

Other may start FY 2017 if corners are in and time permits

Comment: WLD-Featured species: deer, bear, pileated woodpecker. Retaining and promoting mesic conifer within stand diversity is important such as White pine, hemlock, cedar and submerchantable spruce/fir . Oak and cherry should be maintained for mast production. Trees showing potential for nesting birds, and providing nesting and denning cavities should be retained.

Proposed Start Date: 10/01/2016

14	12066014-NF	5.1	3303 - Mixed Low Density Trees	Nonstocked		Unspec ified	NonForestMgt	Herbaceous/Crop /Grass Planting	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Herbaceous opening maintenance

Specs:
Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
15	12066015-NF	5.6	330 - Low-Density Trees	Nonstocked		Unspecified	NonForestMgt	Herbaceous/Crop /Grass Planting	310 - Herbaceous Openland		Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Herbaceous opening maintenance

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

24	12066024-Cut	3.0	4110 - Sugar Maple Association	Poletimber Well	93	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	Field Boundary - Ready for VMS
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Habitat Cut: No**Site Condition:**

Prescription Thin to BA 80 removing poor quality stems and releasing crowns of crop trees.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 11/20/2015

30	12066030-Cut	302.0	4110 - Sugar Maple Association	Sawtimber Well	95	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Thin to BA 80. Focus on removal of poor stems and those competing with crowns of crop trees. Wildlife prefers winter cut.

Specs:

Next Step Planting, Underplant

Treatments:

Acceptable

Regen:

Other

This will be a light thinning for the most part.

Comment: WLD-Featured species: Deer, Bear . DWC- . Mesic conifer in the uplands is promoted to provide structural diversity within stands which increases habitat value, as cover for wildlife. Mast production, such as oak, cherry and raspberry are encouraged to provide valuable forage for bear, deer, and grouse. Maintenance of diverse species for structural diversity such as refuge, cover and den trees is important numerous wildlife species in addition to the featured species. Drainages and vernal pools should be protected as critical bear habitat. Propose wildlife underplant of white pine or hemlock.

Proposed Start Date: 10/01/2017



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
31	12066031-Cut	82.7	4134 - Aspen, Spruce/Fir	Poletimber Well	85	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" dbh and greater except cedar and pine. Winter harvest due to very shallow soils. Be sure to capture aspen along edge of hardwood stand. Retain submerchantable ash and hemlock.

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

Acceptable Regen: mixed softwood, mixed hardwood

Other There is a tag swale in center of stand.

Comment: WLD- featured species: American woodcock, black bear, northern goshawk, ruffed grouse, and white-tailed deer. Balancing the age classes of aspen to provide early successional habitat through mature aspen forest is a goal in this compartment. Mesic conifer in the uplands is promoted to provide structural diversity within stands which increases habitat value, as cover for wildlife. DWC -forage for deer. Mast production, such as oak, cherry and raspberry are encouraged to provide valuable forage for bear, deer, and grouse. Wet forested lowland important habitat for bear and had evidence of heavy deer browse-DWC.

Proposed Start Date: 10/01/2017

34	12066034-Cut	57.0	4134 - Aspen, Spruce/Fir	Poletimber Well	80	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" dbh and greater except cedar (pine, if found). In addition 2-6" dbh sugar maple should be protected (heaviest in south/southeast quarter of this stand). Possibly put retention in this area? There are pockets of lowlands, ash swales and vernal in here. Paint out vernal and winter cut.

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

Acceptable Regen: mixed softwood, mixed hardwood, balm of gilead

Other WLD-Featured Species: Deer, Bear, Grouse. Balancing the age classes of aspen to provide early successional habitat through mature aspen forest is a goal in this compartment. Mesic conifer in the uplands is promoted to provide structural diversity within stands which increases habitat value, as cover for wildlife. Retention of White Pine, hemlock, and cedar component for refuge trees and cover for bear and deer is desirable. This compartment is in DWC-transitions from lowlands are critical for wintering deer to access upland and reach forage in uplands Mast production, such as oak, cherry and raspberry are encouraged to provide valuable forage for bear, deer, grouse. Drainages and associated ash should be protected as critical bear habitat.

Proposed Start Date: 10/01/2017

38	12066038-Cut	26.2	4134 - Aspen, Spruce/Fir	Poletimber Well	66	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" dbh and greater except pine and cedar, hemlock if found.

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

Acceptable Regen: mixed softwood, mixed hardwood

Other WLD-Featured Species: Deer, Bear, Grouse. Balancing the age classes of aspen to provide early successional habitat through mature aspen forest is a goal in this compartment. Mesic conifer in the uplands is promoted to provide structural diversity within stands which increases habitat value, as cover for wildlife. Retention of White Pine, hemlock, and cedar component for refuge trees and cover for bear and deer is desirable. This compartment is in DWC-transitions from lowlands are critical for wintering deer to access upland and reach forage in uplands Mast production, such as oak, cherry and raspberry are encouraged to provide valuable forage for bear, deer, grouse. Drainages and associated ash should be protected as critical bear habitat.

Proposed Start Date: 10/01/2017



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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
39 12066039-Cut	2.7	4110 - Sugar Maple Association	Poletimber Well	85	141-170	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Thin to BA 80

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 09/01/2015

**Total Treatment
Acreage Proposed: 617.0**

Report 4 – Site Conditions

Crystal Falls Mgt. Unit
 Deb Goupell : Examiner

Compartment: 66
 Year of Entry: 2018

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	5C	3H	3J	5E
		With Condition	Not Available					
888	828	0	60	Aspen			10	50
241	241	0	0	Cedar				
41	36	0	4	Low-Density Trees				4
32	3	0	29	Lowland Aspen/Balsam Poplar			29	
37	14	0	23	Lowland Conifers		23		
3	3	0	0	Lowland Deciduous				
118	118	0	0	Lowland Shrub				
789	758	31	0	Northern Hardwood	31			
10	10	0	0	Upland Spruce/Fir				
2,159	2,012	31	116	Total Forested Acres	31	23	39	54
	93%	1%	5%	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	5E: Long-Term Retention	32	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
2	Unavailable	5E: Long-Term Retention	6	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	5E: Long-Term Retention	6	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments: a portion of this stand is in the 300 ft buffer to Skunk Ck							

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment: 66

Year of Entry: 2018

4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Half of this stand is within the 300 ft buffer of Skunk Ck							
7	Unavailable	3H: Deer Wintering Areas	23	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
Comments: Stand is quite wet with good pockets of cedar. Looking to retain what conifer we can as it is in a deer yard.							
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	31	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	5E: Long-Term Retention	7	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							



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
	Potential Old Growth		SCA Removal	40
Comments Deer yard covers this SCA				
	Potential Old Growth		SCA Removal	1675
Comments Deer yard covers this SCA				



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	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.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6120 - Lowland Cedar	Poletimber Well	40.5	95	81-110	
4	4110 - Sugar Maple Association	Poletimber Well	9.3	93	111-140	Ash is browsed hard, 2 leaf maples fairly consistent through the stand. Stand has some great crop sugar maple.
5	4136 - Aspen, Mixed Conifer	Sawtimber Well	40.9	73	Unspecified	Much of conifer is dead and aspen is breaking up. Concentrate retention around cedar pockets. Recommend winter cut due to age and shallow soils.
6	6120 - Lowland Cedar	Poletimber Well	41.5	90	Unspecified	
7	4134 - Aspen, Spruce/Fir	Sawtimber Well	65.9	76	Unspecified	a lot of dying spruce/ fir with a lot of it on the ground. cedar pockets south central of stand. Winter cut recommended
8	4112 - Maple, Beech, Cherry Association	Poletimber Well	3.6	93	111-140	Very thick stand, high BAs. Has potential but a lot of poor quality to remove
10	6120 - Lowland Cedar	Poletimber Well	138.1	85	Unspecified	
11	6111 - Lowland Balsam Poplar	Poletimber Medium	29.4	51	Unspecified	North half of this stand is poorly stocked, with black ash. The south tail has a bed and bank
12	4134 - Aspen, Spruce/Fir	Sawtimber Well	32.0	90	Unspecified	Retention for Rolling Tundra TS, just south
13	4130 - Aspen	Sapling Well	51.5	7	Immature	Rolling Tundra TS 2010. East end of stand has more drainages and wet areas WLD- Hunter walking trail in stand. Herbaceous/opening maintenance
16	4130 - Aspen	Sapling Well	19.6	7	Immature	ROLLING TUNDRA TSALE CLOSED 2010
17	6124 - Lowland Spruce-Fir	Poletimber Well	14.3	49	Unspecified	heavier to birch in northwest corner. Lower ground but not overly wet. Little volume just yet.
18	4134 - Aspen, Spruce/Fir	Sawtimber Well	5.6	90	Unspecified	Retention for ROLLING TUNDRA TSALE(CLOSED 2010). within 300 ft of Skunk CK
19	4134 - Aspen, Spruce/Fir	Poletimber Well	9.8	80	Unspecified	Most of this stand is within 300 ft buffer to Skunk Creek
20	4130 - Aspen	Sapling Well	9.0	7	Immature	ROLLING TUNDRA TSALE CLOSED 2010 WLD- Treat openings. Herbaceous/opening maintenance
21	4130 - Aspen	Sapling Well	117.9	14	Immature	WLD- Hunter walking trail in stand. Herbaceous/opening maintenance



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4110 - Sugar Maple Association	Sawtimber Well	46.1	93	81-110	Stand thinned in 1994. Sugar maple seedlings 3-6 inches in height are fairly thick on north facing aspect. Stand not quite ready for thinning again. Southeast finger has more basswood/ironwood understorey which is poorer quality. Average BA is 108
23	6120 - Lowland Cedar	Poletimber Well	18.8	90	Unspecified	Balm of gilead, BF, WS on north transition. Black ash in south.
24	4110 - Sugar Maple Association	Poletimber Well	3.0	93	111-140	This stand thinned in 1994.
26	4130 - Aspen	Poletimber Well	3.5	39	Unspecified	Autumn olive spotted in this stand
27	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	22.7	90	Unspecified	Sugar maple on south edge 1-3 ft tall
28	4130 - Aspen	Sapling Well	67.6	14	Immature	Cut 2002
29	4130 - Aspen	Sapling Well	115.2	21	Immature	Center third of stand is wetter with residual cedar, birch and balm of gilead. Rest of stand is upland
30	4110 - Sugar Maple Association	Sawtimber Well	302.0	95	111-140	Aspen very minor, along north edge.
31	4134 - Aspen, Spruce/Fir	Poletimber Well	82.7	85	Unspecified	Conifer, aspen, balm is breaking apart. Recommend winter cut. Tag swale in east center of stand. Take upland aspen on edge of hardwood.
33	4110 - Sugar Maple Association	Sawtimber Well	181.7	95	81-110	Red Rock TS cut 2011. A few vernal ponds in this stand
34	4134 - Aspen, Spruce/Fir	Poletimber Well	57.0	80	Unspecified	There are pockets of lowland areas: vernal, ash swales to be protected. Old as this aspen is, it has held up fairly well. South/southeast 1/4 of this stand has decent sugar maple saplings that could be converted? Good aspen site otherwise
35	4110 - Sugar Maple Association	Poletimber Well	5.8	95	81-110	Red Rock TS cut 2011
36	4134 - Aspen, Spruce/Fir	Poletimber Well	5.6	76	Unspecified	this stand was retention for the Wickiller TS just north, plus the 300 ft buffer to Skunk Creek
37	4130 - Aspen	Poletimber Well	43.4	41	Unspecified	OPIC - FMD: OI Stand Year Origin was 1975
38	4134 - Aspen, Spruce/Fir	Poletimber Well	26.2	66	Unspecified	Stand is east of drainage WLD- Treat openings. Herbaceous/opening maintenance
39	4110 - Sugar Maple Association	Poletimber Well	2.7	85	141-170	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
40	4110 - Sugar Maple Association	Poletimber Well	52.3	85	81-110	Moquito TS closed 2011. Trace yellow birch and ironwood.
41	6111 - Lowland Balsam Poplar	Poletimber Well	2.8	85	51-80	Fairly wet and soft/low soils.
42	6120 - Lowland Cedar	Poletimber Well	2.3	85	Unspecified	Not a very wet stand but lower elevation than surrounding. Other species are found more along edges of stand.
43	4112 - Maple, Beech, Cherry Association	Poletimber Medium	15.2	76	51-80	Moquito TS closed 2011. This stand was cut heavier (shelterwood) to experiment regeneration techniques from clearcut (merged stand in center of stand 43--Wickiller TS) and an uncut control (st 46).
44	4130 - Aspen	Sapling Well	134.6	5	Immature	Wickiller TS cut 2011; black ash and cedar was retained WLD- Treat openings. Herbaceous/opening maintenance
45	6115 - Lowland Ash	Poletimber Well	2.6	86	Unspecified	
46	4112 - Maple, Beech, Cherry Association	Poletimber Well	30.6	85	111-140	This stand was "control" (uncut red maple) for heavy thin to BA 50 and the clearcut RM stand in Wickiller
47	4110 - Sugar Maple Association	Poletimber Well	136.6	90	81-110	Sugar maple seedlings 3-6" are throughout most of stand. Stand BAs are not ready for thinning (avg BA 104)
48	42340 - Upland Spruce/Fir	Poletimber Medium	10.0	36	Unspecified	This stand has been slowly filling. WLD- Treat openings. Herbaceous/opening maintenance



Stand	Cover Type	Acres	Managed Site	General Comments:
2	330 - Low-Density Trees	30.1		Two Chair Stroll, out of YOE, cut 2015
3	6220 - Alder/willow	9.5	No	OPIC - FMD: OI Stand Year Origin was
9	6229 - Mixed lowland shrub	101.9	No	OPIC - FMD: SCA Deeryard.
14	3303 - Mixed Low Density Trees	5.1	Yes	OPIC - FMD: See locked comments. Opening maintenance. OI Stand Year Origin was
15	330 - Low-Density Trees	5.6	Yes	OPIC - FMD: See locked comments. Opening maintenance. OI Stand Year Origin was
25	6220 - Alder/willow	1.6	No	OPIC - FMD: SCA Deeryard.
32	622 - Lowland Shrub	5.3	No	OPIC - FMD: SCA Deeryard.