



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12090

Entry Year 2019

Acreage: 2,080

County Dickinson

Management Area: Cassidy Creek

Revision Date: 2017-08-18

Stand Examiner: Matt Modlin

Legal Description:

T41N, R27W, sections 30,31

T 41N, R28W, sections 24,25,36

Identified Planning Goals:

Improve Northern Hardwoods and Aspen while maintaining lowland types and wildlife habitat.

Soil and topography:

Gently rolling hills throughout with a variety of soil types ranging from moderately well drained soils on uplands to poorly drained soils in lowlands.

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

Private and corporate land surround compartment.

Unique Natural Features:

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

Hancock Flooding State Wildlife Management Area

Watershed and Fisheries Considerations:

The Sturgeon River, EB Sturgeon River, Hancock Cree, Hancock Creek Flowage are within this compartment. All waterbodies should have a 100 foot buffer. For all other riparian areas, including vernal pools and intermittent streams, should follow BMPs to maintain canopy cover and prevent erosion into waterbodies.

Wildlife Habitat Considerations:

This compartment has great species diversity for a variety of wildlife species. Featured species include American woodcock, Blackburnian warbler, northern goshawk, white-tailed deer and wood duck. Wild turkey would also be a management species for this compartment. There are scattered parcels of state game fund lands and the center of the compartment is approximately 650 acre state wildlife management area. Hancock marsh is a water level controlled flooding for waterfowl and the DNR Wildlife Division manages the opening next to the flooding for a variety of wildlife species.

Mineral Resource and Development Concerns and/or Restrictions

An inactive gravel pit is located just to the southwest, and there should be some potential within the compartment on the uplands. There has been previous metallic mineral leasing within this compartment and the surrounding area but no real activity since 1995. There is no economic oil and gas production in the UP.

Vehicle Access:

Car, truck, 4x4, and snowmobile access is very good throughout the compartment, especially if visiting the wildlife flooding

Survey Needs:

T41N R28W Sec 24 N1/2NE1/4 - NW, center, and NE corners on north line, and SE corner on East line.

T41N R28W Sec 25 NE1/4NE1/4 - SW corner

T41N R28W Sec 25 E1/2W1/2 Line - N1/4, center, and S1/4 corners on the West line

T41N R28W Sec 36 - Center corner of NW1/4, Center corner of SW1/4, and N1/4 corner on the East line

T41N R28W Sec 36 SE1/4SE1/4 - North east 1/4 corner

T41N R28W Sec 30 NW1/4NE1/4 - all 4 corners

Recreational Facilities and Opportunities:

Hunting, fishing, wildlife viewing, canoeing, 4x4, snowmobile

Fire Protection:

Variety of conifer types with easy access

Additional Compartment Information:

Good pine habitat type in parts of the compartment

The following reports from the Inventory are attached:

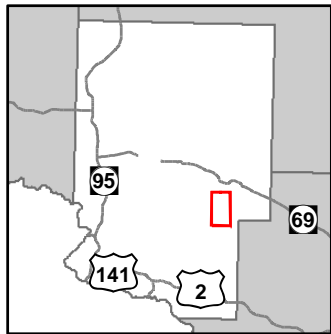
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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

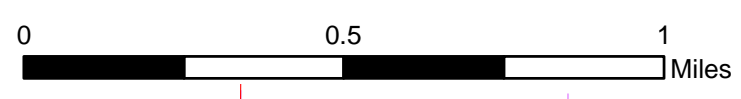
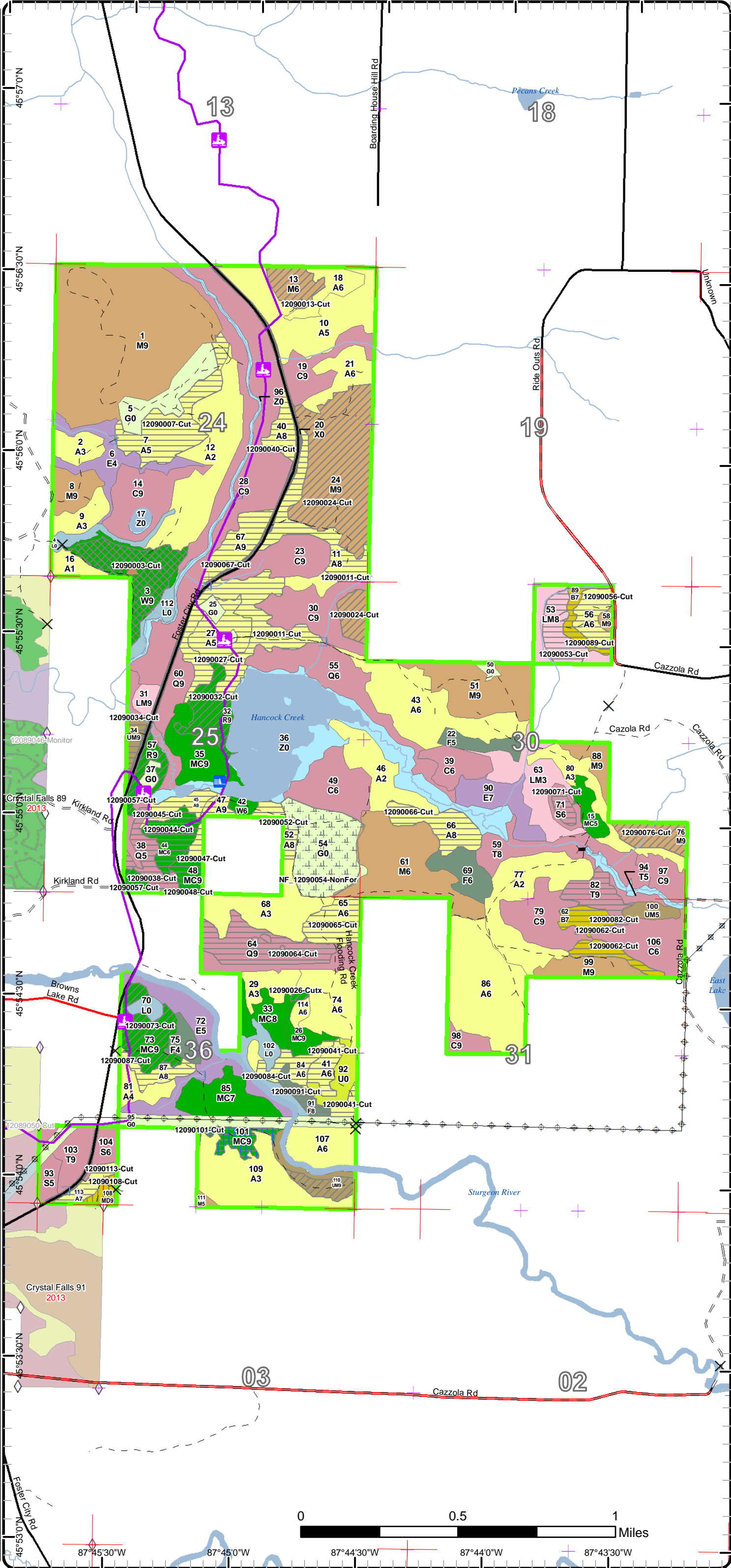
Base feature information, stand boundaries, cover types, and numbers
Proposed treatments
Site condition boundaries
Details on the road access system

Cover Type & Treatments Map

Compartment: 90
 T41N, R28W, Sec. 24, 25, 36
 T41N, R27W, Sec. 30, 31
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Cassidy Creek
 YOE: 2019
 Acres: 2080.2 GIS Calculated
 Examiner: Matt Modlin
 Map Revised: 11/30/2017
 Map Phase: Post-Review



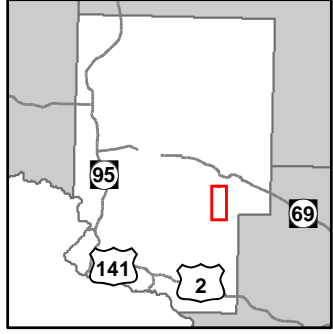
- Miris Corners
- ⊕ Remonumented Section Corners
- ◇ Field Grade GPS Corners
- - - Counties
- ⊗ Gate
- ▲ Berms
- ⊗ Bridge
- ⊗ Culvert
- ⊗ Dams
- ⊗ Snowmobile Trails
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- Gravel Roads
- Poor Dirt Roads
- Streams
- Lakes and Rivers All
- ⊗ Powerline
- Compartment Boundary
- Other Treatment - See Comments
- ▨ Selection (Group, Single Tree)
- ▨ Clearcut (w/Reserves)
- ▨ Seed Tree (w/Reserves)
- ▨ Thinning (Crown, Low, Systematic)
- ▨ Shelter Wood (w/Reserves)
- 411 - Northern Hardwood
- 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
- 613 - Lowland Mixed Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- Lakes



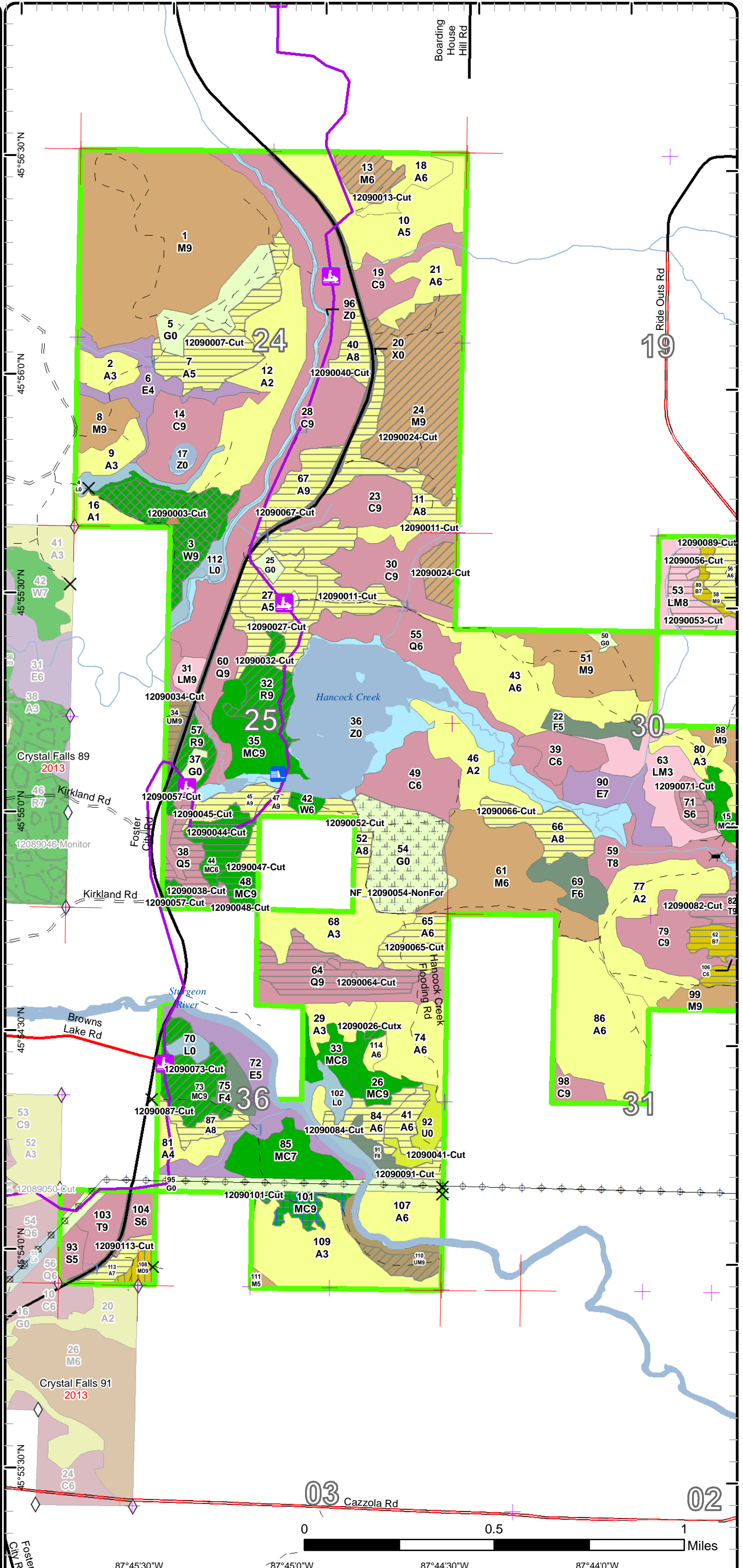
87°45'30"W 87°45'0"W 87°44'30"W 87°44'0"W 87°43'30"W

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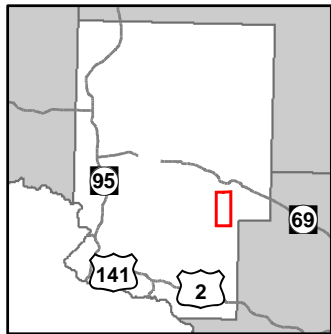


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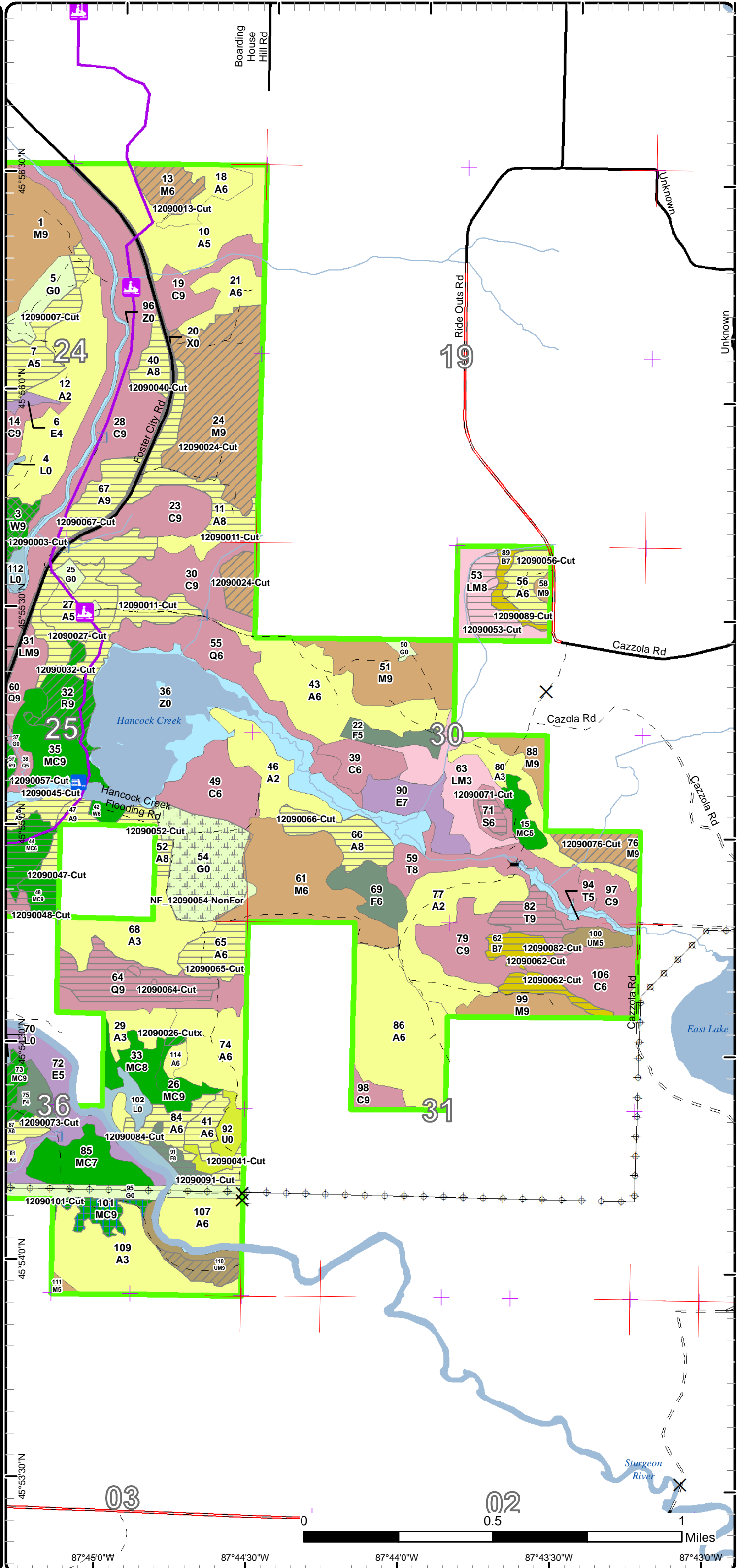


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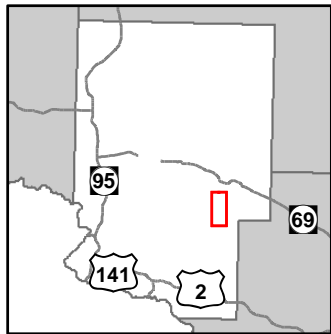
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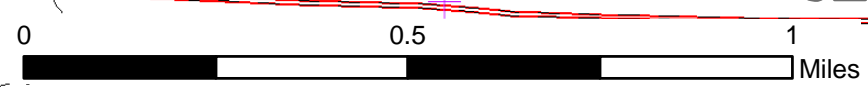
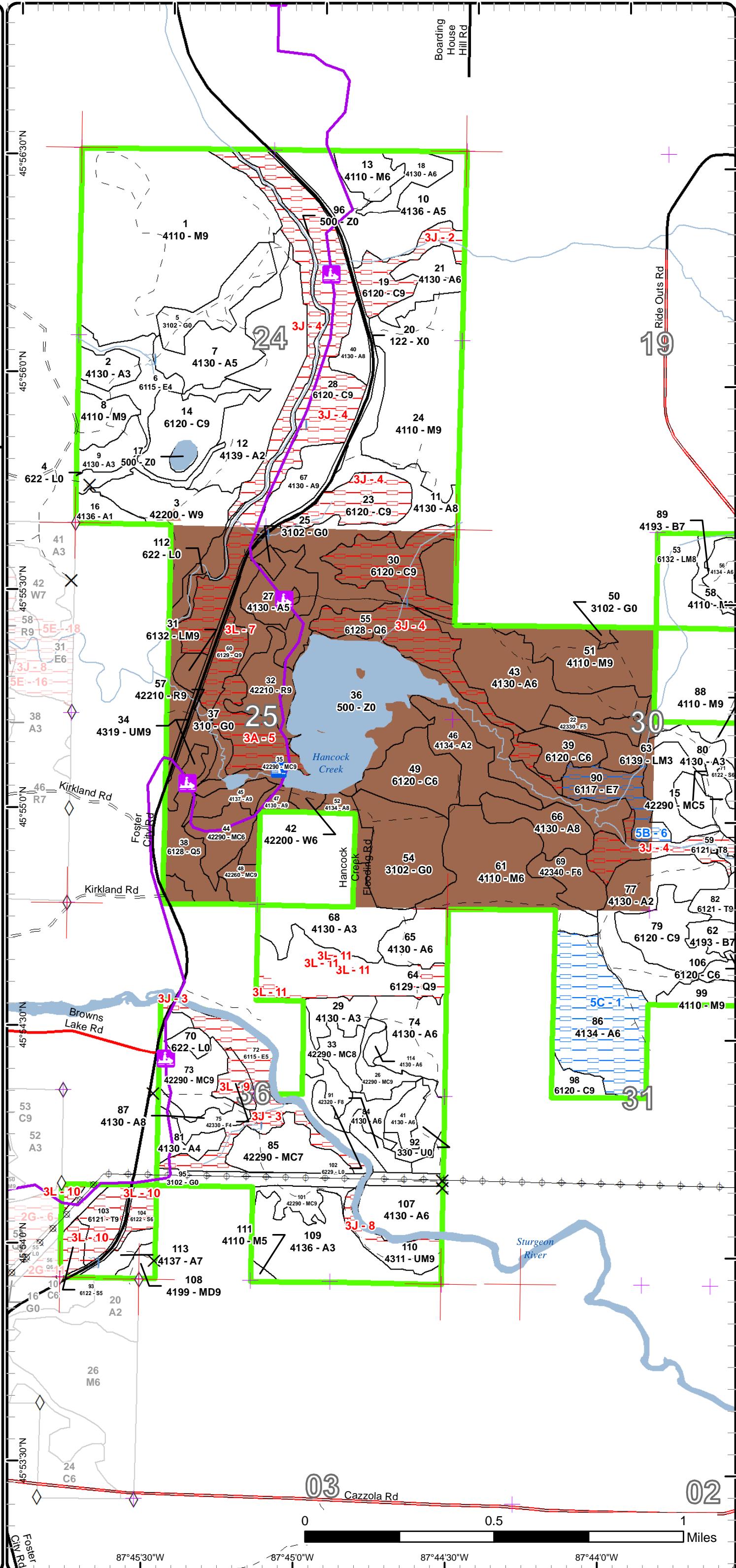
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Special Conservation Areas & Site Conditions Map

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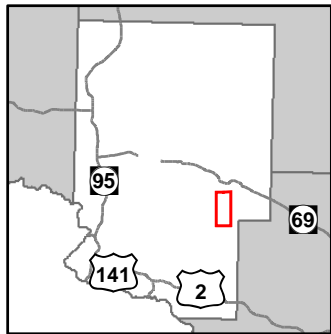
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- Unavailable
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 3A: Conservation Values incompatible with harvest at this time
- 3J: Water quality / BMPs (stream, river, or lake)
- 3L: Other wildlife concerns
- Stand Boundaries
- Wildlife Management Areas



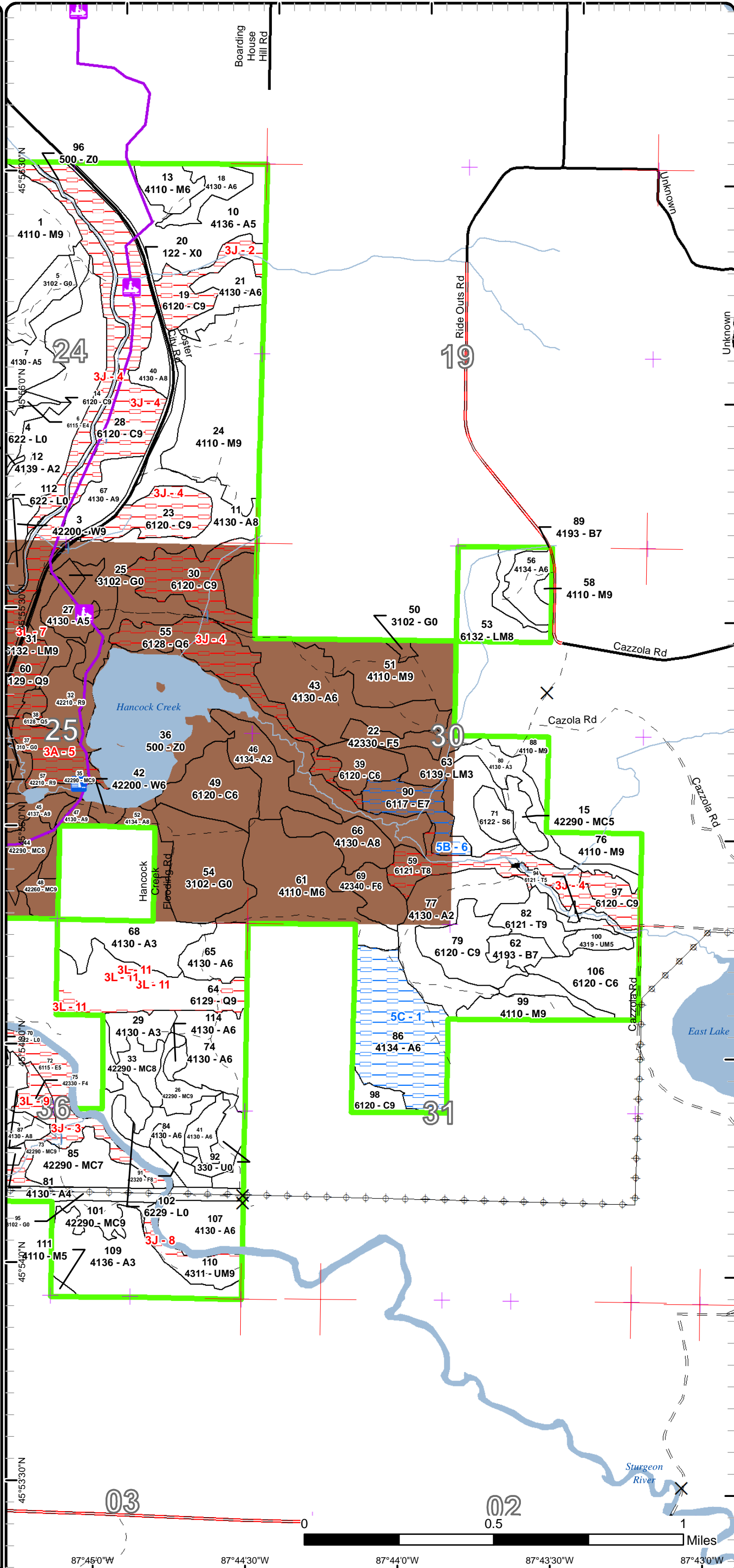
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Report 1 – Total Acres by Cover Type and Age Class



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	75	108	41	41	181	11	116	0	19	8	16	0	0	0	0	0	42	657
Cedar	0	0	0	0	0	0	0	0	91	41	25	30	45	22	0	0	0	17	270
Herbaceous Openland	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84
Low-Density Trees	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Lowland Conifers	0	0	0	0	0	0	0	0	23	0	79	0	0	0	0	0	0	0	102
Lowland Deciduous	0	0	0	0	0	0	0	0	19	29	0	0	17	0	0	0	0	0	65
Lowland Mixed Forest	0	0	25	0	0	0	0	0	4	0	0	0	0	0	21	0	0	0	50
Lowland Shrub	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	6	7	5	0	0	0	0	0	18
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
Natural Mixed Pines	0	0	0	0	0	13	0	40	13	0	0	0	0	0	0	20	0	28	114
Northern Hardwood	0	0	0	0	0	0	0	2	32	20	190	0	0	0	0	0	0	95	339
Paper Birch	0	0	0	0	0	0	0	0	0	0	6	0	14	0	0	0	0	0	20
Red Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	26
Tamarack	0	0	0	0	0	0	0	3	0	0	24	0	24	0	0	0	0	0	51
Upland Mixed Forest	0	0	0	0	0	5	0	0	0	0	0	12	5	0	0	0	0	0	22
Upland Spruce/Fir	0	0	0	0	0	21	11	0	0	0	0	0	0	0	0	0	0	0	32
Urban	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Water	132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	132
White Pine	0	0	0	3	0	0	32	0	0	0	0	0	0	0	0	0	0	0	35
Total	273	75	133	44	41	220	54	161	182	109	338	65	110	22	21	20	0	212	2078



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2019

Acres of Harvest

Compartment 90
Total Compartment Acres: 2,080

Commercial Harvest - 520
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	208	0	0	0	0	0	0	0	0	208
Lowland Conifers	37	0	0	0	0	0	0	0	0	37
Lowland Mixed Forest	12	0	0	0	0	0	0	0	0	12
Lowland Spruce/Fir	4	0	0	0	0	0	0	0	0	4
Mixed Upland Deciduous	0	0	0	0	4	0	0	0	0	4
Natural Mixed Pines	26	0	0	8	0	21	0	0	0	56
Northern Hardwood	0	0	0	0	0	96	0	0	0	96
Paper Birch	20	0	0	0	0	0	0	0	0	20
Red Pine	0	0	0	0	0	26	0	0	0	26
Tamarack	12	0	0	0	0	0	0	0	0	12
Upland Mixed Forest	5	0	0	0	0	7	0	0	0	12
Upland Spruce/Fir	5	0	0	0	0	0	0	0	0	5
White Pine	0	29	0	0	0	0	0	0	0	29
Total	329	29	0	8	4	151	0	0	0	520

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	520	0	0	0	0	0	0	36	0	557
Next Step	0	37	21	0	0	377	9	0	0	444



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
3	12090003-Cut	28.9	42200 - Natural White Pine	Sawtimber Well	57	81-110	Harvest	Group Selection	42290 - Natural Mixed Pine	Even-Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Cut all non pine species. Some operational pine may need to be cut to access the other species. Protect pine regen where possible. Buffer
Specs: river 100 ft.

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Pine
Regen:

Other A lot of dead spruce/fir on the ground in the west half of the stand.
Comment:

Proposed Start Date: 10/01/2018

7	12090007-Cut	28.0	4130 - Aspen	Poletimber Medium	65	81-110	Harvest	Clearcut	413 - Aspen	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut with a 2" spec. Leave 1 stick spruce/fir, cedar, hemlock, pine
Specs:

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

Acceptable Aspen, spruce, fir
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

11	12090011-Cut	57.0	4130 - Aspen	Sawtimber Medium	60	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Leave 1 stick spruce/fir, cedar, hemlock, pine, black ash. Buffer the 2 streams 100 ft. The wet area between the 2 cedar
Specs: stands will be retention. Use the road along the flooding as the no cut buffer or 100 ft.

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

Acceptable Hardwoods and conifers
Regen:

Other Note that there are wetter areas throughout the stand, especially in the middle between the 2 cedar stands.
Comment:

Proposed Start Date: 10/01/2018

13	12090013-Cut	10.9	4110 - Sugar Maple Association	Poletimber Well	65	111- 140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven- Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Thin to 70-90 BA. Favor the release of the maple poles and saplings.
Specs:

Next Step
Treatments:

Acceptable Maple and conifers
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018



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
24	12090024-Cut	72.7	4110 - Sugar Maple Association	Sawtimber Well	80	111- 140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven- Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Thin to 80-90BA, targeting the release of good quality sugar maple poles. Leave cedar, birch, aspen, and fir.

Specs:

Next Step

Treatments:

Acceptable Northern hardwoods and conifers.

Regen:

Other Note: there are a few drains flowing to the road. Watch for seeps.

Comment: Numerous old skid trails throughout

Proposed Start Date: 10/01/2018

26	12090026-Cut	6.6	42290 - Natural Mixed Pine	Sawtimber Well	65	141- 170	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Proposal - Approval Pending Edits
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Habitat Cut: No**Site Condition:**

Prescription Clearcut with low stumps and chipping. Trench and plant to red pine. Leave all legacy trees.

Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Red Pine

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

26	12090026- Cutx	1.1	42290 - Natural Mixed Pine	Sawtimber Well	65	141- 170	Harvest	Low Thinning	42210 - Natural Red Pine	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Thin pine to 100-120 BA, leaving larger crown trees for future seed trees. Leave 1 stick spruce/fir.

Specs:

Next Step

Treatments:

Acceptable Red Pine

Regen:

Other

Comment:

Proposed Start Date: 09/29/2017

27	12090027-Cut	15.9	4130 - Aspen	Poletimber Medium	48	Unspec ified	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut all aspen 2" spec. Cut all spruce fir 2 pulp sticks and greater. Leave all pine and cherry. Protect pine regen as much as possible.

Specs:

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

Treatments:

Acceptable Aspen, conifers

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018



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
32	12090032-Cut	15.5	42210 - Natural Red Pine	Sawtimber Well	85	111-140	Harvest	Crown Thinning	42290 - Natural Mixed Pine	Even-Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Thin the pine to 120 targeting the poorer quality and suppressed trees for removal. In addition, cut all spruce and fir 2 pulp sticks or greater. Cut all other species. Leave any legacy trees present. Use the road along the flooding as the no cut buffer.

Next Step
Treatments:

Acceptable Pine
Regen:

Other No logging equipment should be moved across the flooding dam. It will not support the weight.
Comment:

Proposed Start Date: 10/01/2018

34	12090034-Cut	4.6	4319 - Mixed Upland Forest	Sawtimber Well	116	81-110	Harvest	Clearcut	429 - Mixed Upland Conifers	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Leave all pine, cedar, and 1 stick spruce/fir. Leave spruce tops evenly distributed. Buffer creek 100 ft.

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

Acceptable Conifers
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

38	12090038-Cut	11.9	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	70	141-170	Harvest	Clearcut with Retention	613 - Lowland Mixed Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Do not cut black spruce. Mark out super wet areas. Winter only cut or dry summer.

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

Acceptable Spruce, fir, cedar, aspen, tamarack, birch, pine
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

40	12090040-Cut	7.8	4130 - Aspen	Sawtimber Medium	67	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Leave cedar, pine, hemlock, and 1 stick spruce/fir .

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

Acceptable Aspen, conifers
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018



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
41	12090041-Cut	10.0	4130 - Aspen	Poletimber Well	41	51-80	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Approved Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			Clearcut aspen 2" spec.								
<u>Specs:</u>			Cut all spruce and fir 2 pulp sticks and greater Leave all pine and protect pine regen where possible.								
<u>Next Step</u>			Monitoring, Natural Regen (Re-Inventory)								
<u>Treatments:</u>											
<u>Acceptable</u>			Conifer and aspen								
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u>			10/01/2018								
44	12090044-Cut	13.4	42290 - Natural Mixed Pine	Poletimber Well	45	201+	Harvest	Clearcut	429 - Mixed Upland Conifers	Even-Aged	Approved Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			Cut all spruce and fir greater than one stick. Cut all jack pine and aspen. Leave all white pine, red pine, and cherry.								
<u>Specs:</u>											
<u>Next Step</u>			Monitoring, Natural Regen (Re-Inventory)								
<u>Treatments:</u>											
<u>Acceptable</u>			Conifers								
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u>			10/01/2018								
45	12090045-Cut	7.8	4137 - Aspen, Birch	Sawtimber Well	90	81-110	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Approved Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			Clearcut 2" spec. Leave all pine, cherry, and sub merchantable spruce fir. Buffer creek according to BMP manual regarding slope.								
<u>Specs:</u>											
<u>Next Step</u>			Monitoring, Natural Regen (Re-Inventory)								
<u>Treatments:</u>											
<u>Acceptable</u>			Aspen, conifers								
<u>Regen:</u>											
<u>Other</u>			Steep slopes around stand								
<u>Comment:</u>											
<u>Proposed Start Date:</u>			10/01/2018								
47	12090047-Cut	6.3	4130 - Aspen	Sawtimber Well	85	Unspec ified	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Approved Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			Clearcut 2" spec. Leave all pine and some of the scattered larger aspen for wildlife. Protect pine regen as much as possible. Summer only cut for scarification. Use the road along the flooding as the no cut buffer.								
<u>Specs:</u>											
<u>Next Step</u>			Monitoring, Natural Regen (Re-Inventory)								
<u>Treatments:</u>											
<u>Acceptable</u>			Aspen, conifers								
<u>Regen:</u>											
<u>Other</u>			No logging equipment should be moved across the flooding dam. It will not support the weight.								
<u>Comment:</u>											
<u>Proposed Start Date:</u>			10/01/2018								



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
48	12090048-Cut	6.1	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	70	171-200	Harvest	Clearcut with Retention	42290 - Natural Mixed Pine	Even-Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Thin pine to 120 keeping the diversity of red and white pine. Clearcut all other species. Leave 1 stick spruce/fir

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Pine

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

52	12090052-Cut	5.9	4134 - Aspen, Spruce/Fir	Sawtimber Medium	60	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Leave all maple for future wood duck nesting and spruce and fir one stick or less. Leave all pine as well. Use the road along the flooding as the no cut buffer.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, maple, spruce, fir, birch

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

53	12090053-Cut	11.9	6132 - Mixed Lowland Forest with Cedar	Sawtimber Medium	134	Unspecified	Harvest	Clearcut with Retention	613 - Lowland Mixed Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut with a 2" spec. Leave all cedar, pine, and 1 stick spruce/fir. Protect regen where thickest. Mark out thicker cedar pockets. Buffer stream 100 ft. Winter harvest only.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Cedar, spruce, fir, birch, aspen

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

56	12090056-Cut	10.9	4134 - Aspen, Spruce/Fir	Poletimber Well	56	Unspecified	Harvest	Clearcut	4134 - Aspen, Spruce/Fir	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut aspen 2" spec, spruce/fir 4" spec

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, spruce, fir

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018



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
57	12090057-Cut	10.9	42210 - Natural Red Pine	Sawtimber Well	66	171-200	Harvest	Crown Thinning	42290 - Natural Mixed Pine	Even-Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Thin pine to 120 targeting poorer quality and suppressed trees for removal. Cut all other species. Leave 1 stick spruce/fir. Buffer creek 100 ft.
Specs:

Next Step
Treatments:

Acceptable pine
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

62	12090062-Cut	14.3	4193 - Birch, Aspen	Sawtimber Poor	117	1-50	Harvest	Clearcut	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut with a 2" spec. Leave pine, cedar, and 1 stick spruce/fir.
Specs:

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

Acceptable Aspen, birch, spruce, fir
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

64	12090064-Cut	25.1	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	97	111-140	Harvest	Clearcut with Retention	612 - Lowland Coniferous Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Leave all sub-merchantable spruce and fir. Leave pockets of cedar where it is thicker. Mark out two pockets of black spruce for seed in the pure black spruce patches in the north. Leave all cedar, cherry, and pine. Leave 150 ft wildlife corridor in the south where the cedar is thicker. Stay out of very wet areas where there are springs on the west side.
Specs:

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

Acceptable Spruce, cedar, fir, tamarack, paper birch
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

65	12090065-Cut	14.2	4130 - Aspen	Poletimber Well	48	Unspecified	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut aspen 2" spec. Thin poorer quality and suppressed pine in the pine pocket along the road. Leave all pine in the rest of the stand outside of this pocket. Cut all spruce and fir 2 pulp sticks and greater. Protect pine regen as much as possible.
Specs:

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

Acceptable pine, spruce, fir, aspen
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018



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
66	12090066-Cut	15.8	4130 - Aspen	Sawtimber Medium	104	81-110	Harvest	Clearcut	4136 - Aspen, Mixed Conifer	Even-Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Buffer creek 100 ft.

Specs: Leave pine, cedar, and 1 stick spruce/fir. Leave all maple within 150 of water. Maple is for the wood ducks. Buffer creek 100 ft.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, conifers, birch

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

67	12090067-Cut	13.4	4130 - Aspen	Sawtimber Well	66	81-110	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Leave cedar, pine, and 1 stick spruce/fir.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, conifers

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

71	12090071-Cut	3.8	6122 - Black Spruce	Poletimber Well	106		Harvest	Clearcut with Retention	6122 - Black Spruce	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Cut out the center of this stand leaving a 1 chain buffer around the edge for seed. Cut all tamarack within the buffer that can be reached. Leave 1 stick spruce/fir.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Black spruce

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

73	12090073-Cut	20.1	42290 - Natural Mixed Pine	Sawtimber Well	90	111- 140	Harvest	Crown Thinning	42290 - Natural Mixed Pine	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Thin red and white pine down to 120 or 75% canopy closure targeting suppressed and poor form trees for removal. Cut all spruce and fir 2 pulp sticks and greater. Cut all jack pine and aspen. Leave all cherry.

Specs:

Next Step

Treatments:

Acceptable Conifers and cherry

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018



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
76	12090076-Cut	12.1	4110 - Sugar Maple Association	Sawtimber Well	82	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Thin to 80-90 targeting basswood for removal. Buffer stream 100 feet/on top of slope, whichever is greater. Seeps coming out of hillside.

Specs:

Next Step

Treatments:

Acceptable Northern hardwoods

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

82	12090082-Cut	11.7	6121 - Tamarack	Sawtimber Well	98	81-110	Harvest	Clearcut with Retention	612 - Lowland Coniferous Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut with a 2" spec. Leave all cedar and black spruce. Buffer creek 100 ft.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Tamarack, black spruce, cedar, paper birch

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

84	12090084-Cut	9.1	4130 - Aspen	Poletimber Well	41	51-80	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut with low stumps and chipping. Trench and plant to red pine.

Specs: Leave the finger on the far west side as long term retention.

Next Step Other, Other; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable Red pine

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

87	12090087-Cut	7.3	4130 - Aspen	Sawtimber Medium	84		Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Leave cherry, pine, paper birch, cedar, and 1 stick spruce/fir. Winter only cut.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, spruce, fir

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018



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
89	12090089-Cut	5.9	4193 - Birch, Aspen	Sawtimber Poor	97	1-50	Harvest	Clearcut	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Clearcut with a 2" spec. Protect heavier regen areas. Leave 1 stick spruce/fir.											
<u>Specs:</u>											
<u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)											
<u>Treatments:</u>											
<u>Acceptable</u> Birch, aspen, spruce, fir											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
91	12090091-Cut	5.4	42320 - Upland Spruce	Sawtimber Medium	56	81-110	Harvest	Clearcut	42110 - Planted Red Pine	Even-Aged	Approved Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Clearcut 2" spec. Leave all cedar and 1 stick spruce/fir.											
<u>Specs:</u> Trench and plant to red pine.											
<u>Next Step</u> SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(3yr)											
<u>Treatments:</u>											
<u>Acceptable</u> Planted red pine											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
101	12090101-Cut	8.2	42290 - Natural Mixed Pine	Sawtimber Well	62	111- 140	Harvest	Seed Tree	429 - Mixed Upland Conifers	Even-Aged	Approved Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Cut all jack pine and merchantable spruce and fir. Leave all red and white pine. Roundwood and summer only. Leave tops with cones scattered											
<u>Specs:</u> throughout.											
<u>Next Step</u> ; ; ; SitePrep, Scarification; Monitoring, Natural Regen (Re-Inventory)											
<u>Treatments:</u>											
<u>Acceptable</u> Red, white, and jack pine											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
108	12090108-Cut	4.1	4199 - Other Mixed Upland Deciduous	Sawtimber Well	82	81-110	Harvest	Shelterwood	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Thin stand to 40-60 BA. Cut all aspen and birch. Create gaps where aspen and birch are removed. Cut all spruce and fir 2 pulp sticks and											
<u>Specs:</u> greater. Leave all cedar and pine.											
<u>Next Step</u> ; Monitoring, Natural Regen (Re-Inventory)											
<u>Treatments:</u>											
<u>Acceptable</u> Aspen, birch, spruce, fir, maple											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											



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
110	12090110-Cut	7.3	4311 - Pine, Aspen Mix	Sawtimber Well	100	111- 140	Harvest	Crown Thinning	4221 - Natural Red Pine	Even-Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Cut all aspen and paper birch except scattered wildlife trees. Thin red pine to 120 where possible. Leave all cedar, hemlock, and maple.

Specs: Bulldoze to expose as much bare mineral soil as possible. 100 ft no cut buffer on Sturgeon River.

Next Step ; SitePrep, Scarification; Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Red, white, and jack pine, paper birch, hemlock, maple, cedar, aspen

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

113	12090113-Cut	6.2	4137 - Aspen, Birch	Sawtimber Poor	82	Unspec ified	Harvest	Clearcut	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut with a 2" spec.

Specs:

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

Treatments:

Acceptable Aspen, birch, spruce, fir, maple

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

54	NF_12090054- NonFor	36.2	3102 - Grass	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription WLD will treat this stand to maintain the opening and enhance wildlife habitat. The site will be mowed, disked and/or treated with herbicides as needed to control woody vegetation. The site will be seeded with ryegrass and clover, and fertilized. Crabapple and oak trees will be planted on the site. This work will be done in collaboration with the East Dickinson Sportsmen's Club and the National Wild Turkey Federation.

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

**Total Treatment
Acreage Proposed: 564.3**

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Matt Modlin : Examiner

Compartment: 90

Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions					
		With Condition	Not Available		5B	5C	3A	3J	3L	
659	606	52	0	Aspen		52				
272	110	0	161	Cedar				161		
83	83	0	0	Herbaceous Openland						
9	9	0	0	Low-Density Trees						
103	49	0	54	Lowland Conifers				32	22	
65	19	17	29	Lowland Deciduous	17			29		
50	50	0	0	Lowland Mixed Forest						
26	26	0	0	Lowland Shrub						
18	7	0	11	Lowland Spruce/Fir						11
4	4	0	0	Mixed Upland Deciduous						
114	94	0	20	Natural Mixed Pines			20			
339	339	0	0	Northern Hardwood						
20	20	0	0	Paper Birch						
26	26	0	0	Red Pine						
51	15	0	36	Tamarack				24	12	
22	17	0	4	Upland Mixed Forest				4		
32	26	0	6	Upland Spruce/Fir						6
21	21	0	0	Urban						
132	132	0	0	Water						
34	34	0	0	White Pine						
2,080	1,688	69	323	Total Forested Acres	17	52	20	252	51	
	81%	3%	16%	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	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	52	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Crystal Falls Mgt. Unit
 Matt Modlin : Examiner

Compartment: 90
 Year of Entry: 2019

2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	17	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	201	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3A: Conservation Values incompatible with harvest at this time	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Available	5B: Maintain for regeneration purposes	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	3L: Other wildlife concerns	10	5A: Not able to obtain desirable regeneration	Unspecified	Unspecified	Unspecified
Comments: Stand in state wildlife area							

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Matt Modlin : Examiner

Compartment: 90

Year of Entry: 2019

8	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	1C: Other dept or div proc/practices	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	3L: Other wildlife concerns	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: High concentration of blue berries with some conifer cover.							
10	Unavailable	3L: Other wildlife concerns	23	3D: Recreational / Scenic values	5D: Unproductive Forest Land	Unspecified	Unspecified
Comments: Hold for winter deer cover and to not have too much clearcut along highway.							
11	Unavailable	3L: Other wildlife concerns	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Wildlife travel corridor							

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
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4110 - Sugar Maple Association	Sawtimber Well	129.0	90	81-110	last thinned 2002
2	4130 - Aspen	Sapling Well	8.8	15	Immature	
3	42200 - Natural White Pine	Sawtimber Well	31.5	57	81-110	Limby pines. Spruce/fir moderate level of SBW. Scattered white spruce, jack pine, and black cherry in the overstory
6	6115 - Lowland Ash	Poletimber Poor	18.7	70		Stream flowing through to south
7	4130 - Aspen	Poletimber Medium	28.0	65	81-110	6 stick aspen Patches of pole size fir is about 98% dead
8	4110 - Sugar Maple Association	Sawtimber Well	11.3	90	51-80	Very poor quality stand. It is diverse though.
9	4130 - Aspen	Sapling Well	9.0	15	Immature	
10	4136 - Aspen, Mixed Conifer	Poletimber Medium	41.8	40	51-80	Balsam Fir mostly dead and falling over Sugar maple ranges from 4-10" and is generally very poor quality Aspen ranges from 4-10" and is generally poor to fair quality The stand slopes to the south and west towards the stream and the road The maples are concentrated on the upper slopes on the north and east sides
11	4130 - Aspen	Sawtimber Medium	61.4	60	51-80	Spruce/Fir is just about completely dead from SBW Entire stand is ready to fall over. Scattered white pine
12	4139 - Aspen, Mixed Deciduous	Sapling Medium	46.5	15	Unspecified	Patches of pure tag alder throughout
13	4110 - Sugar Maple Association	Poletimber Well	10.9	65	111-140	Fair quality maple, good quality basswood
14	6120 - Lowland Cedar	Sawtimber Well	24.0	118	Unspecified	Pocket of upland in the north with dead spruce and old aspen
15	42290 - Natural Mixed Pine	Poletimber Medium	7.0	72	51-80	Aspen was cut with neighboring stand and is regenerating poorly under the pine. I would give the pine another rotation or 2 before doing a seed tree and burn/anchor chain. A lot of the aspen will be shaded out by then. Could be a nice mixed stand in the future.
16	4136 - Aspen, Mixed Conifer	Sapling Poor	6.5	15	Immature	Patches of pure tag alder
18	4130 - Aspen	Poletimber Well	10.1	30	Immature	

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Crystal Falls Mgt. Unit

Report 7 – Forested Stands

Compartment: 90
Year of Entry: 2019

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	6120 - Lowland Cedar	Sawtimber Well	16.5	125	Unspecified	Large drainage area with a stream running along the north side Scattered yellow birch and paper birch
21	4130 - Aspen	Poletimber Well	13.7	30	Immature	BF/WS starting to be hit by SBW
22	42330 - Upland Fir	Poletimber Medium	7.7	42		No major SBW damage
23	6120 - Lowland Cedar	Sawtimber Well	19.4	80	Unspecified	Stream is draining the stand to the south west
24	4110 - Sugar Maple Association	Sawtimber Well	72.7	80	111-140	Overall generally good quality stand. Mostly basswood logs with thick co-dominant sugar maple poles. Scattered cedar, aspen, and yellow birch Numerous lower areas throughout and drainages flowing west Lots of old pit and mound topography
26	42290 - Natural Mixed Pine	Sawtimber Well	7.7	65	141-170	Good quality red pine, generally limby white pine Old burnt pine stumps throughout Red pine: Age 65, height 80 ft Site Index: 66 The north half of this stand was cut May 2012 with Madog Sale #12-017-09-01. All pine was left.
27	4130 - Aspen	Poletimber Medium	15.9	48	Unspecified	poor quality aspen, however, it is training the white pine well.
28	6120 - Lowland Cedar	Sawtimber Well	90.6	77	141-170	Numerous drainages to the river
29	4130 - Aspen	Sapling Well	9.9	5	Unspecified	Super canopy red and white pine throughout. Regen thinner where pine is thicker.
30	6120 - Lowland Cedar	Sawtimber Well	25.2	90	Unspecified	White spruce mostly dead Understory balsam completely dead
31	6132 - Mixed Lowland Forest with Cedar	Sawtimber Well	4.0	72	141-170	
32	42210 - Natural Red Pine	Sawtimber Well	15.5	85	111-140	Good quality red pine Aspen is over mature White pine is intermediate to codominant Spruce and fir in understory mostly dead from SBW
33	42290 - Natural Mixed Pine	Sawtimber Medium	11.9	65	51-80	Aspen regen thinner where pine is thicker.
34	4319 - Mixed Upland Forest	Sawtimber Well	4.6	116	81-110	Great quality white spruce: site index = 55



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
35	42290 - Natural Mixed Pine	Sawtimber Well	19.9	140	171-200	Red Pine is good quality, with big crowns. White pine is generally limby, but with massive crowns. Many Legacy Trees. Spruce/fir hit hard by SBW. There are many wet areas and drainages throughout the stand, including 2 tamarack/black spruce pockets.
38	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	23.4	70	141-170	Some spruce/fir hit hard, others just starting. Wet drainage flowing through the middle.
39	6120 - Lowland Cedar	Poletimber Well	12.4	125		Most balsam fir is dead.
40	4130 - Aspen	Sawtimber Medium	7.8	67	81-110	6-7 stick aspen. Overstory spruce/fir is on the ground. Scattered pine.
41	4130 - Aspen	Poletimber Well	10.0	41	51-80	Some lower areas. Red and white pine pocket in western lobe and northeastern lobe. Aspen age 41, height 47 ft. Site Index: 55. Kotar habitat type: PARV[w]/PARVAa[w]
42	42200 - Natural White Pine	Poletimber Well	2.8	20	Immature	
43	4130 - Aspen	Poletimber Well	43.5	40		A lot of trees falling out. The north side is the thinnest.
44	42290 - Natural Mixed Pine	Poletimber Well	13.4	45	201+	Open through the middle more.
45	4137 - Aspen, Birch	Sawtimber Well	7.8	90	81-110	
46	4134 - Aspen, Spruce/Fir	Sapling Medium	20.7	14	Immature	overstory spruce/fir mostly dead from SBW
47	4130 - Aspen	Sawtimber Well	6.3	85	Unspecified	Scattered paper birch Poor quality aspen Good pine regen in the intermediate layer
48	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	6.1	70	171-200	Good quality red pine, probably some utility poles. Poorer quality aspen. White pine generally limby. On the western side is where the highest concentration of red pine poles are. Scattered paper birch.
49	6120 - Lowland Cedar	Poletimber Well	23.7	109	171-200	very wet closer to flooding. 5-7 stick spruce and tamarack
51	4110 - Sugar Maple Association	Sawtimber Well	32.4	78	81-110	Fair to good quality stand. A lot of codominant sugar maple poles.
52	4134 - Aspen, Spruce/Fir	Sawtimber Medium	5.9	60	51-80	Spruce/Fir hit hard by SBW



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
53	6132 - Mixed Lowland Forest with Cedar	Sawtimber Medium	21.4	134	Unspecified	Most of the overstory spruce and fir is dead from SBW. The aspen and birch are way over mature and dying as well. Scattered red maple and sugar maple in the overstory. Some good log red maple.
55	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	32.1	93	201+	Numerous streams and drains flowing to the flooding
56	4134 - Aspen, Spruce/Fir	Poletimber Well	10.9	56	Unspecified	Fir is starting to be hit by SBW Aspen and fir are 3-4 sticks
57	42210 - Natural Red Pine	Sawtimber Well	10.9	66	171-200	Spruce/Fir mostly dead from SBW Scattered overstory balsam fir, black spruce, and paper birch. Chery coming in the understory.
58	4110 - Sugar Maple Association	Sawtimber Well	1.7	90	81-110	
59	6121 - Tamarack	Sawtimber Medium	24.2	110		This is a buffer to Hancock Creek. Most of the understory spruce/fir is dead.
60	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	9.7	90	201+	Basal Area: Tamarack - 100 Cedar - 150
61	4110 - Sugar Maple Association	Poletimber Well	47.5	90	51-80	South east lobe left untreated for retention purposes.
62	4193 - Birch, Aspen	Sawtimber Poor	14.3	117	1-50	Stand is ready to be completely fallen over in the next 10 years. There are more aspen in the north and more paper birch in the south
63	6139 - Mixed Lowland Forest	Sapling Well	24.7	14	Immature	Stand cut in 2003 and coming back thick with balsam poplar and tamarack
64	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	37.6	97	111-140	Very wet drainage with some natural springs. East of the road is a low area thick with tag alder and a few scattered trees. The far west side is wet with less dense smaller trees. Water is flowing east to west through the stand. There are pockets of cedar throughout. There are 2 patches of pure black spruce on the north side. Eastern Larch Beetle is hitting the tamarack hard.
65	4130 - Aspen	Poletimber Well	14.2	48	Unspecified	White pine understory ranges from sapling to pole 3-4 stick aspen
66	4130 - Aspen	Sawtimber Medium	15.8	104	81-110	Scattered white pine, yellow birch, cedar, cherry in the overstory Poor quality sugar maple Aspen 6-7 sticks Fir starting to be hit by SBW



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
67	4130 - Aspen	Sawtimber Well	13.4	66	81-110	This stand slopes down to river. 6-7 stick aspen. The once thick spruce/fir understory is almost non-existent now and the overstory is on the ground.
68	4130 - Aspen	Sapling Well	28.8	5	Unspecified	Super canopy red and white pine throughout. Regen thinner where pine is thicker.
69	42340 - Upland Spruce/Fir	Poletimber Well	12.6	40	81-110	minor SBW impact so far. 3-4 sticks for all species.
71	6122 - Black Spruce	Poletimber Well	6.9	106		5-6 stick black spruce
72	6115 - Lowland Ash	Poletimber Medium	29.3	89	51-80	Scattered white pine and red pine. Buffer for river.
73	42290 - Natural Mixed Pine	Sawtimber Well	20.1	90	111-140	Heavier to aspen in south peninsula. Low to medium density of mixed conifer seedlings throughout.
74	4130 - Aspen	Poletimber Well	23.4	46	51-80	Poor quality aspen
75	42330 - Upland Fir	Poletimber Poor	6.3	57	1-50	Moderate SBW damage. 3-5 stick balsam.
76	4110 - Sugar Maple Association	Sawtimber Well	12.1	82	111-140	Good quality stand. 6 stick sugar maple.
77	4130 - Aspen	Sapling Medium	36.4	5		Little to no regen in lower areas around edges. Spruce, fir, balsam poplar, and tag sparsely filling in these areas. Also, low regen where the super canopy white and red pine are thicker.
79	6120 - Lowland Cedar	Sawtimber Well	21.4	110	201+	Balsam fir and white spruce understory lines the edge of the clearcut. Looks like there is an old ice road along the south side of the stand.
80	4130 - Aspen	Sapling Well	16.5	14		
81	4130 - Aspen	Poletimber Poor	8.3	46		Narrow ash drain runs along northern stand line
82	6121 - Tamarack	Sawtimber Well	11.7	98	81-110	
84	4130 - Aspen	Poletimber Well	11.1	41	51-80	Some lower areas Red and white pine pocket in western lobe and northeastern lobe Aspen age 41, height 47 ft Site Index: 55 Kotar habitat type: PArV[w]/PArVAa[w]
85	42290 - Natural Mixed Pine	Sawtimber Poor	19.8	60	1-50	Aspen is very thin. Conifers coming up under.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
86	4134 - Aspen, Spruce/Fir	Poletimber Well	52.3	48	Unspecified	Poor quality aspen starting to die. Overstory trees are training the pine very well. This will be a very nice mixed stand in the future. Minor SBW in the overstory spruce/fir. Seeps on the west and south sides. Wet areas scattered throughout. Scattered oak, red pine, and white pine in the super canopy. Scattered overstory elm, red maple, paper birch, and sugar maple.
87	4130 - Aspen	Sawtimber Medium	7.3	84		5-7 Stick aspen. Drain flowing to river through majority of stand.
88	4110 - Sugar Maple Association	Sawtimber Well	8.0	85	51-80	4-5 stick, poor quality sugar maple with a lot of top dieback. A few scattered beech.
89	4193 - Birch, Aspen	Sawtimber Poor	5.9	97	1-50	A lot of the overstory spruce and fir are dead and on the ground. Aspen and balsam poplar are falling over too. Paper birch is hanging on, but will probably fall over in about 10 years as well.
90	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Poor	16.6	115		A lot of the spruce/fir is dead in this stand (over and understory)
91	42320 - Upland Spruce	Sawtimber Medium	5.4	56	81-110	Scattered red and white pine in super canopy and understory There is a drainage through this stand to the river White spruce Age: 56 Height: 75 Site index: 70
93	6122 - Black Spruce	Poletimber Medium	5.3	116	51-80	Pure black spruce pocket in the north Some scattered paper birch in the south Low area with cattails on the west line Drainage from south side of stand 104 flows under the road, through the south side of stand 103, through the south part of this stand and into the low area.
94	6121 - Tamarack	Poletimber Medium	2.9	67	111-140	
97	6120 - Lowland Cedar	Sawtimber Well	9.7	122	201+	
98	6120 - Lowland Cedar	Sawtimber Well	6.7	100	Unspecified	Wet
99	4110 - Sugar Maple Association	Sawtimber Well	12.2	90	51-80	Stand thinned 2012 with Yeast Lake sale #12-018-09-01.
100	4319 - Mixed Upland Forest	Poletimber Medium	5.3	42	51-80	
101	42290 - Natural Mixed Pine	Sawtimber Well	8.3	62	111-140	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
103	6121 - Tamarack	Sawtimber Well	12.1	93	201+	Tamarack and Black spruce are in the overstory Very thick cedar understory Almost pure tamarack in the north
104	6122 - Black Spruce	Poletimber Well	5.7	92	201+	Balsam fir understory is thick around the edge Cedar understory is not doing to well. Small thin crowns. 1-2 stick. -BA - Ced 110 - BS 70 - Tam 30
106	6120 - Lowland Cedar	Poletimber Well	22.0	80	Unspecified	
107	4130 - Aspen	Poletimber Well	17.5	34	Immature	Drainages with upland ridges mostly on the west side Scattered super canopy oak, spruce, and pine Scattered black cherry Spruce/fir being hit by SBW
108	4199 - Other Mixed Upland Deciduous	Sawtimber Well	4.1	82	81-110	Sugar maple generally poor quality Balsam fir is being hit by SBW
109	4136 - Aspen, Mixed Conifer	Sapling Well	40.6	27		Lots of low/wet areas throughout. Cedar pocket in south middle. heavier to balsam fir on the west side.
110	4311 - Pine, Aspen Mix	Sawtimber Well	11.9	100	111-140	
111	4110 - Sugar Maple Association	Poletimber Medium	1.5	65	51-80	very poor quality maple. no regen anywhere.
113	4137 - Aspen, Birch	Sawtimber Poor	6.2	82	Unspecified	Spruce and fir are currently falling to the ground and the aspen and paper birch are next
114	4130 - Aspen	Poletimber Well	2.6	46	Unspecified	



Stand	Cover Type	Acres	Managed Site	General Comments:
4	622 - Lowland Shrub	6.3	No	Black ash and red maple scattered throughout
5	3102 - Grass	17.9	No	Scattered fir and mixed deciduous
17	500 - Water	2.8	No	
20	122 - Road/Parking Lot	21.2	No	Foster City Road
25	3102 - Grass	3.0	No	
36	500 - Water	110.1	No	Wildlife flooding
37	310 - Herbaceous Openland	2.8		
50	3102 - Grass	1.7	No	
54	3102 - Grass	36.2	Yes	Scattered WP, RP, WS, ASP, BP, TAM
70	622 - Lowland Shrub	3.9	No	
92	330 - Low-Density Trees	8.9		Open field is filling in with natural pine. Kotar habitat type: PArV[w] and PArVAa[w] (aka pine ground)
95	3102 - Grass	21.9	No	Power line
96	500 - Water	19.0	No	Sturgeon River
102	6229 - Mixed lowland shrub	10.2	No	Low drainage to river. Scattered lowland conifers along edge.
112	622 - Lowland Shrub	6.1	No	Sturgeon river