



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12190

Entry Year 2015

Acreage: 1,248

County Iron

Management Area: Michigamme Reservoir

Revision Date: 2013-06-28

Stand Examiner:

Legal Description:

T45N R31W sections 25, 26, 34, 35, 36

Identified Planning Goals:

Optimize sustainable timber production while enhancing and protecting wildlife habitat. It will be difficult to begin balancing aspen age classes over the next several entry cycles due to past harvesting over the allowable cut. There is a minimal aspen acreage over 30 years of age. Get the hardwood stands on a 20 year alternating cutting cycle towards regulation. Protect the riparian areas and transition zones during management activity.

Soil and topography:

Soils are fairly complex through this compartment, through generally ranging from fine sandy loams to areas of muck soils. In areas with more rolling hills soils move to a sandy - stony type. The topography ranges from fairly steep rolling to flat and low swamp land and river bottom.

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

The compartment is fairly contiguous in state ownership with blocks of private land along several sides. Active forest management has occurred and will continue within and surrounding the compartment. Deer hunting by far dominates the recreational use patterns.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

None identified

Watershed and Fisheries Considerations:

The Fence River (trout stream) runs through the western block of the compartment. Hickman Creek also runs through the compartment. No aspen management is scheduled during this entry.

Wildlife Habitat Considerations:

The compartment falls within deer obligate winter range. Deer and large amounts of deer sign was observed utilizing the compartment for winter range. Any stand containing a considerable conifer component was being used for winter cover. The lowland spruce stands along Hickman Creek and the Fence River are notably used as snow intercept and thermal cover. Lowland conifer stands should be maintained to continue to provide quality winter cover.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. There is insufficient data to determine the glacial drift thickness. The Precambrian Michigamme Formation subcrops below the glacial drift. There is not an economic use for these rocks. The Michigan discovery of kimberlite was near Lake Ellen, approximately six miles to the south. The Porter and Warner abandoned iron mines are located twelve miles to the southwest. This area has not been previously leased for metallic exploration, but leases were located one mile to the northwest and there may be potential. Gravel pits are not located nearby and potential appears to be limited. There is no economic oil and gas production in the UP.

Vehicle Access:

Access overall is good. The Spot Lake Road is a semi improved woods road. Several unimproved woods roads lead into and throughout the compartment.

Survey Needs:

Recreational Facilities and Opportunities:

None identified

Fire Protection:

Due to the high percentage of aspen and hardwoods, this compartment has slight large fire potential. Any fire likely would be surface fire and could be controlled by direct attack. There are many woods roads throughout this area that may be used as fire lines. Access for fire suppression equipment is good. Water sources may be several miles away.

Additional Compartment Information:

The following reports from the Inventory are attached:

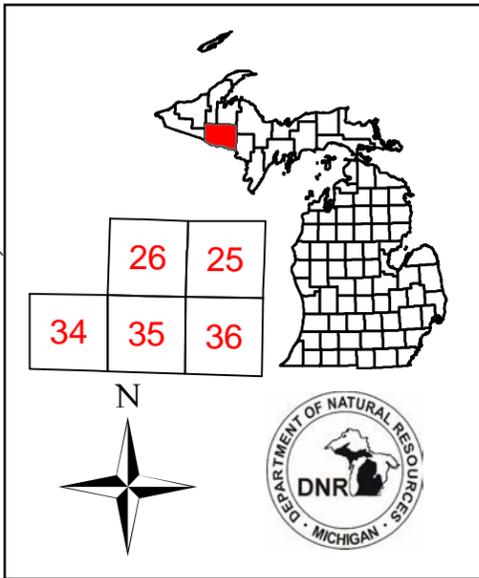
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

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

Cover Type & Treatment Map

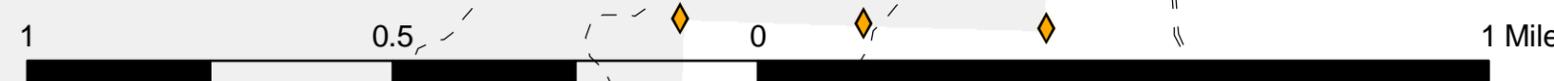
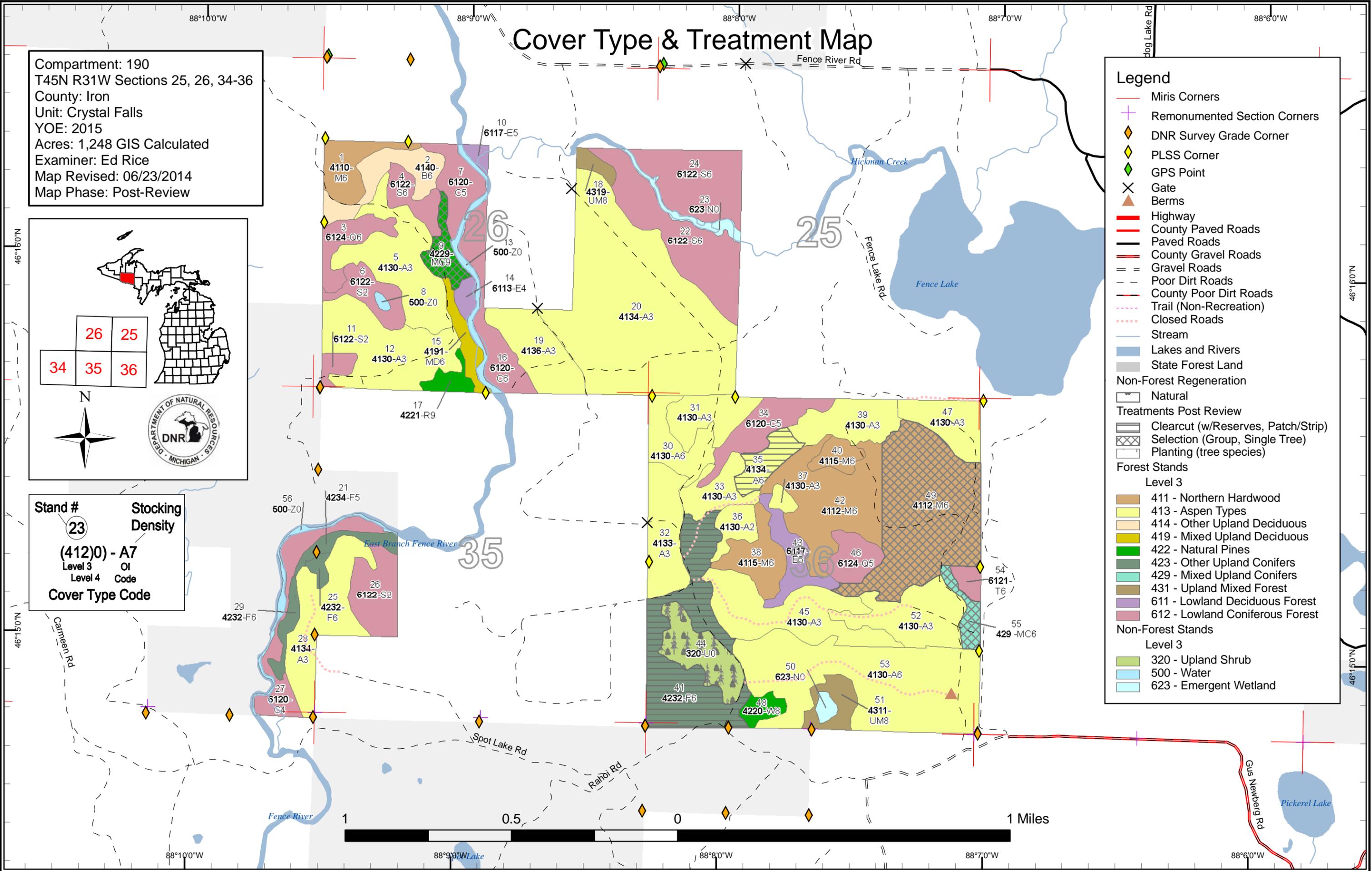
Compartment: 190
 T45N R31W Sections 25, 26, 34-36
 County: Iron
 Unit: Crystal Falls
 YOE: 2015
 Acres: 1,248 GIS Calculated
 Examiner: Ed Rice
 Map Revised: 06/23/2014
 Map Phase: Post-Review



Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

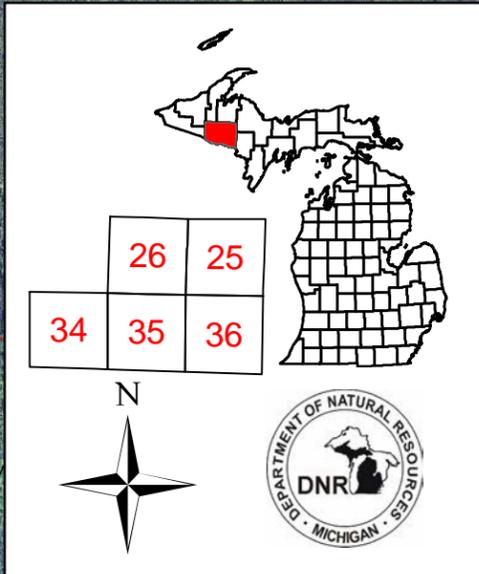
Legend

- Miris Corners
- ✚ Remonumented Section Corners
- ◆ DNR Survey Grade Corner
- ◇ PLSS Corner
- ◇ GPS Point
- ✕ Gate
- ▲ Berms
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Stream
- Lakes and Rivers
- State Forest Land
- Non-Forest Regeneration
- Natural
- Treatments Post Review
- ▨ Clearcut (w/Reserves, Patch/Strip)
- ▩ Selection (Group, Single Tree)
- ▨ Planting (tree species)
- Forest Stands
- Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
- 414 - Other Upland Deciduous
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- Non-Forest Stands
- Level 3
- 320 - Upland Shrub
- 500 - Water
- 623 - Emergent Wetland



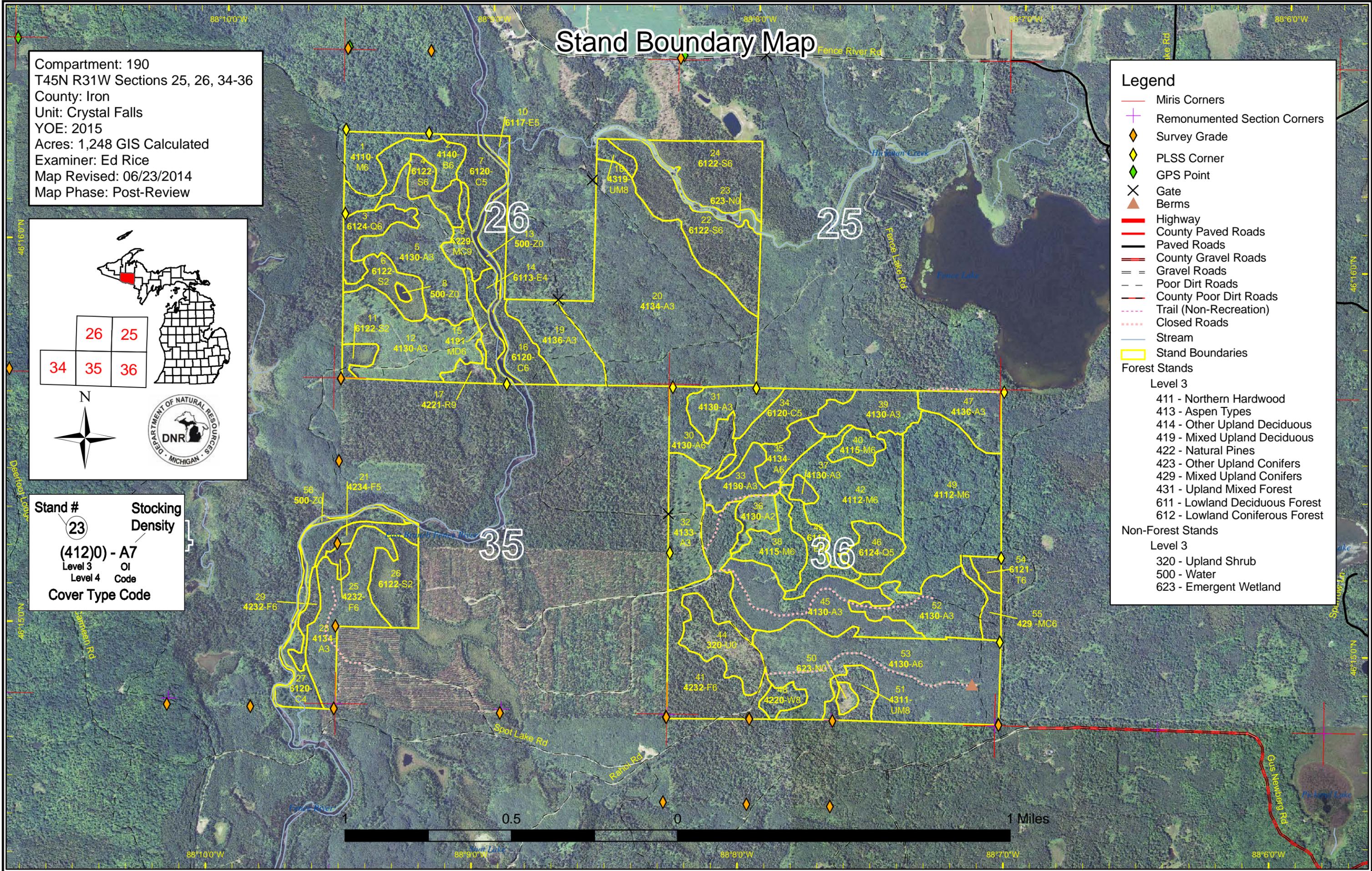
Stand Boundary Map

Compartment: 190
 T45N R31W Sections 25, 26, 34-36
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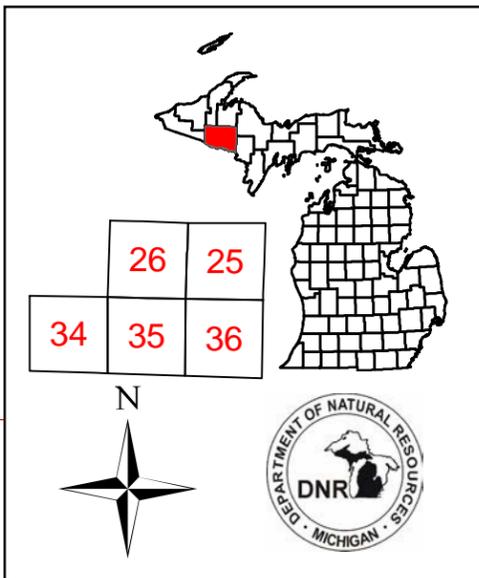


Special Conservation Areas & Site Conditions Map

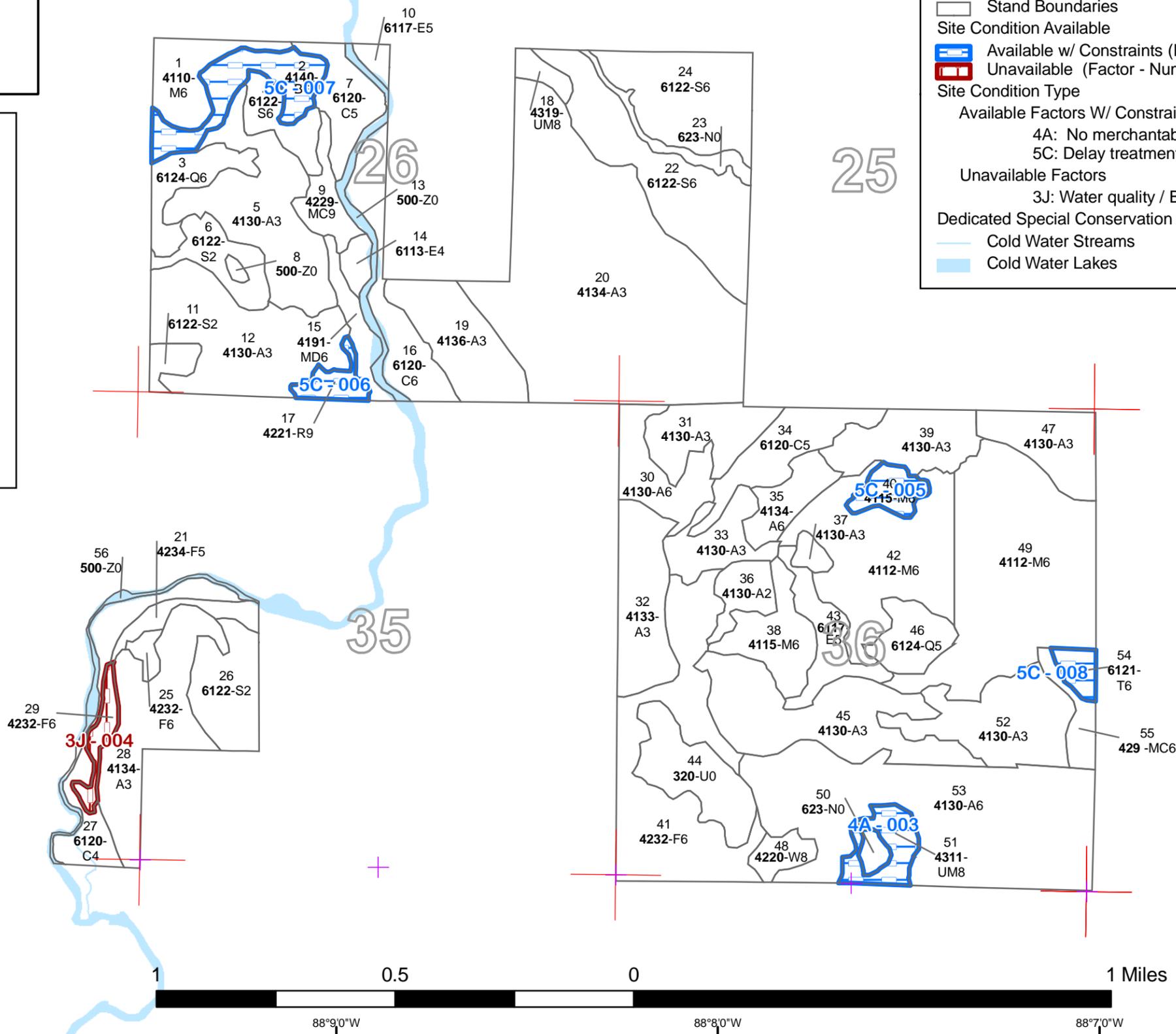
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 Map Phase: Post-Review

Legend

-  Miris Corners
-  Remonumented Section Corners
-  Stand Boundaries
- Site Condition Available
-  Available w/ Constraints (Factor - Number)
-  Unavailable (Factor - Number)
- Site Condition Type
- Available Factors W/ Constraints
- 4A: No merchantable products (see product standards)
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable Factors
- 3J: Water quality / BMPs (stream, river, or lake)
- Dedicated Special Conservation Areas
-  Cold Water Streams
-  Cold Water Lakes

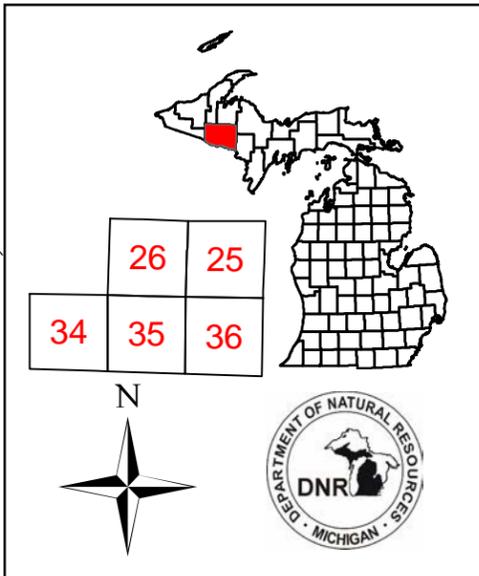


Stand # Stacking Density
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 (4120) - A7
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 Cover Type Code



Cover Type & Treatment Map

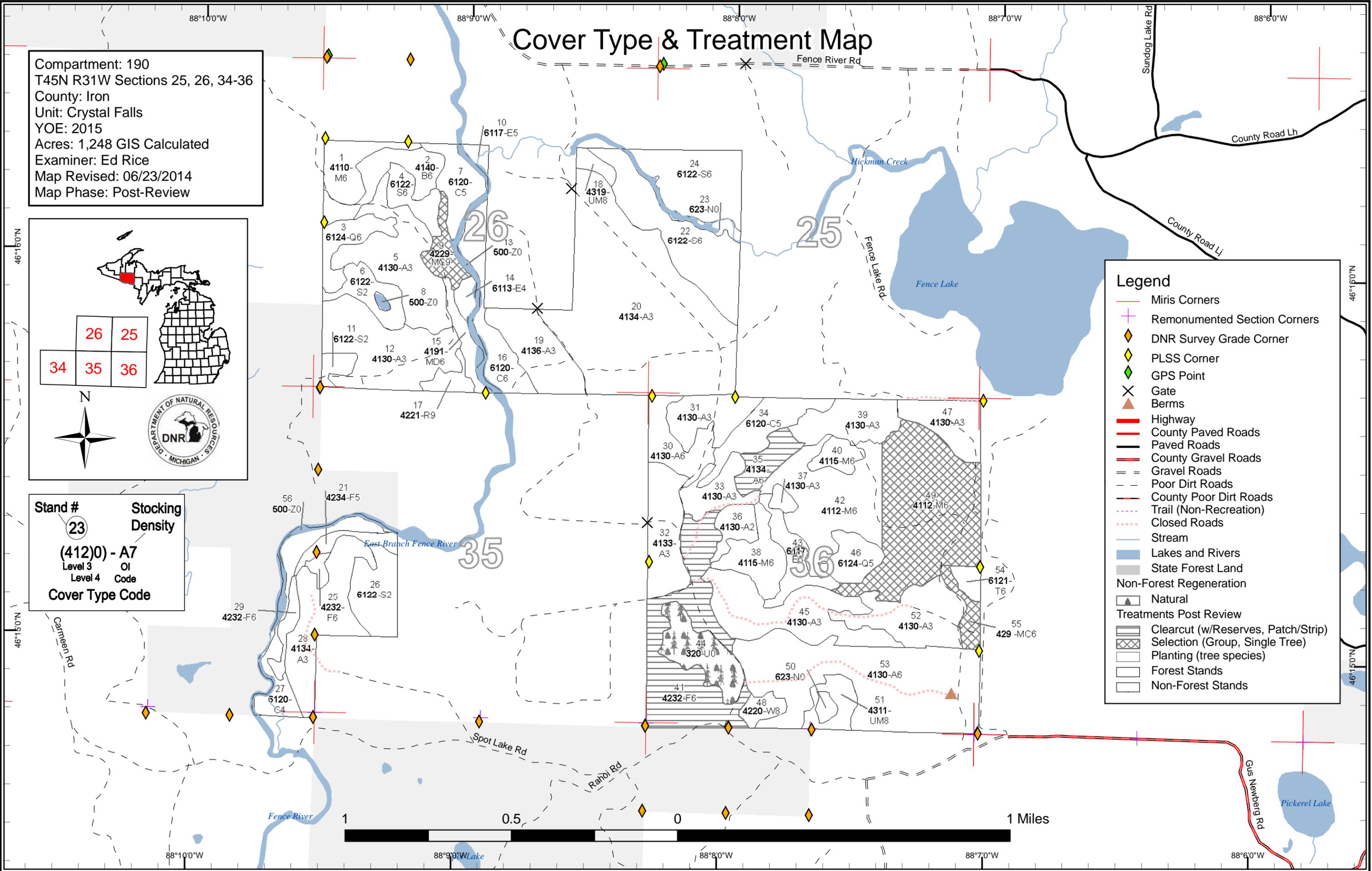
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- Planting (tree species)
- Forest Stands
- Non-Forest Stands



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	83	129	381	0	18	0	12	0	0	0	0	0	0	0	0	0	0	623
Cedar	0	0	0	0	0	0	0	19	0	43	15	0	0	0	0	0	0	0	77
Lowland Conifers	0	0	0	0	0	12	0	0	13	0	0	0	0	0	0	0	0	0	25
Lowland Deciduous	0	0	0	0	0	7	14	0	0	0	0	0	0	0	0	0	0	0	21
Lowland Spruce/Fir	0	0	0	0	18	0	67	0	44	0	0	0	0	0	0	0	0	0	129
Marsh	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Mixed Upland Deciduous	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	8
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10
Northern Hardwood	0	0	0	0	0	0	0	18	159	0	0	0	0	0	0	0	0	0	177
Paper Birch	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	20
Red Pine	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
Tamarack	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5
Upland Conifers	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	7
Upland Mixed Forest	0	0	0	0	0	0	0	10	4	0	0	0	0	0	0	0	0	0	14
Upland Shrub	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Upland Spruce/Fir	0	0	0	0	0	68	6	0	0	0	0	0	0	0	0	0	0	0	74
Water	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
White Pine	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
Total	46	83	129	381	18	98	107	86	220	43	27	10	0	0	0	0	0	0	1248



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2015

Acres of Harvest

Compartment 190
Total Compartment Acres: 1,248

Commercial Harvest - 171
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 22

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	12	0	0	0	0	0	0	0	0	12
Natural Mixed Pines	0	10	0	0	0	0	0	0	0	10
Northern Hardwood	0	84	0	0	0	0	0	0	0	84
Upland Conifers	0	7	0	0	0	0	0	0	0	7
Upland Spruce/Fir	58	0	0	0	0	0	0	0	0	58
Total	70	101	0	0	0	0	0	0	0	171

Proposed and Next Step Treatments by Harvest Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	171	0	22	0	0	0	0	0	0	193
Total	171	0	22	0	0	0	0	0	0	193



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
9	12190009-Cut	9.7	42290 - Natural Mixed Pine	Sawtimber Well	103	111- 140	Harvest	Group Selection	42290 - Natural Mixed Pine	Uneven- Aged	Draft Field Boundary

Prescription group selection creating gaps 50 - 60 feet wide for w pine and r pine seedling recruitment, summer log only for max scarification. adjacent road
Specs: sides where mineral soil was heavily exposed shows excellent pine regen. MO is w pine/r pine. leave a 100' stream buffer to Fence River from the top of the bank.

Next Step
Treatments:

Acceptable
Regen:

Other good form on large w pine and r pine 14 - 22" dbh. associated w birch - tops are breaking up. windthrow salvage timber sale completed
Comment:

Proposed Start Date: 10/1 /2014

Site Condition: None

35	12190035-Cut	11.8	4134 - Aspen, Spruce/Fir	Poletimber Well	64	Unspec ified	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	Draft Field Boundary
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Prescription remove all merchantable aspen and mixed hardwood. cut spruce/fir larger than 6" stump diameter. leave any associated b cherry, w birch, pine
Specs: or cedar (possible cedar along edge of stand). avoid swamp transition to the north. MO is aspen and mixed conifer

Next Step
Treatments:

Acceptable
Regen:

Other aspen 6 - 7 sticks tall 10 - 12" dbh. associated fir 1 - 3 sticks tall with w spruce 12 - 14" dbh
Comment:

Proposed Start Date: 10/1 /2014

Site Condition: None

41	12190041-Cut	57.9	42320 - Upland Spruce	Poletimber Well	42	Unspec ified	Harvest	Clearcut	42120 - Planted Jack Pine	Even-Aged	Draft Field Boundary
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Prescription cut merchantable spruce, fir, aspen, mix hardwood, and if present j pine. leave b cherry, w birch, w pine and r pine. MO is for j pine with
Specs: components of aspen and spruce/fir acceptable and desired.

Next Step
Treatments:

Acceptable
Regen:

Other scattered aspen 3 - 5 sticks tall, thick upland b spruce understory. older aspen (62 yrs) showing conks. poor quality site for aspen production
Comment: (fairly short, black barked) N end has areas of extensive windthrow. far N end has a heavier w birch component with r maple and large w pine as stand transitions to adjacent northern hardwoods. good deer usage 2/11/13, adjacent stands to the N and S are currently being cut. Old next step comments: if site prep needed, prescribe burn to reduce slash load and/or herbicide to discourage heavy aspen regen. trench and plant j pine

Proposed Start Date: 10/1 /2014

Site Condition: None



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
49	12190049-Cut	84.2	4112 - Maple, Beech, Cherry Association	Poletimber Well	74	81-110	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Uneven- Aged	Draft Field Boundary

Prescription thin to 70 - 80 BA. create regen gaps. where possible target removal of large sawtimber 18"+ to capture value while maintaining desired diameter stocking distributions. cut no conifer, exclude lowland conifer inclusions from sale area . MO is northern hardwood.

Next Step
Treatments:

Acceptable
Regen:

Other fair to good h maple sawtimber in areas 12 - 18"dbh. areas of stand heavier to r maple of fair to poor quality. eutypella present. light raspberry and b cherry brush in more open areas from previous thinning. pockets of well established M3. small lowland conifer inclusions with cedar, fir and tag alder. scattered hemlock

Proposed Start Date: 10/1 /2014

Site Condition: None

55	12190055-Cut	7.1	429 - Mixed Upland Conifers	Poletimber Well	59	1-50	Harvest	Single Tree Selection	42200 - Natural White Pine	Uneven- Aged	Draft Field Boundary
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Prescription mark all species to recruit w pine. lightly thin w pine where it is dominate, removing 10 - 20 BA. remove majority of large spruce (susceptible to SBW), leave aspen component throughout the stand to discourage full stand conversion to aspen. MO is mix of w pine, aspen and spruce - attempt to perpetuate current stand species mix.

Next Step
Treatments:

Acceptable
Regen:

Other S end of stand heavier to w pine, good aspen throughout. 10 -14" dbh w spruce with 6 - 8" dbh upland b spruce

Proposed Start Date: 10/1 /2014

Site Condition: None

44	NF_12190044- Plant	22.4	3205 - Mixed Upland Shrub	Nonstocked			Planting	Initial Plant	4130 - Aspen	Even-Aged	Draft Field Boundary
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Prescription underplant w pine to add conifer diversity to the expected aspen regeneration of the current cut. soil and habitat typing support w pine

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 12/30/1899

Site Condition: None

**Total Treatment
Acreage Proposed: 192.9**

Dominant Site Conditions

	4A	5C
Aspen		
Cedar		
Lowland Conifers		
Lowland Deciduous		
Lowland Spruce/Fir		
Marsh		
Mixed Upland Deciduous		
Natural Mixed Pines		
Northern Hardwood		7
Paper Birch		20
Red Pine		6
Tamarack		5
Upland Conifers		
Upland Mixed Forest	10	
Upland Shrub		
Upland Spruce/Fir		
Water		
White Pine		
Total Forested Acres	10	37
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 Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
3	Available	4A: No Markets Available for these Forest Products	10		Unspecified	Unspecified	Unspecified
Comments:							
very little aspen remaining in stand due to windthrow several years ago. very slight amount of pine. stand left in past harvest as buffer to small bog pond. currently acting as only thermal cover in the immediate area, heavily used by deer.							

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment: 190

Year of Entry: 2015

4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 300' buffer to Fence River trout stream							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: hold until next entry cycle to treat with adjacent stand							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 90 BA - just thinned through for recent blow down salvage sale							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments: treat with adjacent hardwood stand likley in next inventory cycle							
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Dominant Site Conditions

	4A	5C
Aspen		
Cedar		
Lowland Conifers		
Lowland Deciduous		
Lowland Spruce/Fir		
Marsh		
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Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment: 190

Year of Entry: 2015

4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 300' buffer to Fence River trout stream							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: hold until next entry cycle to treat with adjacent stand							
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Comments:							

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Total Forested Acres	10	37
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 Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
3	Available	4A: No Markets Available for these Forest Products	10		Unspecified	Unspecified	Unspecified
Comments:							
very little aspen remaining in stand due to windthrow several years ago. very slight amount of pine. stand left in past harvest as buffer to small bog pond. currently acting as only thermal cover in the immediate area, heavily used by deer.							

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment: 190

Year of Entry: 2015

4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 300' buffer to Fence River trout stream							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: hold until next entry cycle to treat with adjacent stand							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 90 BA - just thinned through for recent blow down salvage sale							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments: treat with adjacent hardwood stand likley in next inventory cycle							
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Dominant Site Conditions

	4A	5C
Aspen		
Cedar		
Lowland Conifers		
Lowland Deciduous		
Lowland Spruce/Fir		
Marsh		
Mixed Upland Deciduous		
Natural Mixed Pines		
Northern Hardwood		7
Paper Birch		20
Red Pine		6
Tamarack		5
Upland Conifers		
Upland Mixed Forest	10	
Upland Shrub		
Upland Spruce/Fir		
Water		
White Pine		
Total Forested Acres	10	37
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.*

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Crystal Falls Mgt. Unit

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Comments: 300' buffer to Fence River trout stream							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: hold until next entry cycle to treat with adjacent stand							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 90 BA - just thinned through for recent blow down salvage sale							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments: treat with adjacent hardwood stand likley in next inventory cycle							
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Dominant Site Conditions

	4A	5C
Aspen		
Cedar		
Lowland Conifers		
Lowland Deciduous		
Lowland Spruce/Fir		
Marsh		
Mixed Upland Deciduous		
Natural Mixed Pines		
Northern Hardwood		7
Paper Birch		20
Red Pine		6
Tamarack		5
Upland Conifers		
Upland Mixed Forest	10	
Upland Shrub		
Upland Spruce/Fir		
Water		
White Pine		
Total Forested Acres	10	37
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 Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
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Comments:							
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Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment: 190

Year of Entry: 2015

4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 300' buffer to Fence River trout stream							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: hold until next entry cycle to treat with adjacent stand							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 90 BA - just thinned through for recent blow down salvage sale							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments: treat with adjacent hardwood stand likley in next inventory cycle							
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.



Stand	Crystal Falls Mgt. Unit			Report 8 – Forested Stands		Compartment: 190 Year of Entry: 2015
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4110 - Sugar Maple Association	Poletimber Well	15.9	74	81-110	good poletimber with scattered sawtimber 16 - 18" dbh.
2	4140 - Other Upland Deciduous	Poletimber Well	19.6	58	Unspecified	W birch stand along steep hillsides, timber transition from quality N hardwoods to aspen.
3	6124 - Lowland Spruce-Fir	Poletimber Well	13.3	73	Unspecified	fairly variable stand. B spruce 6 - 8" dbh 4 - 5 sticks tall and tamarack 8 - 12" dbh 6 - 7 sticks tall. Tag alder/swamp grass inclusion in NE of stand along with scattered j pine among b spruce in adjacent slightly higher ground. Inclusions of steep, high ground ridges with w birch and w spruce poletimber.
4	6122 - Black Spruce	Poletimber Well	10.8	52	Unspecified	highly stocked S6 3 - 6" dbh. N section of stand slightly larger dbh notably as the site quality increases in transition to higher ground.
5	4130 - Aspen	Sapling Well	42.0	15	Unspecified	associated w spruce scattered throughout. R pine and w pine also throughout, heavier components on S end
6	6122 - Black Spruce	Sapling Medium	13.2	36	Unspecified	edges of stand hold better quality b spruce and tamarack poletimber but quickly transitions (within 20 - 30 feet) to b spruce saplings
7	6120 - Lowland Cedar	Poletimber Medium	14.9	97	Unspecified	cedar 8 - 18" dbh with widely scattered large w pine and y birch poletimber. small, narrow high ground ridge inclusion holding submerch fir, w birch poletimber and large w pine. B ash saplings 1 - 2" dbh prevalent along river
9	42290 - Natural Mixed Pine	Sawtimber Well	9.7	103	111-140	good form on large w pine and r pine 14 - 22" dbh. associated w birch - tops are breaking up. windthrow salvage timber sale completed
10	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	2.8	52	Unspecified	heavy b ash sapling understory
11	6122 - Black Spruce	Sapling Medium	4.9	36	Unspecified	good b spruce and tamarack adjacent to uplands for 40 - 50' then transitions to younger timber on a lower quality site. b spruce 12 - 15' tall 1 - 2" dbh. widely scattered large w pine
12	4130 - Aspen	Sapling Well	48.5	9	Unspecified	aspen 12 - 16' tall, good regen throughout. NW of stand has large diameter w pine 12 - 28" dbh inclusion. small 1 - 2 acre b spruce/tamarack lowland inclusion. scattered r pine throughout
14	6113 - Lowland Maple	Poletimber Poor	3.9	54	Unspecified	low quality r maple along Fence R floodplain
15	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	8.4	64	Unspecified	from mid point of stand and S is heavier to w birch and spruce. widely scattered r pine and w pine. stand lies along high bank sloping to river
16	6120 - Lowland Cedar	Poletimber Well	22.6	84	Unspecified	edges of stand have fair to good b spruce but quickly graduates to cedar. small pockets of b spruce 3 - 5" dbh



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	42210 - Natural Red Pine	Sawtimber Well	5.7	94	51-80	fair amount of defect - crooks, low crotches. part of recent windthrow salvage sale
18	4319 - Mixed Upland Forest	Sawtimber Medium	4.1	73	Unspecified	top die back prevalent in w birch. E end of stand heavier to spruce/fir saplings/small poletimber.
19	4136 - Aspen, Mixed Conifer	Sapling Well	26.6	20	Unspecified	aspen 16 - 25' tall. NW of stand has inclusion of larg w pine 16 - 30" dbh along with very good w pine seedling establishment. scattered w pine and r pine throughout the stand
20	4134 - Aspen, Spruce/Fir	Sapling Well	147.6	24	Unspecified	aspen 25 - 30' tall 2 - 3" dbh. good amounts of spruce/fir small poletimber mixed throughout with pockets of thicker spruce/fir. very good mix of cover with aspen and mix softwood
21	42340 - Upland Spruce/Fir	Poletimber Medium	7.2	47	Unspecified	river bottom to Fence R.
22	6122 - Black Spruce	Poletimber Well	44.2	74	Unspecified	b spruce 4 - 8" dbh, tamarack 4 - 8" dbh small areas of windthrow creating 20 - 30' openings have good b spruce regen 8 - 12' tall. center part of stand has areas of younger, smaller poletimber (b spruce 60 yrs). 1 - 2 acre S3 T3 inclusion in SE center of stand. heavy sphagnum
24	6122 - Black Spruce	Poletimber Well	35.1	59	Unspecified	b spruce 3 - 6" dbh 3 - 4 sticks tall with scattered older 9 - 10"dbh spruce (70 yrs old). NE of stand is younger and lower quality 2 - 4" b spruce - short, open grown S3 S4. small high ground ridge running NNW to SSE through center of stand with fir saplings 10 - 20' tall and associated w spruce poletimber F3 F4. scattered cedar
25	42320 - Upland Spruce	Poletimber Well	2.8	47	Unspecified	very little understory in stand. scattered larger spruce 10 - 12" dbh. small inclusion of 45 yr old aspen with associated b cherry
26	6122 - Black Spruce	Sapling Medium	20.7	52	Unspecified	low quality site - b spruce 50 yrs old 3" dbh - bog spruce. small acreage of high ground island with large w pine. heavy leatherleaf
27	6120 - Lowland Cedar	Poletimber Poor	20.4	82	Unspecified	stand adjacent to Fence R. areas of open, swamp grass leading into b ash pockets. cedar prevalent throughout.
28	4134 - Aspen, Spruce/Fir	Sapling Well	39.1	27	Unspecified	aspen with areas of higher stocked fir saplings A3 F3. N end of stand has heavier fir component.
29	42320 - Upland Spruce	Poletimber Well	5.9	54	Unspecified	windthrow throughout. widely scattered large w pine
30	4130 - Aspen	Poletimber Well	17.8	47	Unspecified	mainly a pure aspen stand, very little understory. pockets of spruce/fir along road edge
31	4130 - Aspen	Sapling Well	18.9	17	Unspecified	scattered, small openings throughout the stand where spruce/fir was predominate in past cut.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
32	4133 - Aspen, Mixed Pine	Sapling Well	26.4	7	Unspecified	aspen saplings 8 - 10' tall. S end of stand heavier to r pine overstory with A2 from cut.
33	4130 - Aspen	Sapling Well	14.6	17	Unspecified	associated spruce/fir 20 - 25' tall
34	6120 - Lowland Cedar	Poletimber Medium	19.2	67	Unspecified	fair to good quality b spruce and tamarack poletimber adjacent to uplands but transitions quickly to heavy tag alder, cedar, spruce/fir saplings.
35	4134 - Aspen, Spruce/Fir	Poletimber Well	11.8	64	Unspecified	aspen 6 - 7 sticks tall 10 - 12" dbh. associated fir 1 - 3 sticks tall with w spruce 12 - 14" dbh
36	4130 - Aspen	Sapling Medium	8.9	7	Unspecified	aspen 4 - 8' tall newly regenerating from cut
37	4130 - Aspen	Sapling Well	3.0	23	Unspecified	small aspen acreage amongst northern hardwoods
38	4115 - Y.Birch, Hemlock NH	Poletimber Well	17.9	69	51-80	low quality r maple, fair to good form on h maple. scattered areas of hazel with the W end of stand having lower stocking levels and a higher prevalence of ironwood saplings. fir saplings throughout with widely scattered w birch.
39	4130 - Aspen	Sapling Well	21.9	17	Unspecified	widely scattered 4 stick aspen among saplings. large w spruce was left from previous cut - not showing SBW. small pocket of b cherry in W end.
40	4115 - Y.Birch, Hemlock NH	Poletimber Well	7.4	74	111-140	poor r maple poletimber with sawtimber size trees of pulp quality. scattered w birch and aspen. pockets of interior areas heavier to fir. this is a low quality stand that will never produce sawtimber.
41	42320 - Upland Spruce	Poletimber Well	58.0	42	Unspecified	scattered aspen 3 - 5 sticks tall, thick upland b spruce understory. older aspen (62 yrs) showing conks. poor quality site for aspen production (fairly short, black barked) N end has areas of extensive windthrow. far N end has a heavier w birch component with r maple and large w pine as stand transitions to adjacent northern hardwoods.
42	4112 - Maple, Beech, Cherry Association	Poletimber Well	50.9	74	81-110	similar to preinv std 36 with heavier component of r maple with fair quality sawtimber areas of M3 in small pockets. Hemlock scattered through and in small groves
43	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	14.2	69	81-110	portions of stand are a mix of upland and lowland that have been thinned through heavily in past management - pockets of swamp grass prevalent, b ash regen present with other areas of stand showing little growth or regeneration response from past cut. S end of stand is heavier to b ash and cedar
45	4130 - Aspen	Sapling Well	45.2	20	Unspecified	aspen 20 - 25' tall



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
46	6124 - Lowland Spruce-Fir	Poletimber Medium	12.5	44	Unspecified	edges of stand have mix of hemlock, r maple, fir, b spruce. interior of stand progress to higher stocking of b spruce small poletimber and saplings
47	4130 - Aspen	Sapling Well	18.8	26	Unspecified	aspen 2 - 3 sticks tall with submerchantable h maple 2 - 4" dbh. scattered spruce/fir saplings throughout with pockets of higher stocking
48	42200 - Natural White Pine	Sawtimber Medium	6.0	94	81-110	good w pine sawtimber - fairly clear, straight boles. widely scattered r pine sawtimber throughout. windthrow at edges of stand from several years ago.
49	4112 - Maple, Beech, Cherry Association	Poletimber Well	84.3	74	81-110	fair to good h maple sawtimber in areas 12 - 18"dbh. areas of stand heavier to r maple of fair to poor quality. eutypella present. light raspberry and b cherry brush in more open areas from previous thinning. pockets of well established M3. small lowland conifer inclusions with cedar, fir and tag alder. scattered hemlock
51	4311 - Pine, Aspen Mix	Sawtimber Medium	10.4	64	1-50	heavy windthrow on aspen from several years ago - most of aspen is down. variable stand with small well stocked areas of r pine/w pine to more open areas with aspen windthrow and hazel.
52	4130 - Aspen	Sapling Well	31.8	18	Unspecified	aspen saplings with pockets of aspen poletimber 5 - 6 sticks tall (55yr old) throughout. scattered spruce/fir saplings and 1 stick trees
53	4130 - Aspen	Poletimber Well	100.2	25	Unspecified	aspen just beginning moving into 1 stick product class - A3 A4. scattered inclusions of w pine sawtimber 10 - 16" dbh with aspen sapling and hazel understory in those areas.
54	6121 - Tamarack	Poletimber Well	4.6	62	Unspecified	good b spruce and tamarack poletimber 3 - 8" dbh. fairly dense b spruce saplings 3 - 20' tall. S end of stand spruce and tamarack runs smaller in dbh
55	429 - Mixed Upland Conifers	Poletimber Well	7.1	59	1-50	S end of stand heavier to w pine, good aspen throughout. 10 - 14" dbh w spruce with 6 - 8" dbh upland b spruce



Stand	Cover Type	Acres	Managed Site	General Comments:
8	500 - Water	1.0	No	small bog pond
13	500 - Water	8.5	No	Fence River
23	6233 - Wet Meadow	6.2	No	Hickman Creek drainage. series of old beaver meadows, some areas of marginal water or creek flow
44	3205 - Mixed Upland Shrub	22.4		stand currently under timber sale contract and being cut. no regeneration as of yet but expected to be fully stocked A3 by the end of summer.
50	6233 - Wet Meadow	2.8	No	open leatherleaf marsh - seasonally flooded
56	500 - Water	5.5	No	Fence River