

# **Compartment Review Presentation**

Crystal Falls Forest Management Unit Compartment 61 Entry Year 2016 Acreage: 2,681 County Dickinson Management Area: Ralph Ground Moraine

**Revision Date:** 07/25/2014

Stand Examiner: Deb Goupell

#### Legal Description:

T42N R28W Sec 15-17, 20-26, 36

#### **Identified Planning Goals:**

This compartment is almost half upland and half lowland, the majority of the lowland being cedar. Aspen and northern hardwoods make up an equal amount of the upland cover type with a minor mix of upland combinations comprising the rest. Management of all stands is to balance age class distribution and allow best suited species to grow on best suited sites while promoting sustainable timber production, and enhancing and protecting wildlife habitat. Hardwood management goals are to put growth on the best trees in place by removing crown competition and selectively harvest on an alternating 20 year rotation.

#### Soil and topography:

The majority of the lowland is dominated by Carbondale and Cathro mucks with the river floodplains being a Waucedah-Cathro complex. Fine sandy loams and loamy sands, which are well drained soils found on level to rolling hills, dominate the uplands.

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

The compartment has much private land mixed in with State land. State land adjoins the compartment on the north side, with private on all the other sides. The area is heavily used by loggers, hunters, fisherpeople, campers, trappers, general recreationists.

#### **Unique Natural Features:**

East Branch of the Sturgeon River, Skunk Creek

#### Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

#### **Special Management Designations or Considerations:**

This has been identified as obligate deer winter range.

#### Watershed and Fisheries Considerations:

Protect water quality for all bodies of water, particularly the Skunk Creek and East Branch of the Sturgeon River. Promote long lived conifer species along these waterbodies and use adequate buffer protection.

#### Wildlife Habitat Considerations:

The Sturgeon River Deer Wintering Complex makes up a good portion of this compartment. Conifer components of the treated stand should be retained and enhanced/regenerated to provide quality thermal cover and snow intercept values. Age class diversity in aspen stands is essential for species such as goshawk and red-shouldered hawks which inhabit this compartment.

#### 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 100 feet. The Cambrian Munising Group and Precambrian Archean granite/gneiss, Volcanics and sedimentary rocks subcrop below the glacial drift. The Granite/Gneiss could be used for decorative or building stone. A Randville Dolomite marble quarry is located two miles to the south. Groveland Iron mine is located approximately seven miles to the southwest. Part of this compartment was previously leased (Sections 15 - 17) for metallic exploration. Gravel pits are located in the area and there is potential. There is no economic oil and gas production in the UP.

#### Vehicle Access:

Skunk Creek Road access the majority of this compartment in addition to a number of poor, two-track roads. Access south of the East Branch of the Sturgeon is primarily through private.

#### Survey Needs:

Sections 22, 35, 36

### **Recreational Facilities and Opportunities:**

Hunting, dispersed camping, fishing, trapping, hiking, canoeing

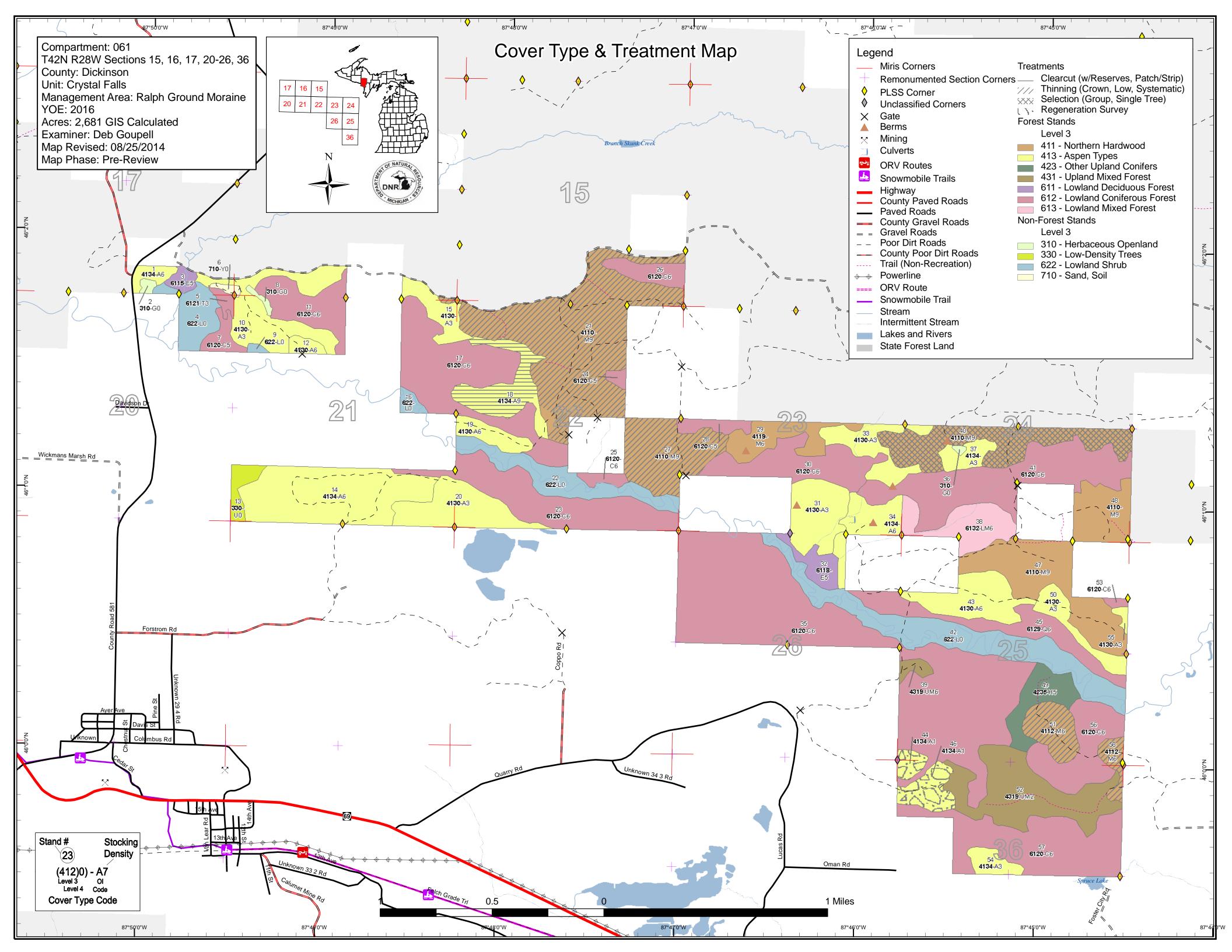
#### **Fire Protection:**

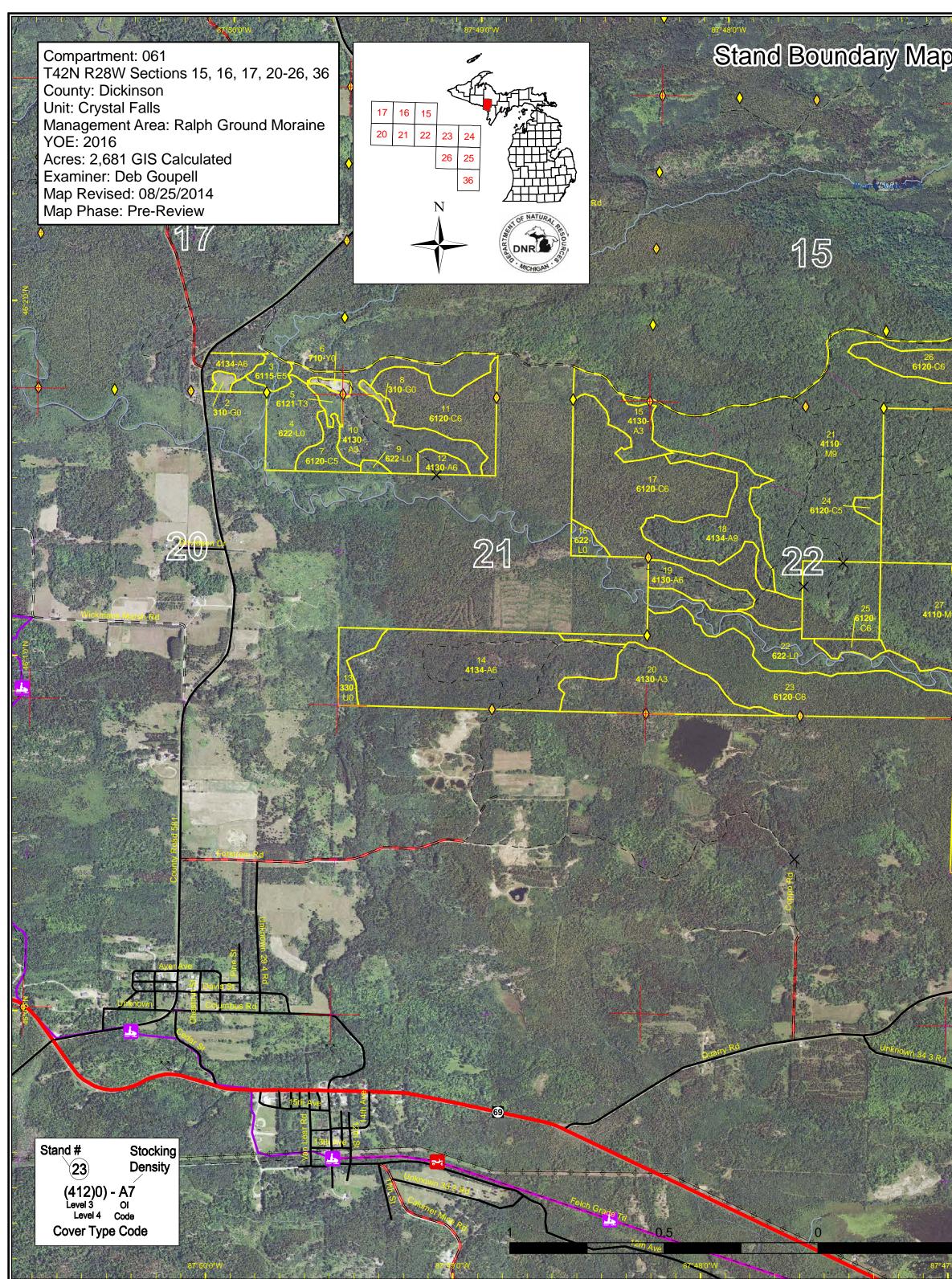
Felch protection area. Access to most upland stands is good, access to some swamp types would be difficult.

**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

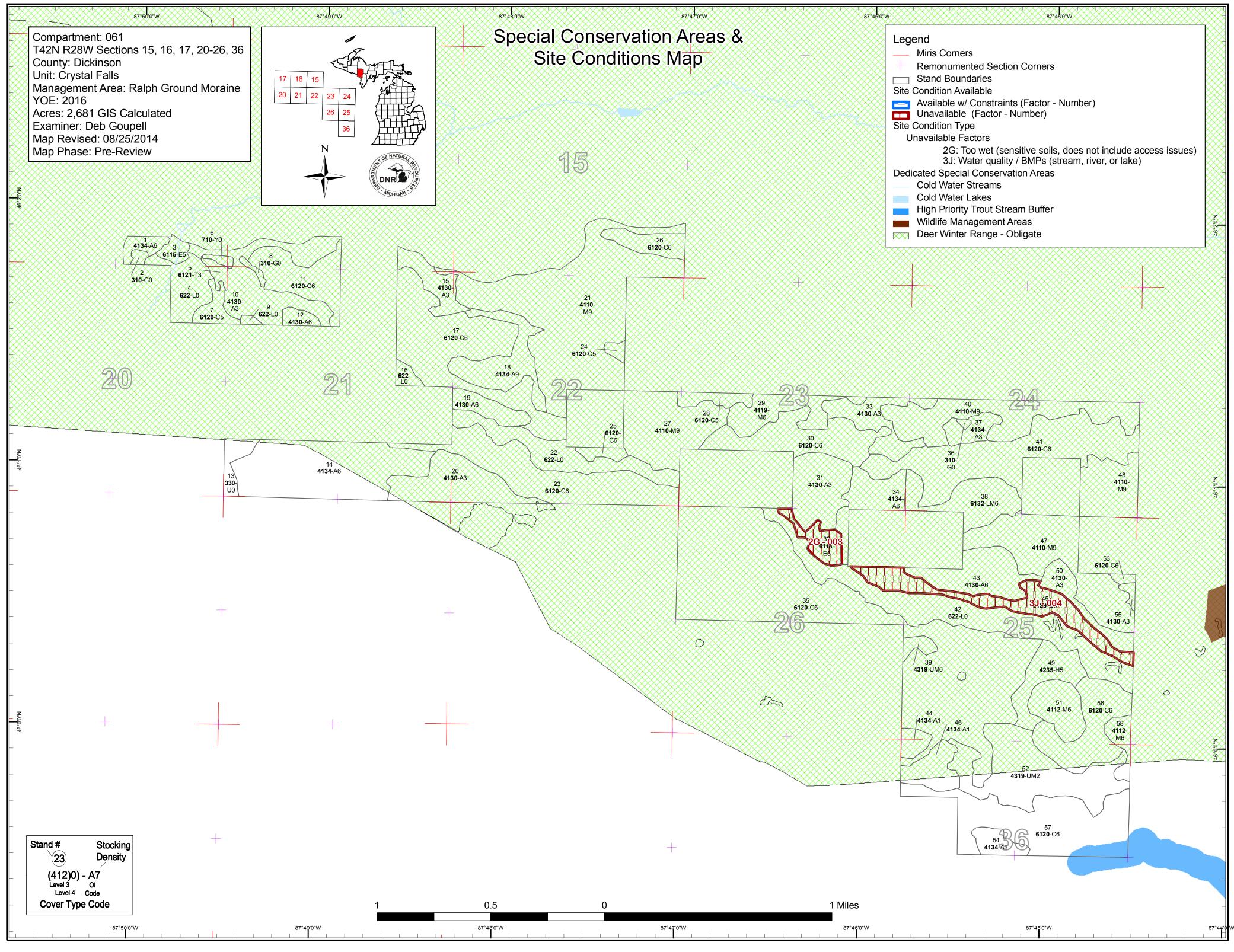
The following information is displayed, where pertinent, on the attached compartment maps: Base feature information, stand boundaries, cover types, and numbers Proposed treatments Site condition boundaries Details on the road access system

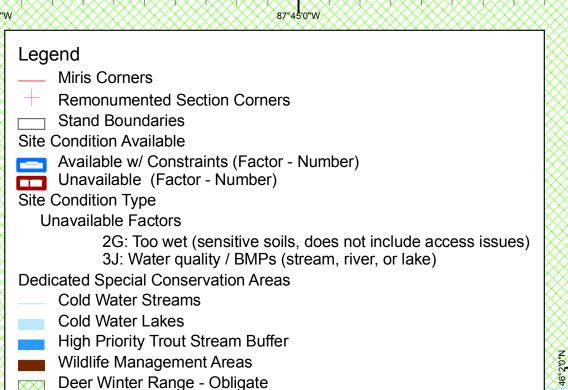




8//470 W	87/46/0 W	代表が必要
p b b b b b b b b b b b b b b b b b b b	Legend   Miris Corners   Remonumented Section Corners   PLSS Corner   Unclassified Corners   Gate   Berms   Culverts   Mining   ORV Routes   Snowmobile Trails   Highway   County Paved Roads   Paved Roads   Paved Roads   County Gravel Roads   County Por Dirt Roads   County Poor Dirt Roads   Frail (Non-Recreation)   Powerline   ORV Route   Snowmobile Trail	
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36





# Report 1 – Total Acres by Cover Type and Age Class

Compartment 061 Year of Entry 2016

Crystal Falls Mgt. Unit Deb Goupell : Examiner

# DR NATURAL MEDIURO

Age Class
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		_														
	/	6.0	10 <sup>,10</sup>	10°2	20.00 00.00	40-0-1-0-1-0-1-0-1-0-1-0-1-0-1-0-1-0-1-0	in the second se	00-00-0	10,10	00,00 00,00	66:0	601.001	021,021,	200 Jr	AND	o <sup>tol</sup>
Aspen	70	47	262	151	7	0	44	0	0	0	0	0	0	0	581	Í
Cedar	0	0	0	0	0	0	0	0	31	902	107	0	0	0	1040	
Hemlock	0	0	0	0	0	0	0	0	0	32	0	0	0	0	32	
Herbaceous Openland	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Low-Density Trees	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12	
Lowland Conifers	0	0	0	0	0	0	0	0	0	55	0	0	0	0	55	
Lowland Deciduous	0	0	0	0	0	0	7	0	17	0	0	0	0	0	24	
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	43	0	0	0	0	43	
Lowland Shrub	199	0	0	0	0	0	0	0	0	0	0	0	0	0	199	
Northern Hardwood	0	0	0	0	0	0	0	0	576	0	0	0	0	0	576	
Sand, Soil	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Tamarack	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5	
Upland Mixed Forest	0	0	98	6	0	0	0	0	0	0	0	0	0	0	105	
Total	290	52	361	157	7	0	52	0	624	1032	107	0	0	0	2681	



MICHIGAN .	Crystal Falls Mgt. Unit Year of Entry 2016									Compartment Total Compartment Acres:	
			Acı	es by T	reatm	ent Ty	ре				
	Commercial Harvest - 448	Tree Planting - 0		Other -	0						
	Habitat Cut - 0	Opening Mainten	ance - 0								
			Co	over Ty	pe by H	larves	st Meth	nod			
			C. C	Colorado de Cale	9000 Jee	Noon Oon Oo	Chining Of	C, C	Solo Photometry		
	Aspen Types		40 0	0	0	0	0	40			
	Northern Hardwood		0 79	0	0	328	0	408			
		Total	40 79	0	0	328	0	448			

Compartment: 061 Crystal Falls Mgt. Unit **Report 3 -- Treatments Prescribed** Year of Entry 2016 with No Limiting Factor s t а Treatment Acres CoverType Size BA Treatment Treatment Cover Type Stand Approval n Method Objective d Name Density Age Range Type Status 39.9 4134 - Aspen, High 68 Clearcut with 413 - Aspen Cmpt. Review 18 12061018-Cut Harvest Spruce/Fir Density Log Reserves Proposal Prescription Clearcut all trees 2" and above except pine and cedar. There is a decent hardwood island that will be thinned in the center of the southwest lobe. Specs: Other Comments: Next Steps: **Proposed** 10/01/2015 Start Date: High 87 411 - Northern Cmpt. Review 21 12061021-Cut 215.4 4110 - Sugar Maple 111-140 Harvest Crown Thinning Association Density Log Hardwood Proposal Prescription Thin to BA 80. Nest buffered in far south 5 chains will be a no cut. Additional 5 chain buffer will be no harvest/activity from March 1 to August 15 while maintaining 70% crown closure per hawk guidelines. South of road split will be its own unit. Specs: Will be a light thinning Other Comments: Next Steps: Proposed 10/01/2015 Start Date: 27 12061027-Cut 71.0 4110 - Sugar Maple High 87 111-140 Harvest Crown Thinning 411 - Northern Cmpt. Review Density Log Association Hardwood Proposal Prescription Thin to BA 80, releasing sugar maple and ash saplings where present. Do not mark cedar or hemlock. Specs: Other Will be a light thin Comments: Next Steps: **Proposed** 10/01/2015 Start Date: 40 12061040-Cut 79.4 4110 - Sugar Maple High 87 81-110 Harvest Group Selection 411 - Northern Cmpt. Review Hardwood Proposal Association Density Log Prescription Shelterwood to 40-50 BA or group removal (ie large canopy gaps). Quality of stand is poor. Some hazel is present. Specs: Other Comments: Next Steps: Proposed 10/01/2015 Start Date: 30.0 Cmpt. Review 51 12061051-Cut 4112 - Maple, High 81 111-140 Harvest Crown Thinning 411 - Northern Density Beech, Cherry Hardwood Proposal Association Pole Prescription Thin to 80 Ba, retain all hemlock, cedar and pine. South piece has more red maple, white birch which should be thinned hard. Specs: Other\_ Access will be through private. Comments:

<u>Next</u> <u>Steps:</u>

Proposed Start Date: 10/01/2015

S t		Crystal Fa	alls Mgt. Unit	Repo			nents Prescri ting Factor	bed	Compartment: 061 Year of Entry 2016	DR NATURAL
a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
58	12061058-Cut	11.9	4112 - Maple, Beech, Cherry Association	High Density Pole	81	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Cmpt. Review Proposal
Prese Spec	<u>cription</u> Thin to E	BA 80.								
Othe		will be throu	gh private.							
<u>Next</u> Steps										
Propo Start I	sed	15								
44	12061044- Survey	8.8	4134 - Aspen, Spruce/Fir	Low Density Sapling	6		Regeneration Survey	Artificial Regeneration (3yr)	4211 - Planted Red Pine	Cmpt. Reviev Proposal
Preso Spec		e, trench an	nd plant to red pine.							
<u>Othe</u> Com	<u>r</u> ments:									
<u>Next</u> Steps										
Propo Start I	<u>sed</u> <u>Date:</u> 07/18/201	14								
46	12061046- Survey	23.0	4134 - Aspen, Spruce/Fir	Low Density Sapling	6		Regeneration Survey	Artificial Regeneration (3yr)	4211 - Planted Red Pine	Cmpt. Review Proposal
Preso Spec	<u>cription</u> Herbicide s:	e, trench, pl	lant to red pine.							
<u>Othe</u> Com	<u>r</u> ments:									
<u>Next</u> Steps										
Propo		14								
	Total Treatmen	ht.								

**Total Treatment** Acreage Proposed: 479.4

S t		Crystal Falls	Mgt. Unit	Report 4		eatment Site Con	Compartment: 061 Year of Entry 2016	DNR DNR SS		
a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
		#Type!	#Type!							
Presci Specs Other Comm										
<u>Next</u> Steps:	<u>:</u>									
<u>Propo</u> Start [										
<u>Limitir</u>	ng Factor									
	Total Treatme reage Propose									

Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment 061 Year of Entry 2016

## Availability for Management

		•					
Total	Acres	Acres		Domina	nt Site	e Conc	litions
Acres	Available	Not Available		No	3J	2G	
581	580	0	Aspen	580		0	
1040	1040		Cedar	1,040			
32	32		Hemlock	32			
55		55	Lowland Conifers		55		
24	8	16	Lowland Deciduous	8		16	
43	43		Lowland Mixed Forest	43			
576	576		Northern Hardwood	576			
5	5		Tamarack	5			
105	105		Upland Mixed Forest	105			
2,461	2,389	71	Total Forested Acres	2,389	55	17	
	97%	3%	Relative Percent				-
		1					

\*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
003	Not Available	2G: Too wet (sensitive soils, does not include access issues)	17	3J: Water quality / BMPs (stream, river, or lake)			
C	Comments:						
004	Not Available	3J: Water quality / BMPs (stream, river, or lake)	55	1C: Other dept or div proc/practices			
	Comments: 10% of stand is ced	ar					



#### 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.

Conservatior Area	п Туре	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish spec year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	ties (e.g., slimy sculpin) to persist from ese conditions due to substantial
SCA	Habitat Area	An area that provide some specific need for the life cycle of wild and Waterfowl Production Areas, deer wintering complexes in lo openings and savannas. Habitat areas are distinct from critical h endangered or threatened species (such as Kirtland's warbler of general in nature, are not primarily associated with threatened of covered by species recovery plans that are developed in cooper	whand conifer communities, grassland habitat designated for recovery of r piping plover areas) in that they are more or endangered species, and are not
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems i influences the aquatic ecosystem and vice-versa. Because of th streams and open water wetlands, riparian areas harbor a high communities are ecologically and socially significant in their effe as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, diversity of plants and wildlife. Riparian ects on water quality and quantity, as well

S t	Crystal Fall	s Mgt. Unit		Report 8 -	- Forested	Stands Compartment: 061 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4134 - Aspen, Spruce/Fir	High Density Pole	9.1	27		trees along CR 581 are a bit bigger in diameter
3	6115 - Lowland Ash	Medium Density Pole	7.2	60		very wet
5	6121 - Tamarack	High Density Sapling	5.0	16		Sand Pit tsale cut1998
7	6120 - Lowland Cedar	Medium Density Pole	11.9	83		
10	4130 - Aspen	High Density Sapling	63.2	28		most of jack pine directly adjacent to sand pit; far northeast shows some aspen dieback. Sand Pit TS 1986. Trace red pine and white birch
11	6120 - Lowland Cedar	High Density Pole	45.3	100		north 1/3 stand is 64 year old black spruce with dbhs ranging from 4-8". Sphagnum hummocks.
12	4130 - Aspen	High Density Pole	6.7	42		
14	4134 - Aspen, Spruce/Fir	High Density Pole	118.6	30		couple of residual, older aspen pockets on rock knobs.
15	4130 - Aspen	High Density Sapling	22.1	24		west end is less stocked and wetter
17	6120 - Lowland Cedar	High Density Pole	120.3	92		Good tight crown closure throughtout most of the stand
18	4134 - Aspen, Spruce/Fir	High Density Log	44.4	68		
19	4130 - Aspen	High Density Pole	17.8	28		Camp on the Rocks cut 1986
20	4130 - Aspen	High Density Sapling	54.9	25		Coyote Corner TS cut 1988
21	4110 - Sugar Maple Association	High Density Log	218.0	87	111-140	Skunk Creek Hwd South thinned 1999. White ash saps heavy in east half.
23	6120 - Lowland Cedar	High Density Pole	96.7	97		
24	6120 - Lowland Cedar	Medium Density Pole	3.8	91		much of the balsam and spruce and balm of gilead have blown down
25	6120 - Lowland Cedar	High Density Pole	6.7	97		Stand is completely within 300 foot buffer

S t	Crystal Fall	Crystal Falls Mgt. Unit			– Forested	Stands Compartment: 061 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
26	6120 - Lowland Cedar	High Density Pole	19.6	87		drainage flows west out of here. Much of the other species are falling out, especially the balsam and spruce.
27	4110 - Sugar Maple Association	High Density Log	71.0	87	111-140	thinned Skunk Creek Hwd South 1999. BAs all over the place. Trees verified on site with canopy cover in 1939 photos
28	6120 - Lowland Cedar	Medium Density Pole	11.3	92		ash heavier on west side
29	4119 - Mixed Northern Hardwoods	High Density Pole	34.9	87	81-110	Git R Done TS cut 2008
30	6120 - Lowland Cedar	High Density Pole	61.8	100		East half of this stand had a habitat cut in 2001 where aspen, birch, bam, spruce/fir and maple were removed. There is heavy sugar maple, red maple, balm regeneration in this area, particularly on the stand edges; many shorter maple stems are browsed to bushes. West end has some blowdown along drainages.
31	4130 - Aspen	High Density Sapling	46.5	13		Sturgeon River aspen TS 2000; aspen dbh ranges from 1-4 inches, trace of cedar
32	6118 - Lowland Deciduous with Cedar	Medium Density Pole	16.9	85		ash dbh ranges from 3-12"; very wet, at least 2 separate drainages with bed and bank in here.
33	4130 - Aspen	High Density Sapling	34.0	23		Dead Deer TS cut 1990; most of white spruce/balsam is along road
34	4134 - Aspen, Spruce/Fir	High Density Pole	32.1	30		
35	6120 - Lowland Cedar	High Density Pole	365.5	97		
37	4134 - Aspen, Spruce/Fir	High Density Sapling	14.3	23		stand has some open areas but they are filling in with small conifers
38	6132 - Mixed Lowland Forest with Cedar	High Density Pole	43.2	98		Far west finger has a couple acres of upland, mature aspen. Ash dbh ranges from 3-10". Also a couple upland acres on far east along road near private land.
39	4319 - Mixed Upland Forest	High Density Pole	6.3	30		Bills Post TS cut 1984
40	4110 - Sugar Maple Association	High Density Log	79.4	87	81-110	A lot of poor quality, defective trees, some very large/overmature. Good stand to try something different, but be careful of hazel. Shelterwood to 40-50? Large canopy gaps? There is a an overmature pocket of aspen/balm/WS/BF just east of the berm on the N/S road in the further west. This may need to be retained as it is near a bed/bank, which disappears as you go east.

S t	Crystal Falls	6 Mgt. Unit		Report 8	– Forested	Stands Compartment: 061 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
41	6120 - Lowland Cedar	High Density Pole	125.4	97		Tall trees, good diversity, thick canopy. Pocket of mixed hardwood, conifer on a knob on north central. Most of aspen and balm of gilead on outter edges of stand. Several drainages.
43	4130 - Aspen	High Density Pole	46.9	28		
44	4134 - Aspen, Spruce/Fir	Low Density Sapling	8.8	6		Git R Done TS cut 2008. Most birch seed trees are dead. Insufficient regeneration. Few pockets of aspen, scattered white spruce/balsam. Heavy grass & raspberry
45	6129 - Mixed Coniferous Lowland Forest	High Density Pole	54.8	97		
46	4134 - Aspen, Spruce/Fir	Low Density Sapling	23.0	6		Git R Done TS cut 2008; most seed trees are dead. Insufficient regeneration. A few pockets of aspen, scattered white spruce and balsam. Heavy grass, raspberry
47	4110 - Sugar Maple Association	High Density Log	89.6	87	81-110	Git R Done TS cut 2008; trace of hemlock and white pine
48	4110 - Sugar Maple Association	High Density Log	41.3	87	81-110	Git R Done cut 2008. White ash saplings in understory are browsed heavily
49	42350 - Upland Hemlock	Medium Density Pole	32.2	90	81-110	aspen and birch cut out of north 2/3 of stand.
50	4130 - Aspen	High Density Sapling	22.3	6		Git R Done TS cut 2008
51	4112 - Maple, Beech, Cherry Association	High Density Pole	30.0	81	111-140	Far south piece has scattered hemlock part of Pete's Clearing TS that was not cut also has more red maple, white birch. Cut this piece with hardwood. Larger trees have cavities, defect. Very little basswood. Grass present and lycopodium is heavy especially on stand edges.
52	4319 - Mixed Upland Forest	Medium Density	98.2	25		Spruce Lake TS cut 1989. Very rocky site with shallow soil and heavy grass, some upland hemlock and cedar.
53	6120 - Lowland Cedar	High Density Pole	2.6	97		
54	4134 - Aspen, Spruce/Fir	High Density Sapling	13.2	5		Git R Done TS cut 2009
55	4130 - Aspen	High Density Sapling	2.9	6		Git R Done TS 2008
56	6120 - Lowland Cedar	High Density Pole	57.7	91		
57	6120 - Lowland Cedar	High Density Pole	111.9	91		

S t n d	Crystal Falls Mgt. Unit			Report 8	- Forested \$	Stands Compartment: 061 Year of Entry: 2016	DF NATURAL PHODURO
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	MICHIGAN .
58	4112 - Maple, Beech, Cherry Association	High Density Pole	11.9	81	111-140	Access will only be through private. Princess pine	on ground

Crystal Falls Mgt. Unit

## **Report 9 – Nonforested Stands**

Compartment: 061

Year of Entry: 2016

NATURA

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	310 - Herbaceous Openland	2.6	Unspecified	Unspecified	
4	622 - Lowland Shrub	29.9	Unspecified	Unspecified	
6	710 - Sand, Soil	2.8	Unspecified	Unspecified	
8	310 - Herbaceous Openland	2.5	Unspecified	Unspecified	
9	622 - Lowland Shrub	1.9	Unspecified	Unspecified	
13	330 - Low-Density Trees	12.3	Unspecified	Unspecified	
16	622 - Lowland Shrub	5.8	Unspecified	Unspecified	
22	622 - Lowland Shrub	51.1	Unspecified	Unspecified	
36	310 - Herbaceous Openland	1.2	Unspecified	Unspecified	
42	622 - Lowland Shrub	109.9	Unspecified	Unspecified	