

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12039
Entry Year 2015
Acreage: 1,320
County Dickinson

Management Area: Ralph Ground Moraine

Revision Date: 2013-04-23

Stand Examiner: Legal Description:

T43N R28W Sec 18-20, 30

Identified Planning Goals:

Over half of this compartment is upland; all of the aspen is under 50 years old. 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. Protect all bodies of water, especially the Ford River.

Soil and topography:

The uplands are gently rolling to flat with fine sands and fine sandy loam soils. The lowlands are flat, poorly drained and characterized by Carbondale & Cathro mucks.

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

Great Lakes Gas Transmission Pipeline crosses the south third of this compartment.

Unique Natural Features:

Ford River.

Archeological, Historical, and Cultural Features:

None in the compartment.

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations:

This compartment follows the south side of the Ford River and provide riparian habitat and movement corridor features for deer, bear, wolves, furbearers and waterfowl. This compartment winters deer and has both lowland coniferand cedar stands as well as hemlock, cedar, spruce, fir, jack pine, mixed pine mesic conifers to provide dense winter cover and transition zone cover to aid in dispersal through upland types to access forage. There is ample soft mast which contributes to this compartment's value as bear habitat. Overall this compartment is highly diverse, which in turn provides habitat for a wide spectrum of animals.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of medium-textured glacial till. There is insufficient data to determine the glacial drift thickness. Precambrian Archean granite/gneiss subcrops below the glacial drift. There is not a current economic use for these rocks, although they have building stone potential. A rock quarry (? type) lies three miles to the north. Iron mines are located approximately twelve miles to the south. Gravel pits are not indicated in this area, but there appears to be good gravel potential. Most of this area was previously leased for metallic exploration and State land to the northwest is currently leased. There is no economic oil and gas production in the UP.

Vehicle Access:

Two-track roads access most of this compartment, but is a roundabout access. Stands on the north are limited by private gate.

Survey Needs:

Needed in Sections 20 and 30.

Recreational Facilities and Opportunities:

The area is heavily used by loggers, hunters, fisherpeople, local camp owners, trappers, general recreationists. Gene's Pond State Forest Camparound is located about a mile south of the compartment's south boundary.

Fire Protection:

Felch protection area. Access to any fire would be circuitous. Great Lakes Gas Transmission underground pipeline present.

Additional Compartment Information:

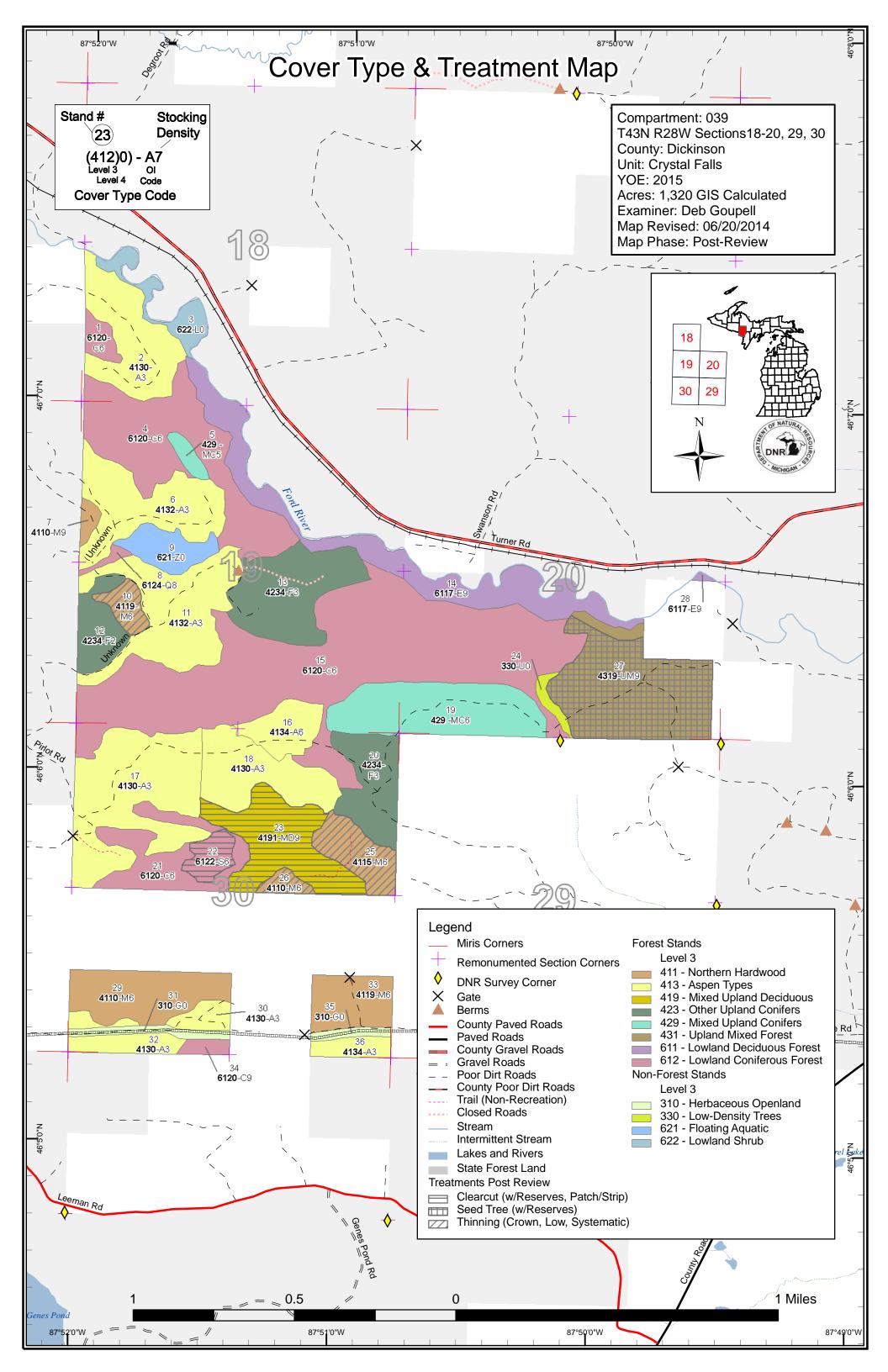
The following reports from the Inventory are attached:

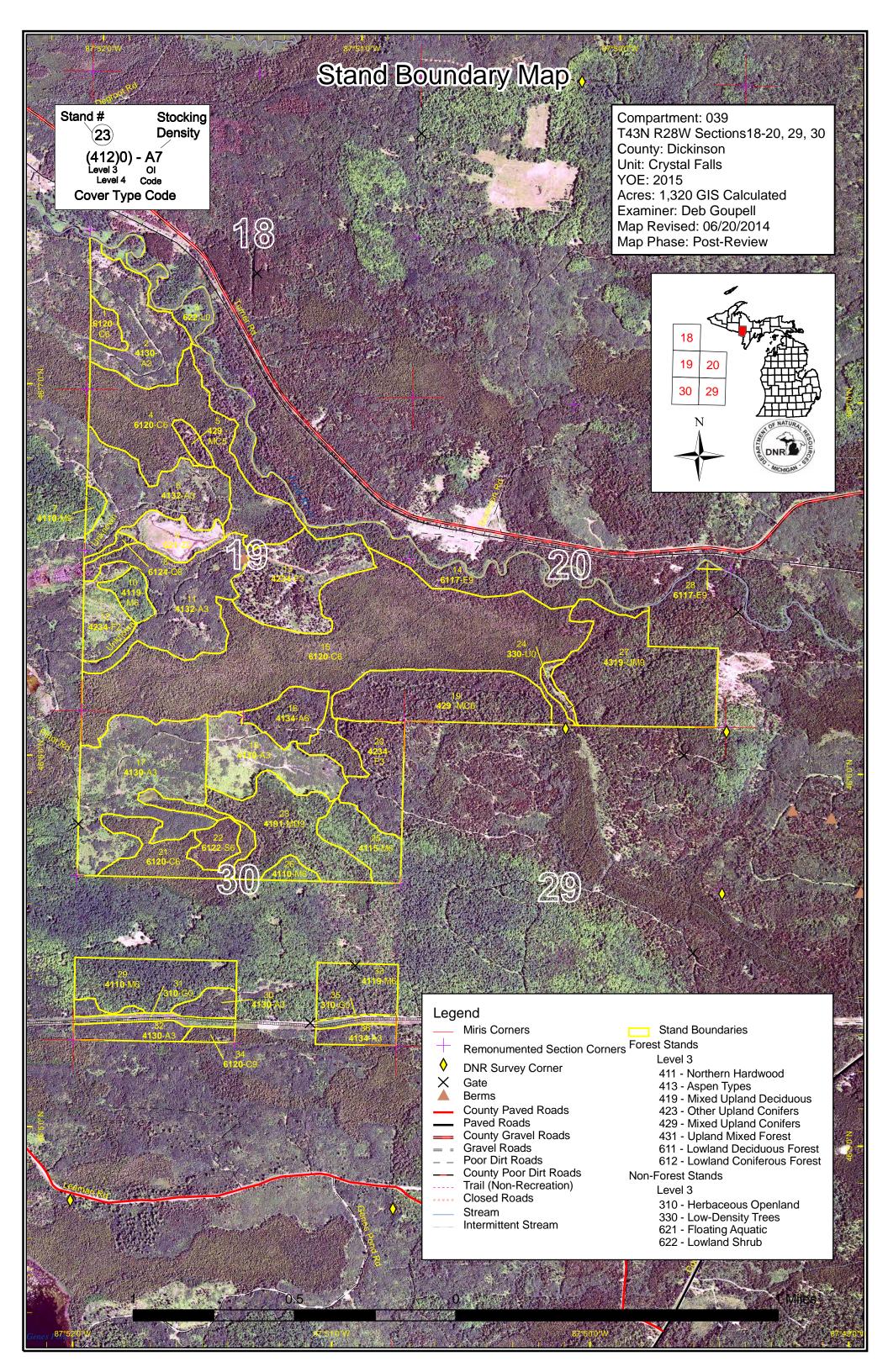
Total Acres by Cover Type and Age Class Cover Type by Harvest Method Proposed Treatments – No Limiting Factors Proposed Treatments – With Limiting Factors Stand Details (Forested and Nonforested) Dedicated and Proposed Special Conservation Areas Site Condition Details

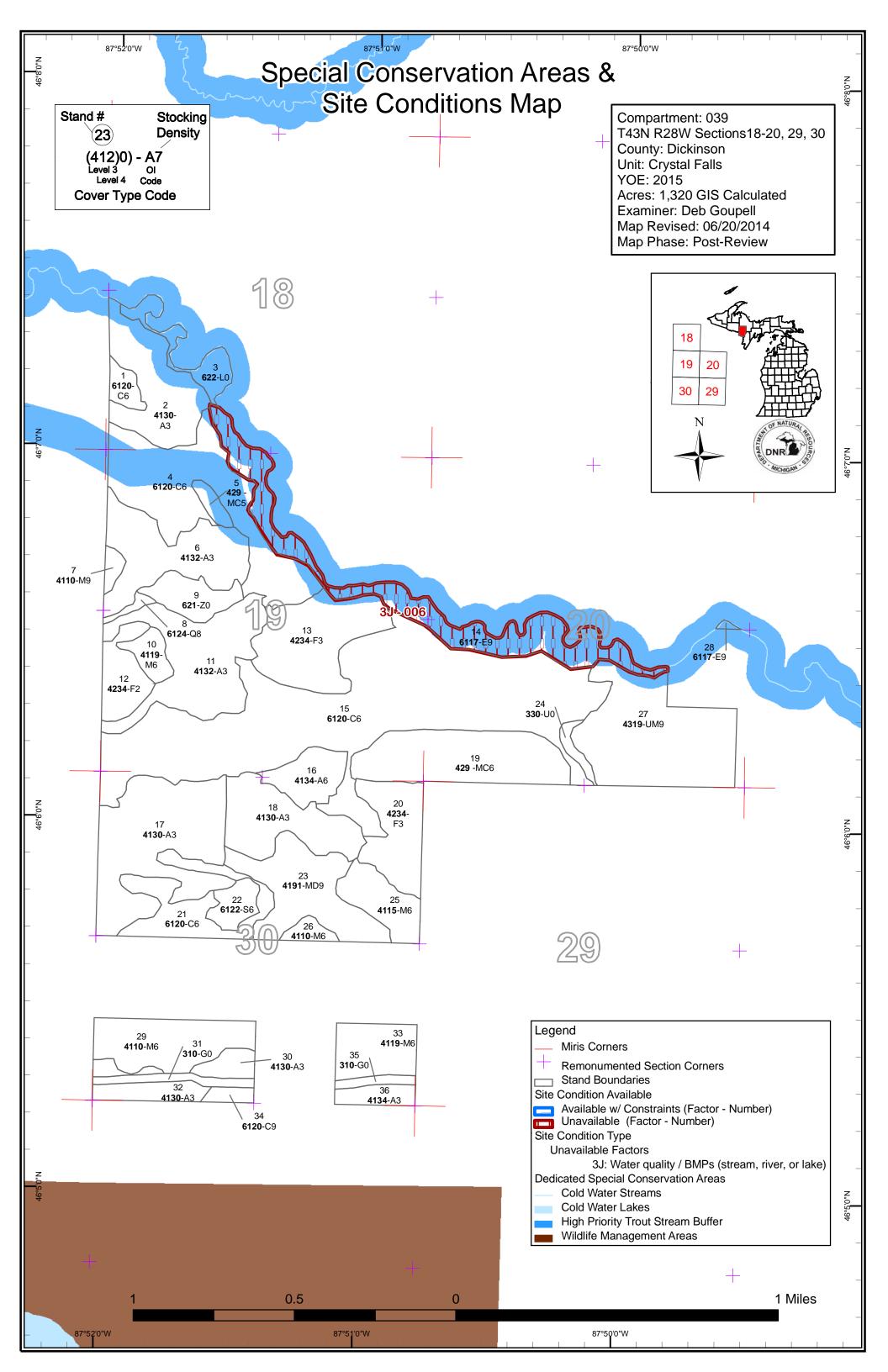
The following information is displayed, where pertinent, on the attached compartment maps:

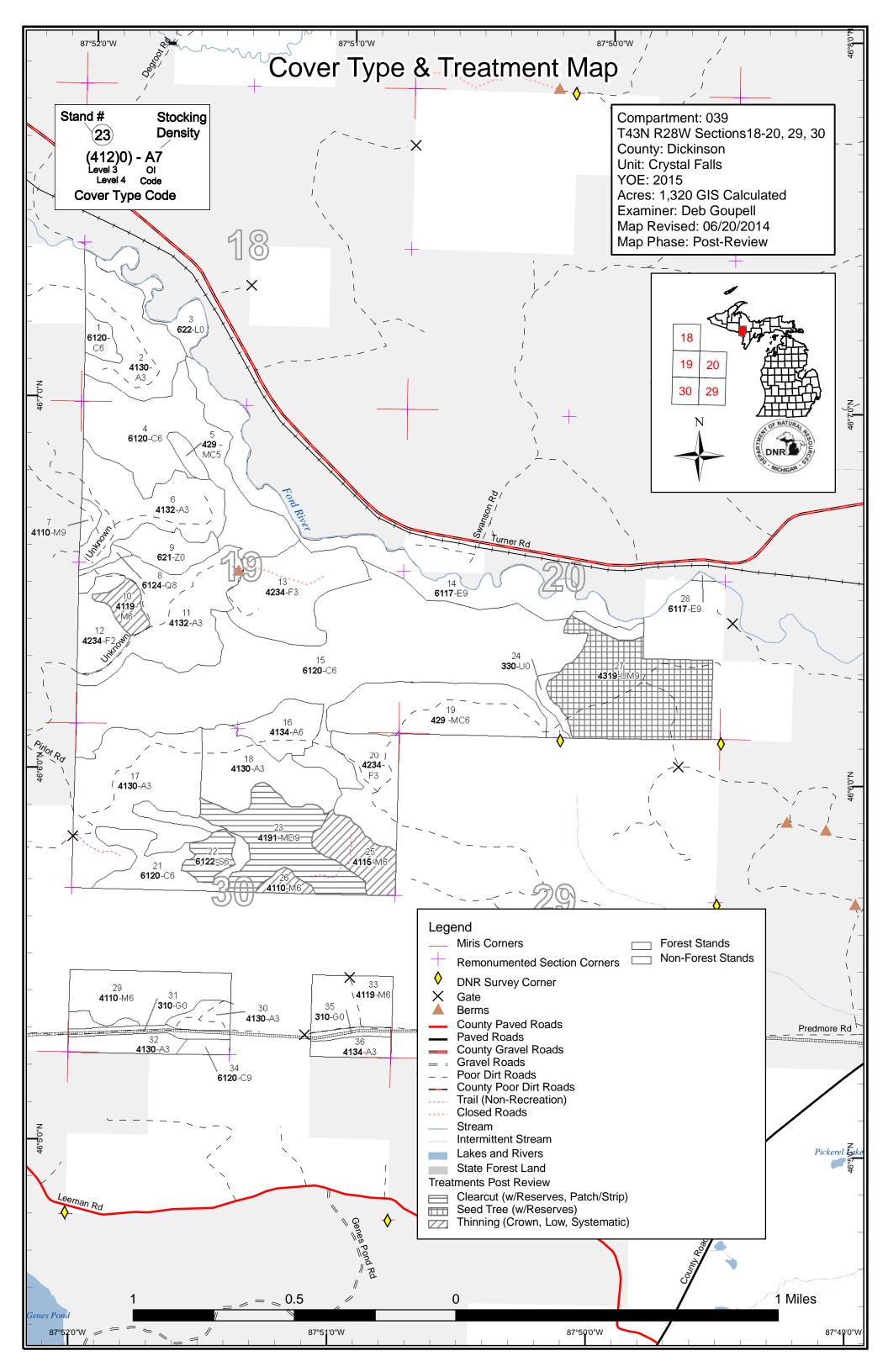
Base feature information, stand boundaries, cover types, and numbers

Proposed treatments
Site condition boundaries
Details on the road access system









Compartment 39

Year of Entry 2015

Crystal Falls Mgt. Unit

Deb Goupell: Examiner



Age Class

	¥or	Koris C	3/2	87 /s	,	8 / 4	\$2,00	, 3 / &		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	80,00	3 / 6	70,	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	B. J. S.	B* Jule	OBO AND
Aspen	0	45	138	156	0	20	0	0	0	0	0	0	0	0	0	0	0	0	359
Cedar	0	0	0	0	0	0	0	0	0	7	378	4	0	0	0	0	0	0	389
Herbaceous Openland	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Low-Density Trees	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Lowland Conifers	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
Lowland Deciduous	0	0	0	0	0	0	0	0	0	73	0	0	0	0	0	0	0	0	73
Lowland Shrub	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	11
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	53	0	0	0	0	0	0	0	53
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	112	0	0	0	0	0	0	0	112
Upland Conifers	0	0	0	0	5	63	0	0	0	0	0	0	0	0	0	0	0	0	68
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	89	0	0	0	0	0	0	0	89
Upland Spruce/Fir	0	56	21	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111
Water	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Total	51	101	159	190	5	83	0	0	3	80	643	4	0	0	0	0	0	0	1319



Report 2 – Treatment Summary

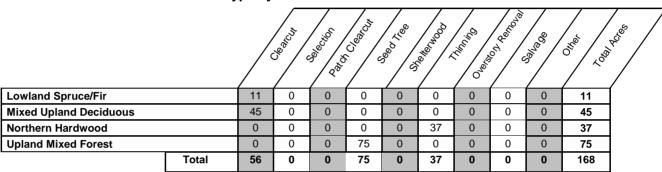
Crystal Falls Mgt. Unit Year of Entry: 2015

Acres of Harvest

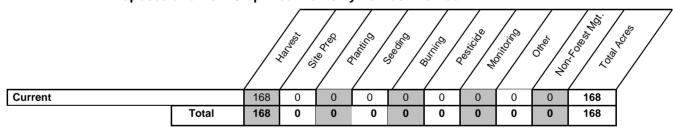
Compartment 39
Total Compartment Acres: 1,320

Commercial Harvest - 168 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Harvest Method



Crystal Falls Mgt. Unit Report 4 -- Treatments Compartment: 39 s Year of Entry: 2015 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d Even-Aged Field Boundary 10 12039010-Cut 4119 - Mixed Poletimber Crown Thinning 4119 - Mixed 9.7 111-Harvest Northern Hardwoods Well 140 Northern Hardwoods Prescription Thin to 80BA removing poorer formed trees to release crop tree crowns. Specs: Next Step Treatments: Acceptable Regen: Other Comment: Proposed Start Date: 8 /1 /2014 Site Condition: None 12039022-Cut 10.8 6122 - Black Spruce Poletimber 92 Unspec Harvest Clearcut with 6122 - Black Even-Aged Draft Field Well ified Retention Spruce Boundary Prescription Harvest all stems 2" dbh and greater except cedar and pine (if present). May leave a few 1/10th acre seed pockets. Specs: Next Step Treatments: Regen:

Acceptable

Other Comment:

Proposed Start Date: 10/1 /2014

Site Condition: None

91 Unspec Clearcut with 12039023-Cut 45.0 4191 - Mixed Sawtimber Harvest 4191 - Mixed Even-Aged Draft Field **Upland Deciduous** Well ified Retention Upland Boundary with Conifer Deciduous with Conifer

Prescription Cut all stems 2" dbh and greater except cedar and pine (retain hemlock if found). South half of stand is anticipated to regenerate to aspen/mixed hardwood/mixed softwood. In the north half of stand, leave all unmerchantable conifer to regenerate to a spruce/fir/mixed deciduous stand. There Specs: is a small wet pocket on south line (against private) east of stand 26 that will be retention.

Next Step **Treatments:**

Acceptable Regen:

Other Old next step comments: Stand will need to be evaluated for possibility of planting to red pine if regeneration is insufficient, particularly the north

Comment:

Proposed Start Date: 10/1 /2014

Site Condition: None

Crystal Falls Mgt. Unit Report 4 -- Treatments

Compartment: 39 Year of Entry: 2015 DNR DNR

а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Objective Name CoverType Density Age Range Type Method Structure **Status** d 25 12039025-Cut 21.8 4115 - Y.Birch. Poletimber 4117 - Mixed N. Draft Field 91 111-Harvest Crown Thinning Even-Aged Hemlock NH Well 140 Hardwood - Pine Boundary

Prescription Thin to BA 70 by removing poorer formed trees to release crop tree crowns. Encourage yellow birch regeneration, as allowable. Retain all pine,

Specs: cedar, hemlock.

Next Step Treatments:

reatments

Acceptable

Regen:

s

t

Other Comment:

Proposed Start Date: 10/1 /2014

Site Condition: None

26 12039026-Cut 5.5 4110 - Sugar Maple Poletimber 91 81-110 Harvest Crown Thinning 4110 - Sugar Even-Aged Draft Field
Association Well Maple Boundary
Association

<u>Prescription</u> Thin to 70 BA where applicable; much of the white birch, yellow birch and merchantable ironwood is dead. Stand can use a sanitation thinning by <u>Specs:</u> releasing crop trees. Do not cut hemlock or pine.

Next Step

Treatments:

<u>Acceptable</u>

Regen:

Other Comment:

Proposed Start Date: 10/1 /2014

Site Condition: None

98 81-110 27 12039027-Cut 74.8 4319 - Mixed Sawtimber Harvest Seed Tree 42260 - Natural Two-Aged **Draft Field Upland Forest** Well Pine, Mixed Boundary Deciduous

Prescription Final harvest whole tree skid, unfrozen ground with residual white/red pine BA 20-30 (green tree reserve). Chip tops. 300 foot buffer to Ford River Specs: in far northwest will be additional retention. East half of stand will regenerate to another mixed upland stand: red maple, aspen, balsam, spruce,

birch, hopefully more red and white pine.

Next Step Treatments:

Trodunionio

<u>Acceptable</u>

Regen: Other

Old next step comments: Additional scarification may be needed and/or herbicide and plant to red/white pine if regeneration is insufficient.

Comment:

Proposed Start Date: 10/1 /2014

Site Condition: None

Total Treatment

Acreage Proposed: 167.7

Crystal Falls Mgt. Unit

Deb Goupell: Examiner

Compartment: 39 Year of Entry: 2015

Dominant Site Conditions

Aspen
Cedar
Herbaceous Openland
Low-Density Trees
Lowland Conifers
Lowland Deciduous
Lowland Shrub
Lowland Spruce/Fir
Mixed Upland Deciduous
Northern Hardwood
Upland Conifers
Upland Mixed Forest
Upland Spruce/Fir
Water
Total Forested Acres
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.

	e Dominant Site . Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	73	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: along Ford River						

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				

Crystal Falls Mgt. Unit Compartment: 39





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.

Conservatio Area	n Type	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 oxyge stocked trout populations and those of other coldwater fis year to year. Coldwater streams in Michigan typically procontributions of groundwater to their stream flows. Such s designated as trout resources by Fisheries Order 210.	h species (e.g., slimy sculpin) to persist from vide these conditions due to substantial				
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosyste influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent t streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. communities are ecologically and socially significant in their effects on water quality and quant as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodive					

S t	Crystal Falls Mgt. Unit			Report 8	- Forested	Stands Compartment: 39 Year of Entry: 2015	NATURAL PRESIDENT
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	CHIGAN .
1	6120 - Lowland Cedar	Poletimber Well	7.3	86	Unspecified	most of the white birch and BAM is dead	
2	4130 - Aspen	Sapling Well	48.8	14	Unspecified	Wooden Fence TS, cut 1990. Along Q types has less regeneration but tamarack, WS, BF are filling in. The north s of this stand was formerly typed as G, but because no recommaintenance has occurred, this sliver is absorbed in aspesstand. It is primarily balsam, white spruce 1-7" dbh with solved pine and cherry saplings.	ent en
4	6120 - Lowland Cedar	Poletimber Well	87.9	97	Unspecified		
5	429 - Mixed Upland Conifers	Poletimber Medium	5.2	31	Unspecified	Balsam fir understory is 1-4" dbh and black spruce is 1-3" c This is a rock upwelling in swamp. Most of the aspen is go (fallen out) however the stand has good black spruce/fir regeneration; surprisingly few white spruce.	ne
6	4132 - Aspen, Jack Pine	Sapling Well	54.3	25	Unspecified	Tucker TS, 1989. Far east is loaded with jack pine seedling and red pine, especially along road and old opening, 1-3" of Some 3" jack pine have cones. Far west sliver along hardward was cut in 1999, but too small to map separately and same of type.	lbh. /ood
7	4110 - Sugar Maple Association	Sawtimber Well	4.0	92	81-110	Thinned in 2005 with adjacent compartment.	
8	6124 - Lowland Spruce- Fir	Sawtimber Medium	2.6	70	Unspecified	This stand has a bed and bank and was obviously left as a b to the drainage in the adjacent timber sales.	uffer
10	4119 - Mixed Northern Hardwoods	Poletimber Well	9.7	92	111-140	Edge of stand along road has young conifer component wh will be protected.	ich
11	4132 - Aspen, Jack Pine	Sapling Well	66.3	25	Unspecified	Trace amounts of sugar maple, white birch and cherry. Tuc TS cut 1989	ker
12	42340 - Upland Spruce/Fir	Sapling Medium	20.9	15	Unspecified	Stand is not regenerating well. Appears from previous data stand was typed as birch. No sale records, but from imagery tell it was cut 1999.	
13	42340 - Upland Spruce/Fir	Sapling Well	55.9	7	Unspecified	Lycopodium Aspen TS cut 2007. Little aspen regeneratio plenty of fir/spruce. North sliver of stand is thick with whit spruce, balsam fir, white pine.	
14	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	72.6	88	Unspecified	within 300 ft Ford River	
15	6120 - Lowland Cedar	Poletimber Well	255.1	97	Unspecified		
16	4134 - Aspen, Spruce/Fir	Poletimber Well	20.2	44	Unspecified		

S t	Crystal Falls Mgt. Unit			Report 8	B – Forested	Stands Compartment: 39 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	4130 - Aspen	Sapling Well	88.9	15	Unspecified	Blomquist Junction TS, 1999. Traces of red and white pine super canopy trees.
18	4130 - Aspen	Sapling Well	44.5	7	Unspecified	Lycopodium Aspen TS, closed 2007
19	429 - Mixed Upland Conifers	Poletimber Well	63.4	44	1-50	Most of this stand has scattered large pine overstory and heavy understory (not much volume, doghair thick). Nice pine country but little to no pine recruitment (saplings or poles) except along road. Good mesic conifer stand. Some upland black spruce north of trail. Drainage with bed/bank runs north-south but fans out as it goes north to swamp (no bed/bank). Located just east of SW section corner of 20.
20	42340 - Upland Spruce/Fir	Sapling Well	34.4	26	Unspecified	Knotty Pine TS, closed 1987. Aspen heavier on south half but overall a very heavy conifer component; "doghair balsam" understory. Large red pine overstory throughout stand but heavier on north half of road that runs east/west.
21	6120 - Lowland Cedar	Poletimber Well	35.4	92	Unspecified	
22	6122 - Black Spruce	Poletimber Well	11.0	92	Unspecified	some tamarack/black spruce seedlings. Leave cedar. Windthrow pockets on west.
23	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	52.9	91	Unspecified	Hogsback TS set up in 1985 never cut. Southeast has more basswood/hardwood but poor quality. Some concern about regenerating as aspen is dying and not dispersed evenly through the stand and balsam clumps throughout. Steep on entire north side, ridge on the north runs east/west.
25	4115 - Y.Birch, Hemlock NH	Poletimber Well	23.2	91	111-140	Stand has nice young conifer component at edges, on north half and interspersed. Little sugar maple saplings over 20' tall. Basswood heavier on north, not great quality. Saw 1 red oak and trace of cedar.
26	4110 - Sugar Maple Association	Poletimber Well	5.5	91	81-110	most of white and yellow birch and ironwood is dead. Smaller diameters; will do a very light thinning to improve stand quality.
27	4319 - Mixed Upland Forest	Sawtimber Well	89.1	98	81-110	Hardly any aspen on west half, very light aspen on east. Vernal pond to protect as retention in far southwest. Took 7 BA plots and overall it averaged 102. Pine BA ranged from 10-120 in those plots.
28	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Well	0.8	88	Unspecified	within 300 feet of Ford River
29	4110 - Sugar Maple Association	Poletimber Well	43.4	92	81-110	Petroleum Hwd cut 2009. Rocky ridge on north runs east/west. Most of yellow birch is dead. A lot of grass on the ground, not sedge.
30	4130 - Aspen	Sapling Well	8.8	28	Unspecified	Pipeline Bluebird closed 1987

S t	Crystal Falls	s Mgt. Unit		Report 8	- Forested S	Stands Compartment: 39 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
32	4130 - Aspen	Sapling Well	16.6	28	Unspecified	Pipeline Bluebird closed 1987
33	4119 - Mixed Northern Hardwoods	Poletimber Well	26.2	92	81-110	Petroleum Hwd closed 2009. Not high quality hardwood; lots of oak/pine/birch with fair amount of conifer understory.
34	6120 - Lowland Cedar	Sawtimber Well	4.5	104	Unspecified	Most of species other than cedar is on edge of stand.
36	4134 - Aspen, Spruce/Fir	Sapling Well	9.5	28	Unspecified	Pipeline Bluebird closed 1987. Wetter than other units of this sale.

Compartment: 39 Year of Entry: 2015



Stand	Cover Type	Acres	Managed Site	General Comments:
3	622 - Lowland Shrub	15.7	No	
9	621 - Floating Aquatic	18.1	No	
24	330 - Low-Density Trees	4.4	No	
31	3102 - Grass	8.2	No	
35	3102 - Grass	4.5	No	