

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12062
Entry Year 2017
Acreage: 2,057
County Dickinson

Management Area: Ralph Ground Moraine

Revision Date: 2015-07-30

Stand Examiner: Deb Goupell

Legal Description:

T42N R28W Sec 9, 10, 15-17

Identified Planning Goals:

Manage for a sustainable yield in all forested cover types with aspen being prescribed for cut at age 50, per Management Area guidelines.

Soil and topography:

Fine sandy loams and rock outcrops for most of the uplands. Lowlands are Carbondale/Cathro/Waucedah mucks.

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

There are a number of private landowners within and adjacent to this compartment. It is heavily used for hunting, trapping and ATV riding.

Unique Natural Features:

Two branches of the Skunk Creek flow through this compartment.

Archeological, Historical, and Cultural Features:

None noted

Special Management Designations or Considerations:

This has been a historic deer wintering area.

Watershed and Fisheries Considerations:

Protect branches of Skunk Creek with a 300 foot buffer and protect all drainages and water bodies, including vernal ponds. Streams, regardless of their size or frequency of flow, are connected to downstream waters and strongly influence their function. Additionally, wetlands and open waters in riparian areas and floodplains are physically, chemically, and biologically integrated with rivers via functions that improve downstream water quality. These systems act as effective buffers to protect downstream waters from pollution and are essential components of river food webs. BMP's should be implemented to control sediment sources from adjacent uplands. Fine sediments such as silt and sand negatively affect natural reproduction of fish, decrease the diversity of aquatic invertebrate and fish taxa, and result in lower overall fish populations.

Wildlife Habitat Considerations:

This compartment in part of a historic deer wintering complex so white-tailed deer was selected as a featured species. Maintenance and enhancement of conifer species to provide thermal cover, travel corridors, and dispersal through uplands to obtain forage will be critical. Maintenance of forest openings and mast producing trees and shrubs is very important for both deer and bear. Maintaining the integrity of lowland conifers, lowland hardwoods, riparian corridors, vernal pools and drainages will provide for necessary black bear habitat. Mature forest conditions that provide nesting and foraging habitat for northern goshawk will be part of this compartment's management. Incorporating smaller aspen stands, increased age-class diversity, and adequate conifer as a stand component will enhance this compartment for grouse and woodcock.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of coarse-textured glacial till. The glacial drift thickness varies between 0 and 100 feet (~30 feet on average). Archean igneous and sedimentary rocks and the Cambrian Munising Group subcrop below the glacial drift. The Munising may crop out at the surface in Section 15. There is no current economic use for these rocks. Felch Quarry (marble) is located in Section 33. Groveland Mine (iron) is located approximately eight miles to the southwest. This compartment was previously leased for metallic mineral exploration. Gravel pits are located in sections 16-17, 26, and 28 and there is additional potential. There is no economic oil and gas production in the UP.

Vehicle Access:

Skunk Creek Rd on the south boundary; poor dirt roads or trails access most of the rest of the compartment.

Survey Needs:

One may be needed in Section 9.

Recreational Facilities and Opportunities:

Stream fishing, hunting, trapping, ATV riding, dispersed camping available in this compartment.

Fire Protection:

Norway protection area.

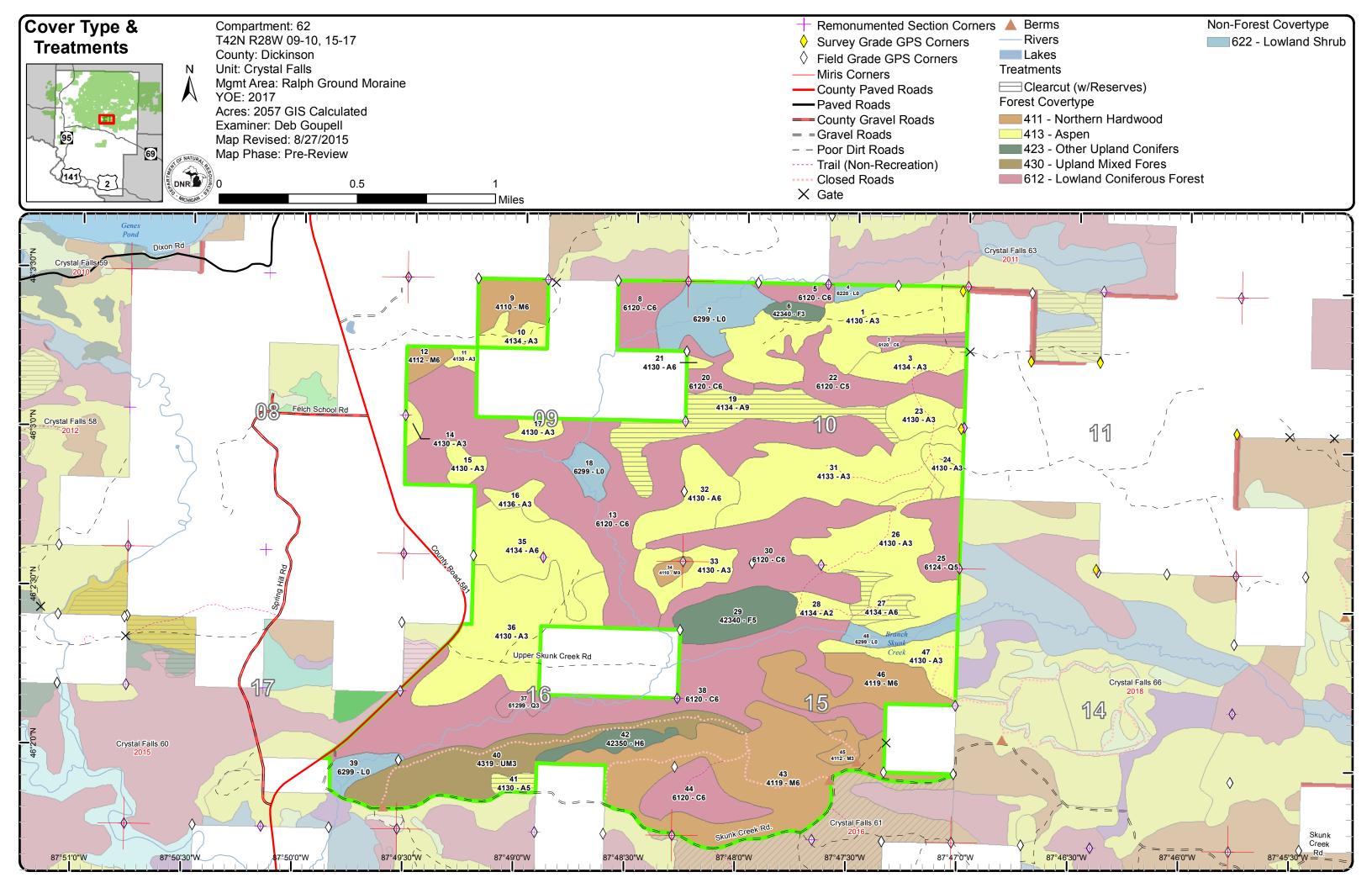
Additional Compartment Information:

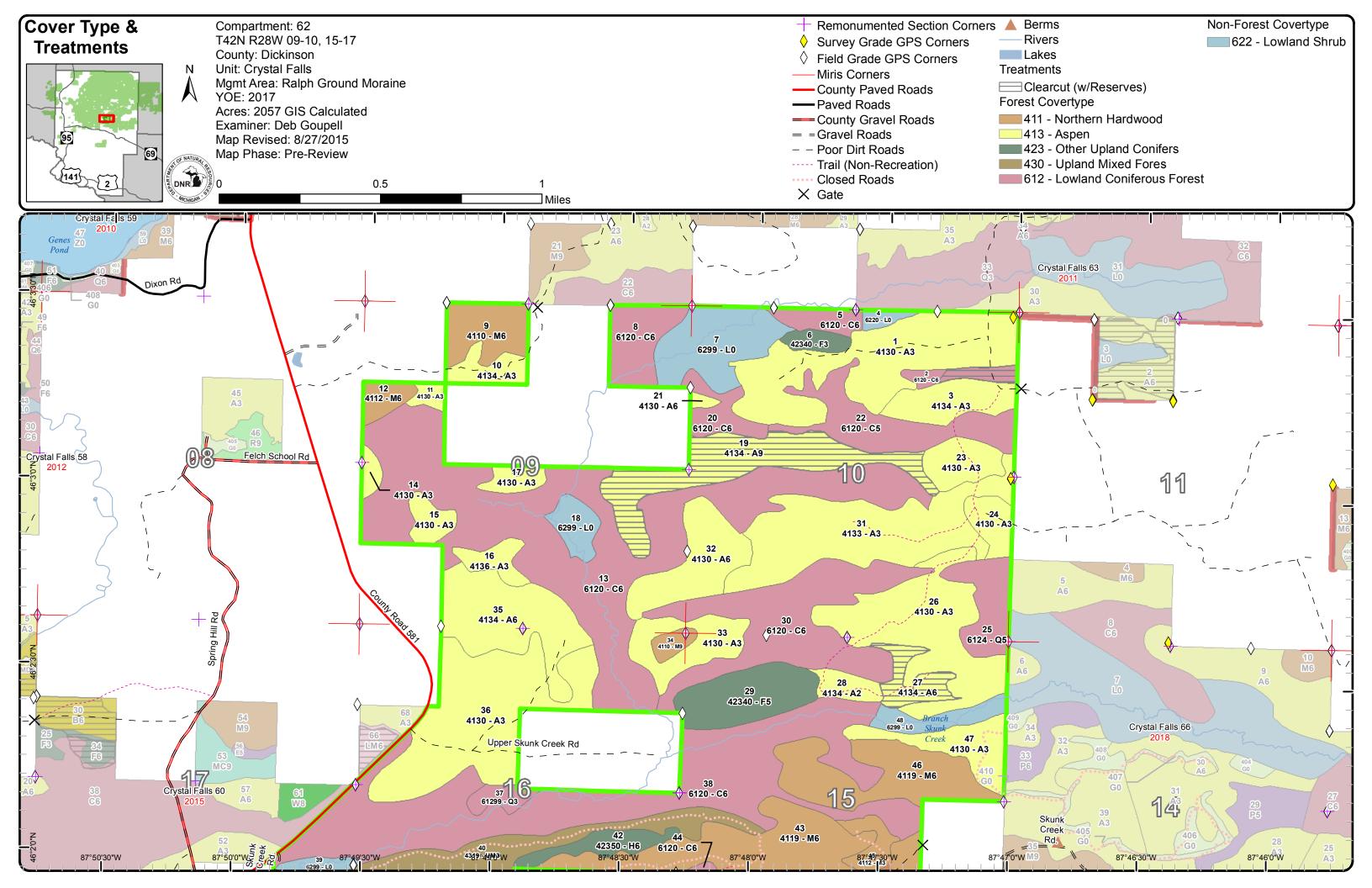
The following reports from the Inventory are attached:

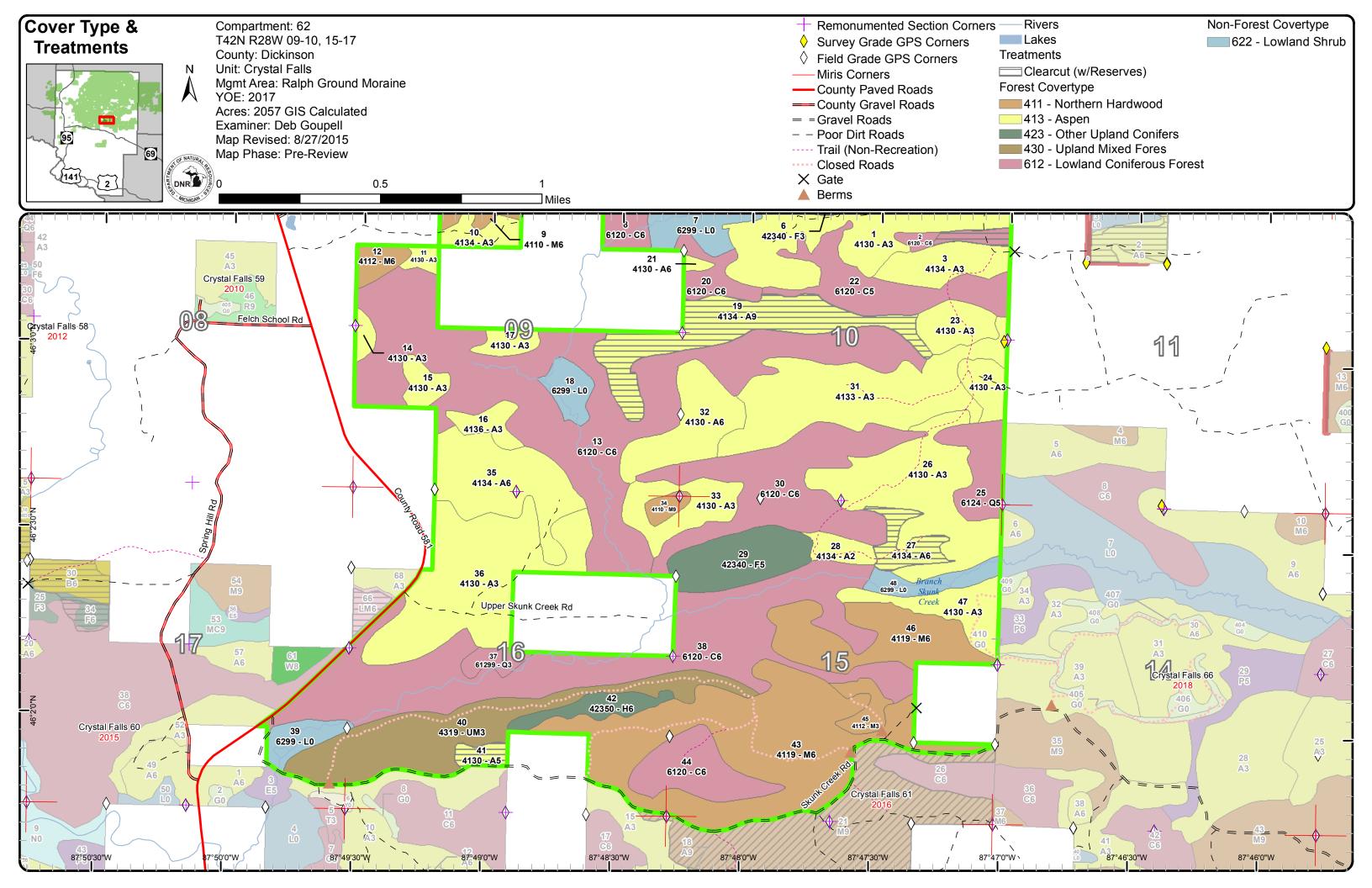
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

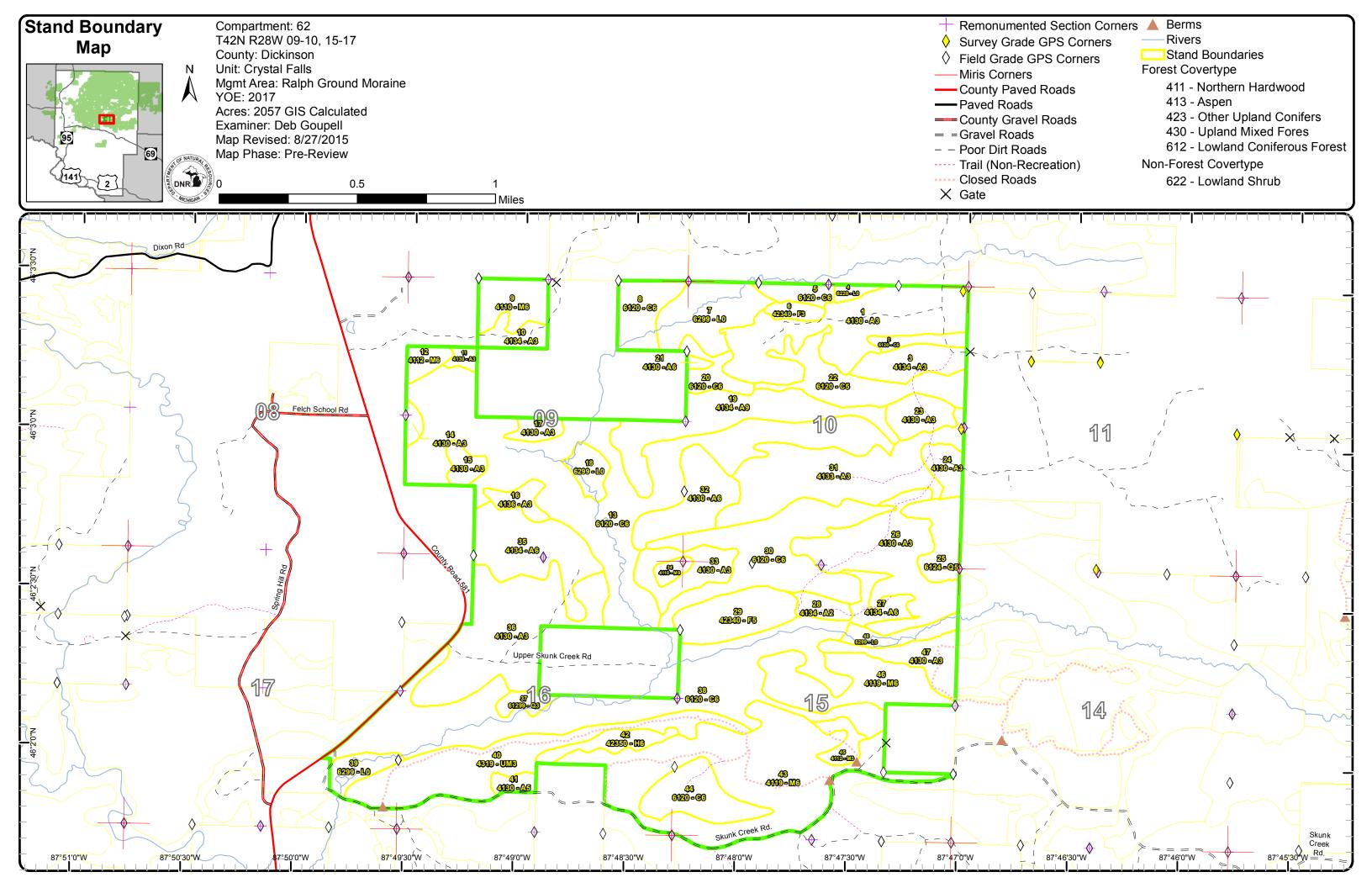
The following information is displayed, where pertinent, on the attached compartment maps:

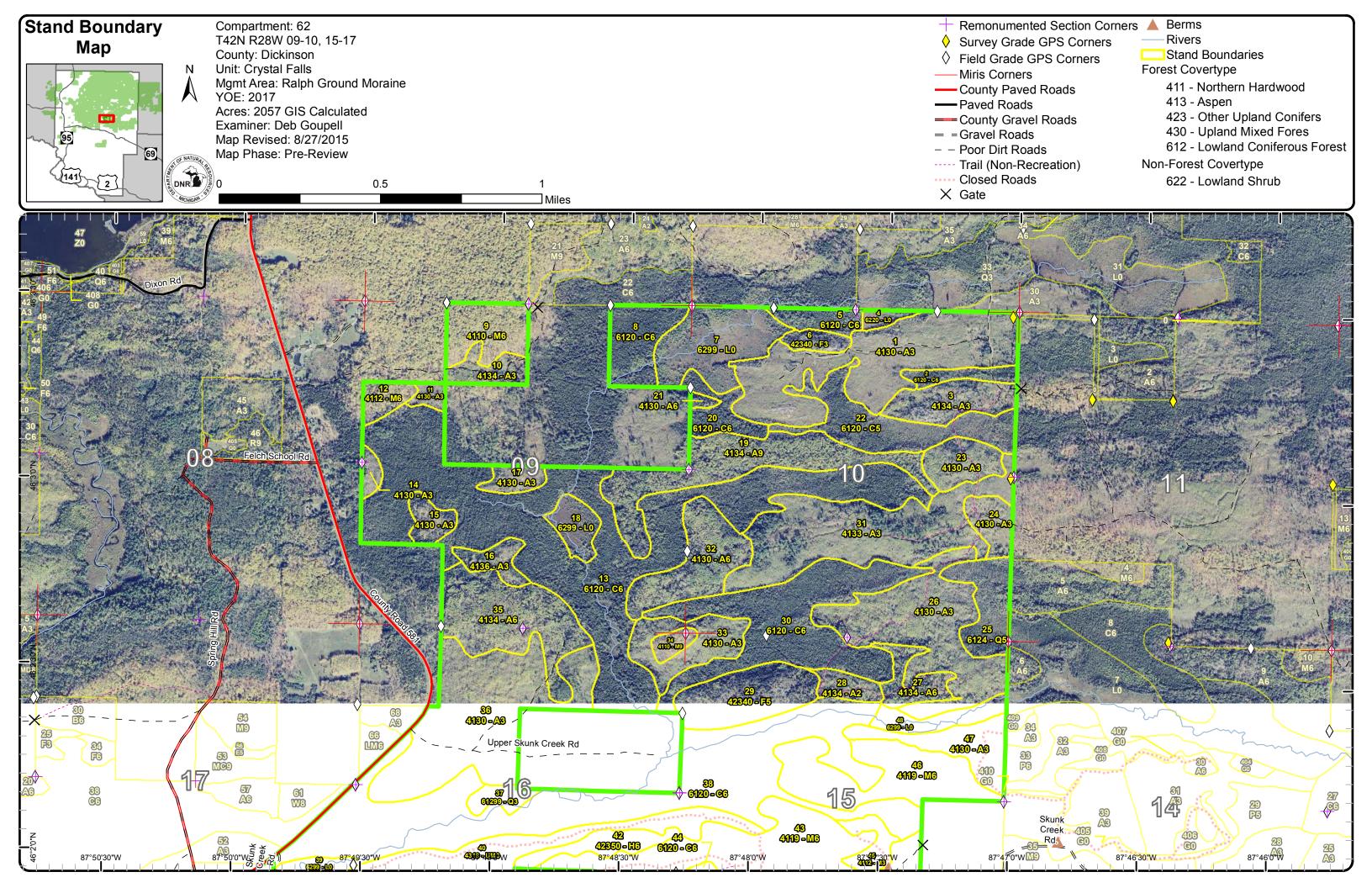
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

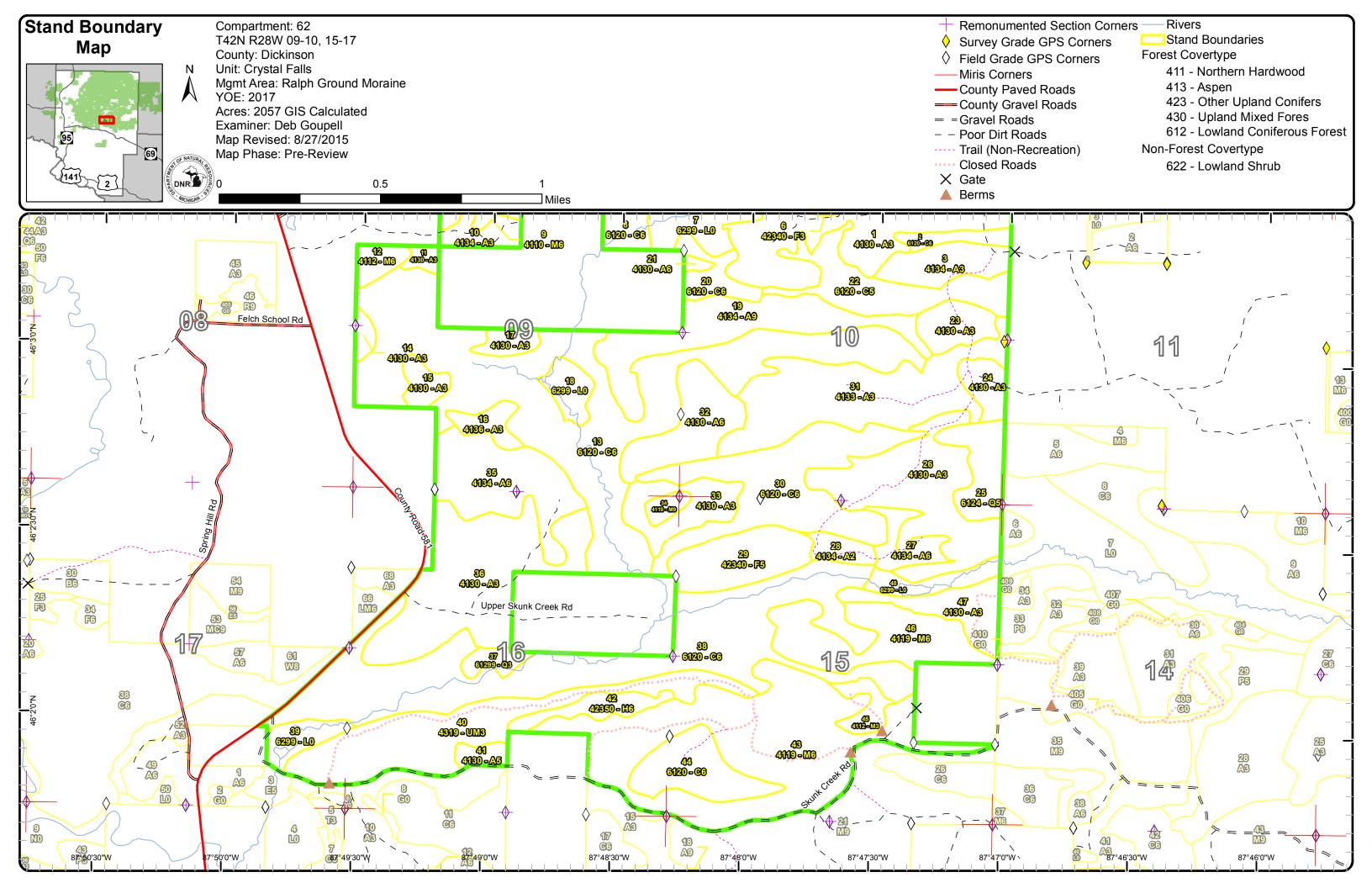


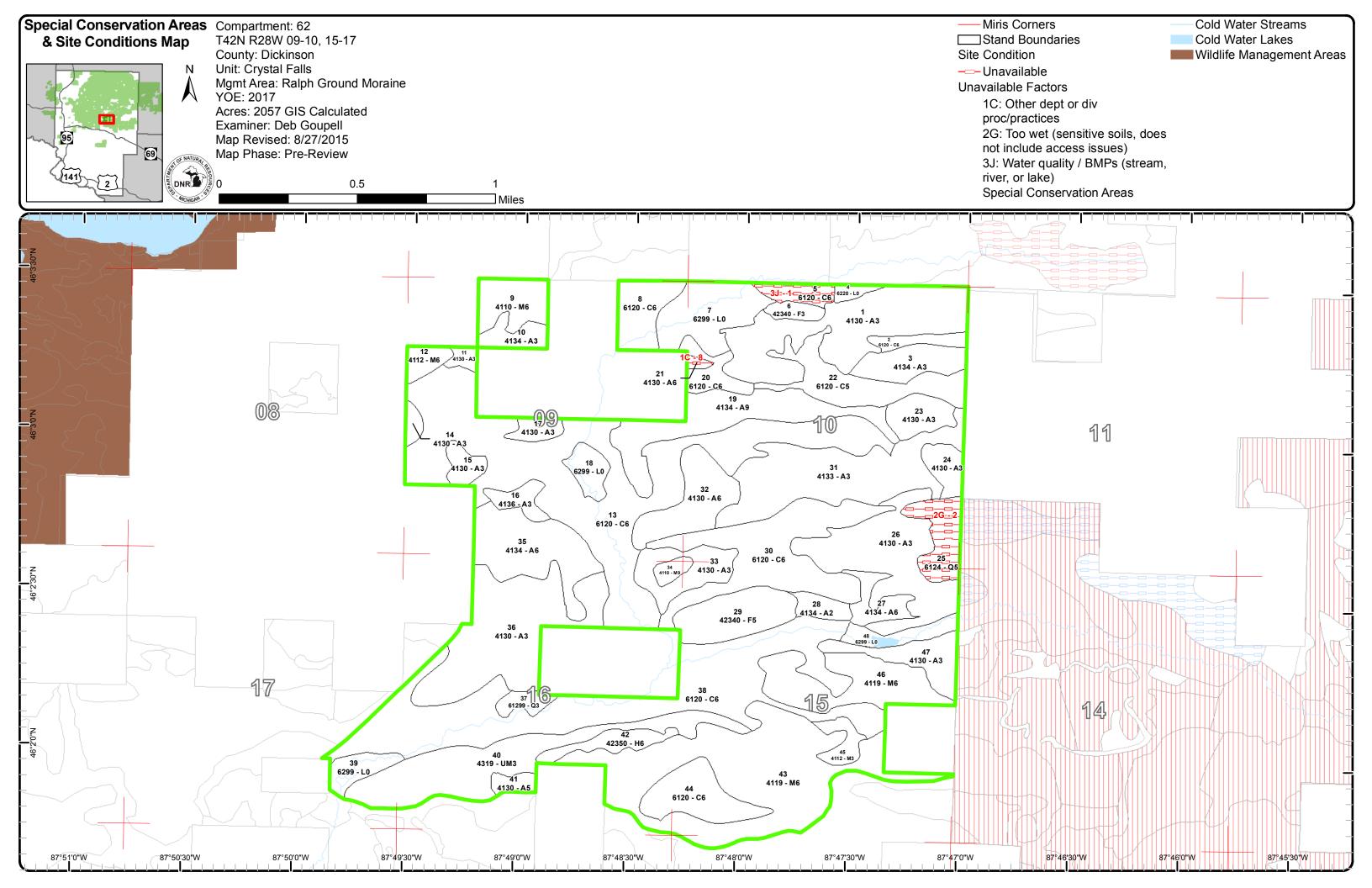


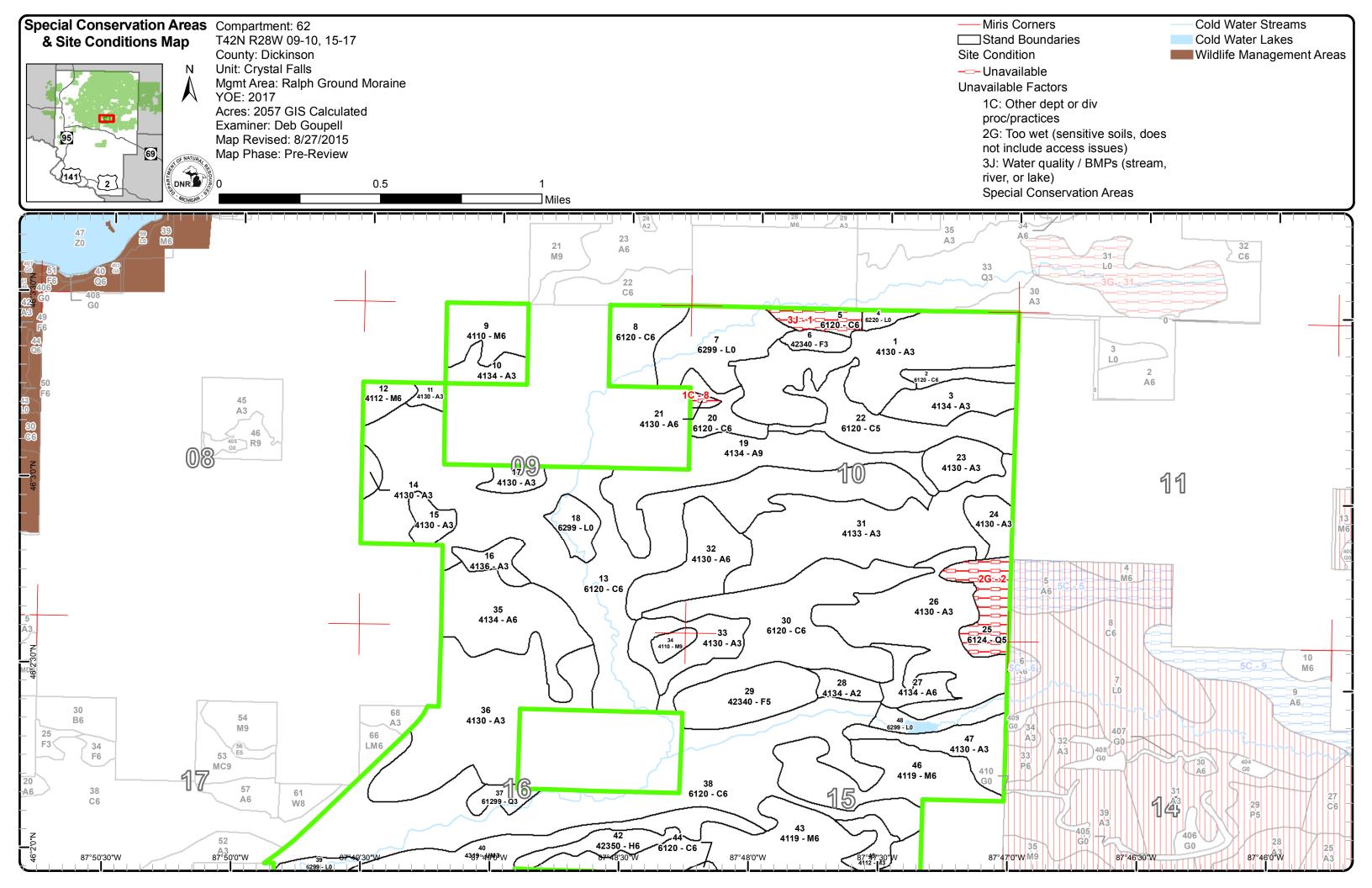


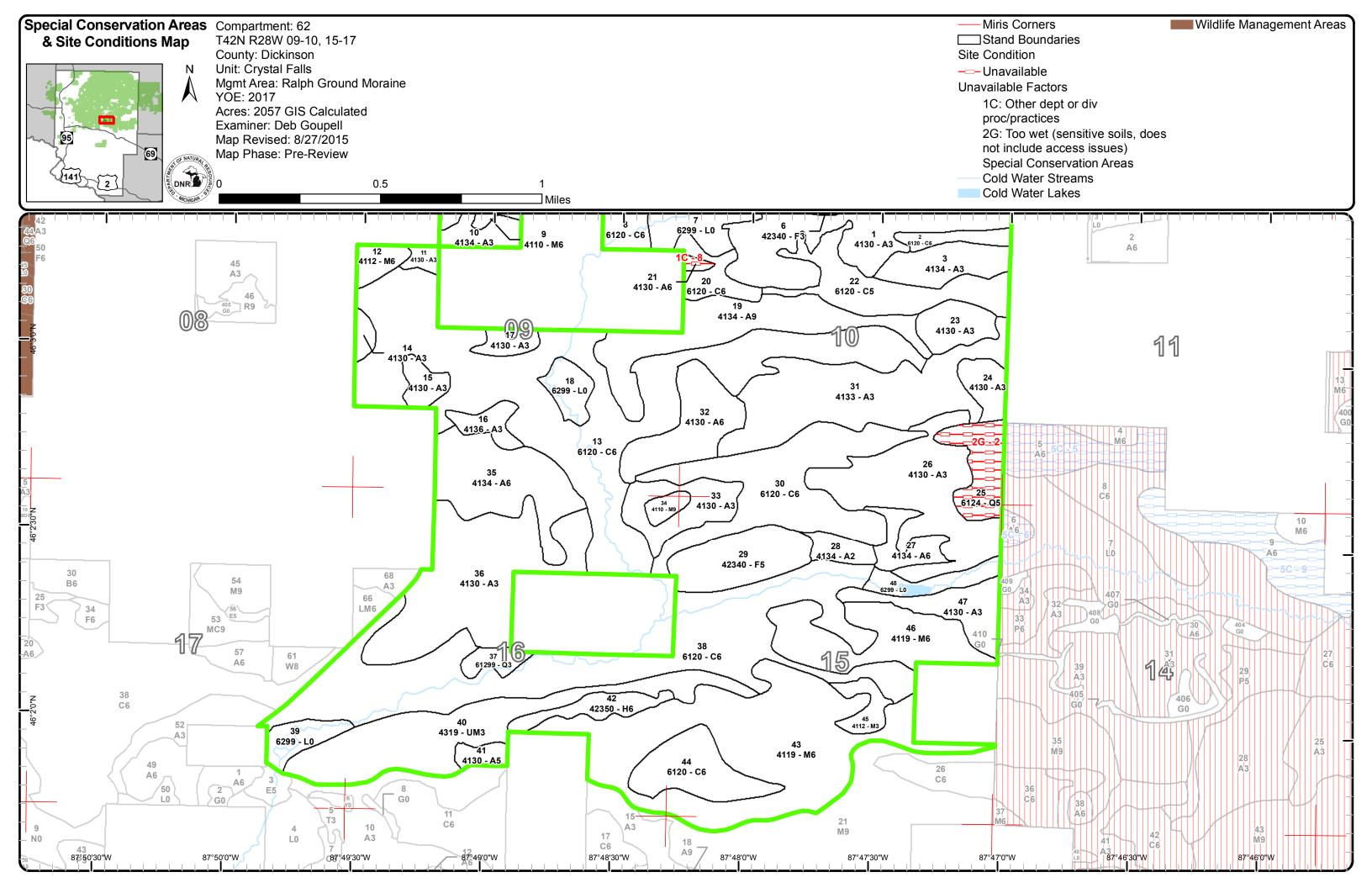












Compartment 62 Year of Entry 2017

Crystal Falls Mgt. Unit **Deb Goupell : Examiner**



Age Class

	No.	in the second se	3/2	0, 0	\$ \ \delta \	2 /2	a la	§ / §			8 8		70,70	, S. /S.	N. S. S.		in the second	Sx Jug	Se La	•
Aspen	0	109	396	77	0	112	15	0	69	2	0	0	0	0	0	0	0	0	780	
Cedar	0	0	0	0	0	0	0	0	0	154	256	292	0	0	0	0	0	0	702	
Hemlock	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	16	
Lowland Conifers	0	0	0	0	8	0	0	0	0	27	0	0	0	0	0	0	0	0	35	
Lowland Shrub	94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94	
Northern Hardwood	0	0	0	0	11	0	0	0	0	0	238	0	0	0	0	0	0	42	291	
Upland Mixed Forest	0	0	0	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	
Upland Spruce/Fir	0	0	0	8	41	0	0	0	0	0	0	0	0	0	0	0	0	0	49	
Total	94	109	396	175	60	112	15	0	69	183	494	308	0	0	0	0	0	42	2057	



Report 2 – Treatment Summary

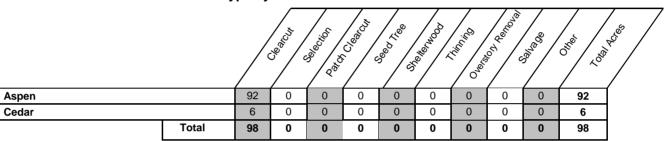
Crystal Falls Mgt. Unit Year of Entry: 2017

Acres of Harvest

Compartment 62
Total Compartment Acres: 2,057

Commercial Harvest - 98 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Crystal Falls Mgt. Unit Rep

Cedar

Report 4 -- Treatments

Compartment: 62 Year of Entry: 2017

а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 2 12062002-Cut 6120 - Lowland Poletimber Clearcut with 6121 - Tamarack Even-Aged 6.2 82 Unspec Harvest Proposal

Retention

ified

Habitat Cut: No Site Condition:

Prescription Cut all stems 2" and up except cedar. retention is remaining cedar on far west end of stand

Well

Specs:

s

t

Next Step Treatments:

Acceptable spruce, maple, balsam, cedar, balm of gilead

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

19 12062019-Cut 69.2 4134 - Aspen, Sawtimber 70 Unspec Harvest Clearcut with 413 - Aspen Even-Aged Proposal Spruce/Fir Well ified Retention

Habitat Cut: No Site Condition:

Prescription Cut all stems 2" and greater except pine and cedar. Leave hemlock (if found). Access may require winter harvest. Retention will likely be left in

Specs: far south lobe.

Next Step Treatments:

Acceptable maple, balsam, spruce, birch, aspen

Regen:

Other Most of softwood is dead on the ground Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

27 12062027-Cut 15.4 4134 - Aspen, Poletimber 56 Unspec Harvest Clearcut with 413 - Aspen Even-Aged Proposal Spruce/Fir Well ified Retention

Habitat Cut: No Site Condition:

Prescription Cut all stems 2" and up except large pine and cedar. Cut to top of steep bank, which will serve as retention. Decent pine site, may consider doing

Specs: some underplanting or bare ground scarification. Wildlife would like to see black spruce left where it transitions to cedar.

Next Step Treatments:

Acceptable aspen, maple, mixed conifer, pine

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

41 12062041-Cut 7.1 4130 - Aspen Poletimber 42 51-80 Harvest Clearcut 413 - Aspen Even-Aged Proposal

Medium

Habitat Cut: No Site Condition:

Prescription Final harvest with no retention, due to small acreage. Will retain yellow birch, cherry, pine and cedar, as found.

Specs:

Next Step Treatments:

Acceptable aspen, mixed hardwood, pine, spruce, fir

Regen:

Other This is on a rocky knob, south facing slope. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

Total Treatment
Acreage Proposed:

97.9

Crystal Falls Mgt. Unit

Deb Goupell: Examiner

Compartment: 62 Year of Entry: 2017

Dominant Site Conditions

1C 2G 3J

Aspen	2		
Cedar			12
Hemlock			
Lowland Conifers		27	
Lowland Shrub			
Northern Hardwood			
Upland Mixed Forest			
Upland Spruce/Fir			
Total Forested Acres	2	27	12
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.

	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	12	5A: Not able to obtain desirable regeneration	Unspecified	Unspecified	Unspecified
С	omments:						
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	27	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
3	Unavailable	1C: Other dept or div proc/practices	2	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified

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: 62
Year of Entry 2017



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.

Conservation Area	on Type	Description	HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxyg stocked trout populations and those of other coldwater conditions for coldwater fishes may occur in Michigan groundwater inflows, or are located in colder (norther Director's action and designated as trout resources by	er fish species to persist from year to year. Suitable n lakes if they are relatively deep, have substantial rn) areas of the state. Such lakes are established by
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved of stocked trout populations and those of other coldwater year to year. Coldwater streams in Michigan typically contributions of groundwater to their stream flows. So designated as trout resources by Fisheries Order 210	er fish species (e.g., slimy sculpin) to persist from provide these conditions due to substantial uch streams are established by Director's action and

S t	Crystal Falls		Report 8	B – Forested	Stands Compartment: 62 Year of Entry: 2017	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4130 - Aspen	Sapling Well	104.1	5	Immature	Goat Country TS cut 2010; wet pockets in here
2	6120 - Lowland Cedar	Poletimber Well	9.7	82	Unspecified	Most of the cedar is on west half of stand. Cutting only merchantable wood to where cedar is predominant. No cedar to be cut. Very wet. Did not find bed and bank but there is definite drainage through here.
3	4134 - Aspen, Spruce/Fir	Sapling Well	26.6	19	Immature	Upper Skunk Ck Club TS cut 1996
5	6120 - Lowland Cedar	Poletimber Well	11.5	105	Unspecified	stand is within 300' buffer to Skunk Creek
6	42340 - Upland Spruce/Fir	Sapling Well	7.6	29	Immature	Stand cut 1986
8	6120 - Lowland Cedar	Poletimber Well	27.5	105	111-140	Skunk Creek passes in the south portion of this stand.
9	4110 - Sugar Maple Association	Poletimber Well	26.8	91	81-110	Private Access TS cut 2010. State received this 40 in 1993 in an exchange
10	4134 - Aspen, Spruce/Fir	Sapling Well	13.7	23	Immature	Cut 1992; State received this 40 in 1993 in trade
11	4130 - Aspen	Sapling Well	4.8	5	Immature	Private Access TS cut 2010
12	4112 - Maple, Beech, Cherry Association	Poletimber Well	9.5	91	81-110	Big bowl in center of stand. Some impressive sugar maple relics. White pine super canopy. South edge of stand has more conifer/pine/birch.
13	6120 - Lowland Cedar	Poletimber Well	252.8	105	Unspecified	Cedar dbhs range all over. Larger diameters on stand perimeters. Very wet stand.
14	4130 - Aspen	Sapling Well	5.0	24	Immature	Stanton Line TS cut 1991
15	4130 - Aspen	Sapling Well	10.4	24	Immature	Stanton Line TS cut 1991. Canopy closure closer to 75%
16	4136 - Aspen, Mixed Conifer	Sapling Well	11.1	24	Immature	Stanton Lines TS cut 1991; tamarack is more on edges
17	4130 - Aspen	Sapling Well	8.7	24	Immature	Stanton Line TS cut 1991
19	4134 - Aspen, Spruce/Fir	Sawtimber Well	69.2	70	Unspecified	Fair amount (15-25%) softwood mortality on ground due to shallow soils & age more than to SBW. Access will be from stand 5 on east.

S t				Report 8	- Forested	Stands Compartment: 62 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
20	6120 - Lowland Cedar	Poletimber Well	16.0	92	Unspecified	center/west of this stand has stunted BS & WC 1-4" dbh. This is a very wet stand.
21	4130 - Aspen	Poletimber Well	2.1	82	Unspecified	Significant conifer mortality. Balsam fir 5-15 feet regeneration. Stand surrounded by cedar, running water on east end. Would be a very difficult stand to access.
22	6120 - Lowland Cedar	Poletimber Medium	48.7	84	Unspecified	Stand is extremely wet. Pockets of S3, tag, Q4.
23	4130 - Aspen	Sapling Well	19.2	19	Immature	Upper Skunk Ck Club TS cut 1996
24	4130 - Aspen	Sapling Well	13.8	19	Immature	Upper Skunk Ck Club TS cut 1996
<u></u> 25	6124 - Lowland Spruce- Fir	Poletimber Medium	26.7	85	Unspecified	Stand is very wet except for the upland knob on the east side, which should be cut with adjacent stand/compartment (YOE 2018).
26	4130 - Aspen	Sapling Well	85.3	19	Immature	Upper Skunk Ck Club TS cut 1996
27	4134 - Aspen, Spruce/Fir	Poletimber Well	15.4	56	Unspecified	Softwood is breaking up. Decent pine potential and/or mixed conifer.Cut to top of bank on south, which will be retention; may be greater than 300' from Skunk Creek
28	4134 - Aspen, Spruce/Fir	Sapling Medium	10.0	19	Immature	Upper Skunk Ck Club TS cut 1996; top of a knob. aspen thinner on top than edges and east end of stand
29	42340 - Upland Spruce/Fir	Poletimber Medium	41.0	36	Unspecified	East Br. Skunk Ck TS cut 1979. This stand is on a rock; north facing slope has thick conifer 1-4" dbh; top of rock is very scattered trees mostly less than 4"dbh. South of rock is thicker to aspen. Not easily accessible great retreat for bear/deer. Some SBW but very little volume to start with. Traces of black cherry on rock top and black spruce on north facing slope 1"dbh.
30	6120 - Lowland Cedar	Poletimber Well	94.8	84	81-110	This stand is very wet.
31	4133 - Aspen, Mixed Pine	Sapling Well	101.2	15	51-80	Pine Ridge TS cut 2000. White pine regen good near seed sources but browsed hard.
32	4130 - Aspen	Poletimber Well	42.1	40	Unspecified	North half of stand has larger diameter of all species
33	4130 - Aspen	Sapling Well	28.9	19	Immature	Upper Skunk Ck Club TS cut 1996. Very wet access along trail from east
34	4110 - Sugar Maple Association	Sawtimber Well	5.9	86	81-110	Too small to manage until aspen is cut. White pine seedlings are browsed hard

S t				Report 8	- Forested	Stands Compartment: 62 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
35	4134 - Aspen, Spruce/Fir	Poletimber Well	62.8	40	Unspecified	some rocky knobs have smaller dbh aspen and trace cherry. Far south tip has ~3acres of RP/WP on rock knob
36	4130 - Aspen	Sapling Well	111.0	15	Immature	Upper Skunk Ck Rd TS cut 2000
37	61299 - Mixed Swamp Conifer (OI)	Sapling Well	8.3	35	Unspecified	OPIC - FMD: OI Stand Year Origin was 1980
38	6120 - Lowland Cedar	Poletimber Well	202.2	90	Unspecified	Wide range of cedar diameters.
40	4319 - Mixed Upland Forest	Sapling Well	90.4	23	Immature	Skunk Ck Rd TS cut 1992. The conifer makes up most of the north edge and east finger. White pine is very bushy.
41	4130 - Aspen	Poletimber Medium	7.1	42	51-80	Stand is on a rock knob facing south. Trees on knob are breaking up.
42	42350 - Upland Hemlock	Poletimber Well	16.4	105	111-140	White pine heavy on east end but scattered throughout. Thick hemlock over west half. Very rocky. Half of stand unharvestable as it's on a cliff face. Lots of deer use.
43	4119 - Mixed Northern Hardwoods	Poletimber Well	176.3	91	81-110	BAs do not, for the most part, indicate urgent need to thin, however there does seem to be some use for sanitation (cracks, splits). Ironwood saps heavier n north. Everything just above snow is browsed very hard. YB and Black ash are more in the wetter depressions, red mpale more on north end. Bed and bank on east end. North central has ~1 acre pocket of hemlock/pine.
44	6120 - Lowland Cedar	Poletimber Well	37.5	94	111-140	Hungry Deer TS cut 1996; aspen, balm of gilead, birch, maple, spruce, & fir were cut if over 4 sticks. Good overstory cover of cedar. No heavy use at time of inventory
45	4112 - Maple, Beech, Cherry Association	Sapling Well	10.9	38	1-50	Most of stems are multi-stemmed. Conifer pocket in south central with a trace of cedar is wetter.
46	4119 - Mixed Northern Hardwoods	Poletimber Well	61.8	92	81-110	Allinger TS cut 2008. Much of the hemlock is half dead or snags. Only fair quality hardwood stand.
47	4130 - Aspen	Sapling Well	28.0	24	Immature	Skunk Ck Trail TS cut 1991. Far west finger is scattered cherry, balsam, spruce, hazel. Most of the conifer is directly on north of stand along Skunk Creek.

Report 9 - Nonforested Stands

Compartment: 62 Year of Entry: 2017



Stand	Cover Type	Acres	Managed Site	General Comments:
4	6220 - Alder/willow	4.4	No	OPIC - FMD: OI Stand Year Origin was 1910
7	6299 - Lowland Shrub (OI)	46.6	No	
18	6299 - Lowland Shrub (OI)	13.6	No	
39	6299 - Lowland Shrub (OI)	14.3	No	OPIC - FMD: OI Stand Year Origin was
48	6299 - Lowland Shrub (OI)	15.1	No	