

Newberry Forest Management Unit Compartment Review Presentation

Compartment #42005 Entry Year: 2013 Compartment Acreage: 2,602 County: Luce

Revision Date: September 1, 2011

Stand Examiner: Tori Irving

Legal Description: T49N, R12W, Sect. 1, 2, 10-15

RMU (if applicable): Deer Park Management Area

Management Goals: Vegetative management for the Deer Park Management Area will emphasize balancing the age classes of jack pine and red pine, and provide various timber products. Management will maintain or enhance wildlife habitat.

Soil and Topography: This compartment is a mix of Histols, Aquents, Spot-Finch Complex, Croswell-Spot Complex, Dawson, Greenwood, Loxley, Carbondale, Lupton, Tawas, and Deer Park Sand. The compartment is mostly upland and fairly level. It has a gentle downward grade into lowland the Blind Sucker Flooding and the Blind Sucker River.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment is entirely state-owned. There are many opportunities for recreation, including, but not limited to, hunting, fishing, ORV, snowmobiling, hiking, skiing, biking, and berry-picking, within and surrounding the compartment. Much of the surrounding land is also state-owned, which provides additional opportunities for timber harvests.

Unique, Natural Features: Michigan Natural Features Inventory (MNFI) notes numerous communities dry northern forest, dry-mesic northern forest, mesic northern forest, bog, muskeg, rich conifer swamp, hardwood-conifer swamp, and patterned fen. MNFI also lists potential for osprey, eagle, merlin, goshawk, great blue heron rookery, loon, Blanding's turtle, marsh birds including, yellow rail, American bittern, least bittern, marsh wren, and common moorhen. Potential for calypso, round-leaved orchid, ram's head lady's slipper, and limestone oak fern. Potential for pine-drops, auricled twayblade orchid, American shoregrass, moor rush, panicled srew-stem, Hill's pondweed, alternate-leaved water-milfoil, and autumnal water starwort.

Archeological, Historical, and Cultural Features: None are listed.

Special Management Designations or Considerations: There are two State Forest Campgrounds located adjacent to the Blind Sucker River, however, neither are located within the compartment boundary. The Blind Sucker Pathway is located along the northern boundary of the compartment. There is a designated wildlife flooding within the compartment boundary. It is operated and maintenance are by objectives described in the *Master Plan for the Operation and Maintenance for the Blind Sucker Wildlife Flooding Dam ID. No. 0258*.

Watershed and Fisheries Considerations:

Fisheries Values: Good-to-Excellent.

Fisheries Concerns: This compartment contains the Blind Sucker Flooding and Keopfgen Lake. We have no file for Keopfgen Lake in the center of this compartment. No prescribed treatments are scheduled near either of these water bodies, so Fisheries has no concerns at this time.

Wildlife Habitat Considerations: Compartment 5 lies in far northwestern Luce county and is in the Grand Marais Sandy End Moraine and Outwash ecological sub-subsection. The northern edge of the compartment lies along the Dead Sucker river and the southern edge lies along the Blind Sucker river and the Blind Sucker Flooding. Bald eagles and osprey have active and historic nests along the flooding in several places. The compartment is largely dominated by pine types. Jack pine is scattered throughout the central portion of the compartment while mixed conifer, lowland conifer and lowland types border the southern portions.

Wildlife objectives will be achieved by retaining any hard mast producing species in harvested pine stands and super canopy white pine for eagle nest trees and bear refuge trees. Hemlock will be retained in stands for species and structural diversity and to provide warbler nesting habitat and bear refuge trees. Scattered red pine, in addition to retention pockets of pine, will provide habitat needs of red crossbill, a featured species in this compartment. Wildlife species potentially using this compartment include white-tailed deer, black bear, fisher, marten, red crossbills and bald eagles.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel and peat and muck deposits. There is insufficient data to determine the glacial drift thickness. The Precambrian Jacobsville Sandstone subcrop below the glacial drift. The Jacobsville has been used as a building stone in the past. The nearest gravel pit is located five miles to the southwest and potential appears to be limited. There is no economic oil and gas production in the UP.

Vehicle Access: This compartment can be accessed only from the west via a two track road off of County Road 416.

Survey Needs: None.

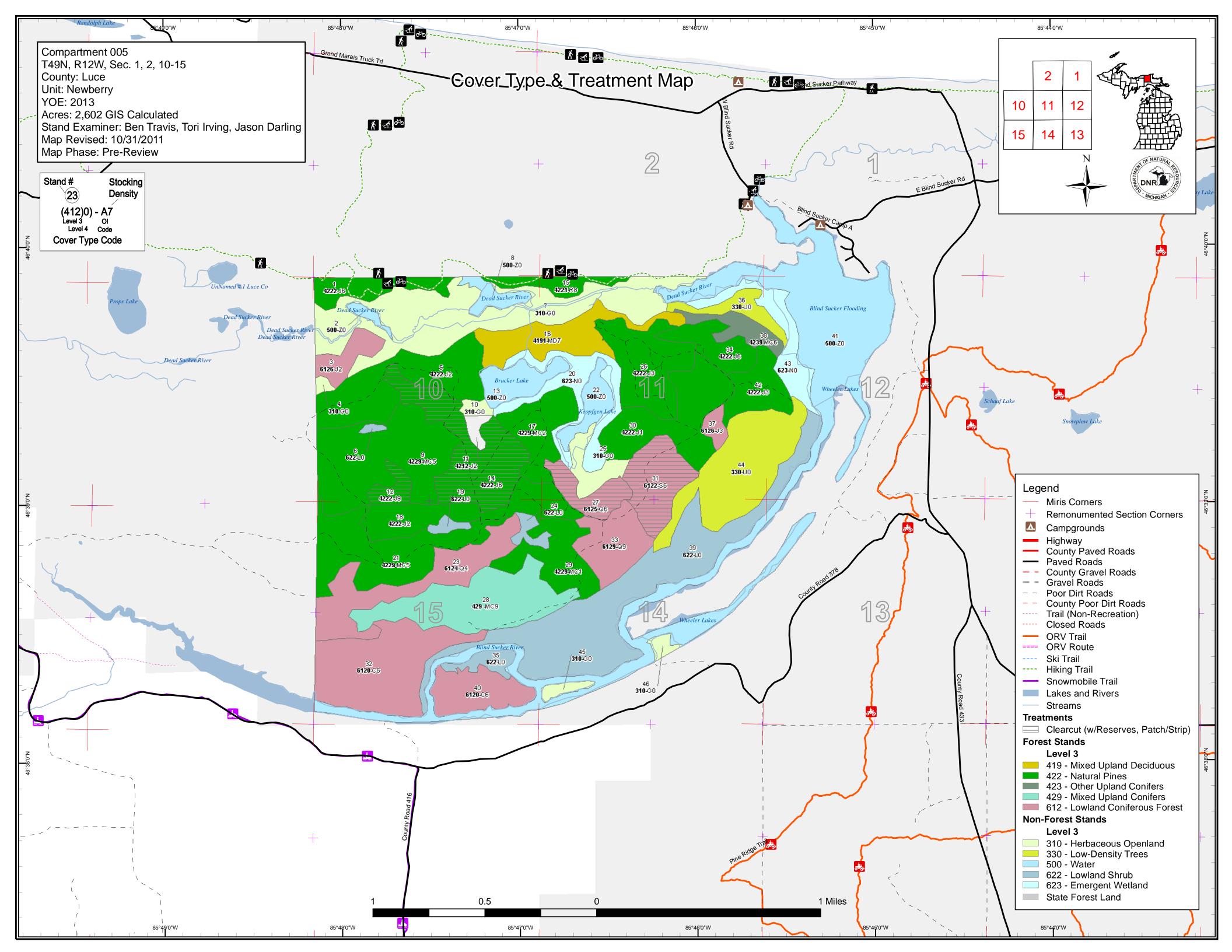
Recreational Facilities and Opportunities: Recreational Opportunities consist of fishing, hunting, and wildlife viewing. There are two State Forest Campgrounds located on the Blind Sucker Flooding and each have a boat launch. In addition, there is an undesignated launch site on the southwest side of Brucker Lake that appears to get a fair amount of use. The Blind Sucker Pathway is located along the northern boundary of the compartment. Country Road 416 is used as a snowmobile trail in the winter.

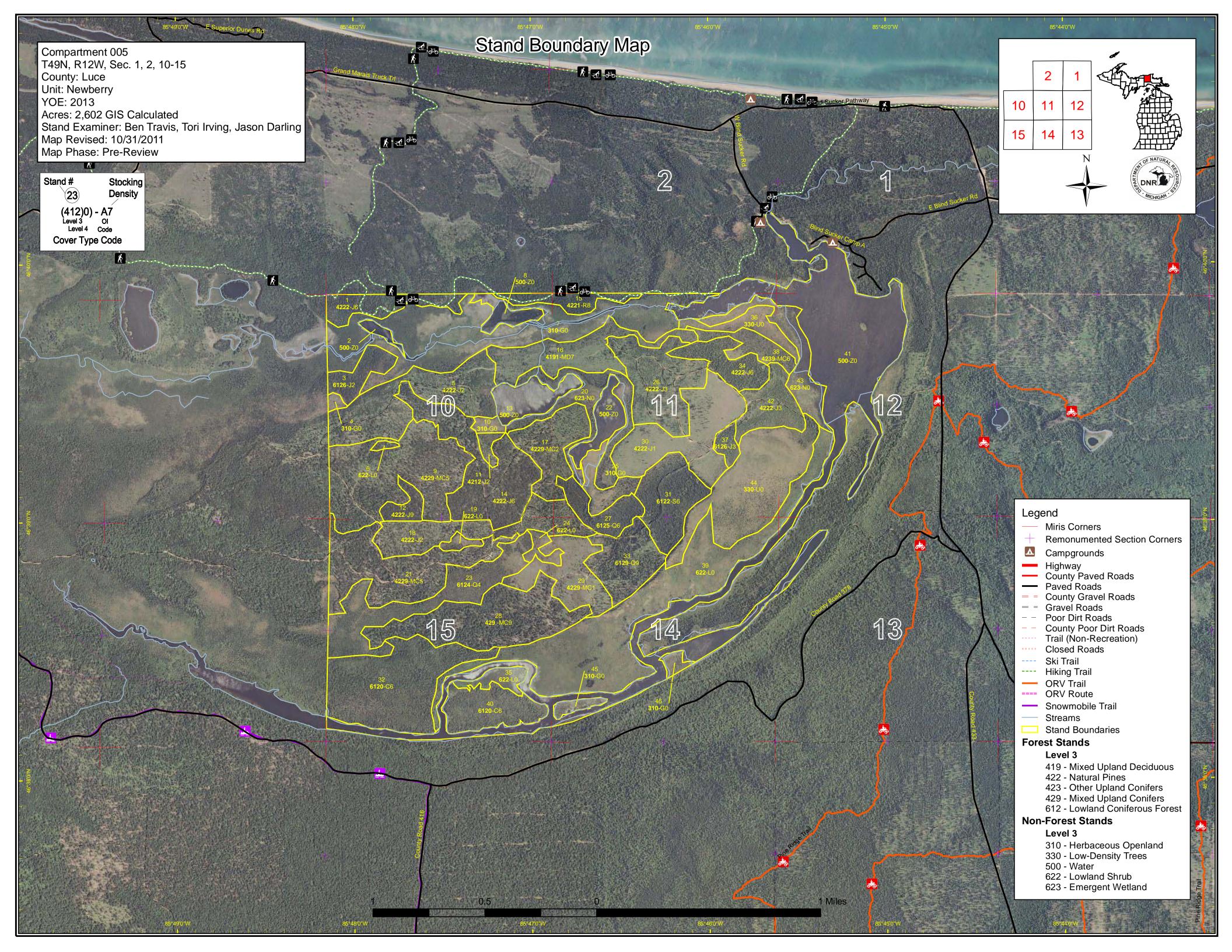
Fire Protection: This compartment was removed from the Two Hearted Zone Dispatch Area when the Two Hearted and Blind Sucker Zone Dispatch Areas were merged. Large fire potential exists in the continuous Jack Pine fuel types. Access to this area is limited which makes for long travel times and lends to the potential for large fires.

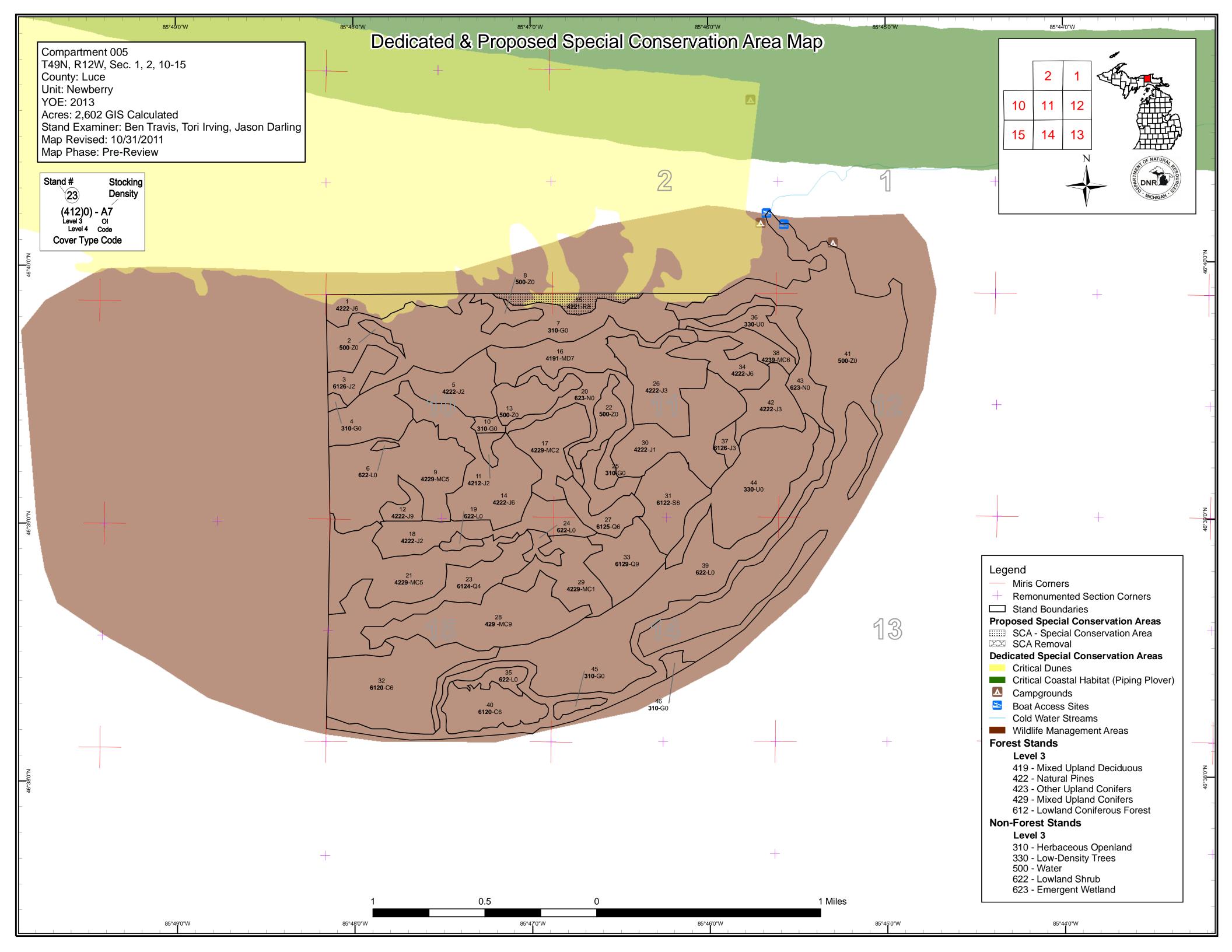
Additional Compartment Information: None.

- **➤** The following reports from the Inventory are attached:
 - **♦** Total Acres by Cover Type and Age Class
 - **♦** Proposed Treatment Summary
 - **♦** Proposed Treatments No Limiting Factors
 - **♦** Proposed Treatments With Limiting Factors
 - **♦** Stand Details (Forested and Nonforested)
 - **♦ Dedicated and Proposed Special Conservation Areas**

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







Compartment 005 Year of Entry 2013

Newberry Mgt. Unit

Tori Irving: Examiner



Age Class

	Age Class																
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Cedar	0	0	0	0	0	0	0	0	47	0	123	0	0	0	0	170	
Herbaceous Openland	228	0	0	0	0	0	0	0	0	0	0	0	0	0	0	228	
Jack Pine	0	168	202	37	0	0	23	109	0	0	33	0	0	0	0	572	
Low-Density Trees	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136	
Lowland Conifers	0	0	0	0	0	86	0	0	50	28	0	0	0	0	0	164	
Lowland Shrub	233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233	
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	55	0	0	0	0	0	55	
Marsh	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	63	0	0	0	0	63	
Natural Mixed Pines	0	53	0	0	50	0	129	0	99	0	0	0	0	0	0	330	
Red Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	21	
Upland Conifers	0	0	0	0	0	23	0	0	0	0	0	0	0	108	0	131	
Water	402	0	0	0	0	0	0	0	0	0	0	0	0	0	0	402	
Total	1096	221	202	37	50	108	152	109	196	83	219	0	0	129	0	2602	



Table 2 – Proposed Treatment Summaries

Newberry Mgt. Unit

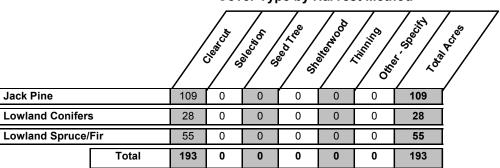
Compartment 005 Year of Entry 2013 **Total Compartment Acres: 2602**

Acres by Treatment Type

Commercial Harvest - 193 Site Prep - 0 Tree Planting - 0 Prescribed Burn - 0 Other - 0

Habitat Cut - 0 Tree Seeding - 0 Pesticide - 0 Opening Maintenance - 0

Cover Type by Harvest Method



Newberry Mgt. Unit

Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 005 Year of Entry 2013

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a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12	42005012 Cut- Cut	13.4	42220 - Natural Jack Pine	High Density Log	66	Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal

Prescription Clearcut with reserves. Remove all jack pine, red pine, and white pine except stems that are in designated retention pockets. Leave 2 retention pockets in the stand (approximately .3 to .5 acres each). No more than one acre of total retention in the stand. Retention pocket must include red Specs: pine and white pine trees.

<u>Other</u> Comments:

s

Scarify after harvest is complete and plant if scarification fails. Acceptable regeneration mix is jack pine with a small component (no more than Next 40% of regeneration) of red and white pine. Continue to monitor regeneration success. Steps:

Cmpt. Review 42005014-Cut 96.1 42220 - Natural High Density Pole 66 Clearcut with 42220 - Natural Jack 14 Harvest Jack Pine Reserves Pine Proposal

Prescription Remove all of the jack pine, red pine, and white pine trees except those occurring in retention pockets. Leave retention pockets of red pine and white pine scattered throughout the stand. No more than 3% of the acreage in retention pockets (approx 2.3 acres or less). Per WLD: In addition Specs: to retention pockets, leave approximately 10 large, super-canopy white pine trees scattered throughout the stand. Leave any oak, if it exists.

Other_ Comments:

Scarify after harvest is complete. Plant jack pine if scarification fails. Acceptable regeneration species mix is jack pine and a small amount (40% <u>Next</u> or less) of red pine and white pine. Continue to monitor for regeneration success. Steps:

42005027-Cut 28.3 42290 - Natural High Density Pole Harvest Clearcut with 6125 - Lowland Cmpt. Review Mixed Pine Reserves Black Spruce, Jack Proposal Pine

Prescription Convert to lowland black spruce/jack pine stand. Cut all species, except hemlock. Incorporate retention into the red line. Specs:

<u>Other</u> Protect the advanced spruce regeneration. Comments:

Acceptable regeneration mix: black spruce, jack pine, and a small component of red and white pine. Continue to monitor for regeneration Next success. If natural regeneration fails, direct seed with black spruce & jack pine. Steps:

31 42005031-Cut 54.9 6122 - Black Spruce High Density Pole 80 Harvest Clearcut with 6125 - Lowland Cmpt. Review Reserves Black Spruce, Jack Proposal Pine

Prescription Cut all species except those specifically requested by WLD. Per WLD: Leave some large white pine and birch, if found, leave all hemlock. Specs:

Other Comments:

Monitor for regeneration success. If natural regeneration fails, direct seed with black spruce and jack pine. Acceptable regneration mix: black <u>Next</u> Steps: spruce, jack pine and a small component of white pine, birch, and hemlock.

Total Treatment

192.7 **Acreage Proposed:**

Newberry Mgt. Unit Table 4 -- Treatments Prescribed with Compartment: 005 a Limiting Factor s Year of Entry 2013 t **Treatment Cover Type** n **Treatment Acres** Stage1 Size Stand **Treatment Approval** Name CoverType Density Method Objective Status Age Type d #Error **Prescription** Specs: <u>Other</u> Comment: <u>Next</u> Steps: Limiting Factor and No

Total Treatment
Acreage Proposed:

Treatment Reason

0

Out of YOE -- Treatments Prescribed with No Limiting Factor

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Year of Entry: 2013

Treatment	Acres	Stage1	Size	Stand	Treatment	Treatment	Cover Type	Approval
Name		CoverType	Density	Age	Type	Method	Objective	Status
42045001-Cut	3.9	42210 - Natural Red Pine	High Density Log	89	Harvest	Seed Tree	42210 - Natural Red Pine	Cmpt. Review Proposal

<u>Prescription</u> Harvest site to imitate a catastrophic crown fire by "clear-cutting all but a patchy mosaic of pine trees and clumps of trees to serve as seed trees" <u>Specs:</u> (MNFI). Focus on the 8-18 inch DBH class. Residual BA 10-20 to allow for successful pine regeneration.

Other This stand is identified by MNFI as a Dry Northern Forest. Move some of the Hemlock and Yellow Birch logs into stand 34 for Hemlock Comments: regeneration nurse logs.

Next Steps:

Burn the harvested area in the spring to reduce slash, hardwood competition, and to expose the mineral soil. This should be done within 2-3 years after the completion of any harvesting activities. If the site is not burned within the time frame, scarify site to promote pine regeneration. If scarification fails, plant red pine. Acceptable regeneration mix is RP and a small component of WP.

Total Treatment

Acreage Proposed: 3.9

s t	Newberry Mgt. Unit			5 – Fo	orested Sta	Compartment: 005 Year of Entry: 2013	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
1	42220 - Natural Jack Pine	High Density Pole	32.5	91			
3	6126 - Lowland Jack Pine	Medium Density	22.8	50			
5	42220 - Natural Jack Pine	Medium Density	94.9	18		Good stocking of jack pine saplings.	
9	42290 - Natural Mixed Pine	Medium Density Pole	128.8	50	51-80	This stand is mixed and various sized trees. There are scattered overstory trees with saplings growing underneath and in some of the openings. Scattered open pockets and lowland pockets are present. Stand was harvested (shelterwood) as West Brucker Pine Sale #39-03-01. Sale was completed 10/2/2006. All paper birch and oak was left as residual. FTP 42-596 was canceled (per TMS) because the site was too old. Regen check needed.	
11	42120 - Planted Jack Pine	Medium Density	6.4	9		Stand was planted as part of FTP C42-574. Machine planting completed 5/16/02, 500 JP/ac. Some of the non-jack pine trees are nice sized logs, some are various sizes from 12 feet and greater. The young jack pine looks really good. There are a few scattered openings in the stand.	
12	42220 - Natural Jack Pine	High Density Log	13.4	66		Nice log stand of jack pine. Some of which is starting to die and degrade. Large diameters 10"-14".	
14	42220 - Natural Jack Pine	High Density Pole	96.1	66	81-110	Nice stand of jack pine with a good amount of RP logs, especially in the north east corner of the stand.	
15	42210 - Natural Red Pine	Medium Density Log	20.7	150			
16	4191 - Mixed Upland Deciduous with Conifer	Low Density Log	63.5	90	1-50	Stand was harvested as Brucker Lake Jack Pine Sale #020-03-01. Sale was completed 11/18/04. Red pine was left scattered throughout the stand. Scarification was completed 8/2/2006 FTP C42-590. West 1/2 of Unit 1 of the sale was NOT scarified due to heavy blowdown of timber and regeneration was noted (from 4" to 2' in heights, mixed spp). 2010 Regen count results: 608 RP/JP/WP trees/ac; All Spp. 960 t/ac.	
17	42290 - Natural Mixed Pine	Medium Density	50.0	31		Very mixed stand. NE corner of stand was part of FTP 42-574 Regen survey date: 5/12/2005: JP 510 t/ac. Southrn part of stand was part of FTP C42-416. Regen survey 5/13/2003 JP 1391 t/ac. Mix of WP, RP, & JP.	
18	42220 - Natural Jack Pine	Medium Density	67.1	9		Cut as part of sale # 36-84-01. FTP 42-574; stand was mahine planted 500-600 tpa. Cultivation work was completed 5/16/02. Regen survey date: 5/12/2005: JP 510 t/ac. Scattered red pine, white pine, red maple, and scpruce. Some of the non-jack pine trees are nice sized logs, some are various sizes from 12 feet and greater. The young jack pine looks really good. There are a few scattered openings in the stand.	
21	42290 - Natural Mixed Pine	Medium Density Pole	98.5	78		This stand has scattered low pockets and a wide range of heights. Stand has been cut in the past but it is hard to tell what the managment objective was. It is now an uneven aged mixed pine stand.	

Newberry Mgt. Unit			5 – Fo	orested Sta	Compartment: 005 Year of Entry: 2013
Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
6124 - Lowland Spruce- Fir	Low Density Pole	85.8	40		
42220 - Natural Jack Pine	High Density Sapling	74.0	14		Cut as sale #32-93-01 in 1997. Stand was scarified in 11/98 under FTP C42-416. Stocking survey was completed 5/13/2003 - 1,391 trees per acre; mix of white, red, and jack pine.
6125 - Lowland Black Spruce, Jack Pine	High Density Pole	28.3	80		
429 - Mixed Upland Conifers	High Density Log	108.3	129		Stand was harvested as Blind Sucker Mix Sale #38-03-01. Sale was complete 5/30/08. Some parts of the stand has good hemlock regeneration, other parts are dominated by white pine, a lot of red maple sprouting through the stand. FTP C42-595 was canceled in the spring (site too old to scarify) per TMS.
					Spring 2011 Regen counts: Hem 236 t/a, WP 269 t/a, JP 285 t/a, RP 77 t/a, BS 153 t/a.
42290 - Natural Mixed Pine	Low Density Sapling	52.9	5		Pockets of red pine scattered throughout the stand. A lot of windtrhow present. Stand was cut as aprt of the Blind Sucker Mis Sale #38-03-01. Sale was completed 5/30/2008. FTP C42-595 was canceled per TMS in the spring of 2011.
					Spring 2011 Regen counts: Hem 236 t/a, WP 269 t/a, JP 285 t/a, RP 77 t/a, BS 153 t/a.
42220 - Natural Jack Pine	Low Density Sapling	85.5	5		Stand was harvested as Keopfgen Lake Jack Pine Sale #019-03-01. Sale was completed 09/06/05. Stand was scarified under FTP C42-589. Scarification completed 7/31/2006. Jack pine is starting to regenerate.
6122 - Black Spruce	High Density Pole	54.9	80		
6120 - Lowland Cedar	High Density Pole	122.6	91		
6129 - Mixed Coniferous Lowland Forest	High Density Log	50.3	70		Stand was harvested as Blind Sucker Mix Sale #038-03-01. Unit 1. Sale was complete 5/30/2008. Was scheduled for scarification under FTP C42-595. FTP was canceled for bein too old (per TMS) in the Spring of 2011.
					Spring 2011 Regen counts: Hem 236 t/a, WP 269 t/a, JP 285 t/a, RP 77 t/a, BS 153 t/a.
42220 - Natural Jack Pine	High Density Pole	33.1	19		Stand was cut as Sale #36-84-01.
6126 - Lowland Jack Pine	High Density Sapling	9.1	9		Stand was cut as part of Sale #36-84-01. FTP C42-574; machine planted 500 JP/ac. Planting complete 5/16/2002.
	Level 4 Cover Type 6124 - Lowland Spruce- Fir 42220 - Natural Jack Pine 6125 - Lowland Black Spruce, Jack Pine 429 - Mixed Upland Conifers 42290 - Natural Mixed Pine 42220 - Natural Jack Pine 6122 - Black Spruce 6120 - Lowland Cedar 6129 - Mixed Coniferous Lowland Forest 42220 - Natural Jack Pine 6126 - Lowland Jack Pine	Level 4 Cover Type 6124 - Lowland Spruce- Fir 42220 - Natural Jack Pine 6125 - Lowland Black Spruce, Jack Pine 429 - Mixed Upland Conifers High Density Pole 42290 - Natural Mixed Pine 42220 - Natural Jack Pine 6122 - Black Spruce 6120 - Lowland Cedar Coniferous Lowland Forest High Density Sapling High Density Pole High Density High Density Log High Density Pole	Level 4 Cover TypeSize DensityAcres6124 - Lowland Spruce- FirLow Density Pole85.842220 - Natural Jack Spruce, Jack PineHigh Density Pole74.06125 - Lowland Black Spruce, Jack PineHigh Density Pole28.3429 - Mixed Upland ConifersHigh Density Sapling108.342290 - Natural Mixed PineLow Density Sapling52.96122 - Black SpruceHigh Density Pole54.96120 - Lowland CedarHigh Density Pole122.66129 - Mixed Coniferous Lowland ForestHigh Density Log50.342220 - Natural Jack PineHigh Density Pole33.142220 - Natural Jack PineHigh Density Pole33.142220 - Natural Jack PineHigh Density Pole33.1	Level 4 Cover Type Density Acres Age	Level 4 Cover Type Size Density Acres Stand Age BA Range 6124 - Lowland Spruce-Fir Low Density Pole 85.8 40 42220 - Natural Jack Pine High Density Sapling 74.0 14 6125 - Lowland Black Spruce, Jack Pine High Density Pole 28.3 80 429 - Mixed Upland Conifers High Density Log 108.3 129 42290 - Natural Mixed Pine Low Density Sapling 52.9 5 42220 - Natural Jack Pine Low Density Sapling 85.5 5 6122 - Black Spruce High Density Pole 54.9 80 6120 - Lowland Cedar Pole High Density Pole 50.3 70 6129 - Mixed Coniferous Lowland Forest High Density Pole 50.3 70 42220 - Natural Jack Pine High Density Pole 33.1 19 42220 - Natural Jack Pine High Density Pole 33.1 19 6126 - Lowland Jack Pine High Density Pole 33.1 19

S	Newberr	y Mgt. Unit		5 – Fo	orested Sta	ands Compartment: 005 Year of Entry: 2013
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	42390 - Mixed Non- Pine Upland Conifers	High Density Pole	22.6	40		Part of this stand was cut as Keopfgen Lake Jack Pine Sale #019-03-01, Sale was completed 09/06/05. This stand was scheduled for scarification under FTP C42-589. Unit 1 was never scarified. This stand would be difficult to scarify, it is too wet. It has adequate natural regeneration of black spruce, tamarack, and jack pine.
40	6120 - Lowland Cedar	High Density Pole	47.1	73		
42	42220 - Natural Jack Pine	High Density Sapling	36.8	23		Cut as Sale #31-93-01. Treated under FTP C42-419 (jack pine scarification). FTP completed 6/1998, The southern part of the stand is a little wetter than the north. The ground is covered with a mix of leather leaf and fern.

6 - Nonforested Stands

Compartment: 005 Year of Entry: 2013



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	50 - Water	5.2	No	Unspecified	
4	310 - Herbaceous Openland	3.1	N\A	Unspecified	
6	6229 - Mixed lowland shrub	2.3	No	Unspecified	
7	310 - Herbaceous Openland	184.7	N\A	Unspecified	
8	50 - Water	15.2	N\A	Unspecified	
10	310 - Herbaceous Openland	5.8	N\A	Unspecified	
13	50 - Water	30.1	No	Unspecified	
19	6229 - Mixed lowland shrub	5.5	No	Unspecified	
20	623 - Emergent Wetland	55.3	N\A	Unspecified	
22	50 - Water	22.2	No	Unspecified	
24	6229 - Mixed lowland shrub	8.5	No	Unspecified	
25	310 - Herbaceous Openland	21.2	N\A	Unspecified	
35	6229 - Mixed lowland shrub	13.4	No	Unspecified	
36	3302 - Low Density Conifer Trees	21.8	No	Unspecified	
39	6229 - Mixed lowland shrub	203.7	No	Unspecified	
41	50 - Water	329.4	No	Unspecified	Blind Sucker Flooding
43	6239 - Mixed Emergent Wetland	41.2	No	Unspecified	Grassy/Shrubby wetland area surrounding the flooding.
44	3302 - Low Density Conifer Trees	114.4	No	Unspecified	

6 - Nonforested Stands

Compartment: 005 Year of Entry: 2013



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
45	310 - Herbaceous Openland	7.1	N\A	Unspecified	
46	310 - Herbaceous Openland	5.9	N\A	Unspecified	

Newberry Mgt. Unit

Compartment: 005 Year of Entry: 2013



7 - 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.

Stand	SCA Type	SCA Name	Acres	Comments
15	Unique Site - SCA	42005015 SCA Unique Site	20.7	Many red pine are 150-200 years old. Some ridges are close to old growth red pine. Stand varies from low-moderately steep sand dunes to flat areas near the marsh.



8 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

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 oxygen cond stocked trout populations and those of other coldwater fish specing 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.	ies (e.g., slimy sculpin) to persist from ese conditions due to substantial
SCA	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy state Forest campgrounds, motorized and non-motorized trails, access sites.	
HCVA	Critical Dunes	Critical dune areas are established via the public legislative produced Dune Protection and Management, of the Natural Resources and 451. The program is administered by the Michigan Department of current distribution of designated critical dunes is established by Areas.	d Environmental Protection Act, 1994 PA of Environmental Quality (DEQ). The
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and coop U.S. Fish and Wildlife service for the recovery of threatened and 365, Endangered Species Protection, of the Natural Resources and 451, and the Federal Endangered Species Act of 1973. This species plans in various stages of review. As of now only two explover Habitat.	endangered species, as governed by Part and Environmental Protection Act, 1994 is an active program, with proposed
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildle and Waterfowl Production Areas, deer wintering complexes in loopenings and savannas. Habitat areas are distinct from critical hendangered or threatened species (such as Kirtland's warbler or general in nature, are not primarily associated with threatened or covered by species recovery plans that are developed in cooperations.	wland conifer communities, grassland labitat designated for recovery of piping plover areas) in that they are more rendangered species, and are not