



Newberry Forest Management Unit
Compartment Review Presentation
Compartment #42021 Entry Year: 2013
Compartment Acreage: 1534 County: Luce

Revision Date: 09/13/11

Stand Examiner: Jason A. Tokar

Legal Description: T48N R11W Sections 1, 2, & 3
T49N R10W Section 31
T49N R11W Sections 35 & 36

RMU (if applicable): This compartment is located within the Two Hearted Headwaters Management Area. For further description of this management area, go to the following web site:

[http://www.midnr.com/publications/pdfs/forestslandwater/Ecosystem/EUP/final-MAsummaries/31 Two Hearted Headwaters MA summary.pdf](http://www.midnr.com/publications/pdfs/forestslandwater/Ecosystem/EUP/final-MAsummaries/31%20Two%20Hearted%20Headwaters%20MA%20summary.pdf)

Management Goals: Maintain or enhance the forest health, productivity, and diversity of the area through proper management. Enhance age class diversity and ensure sustainability in the forest cover types as well as improve the quality of wildlife habitat through continued timber harvest treatments.

Soil and Topography: The soil type is predominately Rubicon sand. Croswell-Spot complex and Paquin sand are also major soil types. The topography is mostly level to rolling throughout the compartment. Steep sand banks are found along many portions of the Two Hearted River.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The compartment is entirely State owned. State land borders the compartment to the north, and most of the west and south. There are a few private cabins on Long Lake just to the west of the compartment a scattered camps/cabins along the Two Hearted River. The area is used heavily for recreation activity such as camping, hiking, canoeing, fishing, ORV riding and some hunting.

Unique, Natural Features: The compartment falls within the boundaries of the Two Hearted River watershed. The Two Hearted River system is designated as a Natural River. The Pretty Lakes Quiet Area lies adjacent to the west of the compartment.

Within the compartment, MNFI lists the potential for rare plants of rich mesic forests: assiniboia sedge, showy orchis, ginseng, and goblin fern. Potential for English sundew in fen. Potential for marsh plants including American shoregrass, moor rush, paniced screw-stem, Hill's pondweed, alternate-leaved water-milfoil, and autumnal water star-wort. Potential for red-shouldered hawk, goshawk, merlin, osprey, eagle, and great blue heron rookery. Potential for wood turtle in Two-Hearted River. Potential for incurvate emerald to be associated with patterned fen community. Potential for ebony bog haunter.

Archeological, Historical, and Cultural Features: Archeological site listed within Compartment boundary.

Special Management Designations or Considerations: The entire compartment falls within the boundaries of the Two Hearted River watershed. The Two Hearted River system is designated as a Natural River.

Watershed and Fisheries Considerations: Fisheries Values: Good-to-Excellent.

Fisheries Concerns: The North Branch Big Two-Hearted River joins the Main Branch Big Two-Hearted River in the compartment. Under the Natural River BMP's a no clear-cut buffer of 100' should be maintained adjacent to these water bodies. No treatments are scheduled near either section of the Big Two-Hearted River, so Fisheries has no concerns at this time.

Wildlife Habitat Considerations: Compartment 21 is situated in northern Luce county, east and south of the Pretty Lakes complex and is in the Seney Sand Lake Plain ecological sub-subsection. The compartment is a mixture of white and red pine stands with some mixed conifer, aspen and northern hardwood stands scattered throughout. The North branch of the Two Hearted river borders the southern edge of the compartment serving as an excellent east-west wildlife travel corridor. The compartment is a transitional zone between predominately pine types to the north and more deciduous types to the south and therefore, the within stand species diversity of most all stands is quite high.

Wildlife species needs will be met by leaving scattered aspen or birch in many stands to provide food sources (ruffed grouse, redpolls, and grosbeaks) as well as snags and den trees for wildlife species such as saw-whet owls, flycatchers, chickadees. Pileated woodpecker and marten (featured species in this compartment) will utilize snags as well as nesting locations. Super canopy white pine will be retained to provide future eagle nest trees, and black bear (featured species) refuge trees. Retained trees will eventually die and fall over providing hunting and travel corridors for fisher and marten and habitat for small mammals. A component of spruce and fir will be retained in hardwood harvests for structural diversity and to provide foraging and singing sites for Blackburnian warbler (featured species), Cape May warbler and red-breasted nuthatch and resting sites for marten and fisher.

Mineral Resource and Development Concerns and/or Restrictions:

Sections 1–3, T48N-R11W, Sections 35 & 36, T49N-R11W, Section 31, T49N-R10W, Luce County 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 Cambrian Munising Formation subcrops below the glacial drift. There is not economic use for the Munising. There are no gravel pits in the area, and potential appears to be limited. There is no economic oil and gas production in the UP.

Vehicle Access: The compartment can be accessed via County Road 418. This road is maintained by the Luce County Road Commission as a seasonal county road. Long Lake Road is a dirt road which runs through most of the compartment and provides access for a few private land owners on the south side of Long Lake. Several two track roads provide access to most areas in the compartment.

Survey Needs: No survey work is needed to complete the prescribed treatments.

Recreational Facilities and Opportunities: There are no designated facilities within the compartment. Recreational opportunities would include fishing and canoeing along the various branches of the Two Hearted River, hunting, ORV riding, snowmobiling, dog sledding, and wildlife viewing. The High Bridge SF Campground is located just east of the compartment and the Pretty Lakes SF Campground and proposed quiet area is adjacent to the west.

Fire Protection: The mixed pine types doesn't lend itself to large fires except in extreme conditions. Access is limited in some areas and may challenge suppression capabilities. The compartment borders the Two Hearted Zone Dispatch Area.

Additional Compartment Information:

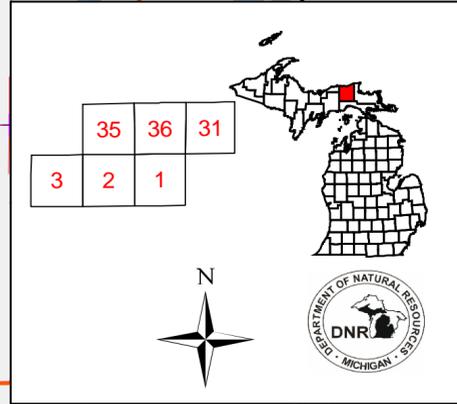
- **The following reports from the Inventory are attached:**
 - ◆ **Total Acres by Cover Type and Age Class**
 - ◆ **Proposed Treatment Summary**
 - ◆ **Proposed Treatments – No Limiting Factors**
 - ◆ **Proposed Treatments – With Limiting Factors**
 - ◆ **Stand Details (Forested and Nonforested)**
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

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Cover Type & Treatment Map

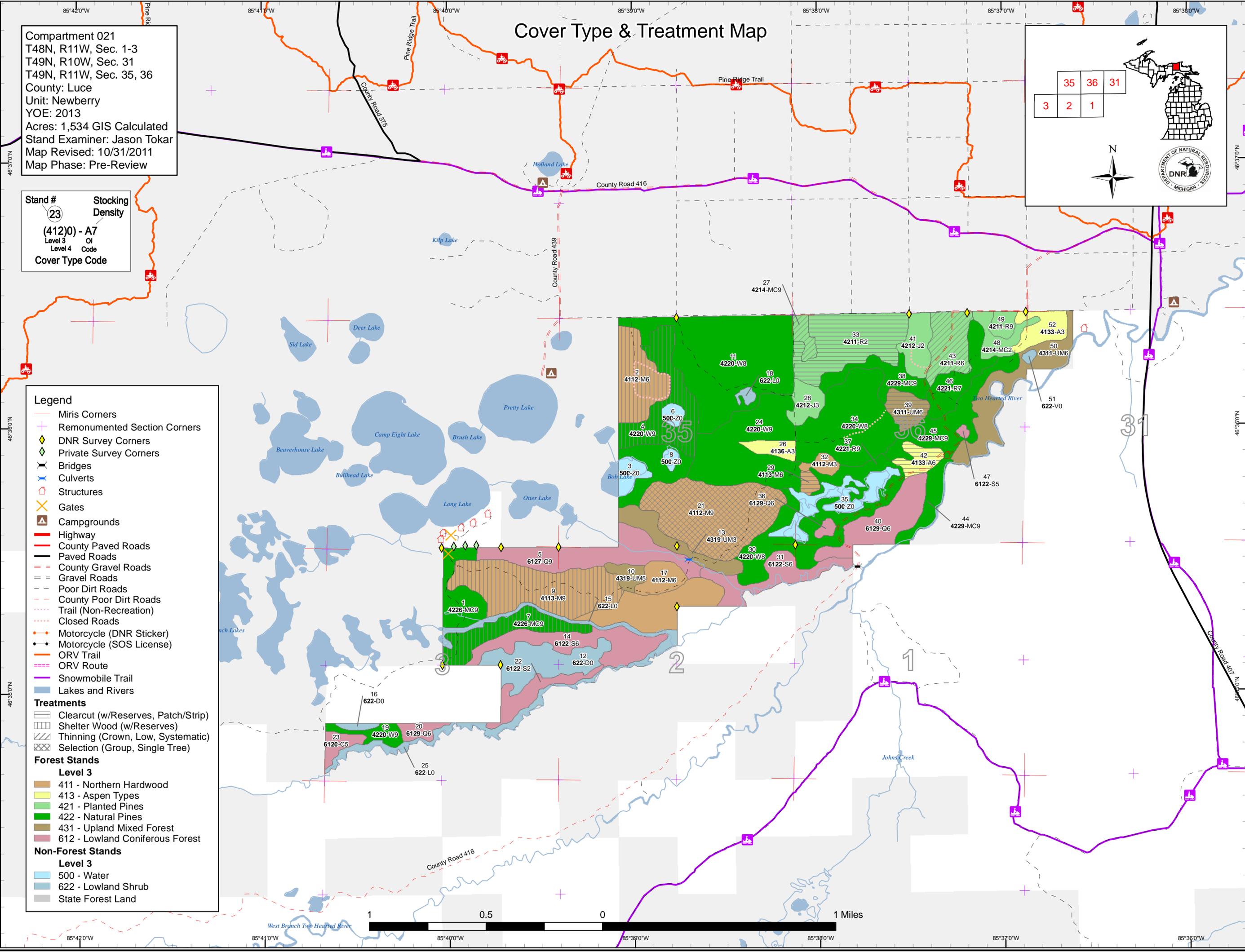
Compartment 021
 T48N, R11W, Sec. 1-3
 T49N, R10W, Sec. 31
 T49N, R11W, Sec. 35, 36
 County: Luce
 Unit: Newberry
 YOY: 2013
 Acres: 1,534 GIS Calculated
 Stand Examiner: Jason Tokar
 Map Revised: 10/31/2011
 Map Phase: Pre-Review



Stand #
 (23)
 Level 3
 Level 4
 Cover Type Code

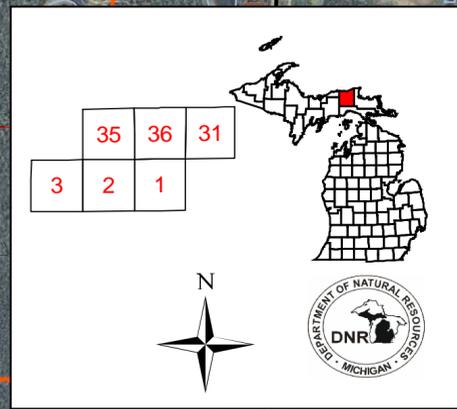
Stocking
 Density
 (4120) - A7
 OI
 Code

- Legend**
- Miris Corners
 - Remunented Section Corners
 - DNR Survey Corners
 - Private Survey Corners
 - Bridges
 - Culverts
 - Structures
 - Gates
 - Campgrounds
 - Highway
 - County Paved Roads
 - Paved Roads
 - County Gravel Roads
 - Gravel Roads
 - Poor Dirt Roads
 - County Poor Dirt Roads
 - Trail (Non-Recreation)
 - Closed Roads
 - Motorcycle (DNR Sticker)
 - Motorcycle (SOS License)
 - ORV Trail
 - ORV Route
 - Snowmobile Trail
 - Lakes and Rivers
- Treatments**
- Clearcut (w/Reserves, Patch/Strip)
 - Shelter Wood (w/Reserves)
 - Thinning (Crown, Low, Systematic)
 - Selection (Group, Single Tree)
- Forest Stands**
- Level 3**
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 431 - Upland Mixed Forest
 - 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3**
- 500 - Water
 - 622 - Lowland Shrub
 - State Forest Land



Stand Boundary Map

Compartment 021
 T48N, R11W, Sec. 1-3
 T49N, R10W, Sec. 31
 T49N, R11W, Sec. 35, 36
 County: Luce
 Unit: Newberry
 YOE: 2013
 Acres: 1,534 GIS Calculated
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Stand #
 (23)
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

Legend

- Miris Corners
- + Remonumented Section Corners
- ◆ DNR Survey Corners
- ◆ Private Survey Corners
- Bridges
- X Culverts
- Structures
- X Gates
- ▲ Campgrounds
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
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- Closed Roads
- Motorcycle (DNR Sticker)
- Motorcycle (SOS License)
- ORV Trail
- ORV Route
- Snowmobile Trail
- Stream
- Intermittent Stream
- Stand Boundaries

Forest Stands

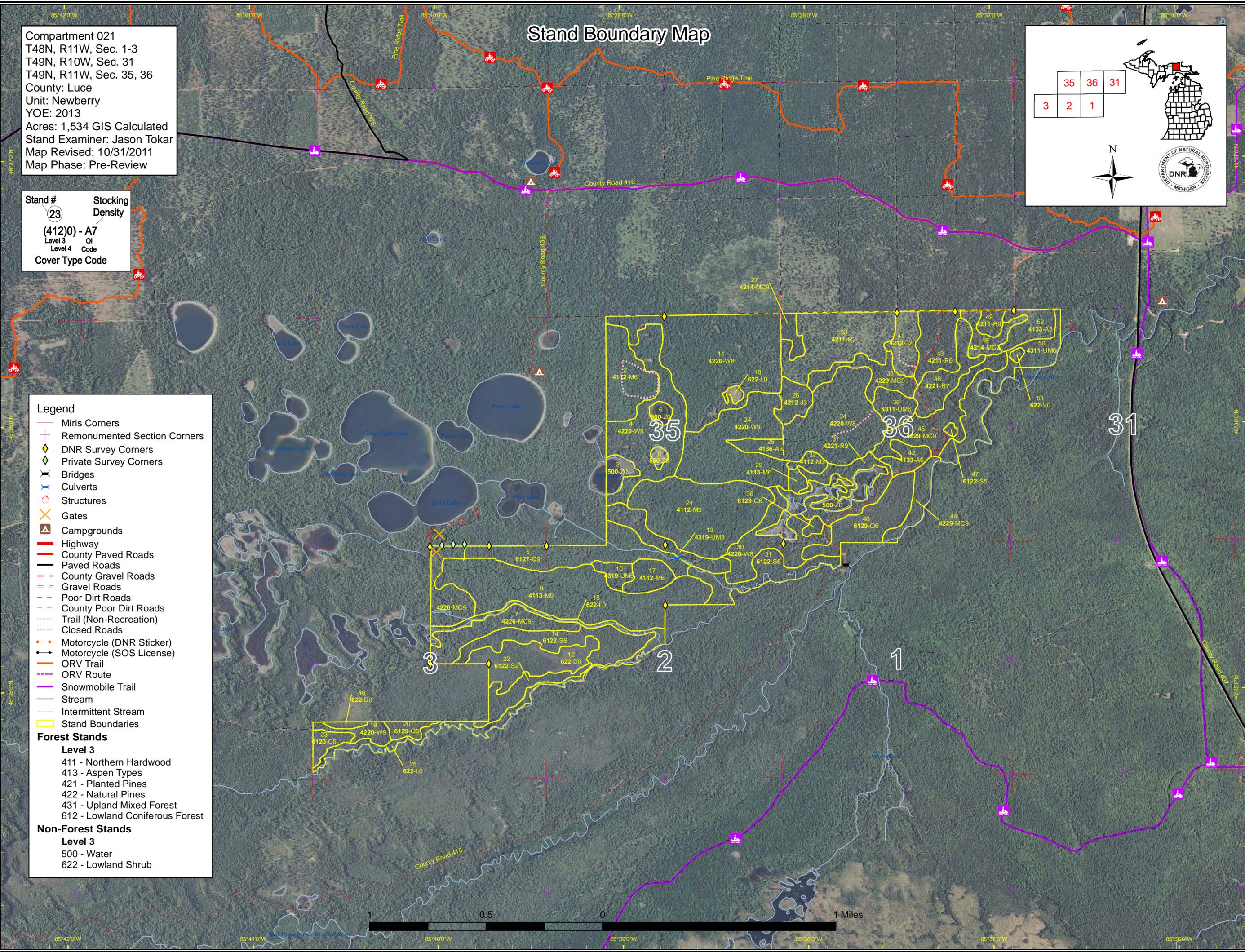
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
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- 422 - Natural Pines
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- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

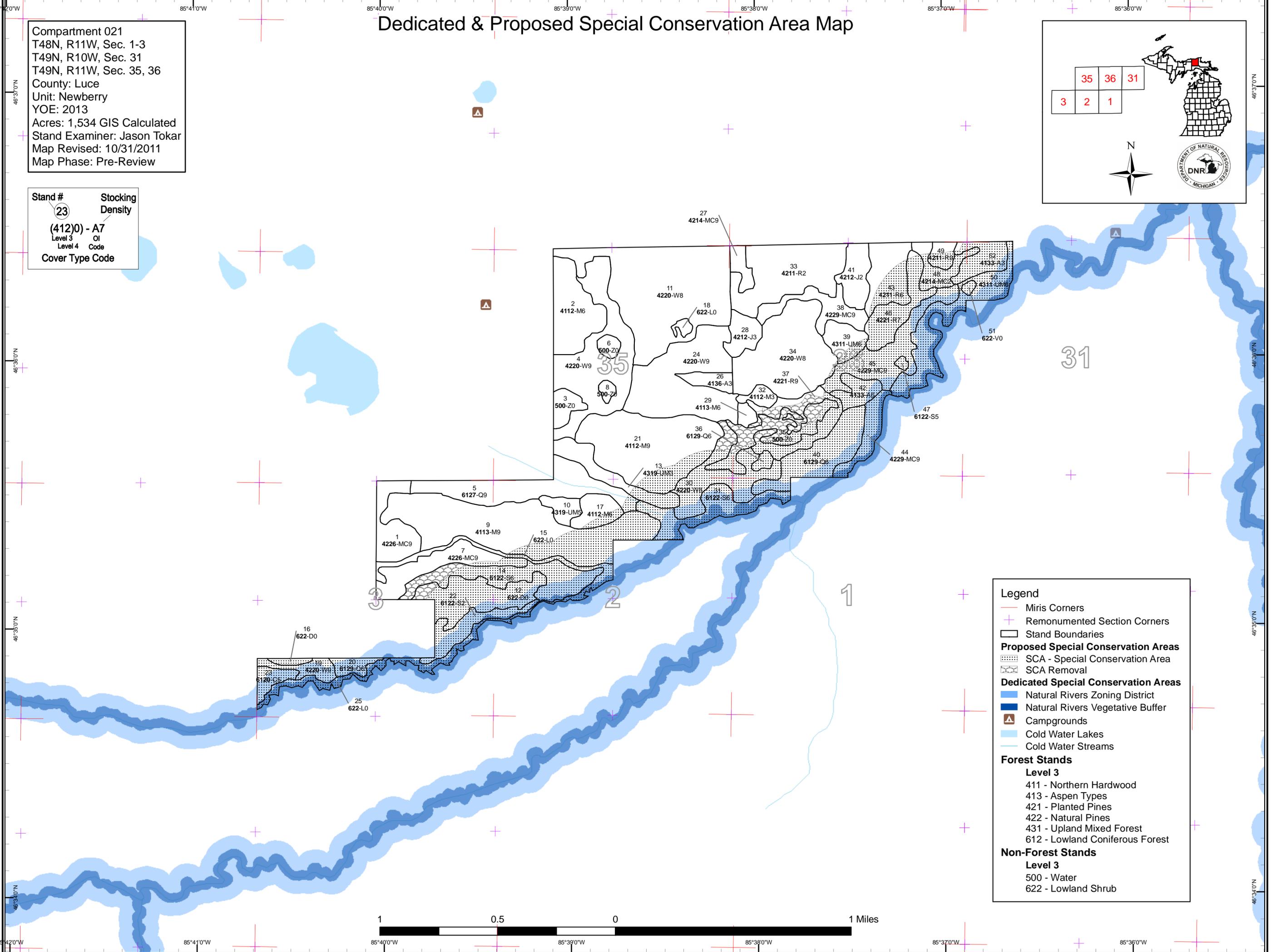
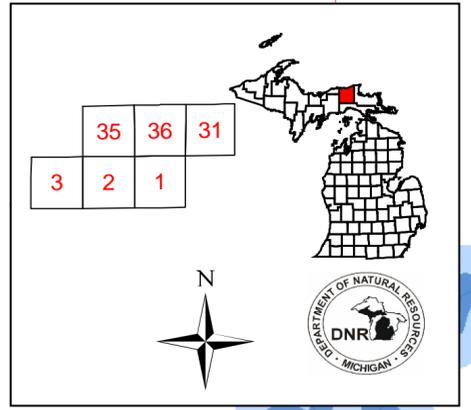
- 500 - Water
- 622 - Lowland Shrub



Dedicated & Proposed Special Conservation Area Map

Compartment 021
 T48N, R11W, Sec. 1-3
 T49N, R10W, Sec. 31
 T49N, R11W, Sec. 35, 36
 County: Luce
 Unit: Newberry
 YOE: 2013
 Acres: 1,534 GIS Calculated
 Stand Examiner: Jason Tokar
 Map Revised: 10/31/2011
 Map Phase: Pre-Review

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



Legend

- Miris Corners
- + Remonumented Section Corners
- Stand Boundaries
- Proposed Special Conservation Areas**
- ▨ SCA - Special Conservation Area
- ▩ SCA Removal
- Dedicated Special Conservation Areas**
- Natural Rivers Zoning District
- Natural Rivers Vegetative Buffer
- ▲ Campgrounds
- Cold Water Lakes
- Cold Water Streams
- Forest Stands**
- Level 3**
- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3**
- 500 - Water
- 622 - Lowland Shrub

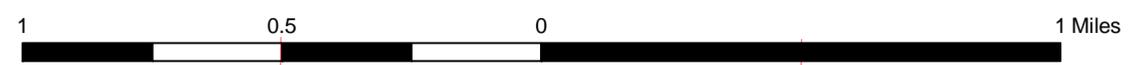


Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total	
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Uneren Age
Aspen	0	0	18	9	0	0	0	0	0	12	0	0	0	0	0	39
Bog	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9
Jack Pine	0	0	19	14	0	0	0	0	0	0	0	0	0	0	0	33
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	62	0	3	41	0	107
Lowland Shrub	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Lowland Spruce/Fir	0	0	0	0	0	0	19	0	0	1	75	0	0	0	0	95
Natural Mixed Pines	0	0	0	0	0	0	0	0	23	0	56	26	33	0	0	138
Northern Hardwood	0	0	0	6	0	0	0	0	15	266	0	0	0	0	0	287
Planted Mixed Pines	0	14	0	0	0	0	0	0	8	0	0	0	0	0	0	22
Red Pine	0	0	0	0	0	0	0	0	101	0	27	31	0	0	0	159
Treed Bog	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
Upland Mixed Forest	0	0	0	0	24	9	0	0	44	15	0	0	0	0	0	91
Water	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
White Pine	0	0	0	0	0	0	0	0	79	133	74	10	80	42	0	419
Total	136	14	37	29	24	9	19	0	269	428	294	67	117	92	0	1534



Table 2 – Proposed Treatment Summaries

Newberry Mgt. Unit
Year of Entry 2013

Compartment 021
Total Compartment Acres: 1534

Acres by Treatment Type

Commercial Harvest - 368	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	12	0	0	0	0	0		12
Natural Mixed Pines	0	0	0	33	0	0		33
Northern Hardwood	4	94	0	123	0	0		221
Planted Mixed Pines	0	0	0	0	8	0		8
Red Pine	64	0	0	0	29	0		94
Upland Mixed Forest	15	0	0	0	0	0		15
White Pine	0	0	0	50	0	0		50
Total	96	94	0	205	37	0		433



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
2	42021002-Cut	40.5	4112 - Maple, Beech, Cherry Association	High Density Pole	85	Harvest	Shelter Wood with Reserves	4116 - Mixed N. Hardwood - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Treat stand with a shelterwood harvest with reserves. Reserve area where thick young regen is located. Mark trees to leave, average 30-40 BA residual for the stand. Don't mark within pockets of advanced regeneration (within the "loop" mainly). No new roads will be built for the harvest. Leave better quality maple as residual. Leave one third of the white pine (super canopy) as residual. Retain a component of yellow birch and all hemlock. Try to retain all aspen 6 inches and less in diameter.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Monitor success of desired regeneration. Acceptable regeneration is a mix of northern hardwoods with aspen, balsam, spruce.</p>									
4	42021004-Cut	49.5	42200 - Natural White Pine	High Density Log	93	Harvest	Shelter Wood with Reserves	42200 - Natural White Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Treat stand with a shelterwood harvest with reserves. Retention areas focused around low areas and small lake within the stand. Mark white pine to cut, residual of 40-50 BA. Remove all miscellaneous species in the harvest areas to promote white pine regeneration. Leave 1 very large aspen/5 acres if found. Leave all hemlock. No new roads are to be built for harvest operations (stand borders Pretty Lakes quiet area).</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Scarification of the treatment area to promote better white pine regeneration. Monitor success of white pine regeneration.</p>									
7	42021007-Cut	33.0	42260 - Natural Pine, Mixed Deciduous	High Density Log	112	Harvest	Shelter Wood with Reserves	42201 - Natural White Pine, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Shelterwood harvest. Remove aspen, white birch and maple. Mark white pine and red pine for harvest. Residual basal area for the stand will average 40 sq ft. Leave a few white birch and aspen for retention (pockets?). No roads to be built into the stand due to slopes.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Monitor success of desired regeneration. Acceptable regeneration is white pine with minor components of aspen, maple, balsam, red pine and spruce.</p>									
9	42021009-Cut	82.1	4113 - R.Maple, Conifer	High Density Log	84	Harvest	Shelter Wood with Reserves	4117 - Mixed N. Hardwood - Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Shelterwood harvest with reserves. Portion of stand removed from treatment area to act as retention/reserves. Remove most aspen and spruce and all balsam. Mark red maple and white pine to cut. Leave some super canopy white pine. Leave better quality red maple. Remove 1/3 to 1/2 of white pine volume. Leave all red pine. Leave hemlock pockets intact. Stand residual BA should average 50 sq ft (40-60 range). Portion of stand that falls within the Two Hearted River Natural River Plan corridor will be left out of harvest - retention.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Scarify the stand following harvest to promote more white pine regeneration. Manage the stand for white pine. Management objective of white pine with red maple and aspen.</p>									
21	42021021-Cut	94.5	4112 - Maple, Beech, Cherry Association	High Density Log	85	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
<p><u>Prescription</u> Selection harvest. Remove larger diameter, low quality red maple. Residual BA of 70-90. Remove any live beech with product in them. Leave some for snags (WLD). Leave hemlock and some super canopy white pine. Leave a component of spruce and balsam. Create regeneration gaps in areas with beech mortality or maple with dead tops. Maintain a component of all species present. Southern reaches of stand fall within the Two Hearted River Natural River Plan corridor. Follow plan specifications where necessary.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Monitor for success of desired regeneration. Acceptable regeneration of maple with a mix of northern hardwoods.</p>									



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
27	42021027-Cut	8.0	42141 - Planted Mixed Pine, Mixed Deciduous	High Density Log	79	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Treat stand with a thinning. Remove the aspen and jack pine (both mature). Leave a few aspen on teh edge. Remove any merchantable <u>Specs:</u> balsam and spruce. Mark red pine and white pine to cut. Residual BA to average 90 sq ft. Some areas may be lower.</p> <p><u>Other</u> Stand was planted in the fall of 1934 (2-0 RP & JP) and in the spring of 1962 (3-0 RP). <u>Comments:</u></p> <p><u>Next</u> Continue to manage stand as a red pine plantation. Follow with a final harvest next entry year and plant red pine. Management objective of red <u>Steps:</u> pine plantation.</p>									
29	42021029-Cut	4.3	4113 - R.Maple, Conifer	High Density Pole	82	Harvest	Clearcut	4116 - Mixed N. Hardwood - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Treat the stand with a clearcut. Leave a few large diameter white pine and most of yellow birch. No other retention needed. Small acreage <u>Specs:</u> stand. Portion of the stand falls within the Two Hearted Natural River Plan corridor. Follow plan specifications.</p> <p><u>Other</u> Adjacent stand (32) has good regeneration of all species. Should get same result with this harvest. <u>Comments:</u></p> <p><u>Next</u> Monitor the success of desired regeneration. Acceptable regeneration of mixed northern hardwoods with white pine, balsam and spruce. <u>Steps:</u></p>									
33	42021033-Cut	64.4	42210 - Natural Red Pine	Medium Density Saplin	79	Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut with reserves. Leave 10-20 BA of red pine residual near road (within 100 ft of road). Promote red pine and jack pine regeneration. <u>Specs:</u></p> <p><u>Other</u> Stand was planted in fall of 1934 (JP & RP) and then again in spring of 1962 (RP). Harvested in 2003 as sale #001-03-01. No scarification of <u>Comments:</u> the site - conversion to red pine. Removed all jack pine, aspen and maple. Not much red pine regeneration coming in after the harvest.</p> <p><u>Next</u> RX burn to reduce slash and prep site for planting. If RX burn does not take place within 18 months of harvest, treat the stand with herbicide <u>Steps:</u> application to reduce competition. Trench and plant red pine. Monitor for success of red pine and jack pine regeneration. Release red pine regeneration once established.</p>									
39	42021039-Cut	14.8	4311 - Pine, Aspen Mix	High Density Pole	81	Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut with reserves harvest. Remove aspen, maple and spruce. Leave some large aspen and birch as red line trees. Mark white and red <u>Specs:</u> pine for harvest. Residual BA to average 20 sq ft of white pine. Residual BA to be low enough to ensure full aspen regeneration. No other retention.</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> Management objective of aspen. Acceptable regeneration of aspen mixed with white pine, white birch and maple. <u>Steps:</u></p>									
42	42021042-Cut	12.1	4133 - Aspen, Mixed Pine	High Density Pole	82	Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Possible harvest. Clearcut with reserves. Stand falls within the management zone of the Two Hearted Natural River Plan. Follow the <u>Specs:</u> specifications in the plan for retention. Remove aspen, maple. Remove spruce, white pine, red pine and white birch according to guidelines in the plan.</p> <p><u>Other</u> Series of ridges, one deep drainage in stand. <u>Comments:</u></p> <p><u>Next</u> Monitor for success of desired regeneration. Acceptable regeneration of aspen with mixed pine, maple and spruce. <u>Steps:</u></p>									

**Table 3 -- Treatments Prescribed
with No Limiting Factor**

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
43 42021043-Cut	29.5	42110 - Planted Red Pine	High Density Pole	79	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription: Treat stand with a thinning. Remove aspen and jack pine (mature). Mark red pine and white pine to cut. Remove any merchantable balsam and spruce. Residual basal area not to exceed 90 sq ft. Leave any oak. Southern portion of stand falls within Two Hearted Natural River Plan area. Follow plan specifications when conducting treatment.

Other Comments: Red Pine plantation. Planted in fall of 1934 (2-0 RP & JP) and then again in spring of 1962 (3-0 RP).

Next Steps: Continue to manage stand as a red pine plantation. Follow with a final harvest next entry year and plant red pine. Management objective of red pine plantation.

**Total Treatment
Acreage Proposed: 432.7**

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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#Error

Prescription
Specs:

Other
Comment:

Next
Steps:

Limiting Factor and No
Treatment Reason

Total Treatment
Acreage Proposed: 0

**Out of YOE -- Treatments
Prescribed with No Limiting Factor**

Year of Entry: 2013



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

Prescription: 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"
Specs: (MNFI). Focus on the 8-18 inch DBH class. Residual BA 10-20 to allow for successful pine regeneration.

Other Comments: 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 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**



Stand	Newberry Mgt. Unit			5 – Forested Stands		Compartment: 021 Year of Entry: 2013	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
1	42260 - Natural Pine, Mixed Deciduous	High Density Log	26.0	105		Large diameter white pine with small diameter red maple, some large diameter aspen. Scattered red pine.	
2	4112 - Maple, Beech, Cherry Association	High Density Pole	40.5	85	111-140	Poor quality red maple, mature to overmature. Top dieback, crooked, etc. Mature aspen. Mature balsam which is showing signs of decline, mortality. Center of the stand (within the "loop" of the road) has more advanced regeneration from the previous harvest. Good aspen regen in those areas mixed with maple and birch.	
4	42200 - Natural White Pine	High Density Log	74.0	93	141-170	Large diameter white pine stand. Thick BA in spots. Areas where the stand is more open. Aspen in the stand is mature and dying out. Dead tops in some of the white pine. Red pine component. Low areas throughout the stand.	
5	6127 - Lowland Pine	High Density Log	55.0	93		Large diameter white pine with smaller spruce, maple, scattered large aspen. Pockets of hemlock. Much of the stand is low ground, lower than adjacent stand to the south.	
7	42260 - Natural Pine, Mixed Deciduous	High Density Log	33.0	112	141-170	White pine ridge with aspen. Component of red pine, white birch and some maple. Some slopes but manageable for harvest. Western half of stand has more aspen and eastern half is more of a solid pine stand.	
9	4113 - R.Maple, Conifer	High Density Log	126.8	84	111-140	Low quality red maple with large diameter white pine and aspen. Component of red pine as well. Poor form to much of the maple. Aspen is dying out. Hemlock pockets. Better timber and large diameters in the western half of the stand. Dieback in some of the maple, bark beetle in some of red pine, aspen is declining and showing mortality.	
10	4319 - Mixed Upland Forest	Medium Density Pole	8.9	41	1-50	Open area filling in with mainly spruce, along with balsam, cherry, maple, aspen and white pine.	
11	42200 - Natural White Pine	Medium Density Log	133.1	82	1-50	Large diameter white pine and red pine over thick regeneration of aspen, maple, balsam, white pine and spruce. Multiple cuts done over a number of years within the stand. Different cut types over the stand area as well. Very mixed stand with lots of aspen just reaching pole size.	
13	4319 - Mixed Upland Forest	High Density Sapling	23.5	30		Old notes state that stand was cut as sale #05-81 - salvage cut.	
14	6122 - Black Spruce	High Density Pole	43.1	95	51-80	Lowland spruce stand.	
17	4112 - Maple, Beech, Cherry Association	High Density Pole	15.0	70	51-80		
19	42200 - Natural White Pine	High Density Log	10.5	101	111-140	Isolated white pine ridge with a mix of other species. No good access to the stand.	
20	6129 - Mixed Coniferous Lowland Forest	High Density Pole	7.4	90			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4112 - Maple, Beech, Cherry Association	High Density Log	94.5	85	111-140	Red maple and beech with sugar maple and yellow birch. Balsam and super canopy white pine. Large diameters in the maple with alot of large pulp quality trees. Beech is mostly dead or dying (BBD) Pockets of lower basal areas - mortality or smaller diameters. Top dieback on some of the larger maple. Understory is mostly beech with some maple.
22	6122 - Black Spruce	Medium Density	19.2	55		
23	6120 - Lowland Cedar	Medium Density Pole	8.8	120		Lowland cedar and mixed conifers along the North Branch Two Hearted River.
24	42200 - Natural White Pine	High Density Log	80.4	110	81-110	Combination of two old stands. W8/W9. Large diameter white pine with red maple, aspen, spruce, balsam, and a trace of hemlock. South half of the stand has more of a range of species while the northern half is mostly just large white pine.
26	4136 - Aspen, Mixed Conifer	High Density Sapling	8.8	27		Stand harvested as sale #79-84. Final harvest. Old notes say that the stand was a white pine type prior to harvest. Nice young aspen stand with balsam, white pine, and red maple.
27	42141 - Planted Mixed Pine, Mixed Deciduous	High Density Log	8.0	79	111-140	R9 stand. Large diameter red pine with good component of aspen and white pine. Some jack pine. Trace of white birch. Aspen is mature, large diameter. Jack pine is mature. Stand was planted in the fall of 1934 (2-0 RP & JP) and in the spring of 1962 (3-0 RP).
28	42120 - Planted Jack Pine	High Density Sapling	13.6	26		Young jack pine. Harvested in 1983 as sale #40-83. FTP #42-177 - scarified in 1984. Mixed stand with white pine, aspen, red pine, maple and small spruce.
29	4113 - R.Maple, Conifer	High Density Pole	4.3	82	81-110	Low quality red maple. Component of large diameter white pine, mature aspen, balsam, yellow birch and paper birch. A small component of beech as well.
30	42200 - Natural White Pine	Medium Density Log	41.8	120	51-80	White pine with red pine and some spruce. Ridges around small lakes.
31	6122 - Black Spruce	High Density Pole	31.7	90	51-80	
32	4112 - Maple, Beech, Cherry Association	High Density Sapling	6.3	28		Young mixed northern hardwoods stand. Cut in 1983 as sale #40-83. Red maple and cherry clumps. White pine, spruce, aspen and a trace of white birch. Good regeneration. Well stocked stand.
33	42110 - Planted Red Pine	Medium Density	64.4	79	1-50	Stand was planted in fall of 1934 (JP & RP) and then again in spring of 1962 (RP). Harvested in 2003 as sale #001-03-01. No scarification of the site - conversion to red pine. Removed all jack pine, aspen and maple. Not much red pine regeneration coming in after the harvest.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
34	42200 - Natural White Pine	Medium Density Log	78.9	76	51-80	Stand was harvested in 1995 (sale #06-94). Old notes mention stand almost being a clearcut after harvest. White pine and red pine residual left as overstory. Good aspen and white pine regeneration from harvest....thick. Scattered maple regeneration.
36	6129 - Mixed Coniferous Lowland Forest	High Density Pole	3.3	110		
37	42210 - Natural Red Pine	High Density Log	30.9	104	81-110	Natural Red Pine stand, comprised of ridges around small chain of un-named lakes. Very scenic stand along Co Rd.
38	42290 - Natural Mixed Pine	High Density Log	22.9	79	51-80	Mixed pine stand. Mostly white pine. Components of red pine, jack pine, aspen and white birch. Lots of diversity within the stand. Planted in fall 1934 and replanted in spring of 1962 (3-0 RP, 2-0 JP).
39	4311 - Pine, Aspen Mix	High Density Pole	14.8	81	141-170	Stand is pretty evenly bigtooth aspen and white pine. Much of the aspen is lower quality and showing decline, rot. White pine pulp is suppressed, some white pine dieback in sawlog size trees. A few red pine in the stand.
40	6129 - Mixed Coniferous Lowland Forest	High Density Pole	41.3	130		
41	42120 - Planted Jack Pine	Medium Density	19.0	11		Young jack pine stand. Planted with 2-0 jack pine in 2000. (FTP #42-359). Stand is a combination of natural jack pine and planted jack pine. Residual red pine mostly along the east side of the stand.
42	4133 - Aspen, Mixed Pine	High Density Pole	12.1	82	81-110	Mature aspen stand with component of red pine, white pine, white birch, red maple, and spruce. Series of ridges, one deep drainage in stand.
43	42110 - Planted Red Pine	High Density Pole	29.5	79	141-170	Red Pine plantation. Planted in fall of 1934 (2-0 RP & JP) and then again in spring of 1962 (3-0 RP). Jack pine is 79 years old and showing decline and mortality. Jack pine is in pockets. Clones of mature aspen throughout. Two ages of red pine. Natural white pine throughout the stand, large diameters.
44	42290 - Natural Mixed Pine	High Density Log	16.0	97		Natural red pine stand bordering the Two Hearted River. Ridge of red pine and white pine.
45	42290 - Natural Mixed Pine	High Density Log	40.4	96		
46	42210 - Natural Red Pine	Low Density Log	26.9	93	1-50	Stand was harvested in 1994 (sale #04-93). Residual overstory BA averages 40 sq ft (ranges from 40-70 sq ft). Good aspen and white pine regeneration following harvest.
47	6122 - Black Spruce	Medium Density Pole	1.5	80		

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Newberry Mgt. Unit

5 – Forested Stands

Compartment: 021
Year of Entry: 2013

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
48	42141 - Planted Mixed Pine, Mixed Deciduous	Medium Density	14.3	7		Stand was planted in fall of 1934 (2-0 RP and JP) and in the spring of 1962 (RP). Harvested in 2003 as sale #001-03-01. Scarified 6/2004. Regeneration check done 6/4/2008. 1902 tr/ac - mostly aspen. Residual BA from sale is 30-40 sq ft.
49	42110 - Planted Red Pine	High Density Log	7.1	79	81-110	Stand was planted in the fall of 1934 (2-0 RP & JP) and in the spring of 1962 (3-0 RP). Harvested in 2003 as sale #001-03-01. Removed all jack pine and aspen, marked red pine, left white birch. Red pine regeneration is sparse. Mainly aspen with pockets of white pine regeneration.
50	4311 - Pine, Aspen Mix	High Density Pole	43.5	71	141-170	Aspen ridges and slopes bordering on teh Two Hearted River. Aspen with white pine, red pine, and white birch. Balsam understory.
52	4133 - Aspen, Mixed Pine	High Density Sapling	17.9	17		Stand was cut as sale #04-93 (Unit 1). Red pine and white pine residual left after the harvest. Good aspen and jack pine regeneration. Management objective for stand is aspen.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	50 - Water	9.7	No	Unspecified	Bob Lake
6	50 - Water	4.9	No	Unspecified	
8	50 - Water	3.1	No	Unspecified	
12	6224 - Treed Bog	41.7	No	Unspecified	
15	6229 - Mixed lowland shrub	28.5	No	Unspecified	North Branch Two Hearted River corridor and feeder stream.
16	6224 - Treed Bog	2.9	No	Unspecified	
18	6229 - Mixed lowland shrub	2.8	No	Unspecified	
25	6229 - Mixed lowland shrub	10.6	No	Unspecified	North Branch Two Hearted River corridor
35	50 - Water	30.1	No	Unspecified	Small chain of un-named lakes
51	6225 - Bog	1.6	No	Unspecified	



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
multiple - see	SCA Removal	41021_SCA_Removal	11.3	SCA removal - Old stand condition "8" - Potential Old Growth. This designation was placed on these stands to account for the Natural River Plan corridor. Designation is no longer needed. New SCA created for Two Hearted River Natural River Plan Corridor.
multiple - see	Unique Site - SCA	Two Hearted River Natural River Mgmt Corridor	1503.3	This is the SCA designating the 1/4 mile corridor for management specifications in the Two Hearted River Natural River Management Plan.



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.

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

Conservation Area	Type	Description
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.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.