



Compartment Review Presentation

Newberry Forest Management Unit

Compartment 42007

Entry Year 2019

Acreage: 1,870

County Luce

Management Area: Deer Park

Revision Date: 2017-08-16

Stand Examiner: Jason Tokar

Legal Description:

T48N R12W Sections 2 & 3

T49N R12W Sections 23, 26, 27, 34 & 35

Identified Planning Goals:

Timber management, wildlife habitat, and recreation are the main uses of the compartment. The goal is to maintain or improve the forest health, productivity and diversity of the area to promote and enhance these uses. Treatments prescribed will help ensure the sustainability of the forest resource and continue to enhance the quality of the wildlife habitat. Timber management (jack pine, red pine white pine and northern hardwoods) will continue at a sustainable level of management, promoting an array of both age class and structural diversity in the cover types. Jack pine stands will either be scarified or planted if necessary. White pine and spruce treatments will help add age class diversity to those types.

Soil and topography:

The main soil type of the compartment is Rubicon sand, an outwash sand found throughout most of the compartment. The northern portion of the compartment has Rubicon sand with an organic surface. A lesser component of Wallace sand also occurs in the southern and western edges of the compartment. Cover types found on the Rubicon sands are overwhelmingly red pine, white pine, and jack pine. The Wallace sand supports mainly a northern hardwoods cover type. The overall topography of the compartment is level to slightly rolling.

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

The compartment is comprised of one large contiguous block of State land and one small parcel of State land surrounded by The Hancock Group (private). State land borders the compartment to the east and north, while The Hancock Group lands border the compartment on the west and south. Development in and around the compartment is low due to the large amount of State land and large "corporate" tracts (Hancock) in the vicinity. A few small camps are located within the area around the compartment. The main types of land use in the area are hunting and ORV and snowmobile riding.

Unique Natural Features:

MNFI doesn't list any occurrences within the compartment. Potential is there for a variety of flora and fauna including red shouldered hawk, eagle, osprey, moose and wolf.

Archeological, Historical, and Cultural Features:

The State Historic Preservation Office does not list any historical features within the compartment.

Special Management Designations or Considerations:

The Two Hearted River Natural River Zone is found within the southern reaches of the compartment. This is designated as an HCVA. No management activity is prescribed within the Natural River Zone.

Watershed and Fisheries Considerations:

Fisheries Values: Excellent

Fisheries Concerns: The southern margin of this compartment contains the North Branch Two Hearted River. This branch of the Two Hearted River is within the Natural River management zone. The Two Hearted River is known for its salmon and steelhead runs during the fall and spring months, respectively. Native Brook Trout populations exist in this reach of the North Branch Two Hearted River. No management is proposed within the Natural River management zone. All other treatments are not in proximity to any surface water, so there are no fisheries concerns at this time.

Wildlife Habitat Considerations:

Compartment 7 lies in the far northern portion of Luce county and is in the Grand Marais Sandy End Moraine and Outwash ecological sub-subsection. The compartment is on the western side of the Deer Park Management Area and American marten, Kirtland's warbler, Piping plover, and red crossbill are featured species. The vegetation is largely comprised of red and jack pine with some white pine, hardwood, and aspen stands scattered throughout the compartment. In general, the

stands in this compartment have high species diversity compared to other areas of the management area. Overall, pre-settlement vegetation patterns appear to have been similar to the current landscape of this compartment.

In a predominantly pine forested ecosystem, maintaining as much structural diversity as possible in managed stands will be important to achieving wildlife objectives and as such, regenerating trees in the stand pre-harvest will be protected as much as possible. In addition, retaining well stocked stands as wildlife corridors and good, connected marten habitat will be important. Wildlife species potentially using this compartment include white-tailed deer, black bear, fisher, marten, snowshoe hare, gray wolves, and coyote.

Mineral Resource and Development Concerns and/or Restrictions

Gravel pits are not located in the area. There may be some sand and gravel potential within the compartment but little information about the surface geology is available for the area. There is no known metallic mineral potential in this area, and there is no known potential for economic oil and gas production in the UP.

Vehicle Access:

The Compartment is approximately 30 miles northwest of Newberry. There is substantial vehicle access to the compartment. County Road 416 runs through the southern portion and up along the west side of the compartment. Several woods roads (two tracks) and fire lanes transect the compartment.

Survey Needs:

For management activities to occur, some verification of private lines needs to be done. The property lines between the State Land and Hancock Group lands have been run by private individuals and appear to be accurate. Verification of these line locations in Sections 23 and 34 for proper location is needed.

Recreational Facilities and Opportunities:

Recreational facilities within the compartment include the Grand Marais Snowmobile Trail and the Pine Ridge ORV Trail. Other recreational opportunities include hunting, hiking and wildlife viewing. There are a few hunting camps on private lands adjacent to the property.

Fire Protection:

Large fire runs are possible with some continuous pine stands. Hardwood stands around the perimeter of the north, west and south sides could slow fire spread, reducing the fire spread to private lands. Road access through the compartment is fair providing some opportunities for fire lines if needed.

Additional Compartment Information:

The southern compartment boundary was moved to follow the North Branch Two Hearted River in sections 2 & 3.

The following reports from the Inventory are attached:

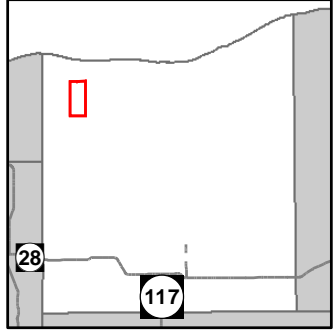
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

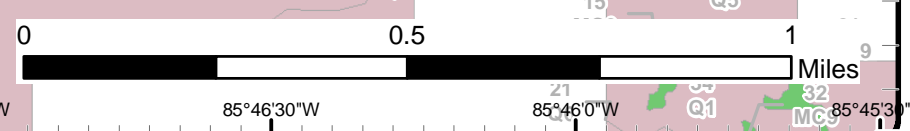
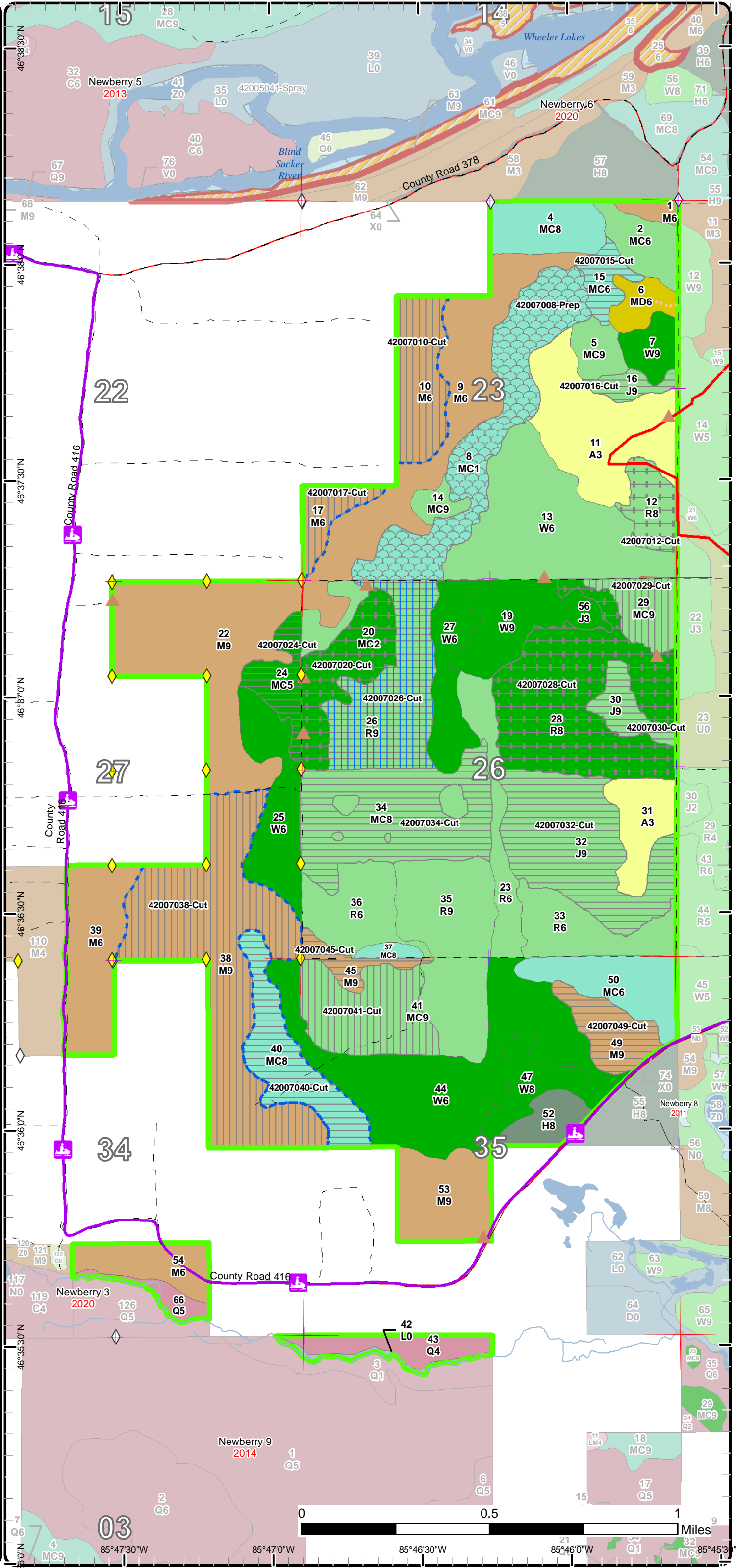
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 7
 T49N, R12W, Sec. 23, 26, 27, 34, 35
 T48N, R12W, Sec. 2, 3
 County: Luce
 Unit: Newberry
 Mgmt Area: Deer Park
 YOE: 2019
 Acres: 1870.3 GIS Calculated
 Examiner: Jason Tokar
 Map Revised: 12/11/2017
 Map Phase: Post-Review



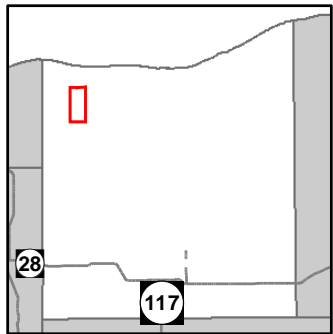
- Miris Corners
- Remonumented Section Corners
- Survey Grade GPS Corners
- Field Grade GPS Corners
- Counties
- Berms
- Snowmobile Trails
- Designated ATV
- Designated Snowmobile Trails
- County Gravel Roads
- Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Treatments with Site Conditions
- Clearcut (w/Reserves)
- Harvest, Overstory Removal
- Seed Tree (w/Reserves)
- Shelter Wood (w/Reserves)
- Site Prep
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 612 - Lowland Coniferous Forest
- 622 - Lowland Shrub
- Lakes



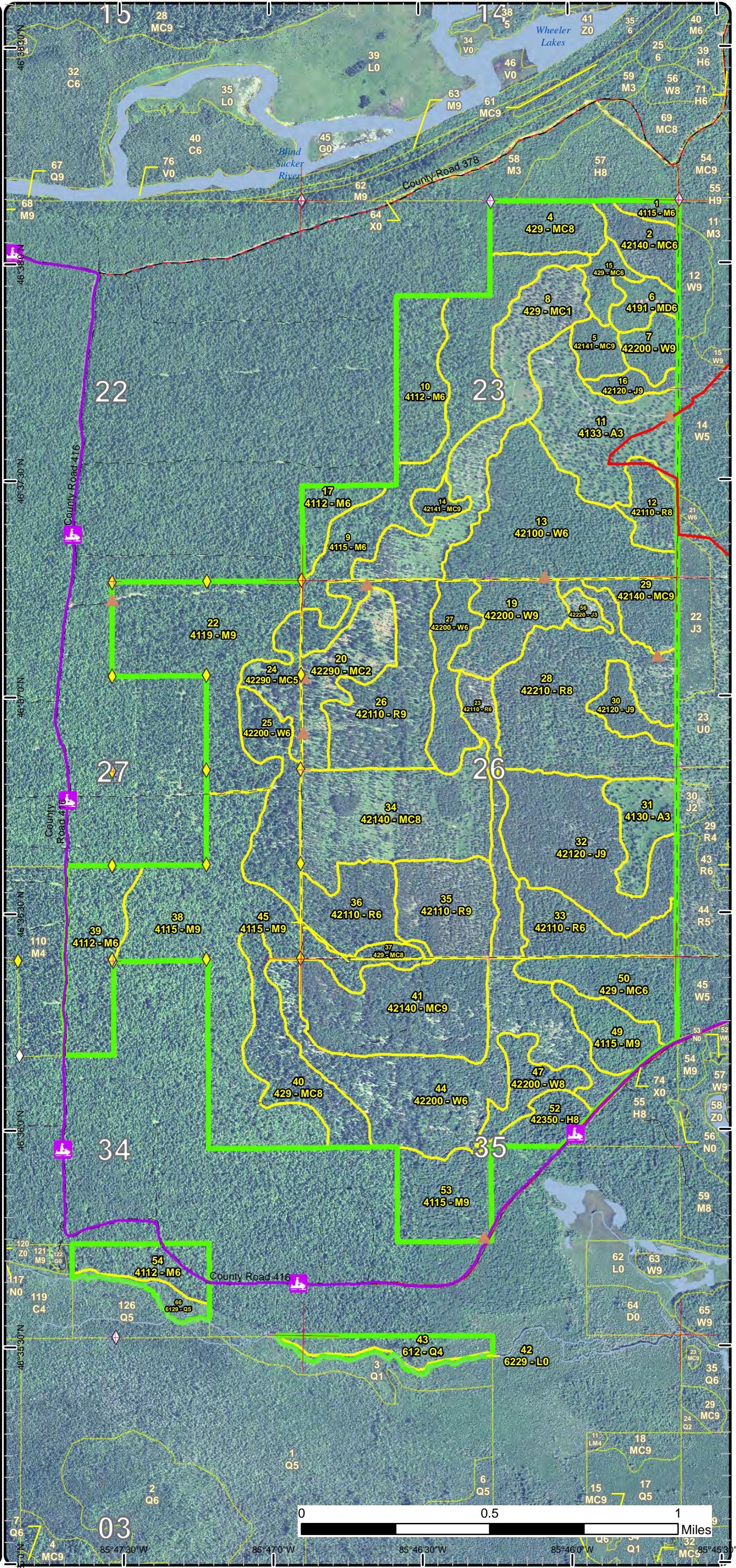
46°35'00"N 85°47'30"W 85°47'00"W 85°46'30"W 85°46'00"W 85°45'30"W

Stand Boundary Map

Compartment: 7
 T49N, R12W, Sec. 23, 26, 27, 34, 35
 T48N, R12W, Sec. 2, 3
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 Examiner: Jason Tokar
 Map Revised: 12/11/2017
 Map Phase: Post-Review

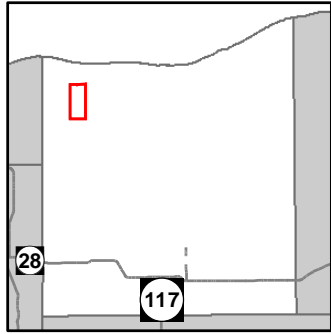


- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
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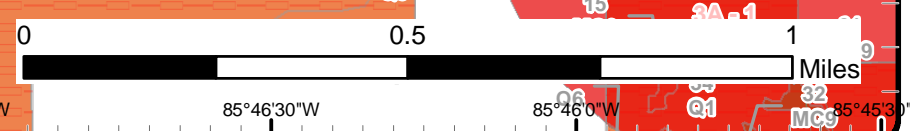
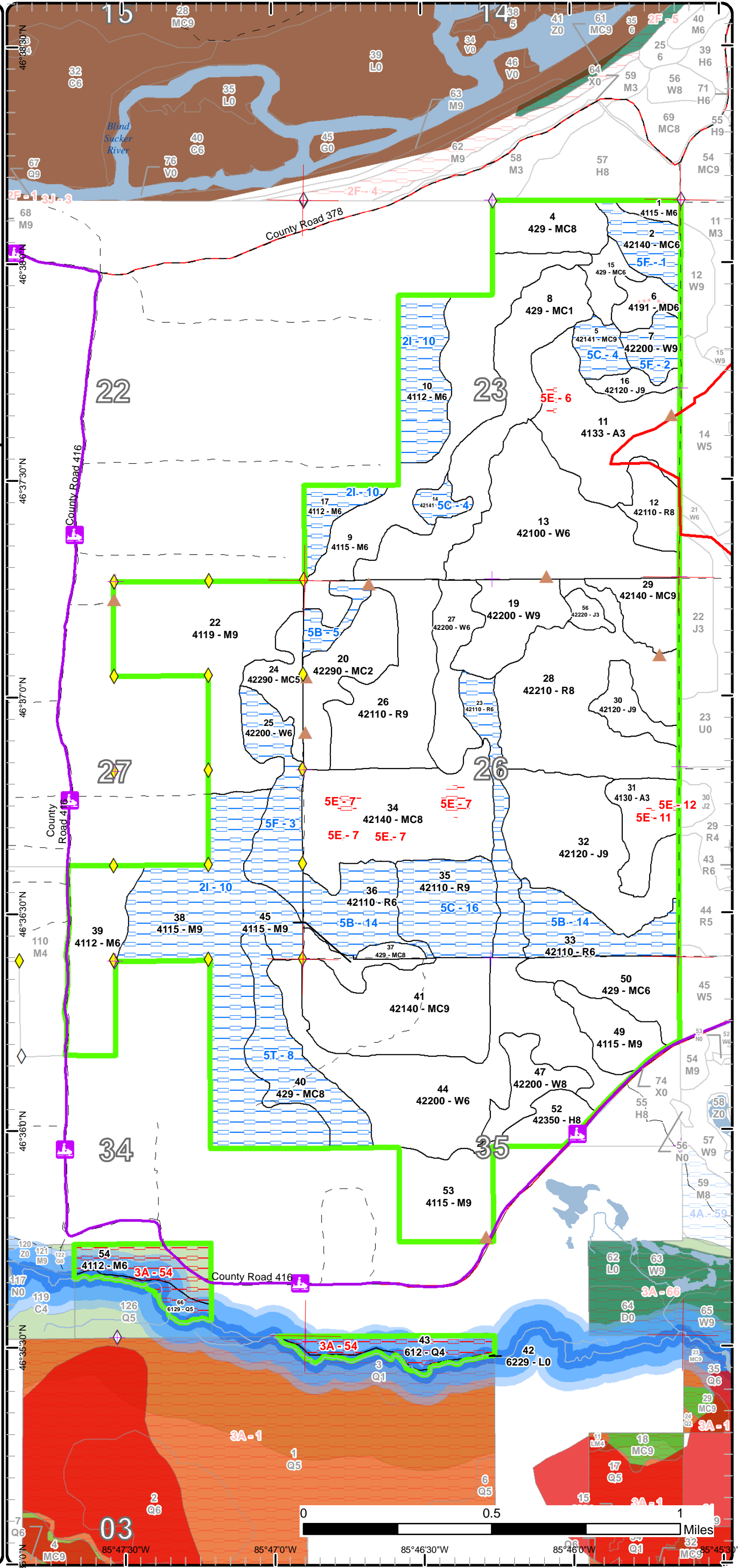


Special Conservation Areas & Site Conditions Map

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 T48N, R12W, Sec. 2, 3
 County: Luce
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- Miris Corners
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- ▲ Berms
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- Gravel Roads
- County Poor Dirt Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 2I: Survey needed
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 5T: Contingency Treatment for Forest Health Concerns
- 3A: Conservation Values incompatible with harvest at this time
- 5E: Long-Term Retention
- Stand Boundaries
- Ecological Reference Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Verified Type 1 Old Growth
- Verified Type 2 Old Growth
- Wildlife Management Areas
- Habitat Corridor
- Other Habitat Area
- Recreational/Scenic Value Area



Report 1 – Total Acres by Cover Type and Age Class

Newberry Mgt. Unit
Jason Tokar : Examiner

Compartment 7

Year of Entry 2019



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89
Hemlock	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	16
Jack Pine	0	0	6	0	0	0	0	0	101	0	0	0	0	0	0	0	0	0	107
Lowland Conifers	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	27
Lowland Shrub	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Mixed Upland Deciduous	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	12
Natural Mixed Pines	0	0	36	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	54
Northern Hardwood	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0	468	506
Planted Mixed Pines	0	0	0	0	0	0	0	74	143	0	0	0	0	0	0	0	0	0	216
Red Pine	0	0	0	0	0	0	0	0	321	0	0	0	0	0	0	0	0	0	321
Upland Conifers	0	73	0	0	0	0	0	0	0	41	42	0	0	0	0	0	0	33	189
White Pine	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	310	330
Total	4	162	42	0	0	12	0	92	565	106	62	16	0	0	0	0	0	811	1871



Report 2 – Treatment Summary

Newberry Mgt. Unit

Year of Entry: 2019

Acres of Harvest

Compartment 7

Total Compartment Acres: 1,870

Commercial Harvest - 524
 Harvests with Site Condition - 223
 Next Step Harvest - 0
 Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Jack Pine	101	0	0	0	0	0	0	0	0	101
Natural Mixed Pines	18	0	0	0	0	36	0	0	0	54
Northern Hardwood	32	0	0	182	0	0	0	0	0	214
Planted Mixed Pines	80	0	0	67	0	0	0	0	0	146
Red Pine	0	0	0	60	0	119	0	0	0	179
Upland Conifers	52	0	0	0	0	0	0	0	0	52
Total	283	0	0	60	249	0	156	0	0	747

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	747	73	0	0	0	0	0	0	0	820
Next Step	0	463	253	0	0	80	1084	0	0	1880
Total	747	536	253	0	0	80	1084	0	0	2700



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
8	42007008-Prep	73.1	429 - Mixed Upland Conifers	Sapling Poor	4	Immature	SitePrep	Trenching	4212 - Planted Jack Pine	Even-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Trench site for planting of jack pine.											
<u>Specs:</u>											
<u>Next Step</u> Planting, Initial Plant; Monitoring, Artificial Regen(1yr)											
<u>Treatments:</u>											
<u>Acceptable</u> Jack pine											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
10	42007010-Cut	35.5	4112 - Maple, Beech, Cherry Association	Poletimber Well	85	81-110	Harvest	Shelterwood with Retention	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition: Survey Needed								
<u>Prescription</u> Shelterwood with retention. Remove overmature, large diameter red maple. Maintain most of the hemlock and a component of large diameter white pine. Residual BA of 50-60. Protect small poles and advanced regeneration during harvest.											
<u>Specs:</u>											
<u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)											
<u>Treatments:</u>											
<u>Acceptable</u> Red maple with sugar maple, beech and yellow birch and lesser components of white pine and hemlock.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
12	42007012-Cut	17.8	42110 - Planted Red Pine	Sawtimber Medium	79	51-80	Harvest	Overstory Removal	4221 - Natural Red Pine	Two-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Overstory removal. Leave 10 BA of red pine for retention. Harvest will have to be monitored to make sure current regeneration is not destroyed.											
<u>Specs:</u> No roads, only main skid trails, laid out prior to sale.											
<u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)											
<u>Treatments:</u>											
<u>Acceptable</u> Red pine with component of white pine, jack pine, aspen and maple. Some aspen.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											
15	42007015-Cut	11.4	429 - Mixed Upland Conifers	Poletimber Well	92	111-140	Harvest	Clearcut	429 - Mixed Upland Conifers	Even-Aged	Draft Field Boundary
Habitat Cut: No			Site Condition:								
<u>Prescription</u> Clearcut, no retention due to small acreage. Retain 1 white pine or hemlock per acre.											
<u>Specs:</u>											
<u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)											
<u>Treatments:</u>											
<u>Acceptable</u> Spruce and balsam with white pine, red maple, aspen.											
<u>Regen:</u>											
<u>Other</u>											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/01/2018											



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
16	42007016-Cut	8.0	42120 - Planted Jack Pine	Sawtimber Well	79	111- 140	Harvest	Clearcut	4212 - Planted Jack Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Clearcut, no retention. Small acreage. Follow harvest with trench and plant to jack pine

Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable Planted jack pine with a component of red pine, white pine and maple

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

17	42007017-Cut	14.6	4112 - Maple, Beech, Cherry Association	Poletimber Well	90	81-110	Harvest	Shelterwood with Retention	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition: Survey Needed**

Prescription Shelterwood. Remove low quality red maple. Retain most of the hemlock and a component of white pine. Residual BA of 40-50.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Red maple, beech, sugar maple.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

20	42007020-Cut	36.2	42290 - Natural Mixed Pine	Sapling Medium	16	Immatur re	Harvest	Overstory Removal	42290 - Natural Mixed Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Overstory removal. Remove all merchantable red pine and white pine. Mark 2 trees per acre to retain, red pine and white pine greater than 20 inches in diameter. Be sure to protect all red pine, jack pine and white pine regeneration during harvest. No roads into the stand. Only main skid trails, laid out ahead of time.

Specs:

Next Step SitePrep, Scarification; Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Jack pine, red pine, white pine.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

24	42007024-Cut	18.2	42290 - Natural Mixed Pine	Poletimber Medium	66	51-80	Harvest	Clearcut	4222 - Natural Jack Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clearcut, no retention. Small acreage, narrow stand. Retain 12 white pine throughout the stand. Harvest this stand while managing stands 20, 26. Scarify for JP following harvest.

Specs:

Next Step SitePrep, Scarification; Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Jack pine with a component of spruce, white pine, maple

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
26	42007026-Cut	60.0	42110 - Planted Red Pine	Sawtimber Well	79	51-80	Harvest	Seed Tree with Retention	42210 - Natural Red Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Seed Tree. Residual BA of 20-30 sq ft. Keep large diameter red pine and white pine, 20 inches or greater. Specify to protect any red pine and white pine regeneration. No roads, just main skid trails, laid out prior to harvesting. Northwestern portion of the stand is not part of the treatment. More maple, balsam and aspen understory in that portion of the stand. Follow harvest with double scarification or use "the claw" that Shingleton is prescribing.

Next Step SitePrep, Scarification; Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Red pine with white pine and jack pine.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

28	42007028-Cut	101.6	42210 - Natural Red Pine	Sawtimber Medium	79	51-80	Harvest	Overstory Removal	42290 - Natural Mixed Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Overstory removal. Leave 20 BA of red pine and/or white pine. Any access roads will need to be laid out ahead of time to protect advanced regeneration.

Next Step SitePrep, Scarification; Monitoring, Natural Regen (Intermediate); Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Red pine, jack pine, and white pine with a component of aspen and maple.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

29	42007029-Cut	19.7	42140 - Planted Mixed Pine	Sawtimber Well	77	111-140	Harvest	Shelterwood with Retention	42210 - Natural Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Shelterwood. Manage for red pine. Residual BA of 30 sq ft. Remove all jack pine, and most of white pine. Remove any aspen, spruce and maple that may be present. Concentrate on red pine as residual. Leave one 24 inch or larger white pine (possibly legacy trees) for every 4 acres with a 50 foot diameter circle around it as uncut. Follow harvest with a double scarification to promote red and jack pine regeneration.

Next Step SitePrep, Scarification
Treatments:

Acceptable Red pine with a component of jack pine and white pine.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

30	42007030-Cut	14.0	42120 - Planted Jack Pine	Sawtimber Well	79	141-170	Harvest	Clearcut	4212 - Planted Jack Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clearcut, no retention. Small acreage and narrow stand. Lots of diversity adjacent to the stand. Could possibly leave 1-2 red pine and white pine per acre.

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)
Treatments:

Acceptable Jack pine with smaller components of red pine, white pine, aspen and maple
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
32	42007032-Cut	78.6	42120 - Planted Jack Pine	Sawtimber Well	79	111-140	Harvest	Clearcut with Retention	4212 - Planted Jack Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Clearcut with retention. Leave retention pocket(s). Retention between 3-5% of stand acreage. No individual tree retention. Leave large diameter trees in the red line. One retention pocket should be located near along stand 31, should include spruce.

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(3yr)

Acceptable Regen: Jack pine, with component of red pine, white pine, maple.

Other Comment:

Proposed Start Date: 10/01/2018

34	42007034-Cut	79.7	42140 - Planted Mixed Pine	Sawtimber Medium	79	1-50	Harvest	Clearcut with Retention	4212 - Planted Jack Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clearcut with retention\overstory removal. Remove all red pine, white pine, spruce from the overstory. Retain current retention pockets from previous harvest. Follow the harvest with trenching, herbicide for the maple regeneration, and plant to jack pine.

Next Step SitePrep, Trenching; Pesticide, Aerial; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr); Monitoring, Treatments: Herbicide Use

Acceptable Regen: Planted jack pine with red pine, white pine and lesser components of aspen and maple

Other Comment:

Proposed Start Date: 10/01/2018

38	42007038-Cut	131.9	4115 - Y.Birch, Hemlock NH	Sawtimber Well	85	141-170	Harvest	Shelterwood with Retention	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition: Survey Needed**

Prescription Shelterwood with retention. Remove lower quality red maple. Maintain the hemlock pockets and a component of large diameter white pine.

Specs: Mark some white pine for cut. Residual BA of 40 sq ft. Try to protect as much maple present in the understory as possible.

Next Step Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Red maple with a component of white pine, hemlock, beech and balsam.

Other Comment:

Proposed Start Date: 10/01/2018

40	42007040-Cut	41.0	429 - Mixed Upland Conifers	Sawtimber Medium	88	111-140	Harvest	Clearcut with Retention	429 - Mixed Upland Conifers	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition: Contingency Treatment**

Prescription Clearcut with retention. Leave 2 trees per acres of various species for retention. Leave hemlock.

Next Step Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: White spruce, white pine, balsam, maple and aspen

Other Comment: Stand will be harvested if spruce budworm infects the stand. Otherwise hold the treatment for 10 years.

Proposed Start Date: 10/01/2018



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
41	42007041-Cut	46.8	42140 - Planted Mixed Pine	Sawtimber Well	65	81-110	Harvest	Shelterwood with Retention	42210 - Natural Red Pine	Two-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Shelterwood. Treat western 2/3 of the stand with a shelterwood. Manage for red pine. Reduce BA to 30-40 sq ft of red pine. Remove white pine and other species. Leave white pine in areas of less red pine to maintain residual BA of 30-40. Follow harvest with a scarification to promote red pine regeneration.

Next Step SitePrep, Scarification; Monitoring, Natural Regen (Intermediate)

Acceptable Regen: Red pine with white pine, and lesser components of maple, aspen, spruce.

Other Comment:

Proposed Start Date: 10/01/2018

45	42007045-Cut	10.1	4115 - Y.Birch, Hemlock NH	Sawtimber Well	85	141- 170	Harvest	Clearcut with Retention	4191 - Mixed Upland Deciduous with Conifer	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clearcut with retention. Remove all red maple, beech, spruce, balsam, aspen. Remove 2/3 of white pine BA. Retain all hemlock and any yellow birch.

Next Step ; Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Red maple, aspen, and beech with a component of hemlock, white pine and red pine.

Other Comment:

Proposed Start Date: 10/01/2018

49	42007049-Cut	22.2	4115 - Y.Birch, Hemlock NH	Sawtimber Well	85	111- 140	Harvest	Clearcut with Retention	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clearcut with retention. Remove all maple, spruce, aspen. Remove a component of white pine (poor quality, dead tops), but maintain some large diameter white pine (1/acre). Retain all hemlock and yellow birch. Leave species diversity of mature trees in the red line. Protect regeneration during sale operations.

Next Step Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Red maple, beech, yellow birch and aspen with a component of white pine and hemlock.

Other Comment:

Proposed Start Date: 10/01/2018

**Total Treatment
Acreage Proposed: 820.4**

Report 4 – Site Conditions

Newberry Mgt. Unit
Jason Tokar : Examiner

Compartment: 7
Year of Entry: 2019

Availability for Management

Total	Acres	Acres Avail	Acres
Acres	Available	<i>With Condition</i>	Not Available

Dominant Site Conditions

2I 5B 5C 5F 5T 3A 5E

89	24	0	65	Aspen							65
16	16	0	0	Hemlock							
106	106	0	0	Jack Pine			0				
27	0	0	27	Lowland Conifers						27	
4	4	0	0	Lowland Shrub							
12	12	0	0	Mixed Upland Deciduous							
54	54	0	0	Natural Mixed Pines			0				
506	300	182	24	Northern Hardwood	182		0			24	
216	173	37	6	Planted Mixed Pines			18	18			6
322	179	142	0	Red Pine		74	68				
189	148	41	0	Upland Conifers					41		
330	278	52	0	White Pine			52				
1,870	1,295	454	121	Total Forested Acres	182	74	86	70	41	51	71
	69%	24%	6%	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.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	5F: Evaluated for Forest Health Considerations	19	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Evaluated for SBW.							
2	Available	5F: Evaluated for Forest Health Considerations	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Evaluated for SBW.							

Report 4 – Site Conditions

Newberry Mgt. Unit
Jason Tokar : Examiner

Compartment: 7
Year of Entry: 2019

3	Available	5F: Evaluated for Forest Health Considerations	38	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Evaluated for SBW.							
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	18	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	5B: Maintain for regeneration purposes	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	5E: Long-Term Retention	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Available	5T: Contingency Treatment for Forest Health Concerns	41	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stand to be harvested if/when Spruce Budworm (SBW) is found in the stand.							
10	Available	2I: Survey needed	182	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Newberry Mgt. Unit
Jason Tokar : Examiner

Compartment: 7
Year of Entry: 2019

11	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
14	Available	5B: Maintain for regeneration purposes	65	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Hold for 10 years to allow the red pine and white pine regeneration establish before another harvest.							
16	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	68	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
54	Unavailable	3A: Conservation Values incompatible with harvest at this time	51	1A: Federal/State/Local Law	3G: Other Influence zones - See comments	Unspecified	Unspecified
Comments: Stand falls within the Two Hearted River Natural River Zone							

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 5 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				



Report 6 – 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.

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

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
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.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4115 - Y.Birch, Hemlock NH	Poletimber Well	5.1	85	81-110	Low quality red maple. Beech is dying out. Good component of hemlock and white pine.
2	42140 - Planted Mixed Pine	Poletimber Well	18.5	79	81-110	Combined stands 2 and 3 from 2007 YOE. Mixed stand of pine, red pine, jack pine and white pine. Areas with more jack pine. Component of balsam and spruce, also red maple. Western portion of the stand has smaller diameter white pine, eastern portion has larger white pine. Rubicon sand.
4	429 - Mixed Upland Conifers	Sawtimber Medium	26.7	95	51-80	Stand was harvested as "Lucky 7 Hardwoods", sale #023-99-01. Completed on 7/26/02. Marked as a leave tree (Beech and a few red maple). All Hemlock and white pine were left as residual. Multiple sizes of hemlock. 90% of beech residual is dead. Stand is now hemlock, white pine and a few red maple over an understory of red maple stump sprouts and some balsam and hemlock. Long term MO for the stand is hardwoods with some hemlock regeneration.
5	42141 - Planted Mixed Pine, Mixed Deciduous	Sawtimber Well	11.7	79	81-110	Mixed pine stand of red, white and jack. Lots of structural diversity. Large diameter white pine and red pine. Pole size jack pine, red pine, white pine, white birch, maple, balsam. White pine is very limby. Planted in 1940.
6	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	11.9	49	51-80	Clearcut in 1968. Good regeneration of maple, white birch, beech, balsam and a few hemlock. Stand is transitioning to an M5/M6, red maple, white birch, beech, balsam, occasional yellow birch. Younger trees are 3-6 inches in diameter, some averaging 2 merchantable sticks. Large hemlock, some maple and white pine which were residual after the last harvest.
7	42200 - Natural White Pine	Sawtimber Well	13.2	95	141-170	White pine stand with a real mix of species. Good amount of large diameter, tall white pine. Pockets of W9. Some mortality within the stand. Components of maple, balsam, beech, aspen and spruce.
8	429 - Mixed Upland Conifers	Sapling Poor	73.1	4	Immature	Stand harvested as sale #029-09-01, Knotched Log Pine. Completed 10/14/13. Scarification yet to be done as of 11/12/13. Regen 2016: 805 TPA of red maple, 268 TPA of balsam fir, 80 TPA of red pine and 53 TPA of white pine. Residual BA of 20. Stand was mature jack pine, tall and fairly large diameters. MO of jack pine. Regeneration check, as well as inventory doesn't show any jack pine regeneration yet. Some balsam and maple regeneration.
9	4115 - Y.Birch, Hemlock NH	Poletimber Well	81.6	85	81-110	Northern hardwoods with a good white pine and hemlock component, especially in both the northern and southern ends. White pine ranges from 8 - 18 inch in diameter. Beech is dying out of the stand. Low quality, multiple stem red maple and yellow birch. Red maple of diameter classes throughout. Good hemlock regeneration. Nice large diameters throughout. Lots of hemlock "nurse logs". Last cut in the early 1960's. Stand 18 (4 acre white pine stand from 2007 YOE) was combined in with this stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
10	4112 - Maple, Beech, Cherry Association	Poletimber Well	35.5	85	81-110	Small diameter red maple poles with overmature red maple and large beech throughout. Beech is dying out of the stand. Lots of maple 3-5 inches in diameter. Good sugar maple component. Areas with larger average diameter. Scattered large white pine and hemlock. Best quality is in the sugar maple and the smaller diameter red maple poles.
11	4133 - Aspen, Mixed Pine	Sapling Well	65.3	4	Immature	Stand harvested as sale #031-09-01, Curious Marten Aspen. Completed 10/14/13. Left most of the large white pine and red pine, all of the hemlock. Stand is regenerating nicely to aspen with component of maple, white pine, balsam. Regeneration is 5-8 ft tall. Red maple is stump sprouting. Good regeneration in open areas and a little less regen in areas where overstory was left.
12	42110 - Planted Red Pine	Sawtimber Medium	17.8	79	51-80	Stand was harvested in 2000. Sale #008-99-01. Stand was typed as a J6 prior to harvest. Due to residual BA of red pine and white pine left from the harvest, little to no jack pine regeneration and the MO for the stand has been changed from jack pine to red pine. Stand is more of an R5/R8 with R6/R9 pockets. Good red pine regeneration 5-10 ft tall throughout. North portion of the stand has more aspen regen 10-15 ft tall. Some white pine and occasional jack pine regeneration. Access road from sale is full of red pine regen. In areas of higher overstory BA, regeneration is sparse.
13	42100 - Planted White Pine	Poletimber Well	86.5	79	81-110	Stand thinned as sale #008-99-01. Completed 2000. Notes from 1994 state "the stand was planted to a mix of red, white and jack pine but is converting to white pine. Expand and maintain aspen clones where feasible". Stand is now a white pine stand with a good mix of species regenerating (asp, red maple, white pine, red pine and jack pine). Overstory of white pine and red pine of all sizes and heights. Good aspen and maple regeneration 20 ft tall white pine and red pine ranging from 4 ft to 10 ft tall on average. Access road from the sale is choked in with red pine 4-6 ft tall. Stand has a good overstory of mainly white pine with a good component of red pine, with an established understory of maple, aspen, red pine, white pine and some jack pine. Nice two aged stand.
14	42141 - Planted Mixed Pine, Mixed Deciduous	Sawtimber Well	6.6	79	111-140	Small acreage stand of white pine with a mix of species. All sizes of white pine, low quality aspen and some red pine.
15	429 - Mixed Upland Conifers	Poletimber Well	11.4	92	111-140	Very mixed stand. Mainly balsam and low quality hardwoods, white spruce (large dbh), hemlock. Beech is dying out. Large diameter white pine throughout. Component of aspen, hemlock, red pine and yellow birch. Some mortality in the balsam and spruce.
16	42120 - Planted Jack Pine	Sawtimber Well	8.0	79	111-140	Mature jack pine stand. Tall and fairly large diameter jack pine. Some evidence of budworm. Jack pine starting to decline. Component of larger red pine and white pine. Edges have more of a mix of species.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	4112 - Maple, Beech, Cherry Association	Poletimber Well	14.6	90	81-110	Nice tall red maple stand. Pockets of M9. Decent quality in areas. Majority of the stand is beginning to show signs of decline in the maple. Most of the beech is dead. Good component of yellow birch. Scattered sugar maple. East edge is lower quality with some aspen mixed in. Stand was held for 10 years due to large cuts on adjacent private land the last year of entry.
19	42200 - Natural White Pine	Sawtimber Well	31.5	79	81-110	Mixed pine stand of white pine and red pine. Stand was harvested via shelterwood as sale #029-09-01, Knotched Log Pine. Completed 10/14/13. Residual BA was higher than prescribed. Regen check 2016: 1091 TPA of red maple, 492 TPA of white pine and 128 TPA of red pine. Stand is regenerating from the harvest, but with the residual BA higher than prescribed with a shelterwood, some areas don't have as much regeneration. Stand is primarily a white pine stand with a good red pine component. Aspen, Jack pine and maple were removed with the harvest. White pine regeneration 3-6 ft tall, aspen patches of regen 10-15 ft tall. Red pine regeneration is in the areas with a more open canopy, ranging from 2-4 ft tall. Some maple regen as well, up to 10 ft tall. North/Northwest portion of the stand has thicker aspen and maple regeneration. Check in 10 years. If regeneration is more established, prescribe a shelterwood cut.
20	42290 - Natural Mixed Pine	Sapling Medium	36.2	16	Immature	Stand was harvested as sale #010-99-01. Completed in June, 2000. Scarified in July 2001. Regen check in May 2004 showed 808 tr/ac - mixed regen. Stand is regenerating to a mix of jack pine and red pine with a lesser component of white pine. More open areas are regenerating better to jack pine and other areas have more red pine regeneration. Jack pine regeneration is 10-20 ft tall. Red pine and white pine ranges from 3-10 ft tall. Some stump sprout red maple 15 ft tall, along with some balsam regeneration. Some residual red pine and some white pine left after the harvest, ranging from 10 inches up to 18 inches in diameter with scattered larger ones. More residual red pine than white pine. Patchy.
22	4119 - Mixed Northern Hardwoods	Sawtimber Well	95.7	90	51-80	Red maple stand with a component of hard maple and yellow birch. Good component of white spruce, hemlock and white pine. More conifers along the east stand edge and southern portion of the stand. Some dieback and mortality in red maple. Super canopy white pine throughout. Component of hemlock. Good maple in the understory throughout the stand. Stand harvested via selection as sale #039-09-01, "Stellwagon Hardwoods". Complete 07/22/11. Residual BA average between 60-80. Some white pine and white spruce were removed. (east and south). Stand now has a thick understory of maple and beech.
23	42110 - Planted Red Pine	Poletimber Well	27.1	79	141-170	Stand was planted in 1938. Mixed stand of red pine and jack pine with a component of limby white pine. Red pine and jack pine are larger diameter. White pine is smaller diameters, 8-9 inch. Scattered larger diameter white pine. Stand has some open areas. Stand is a long narrow N/S stand, good corridor between harvests to east and west.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	42290 - Natural Mixed Pine	Poletimber Medium	18.2	66	51-80	Open area that has filled in with jack pine, white pine and spruce. Jack pine is 3-4 sticks merchantable height. Some maple in the northern portion of the stand. White pine is limby and weeviled. Jack pine is showing signs of mortality and decline, as is the spruce. Grass opening filling in with bushy white pine and some jack pine.
25	42200 - Natural White Pine	Poletimber Well	38.5	95	81-110	Natural, all aged white pine stand, ranging from W5/W6 to W8/W9. Larger diameter white pine in the northern 1/2 of the stand. Most of the smaller white pine is 4-6 sticks in height. Thick in spots. Stand is mainly weeviled white pine with a component of spruce and aspen with a few red maple. Very low quality in the aspen and red maple. Stand has a lot of structural diversity. Hold for 10 years before harvesting due to adjacent stands being harvested.
26	42110 - Planted Red Pine	Sawtimber Well	69.5	79	51-80	Stand was typed as jack pine originally. Harvested as sale #10-99-01. Completed June, 2000. Scarified in July 2001. Regen check in May 2004 showed 808 tr/ac - mixed regen. Most of the regeneration is red pine, ranging from 5-15 ft tall on average. Very thick regeneration of red pine on abandoned timber sale roads. White pine regeneration is variable. Scattered jack pine regen. Some red maple and aspen regeneration as well. Best regen is on the abandoned sale access road. MO of the stand is changed from jack pine to red pine. Stand is now a red pine stand with a white pine component. BA ranges from 50 - 120 sq ft of red pine and white pine.
27	42200 - Natural White Pine	Poletimber Well	28.9	95	111-140	Originally part of the same stand as Stand 19. Separated out due to the higher component of aspen, and white birch. Mainly a white pine stand with a real mix of other species (Red pine, Red maple White birch, Aspen, Balsam, White spruce). Scattered jack pine. Maple and birch is in clumps in areas. Aspen showing decline. White pine ranges from mainly 8-10 inches up to 20+ inches in diameter. Stand has alot of structural and species diversity throughout the understory.
28	42210 - Natural Red Pine	Sawtimber Medium	101.6	79	51-80	Stand was harvested as sale #37-99-01. Completed 2001. Scarified in July 2001. Regen check in may 2004 showed 1323 tr/ac - red and white pine mix. Stand was originally type as a J6 last entry year. As a result of the harvest, stand is now a red pine stand. Good regeneration of jack pine, red pine, white pine and aspen. White pine regeneration in areas with higher BA, 10-20 ft tall. Aspen regeneration is also 10-20 ft tall, patchy. Open areas have good jack pine and red pine regen. Jack pine is 10-20 ft tall while red pine regen on average is about 8-10 t tall. Old sale access road is choked full of red pine and white pine regen.
29	42140 - Planted Mixed Pine	Sawtimber Well	19.7	77	111-140	Mixed pine stand. Planted in 1940 to a mix of red pine, white pine and jack pine. Primarily a red pine stand with very good component of jack pine and white pine. Red pine appears to be the best quality. Jack pine is mature and showing some decline and mortality. White pine is various size classes, ranging from 6 inch dbh up to greater than 24 inch dbh. Much of it is limby and short. Has an appearance of a natural stand with the range of age classes and size classes. Center of the stand has a higher jack pine component.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
30	42120 - Planted Jack Pine	Sawtimber Well	14.0	79	141-170	Mature jack pine stand with a good component of red pine. Also components of white pine and aspen. Tall, large diameter jack pine. Higher BA of red pine mixed in with jack pine in the center of the stand. Jack pine showing mortality in many areas in the stand. Red pine is all sizes, good heights. Good component of aspen throughout. White pine is large diameter 14-18 inch and a lot of smaller scrubby white pine 6-8 inches. Stand is mature, was held for diversity during last year of entry.
31	4130 - Aspen	Sapling Well	24.0	4	Immature	Stand harvested as sale #031-09-01, Curious Marten Aspen. Completed 10/14/13. Good mix of regeneration. Bigtooth and quaking aspen, maple, white pine, birch, red pine. 2 small retention pockets from harvest are a mix of red pine, white pine, jack pine, aspen and maple. Scattered large white pine, some white birch also as residual.
32	42120 - Planted Jack Pine	Sawtimber Well	78.6	79	111-140	Jack pine stand with red pine and white pine, lesser components of aspen, white birch and spruce. Jack pine is large diameter throughout. Showing some mortality in the jack pine, up to 10-20 BA on some plots. Red pine is healthy. White pine is mainly smaller, limby. Pockets where the red pine and jack pine is an even mix. Stand is mature. Jack pine is old. Stand was held for diversity last year of entry.
33	42110 - Planted Red Pine	Poetimber Well	32.4	79	81-110	Stand was thinned as sale #35-99-01. Removed jack pine, aspen and maple. Completed 12/2000. Stand has good regeneration of various species. Good red pine regen in areas with open canopy, 6-8 ft tall. Other areas have more white pine and aspen regen 10-15 ft tall. Fairly thick regen in many areas. Pockets of thick maple and aspen regen. Stand BA ranges from 70-120 on average. Two-aged stand now after the harvest.
34	42140 - Planted Mixed Pine	Sawtimber Medium	85.5	79	1-50	<p>Stand harvested via final harvest as sale #030-09-01, First Fawn Jack Pine. Completed 06/26/2012.</p> <p>Regen 2016: 318 TPA of red maple, 106 TPA of balsam, 59 TPA of red maple, and 153 TPA of white pine. No jack pine regen found in survey. Heavier residual on eastern edge.</p> <p>2017: Stand is not regenerating to jack pine. Stand was prescribed for a clearcut with reserves but with the residual that was left, it was more of a light shelterwood. MO of jack pine. Currently, very little jack pine regeneration at all. Regen check in 2016 showed no jack pine. Areas in the stand where the residual BA is too high to promote good jack pine regeneration, ranging from 30-90 with many areas 50 or higher. Overstory of red pine, white pine and a few spruce and white birch. More white pine residual in western portion of the stand. Jack pine was old and showing lots of decline and mortality when harvested. Currently the stand has marginal regeneration of maple stump sprouts, balsam and some white pine. Retention areas of a mix of jack pine, white pine, red pine and aspen. Management objective for the stand was jack pine.</p>



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
35	42110 - Planted Red Pine	Sawtimber Well	40.7	79	111-140	<p>Stand is a combination of old stand 35 and southern portion of stand 34. West half (original stand 35) was thinned as sale #35-99-01. Completed 12/2000. Entire new stand was harvested via shelterwood harvest as sale #030-09-01, First Fawn Jack Pine. Completed 06/26/2012.</p> <p>Regen 2016 (western half - original stand 35): 761 TPA of red pine, 152 TPA of white pine, 456 TPA of balsam fir, 228 TPA of red maple. Good red pine regeneration in skid roads and small clearing. Residual BA of 90.</p> <p>Regen 2016 (eastern half - old stand 34): 318 TPA of red maple, 106 TPA of balsam, 59 TPA of red maple, and 153 TPA of white pine. No jack pine regen found in survey. Residual BA of 30. Heavier residual on eastern edge.</p> <p>The stand is now averaging a BA of 120-140, with some areas that are more open with a lower BA. Good red pine regeneration in the western half of the stand (thinned twice). Eastern half doesn't have much red pine regeneration. Small sawlog size stand. Average diameter of 11 inch. Open area in the middle of the stand is full of red pine and white pine regeneration.</p>
36	42110 - Planted Red Pine	Poletimber Well	32.4	79	81-110	<p>Stand was thinned in 2000 as sale #35-99-01. Red pine sawtimber stand with a good white pine component. A ton of red pine regeneration, mainly in the open canopy areas and along the roads and skid trails from the thinning. Sale access road is choked full of red pine and some white pine regen. Red pine regeneration is 2-8 ft tall. White pine, maple, balsam, spruce and some aspen regeneration throughout. Red pine overstory is sawtimber size. White pine is mainly pulp (8-9 inch diameter) with a component of large, 18-24 inch diameter white pine as well. Most of regeneration from the harvest is red pine. Better quality in the residual stand is in the red pine. Portions of the stand have more white pine, but majority of the stand is red pine.</p>
37	429 - Mixed Upland Conifers	Sawtimber Medium	4.1	90	51-80	<p>Stand was harvested as sale #35-99-01. Completed 2000. Treatment was a seed tree harvest. All hemlock and white pine was retained along with marked beech and yellow birch leave trees. Beech is dead. Stand is now hemlock and white pine with good maple, balsam, beech, hemlock, red pine and white pine regeneration, all 10-20 ft tall. Very thick understory throughout.</p>
38	4115 - Y.Birch, Hemlock NH	Sawtimber Well	131.9	85	141-170	<p>Red maple with high component of hemlock and white pine. Hemlock patches 8-18 inch diameter. Component of yellow birch. Some very large diameter, tall white pine. A percentage of the beech in the stand is still alive, but not very healthy. Good heights to much of the maple, 5-6 sticks merchantable. Fair amount of young hemlock in the understory. Beech in the stand is dying out. Some top dieback in the hemlock. Overmature red maple, showing signs of dieback, seems and rot..</p>
39	4112 - Maple, Beech, Cherry Association	Poletimber Well	47.0	90	81-110	<p>Stand was cut heavily in 1991. Lower quality overstory of red maple with some hemlock, white pine and white spruce. Understory of maple is where the quality in the stand lies. Very thick throughout. Some top dieback in overstory red maple. Hold for 10 years due to adjacent harvest and also to let the understory continue to establish.</p>



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
40	429 - Mixed Upland Conifers	Sawtimber Medium	41.0	88	111-140	Very tall, large diameter white spruce, 7-8 sticks merchantable height or more. Open grown white pine along the eastern side. Large diameter white pine as well. Low quality red maple. Beech is dying out. Component of hemlock. Small diameter, pole size balsam. Large spruce is declining, crowns at 40%. Understory is thick with balsam and maple with components of spruce and some hemlock.
41	42140 - Planted Mixed Pine	Sawtimber Well	73.9	65	81-110	N/S rows. Planted in 1952. 1994 notes - "Repeated weevil attacks. Mostly white pine survived but there is a component of red pine." Short, very limby. Open in areas. The eastern 1/3 of the stand is a young white pine plantation. The western 2/3 of the stand is a mixed plantation in which the red pine is better quality and larger diameter than the white pine. Most of the western 2/3 of the stand appears to be alternating rows of red pine and white pine. Areas along the north side with small diameter aspen and jack pine. Scattered white spruce.
43	612 - Lowland Coniferous Forest	Poletimber Poor	18.6	86	Unspecified	
44	42200 - Natural White Pine	Poletimber Well	111.4	65	81-110	Western half of this stand is the portion of the 1952 planting that didn't have as much survival (compared to stand 41). Was planted to white pine. Stand also has a mix of natural white pine throughout. Semi open stand in many areas. Wide range of BA, heights and diameters in the white pine. Scattered mature white pine, spruce, red pine. Most of the stand is short, limby white pine of multiple ages and sizes, with small diameter aspen, balsam and spruce. Lots of structural diversity in the stand due to all the different ages and heights of the white pine. Large diameter, weeviled white pine and all size classes down to 2-3 inch white pine regeneration. Open areas with smaller white pine.
45	4115 - Y.Birch, Hemlock NH	Sawtimber Well	10.1	85	141-170	Originally part of stand 38. Made into a separate stand due to the decline, mortality and low quality. Red maple and beech dieback. Aspen is 45-50 years old and is showing decline. Spruce is also showing decline. Balsam in the stand is mature. Stand 37, adjacent to the north, was a similar stand prior to harvest. Based on that stand at present, this stand should be managed the same way.
47	42200 - Natural White Pine	Sawtimber Medium	19.6	96	51-80	Stand Year Origin was 1930. Large diameter white pine, mostly 18-20 inch. Diameter ranges from 10 up to 20+ inches. Tall white pine. Good component of large diameter spruce.
49	4115 - Y.Birch, Hemlock NH	Sawtimber Well	22.2	85	111-140	Low quality red maple stand with a high component of hemlock. Lots of young hemlock in the understory in patches. Dieback and decline in the red maple. Beech is dying out. Overall stand quality is poor. Spruce is showing decline and dead tops. Good component of white pine. Some aspen and yellow birch.
50	429 - Mixed Upland Conifers	Poletimber Well	33.2	90	81-110	Mixed stand. Open grown, limby white pine with spruce, maple, aspen and some balsam and beech. Spruce showing decline. Aspen is short and "tops out" (3 sticks). Low quality red maple, small diameters, poor form. Some quality in the larger diameter white pine. The smaller diameter spruce is healthy while the larger diameter spruce is declining. Open areas with small white pine. A few pockets of jack pine.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
52	42350 - Upland Hemlock	Sawtimber Medium	15.7	100	51-80	Stand was harvested as sale #23-99-01. Completed 7/26/02. Maple, beech and yellow birch leave trees were left along with all hemlock and most of the white pine and white spruce. Hemlock ranges from 10 to 20 inches in diameter, while white pine is very large, up to 40 inches in diameter and very tall. Stand is currently a hemlock and white pine overstory with maple, beech and hemlock regeneration in the understory. Beech residual from harvest is dead. Some young hemlock 2-6 inch dbh and 10-25 ft tall. Long term MO for the stand is still hardwoods with hemlock and white pine.
53	4115 - Y.Birch, Hemlock NH	Sawtimber Well	37.9	85	51-80	Stand harvested via selection as sale #039-09-01, "Stellwagon Hardwoods". Complete 07/22/11. Pockets of larger red maple with hemlock and large beech (M9 pockets). Component of yellow birch and black cherry in the stand. Much of the beech has died. North end of the stand transitions to more of a hardwoods stand with a higher component of hemlock. Good component of maple in the understory, both what was released by the harvest and also new regeneration from the harvest. Supercanopy white pine were retained. Best quality is in the pole size red maple. Abandoned road entering stand that was used for the sale access is bermed at Co Rd 416.
54	4112 - Maple, Beech, Cherry Association	Poletimber Well	24.0	90	111-140	HCVA - Two Hearted River Natural River Zone. Northern hardwoods stand. Mixture of red maple with hard maple, black cherry, yellow birch and hemlock. Ranges from M6 to M9.
56	42220 - Natural Jack Pine	Sapling Well	5.6	16	Immature	Stand harvested as sale #37-99-01. Completed 5/2001. Scarified July 2001. Regen check in May 2004 showed 1323 tr/ac. Good regeneration, mostly jack pine with some red pine. A few scattered small dbh jack pine pockets and scattered red pine left as residual after the harvest. Stand was fairly open before the harvest. Kind of a "valley".
66	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	8.0	86	1-50	HCVA - Two Hearted River Natural River Zone. Corridor along the North Branch of the Two Hearted River. Low quality stunted black spruce and cedar over tag alder.



Stand	Cover Type	Acres	Managed Site	General Comments:
42	6229 - Mixed lowland shrub	3.9	No	Lowland brush within the river corridor