



Shingleton Forest Management Unit Compartment Review Presentation

Compartment #81

Entry Year: 2014

Compartment Acreage: 2,259

County: Schoolcraft

Revision Date: 7/16/2012

Stand Examiner: Adam Petrelius

Legal Description: T42N R17W, Section 36 : T41N R17W, Sections 1, 12, 13

RMU (if applicable): Compartment 81 lies within Garden Thompson Plains Management Area.

Management Goals: The main goal of this compartment is to conduct multiple resource management for current and future generations.

Soil and Topography: The topography within the compartment fairly consistent. Elevation values peak at 682 feet and drop to 620 near the Indian Lake shoreline. With the exception of a few small stands, the entire compartment is forested. Forested land is mostly northern hardwoods, red pine plantations, and aspen. The two most abundant soils are Rubicon Sand and Kalkaska Sand.

Ownership Patterns, Development, and Land Use in and Around the Compartment: State land within this compartment was acquired between 1972 and 1980 from a federal government exchange. The compartment boundary borders private, state land, and some school forest land. It receives heavy use by various people for hunting, berry picking, ORV, walking, riding horses, and fishing. It also sees a lot of illegal use such as littering, off road riding, and firewood theft.

Special Management Designations or Considerations: The northern part of the compartment is a deer wintering area.

Watershed and Fisheries Considerations: Streams are classified from First Quality Cold Water (FQCW) down to Second Quality Warm Water (SQWW). In this area, the FQCW means an excellent trout fishery, one that is supplemented by a Fisheries Division annual stocking program. These waters are generally the famous ones, but also include somewhat smaller waters that are capable of supporting the fish population density necessary to provide a superior angling experience. SQCW implies a cold stream that supports a natural trout population, but is limited by either physical size or lack of spawning/foraging habitat. Its limitations mean that it will never support a heavy angling pressure and harvest, so Fisheries Division does not publicize the water. Local anglers, however, know what the streams support, and do fish them quite a bit. In-stream habitat is usually in the form of large woody debris, or downed trees. Fish need them because they provide protection from overhead predators and because they force water currents to scour holes under and around them. The holes provide more water volume in the stream, keeping it cooler, as well as giving the fish more volume to “hide” in. The woody structure also forces more eddy currents, breaking the “solid” water flow so that fish can get out of the current to rest. First Quality Warm Waters, (FQWW) are large, productive waters capable of supporting a good fishery for either warm-water species or cool-water species. In the Upper Peninsula, the designation generally applies to walleye, pike, musky or smallmouth bass waters. SQWW means small, possibly stagnant, warm streams that produce little to no actual fishery. Although small, their warm temperatures and generally high nutrient levels imply generally a higher productivity than the more “fishable” streams. Their value is attained from the production of forage that migrates downstream into areas of either cold-water or warm-water sports fish populations. For that reason, they are NOT useless

waters, and they should be protected somewhat for the aquatic invertebrate and fish forage that they produce. Beaver populations in these streams could be a benefit, as their dams will increase productivity as well as inhibit sand bedload migration. Fisheries Values Good. Both Dufour and Silver Creeks are classified as FQCW and should be protected as much as possible.

Wildlife Habitat Considerations: This compartment is contained within the Escanaba/Door Peninsula ecological sub-subsection. The growing season is 140 days. Extreme minimum temperatures are around -35 degrees F. Annual average snowfall is 70 inches. The compartment falls within the Garden Thompson Plains Management Area which highlights the following Featured Species: American woodcock, ruffed grouse, wild turkey and white-tailed deer. General Land Office (GLO) Surveyor notes show the circa 1850 upland forest in the northern portion of this compartment was dominated by hemlock with a mixture of beech, sugar maple, birch, and beech. Lowlands were predominantly cedar. The southern portion of the compartment contained open and semi-open pine plains containing red and white pine. Windthrow, fire, and beaver ponding were likely the major forms of natural disturbance. Current upland forests are substantially altered from pre-settlement conditions. While there is a fairly significant amount of northern hardwoods remaining within the compartment, the sugar maple is now the most abundant species. In addition red pine plantations, jack pine plantations, and aspen stands are distributed across the southern half of the department. The silver creek basin is a deer yarding area. Wildlife habitat objectives include maintaining species and structural diversity within and between hardwood stands, maintaining age-class diversity between aspen stands and conifer stands, and maintaining closed canopy conifer stands. There are no known rare species within this compartment. Other wildlife species of interest that may utilize this compartment include red-backed salamander, ring-necked snake, brown thrasher, gray squirrel and southern flying squirrel.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel, an end moraine of medium-textured till and minor peat and muck. The glacial drift thickness varies between 10 and 100 feet. The Silurian Manistique and Burnt Bluff Groups subcrop below the glacial drift. The Burnt Bluff is quarried for stone on private land in Section 8, 3 miles to the west, for the limited production of dimension building stone and decorative stone. Gravel pits are located in Section 15, but potential may be limited. There is no commercial oil and gas production in the UP.

Vehicle Access: A lot of roads are present and the land is mostly upland. Access is very good. A portion of the Silver Creek Grade was formerly closed to use two years ago due to BMP issues.

Survey Needs: Survey work will be needed for timber sale purposes.

Recreational Facilities and Opportunities: Snowmobile Trails 2 and 7 intersect in the Southern portion of the compartment and Trail 7 continues north through much of the compartment. The Indian Lake State Park Westshore Campground lies to the east. Local equestrian's riders frequently use the area and take advantage of a turn-around at intersection of the snowmobile trails listed above.

Fire Protection: Response time to fire will be fairly fast due to good access and distance from Thompson office. A variety of fuels exist, mostly upland and spring fires would be the concern here. This area receives a lot of public use also.

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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Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total
	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 +	Uneven Age	
Aspen	84	9	117	257	57	55	5	0	0	0	0	0	0	0	585
Cedar	0	0	0	0	0	0	0	55	0	9	11	0	0	0	74
Hemlock	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
Herbaceous Openland	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Jack Pine	72	28	0	0	0	0	0	0	0	0	0	0	0	0	100
Lowland Conifers	0	7	0	0	0	0	0	0	0	0	38	0	0	0	45
Lowland Deciduous	0	0	0	0	0	0	0	30	0	0	0	0	0	0	30
Lowland Shrub	14	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	39	0	0	0	0	0	39
Northern Hardwood	0	0	0	0	25	0	0	10	16	745	0	0	0	0	795
Red Pine	18	0	0	0	28	3	420	1	0	0	0	0	0	0	472
Upland Mixed Forest	0	0	25	0	0	0	7	0	0	0	0	0	0	0	32
Urban	36	0	0	0	0	0	0	0	0	0	0	0	0	0	36
Water	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
White Pine	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8
Total	249	44	143	257	110	58	433	104	55	757	49	0	0	0	2259



Table 2 – Proposed Treatment Summaries

Shingleton Mgt. Unit
Year of Entry 2014

Compartment 081
Total Compartment Acres: 2259

Acres by Treatment Type

Commercial Harvest - 1323	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 18	

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	64	0	0	0	0	0		64
Mixed Upland Deciduous	25	0	0	0	0	0		25
Northern Hardwood	10	737	0	0	0	0		747
Red Pine	0	0	0	0	421	0		421
Upland Mixed Forest	66	0	0	0	0	0		66
Total	164	737	0	0	421	0		1323



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
8	41081001-Cut	3.5	42110 - Planted Red Pine	High Density Log	65	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Thin stand to 120 basal area. <u>Specs:</u> <u>Other Comments:</u> Use of the snowmobile trail during snowmobile season for harvesting will not be allowed. Trail may be crossed only during winter months. Some areas of the plantation have rows which are getting very tight to operate. These should be evaluated at time of sale prep and whole rows may need to be removed in areas. <u>Next Steps:</u> Thin again next year of entry. <u>Proposed Start Date:</u> 10/01/2013										
2	41081002-Cut	5.3	4139 - Aspen, Mixed Deciduous	Medium Density Pole	60		Harvest	Clearcut	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Cut all species except hemlock and oak if they exist. Leave the apple trees located within stand. <u>Specs:</u> <u>Other Comments:</u> Chipping is allowed. No winter harvesting for deer yard management. Include small portion that crosses compartment boundary. Less than 3% retention is acceptable due to stands size. <u>Next Steps:</u> Check regeneration next year of entry. <u>Proposed Start Date:</u> 10/01/2013										
10	41081003-Cut	4.0	4110 - Sugar Maple Association	High Density Log	90	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription</u> Mark hardwood according complete marker standards. Designate all beech to be cut. Some areas of stand have beech bark disease present. If resistant trees are found, mark those to leave. Also leave some large mast producing beech with bear claw marks. Make sure that sufficient regeneration holes are created. <u>Specs:</u> <u>Other Comments:</u> No winter harvesting. In areas that were harvested heavily 20 years ago sugar maple regenerated well and out competed the beech. It is very important that overall residual basal area is lower than 80 and sufficient large regen holes are present. Some sinkholes and vernal ponds are located NE of county road 455. No trees should be marked in these areas and equipment should be kept out. <u>Next Steps:</u> Check regeneration next year of entry. <u>Proposed Start Date:</u> 10/01/2013										
4	41081004-Cut	9.7	4116 - Mixed N. Hardwood - Aspen	High Density Log	70	111-140	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Cut all trees except hemlock and oak if they are present. <u>Specs:</u> <u>Other Comments:</u> Winter harvest for deeryard managenet. There is a small pocket in the middle of the stand that has thick fir regeneration. This should be saved for retention. <u>Next Steps:</u> Check regeneration next year of entry. <u>Proposed Start Date:</u> 10/01/2013										



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
8	41081006-Cut	13.3	42110 - Planted Red Pine	High Density Log	65	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Thin stand to 120 basal area. <u>Specs:</u> <u>Other</u> Use of the snowmobile trail during snowmobile season for harvesting will not be allowed. Trail may be crossed only during winter months. <u>Comments:</u> Some areas of the plantation have rows which are getting very tight to operate. These should be evaluated at time of sale prep and whole rows may need to be removed in areas. <u>Next</u> Thin again next year of entry. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013</p>										
8	41081008-Cut	78.7	42110 - Planted Red Pine	High Density Log	65	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Thin stand to 120 basal area. No winter harvesting for deer yard management. <u>Specs:</u> <u>Other</u> Use of the snowmobile trail during snowmobile season for harvesting will not be allowed. Trail may be crossed only during winter months. <u>Comments:</u> Some areas of the plantation have rows which are getting very tight to operate. These should be evaluated at time of sale prep and whole rows may need to be removed in areas. <u>Next</u> Thin again next year of entry. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013</p>										
10	41081010-Cut	199.1	4110 - Sugar Maple Association	High Density Log	90	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<p><u>Prescription</u> Mark hardwood according complete marker standards. Designate all beech to be cut. Some areas of stand have beech bark disease present. If resistant trees are found, mark those to leave. Also leave some large mast producing beech with bear claw marks. Make sure that sufficient regeneration holes are created. <u>Specs:</u> <u>Other</u> Winter harvest for deer yard management. In areas that were harvested heavily 20 years ago sugar maple regenerated well and out competed the beech. It is very important that overall residual basal area is lower than 80 and sufficient large regen holes are present. <u>Comments:</u> Some sinkholes and vernal ponds are located NE of county road 455. No trees should be marked in these areas and equipment should be kept out. <u>Next</u> Check regeneration next year of entry. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2012</p>										
8	41081014-Cut	11.5	42110 - Planted Red Pine	High Density Log	65	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Thin stand to 120 basal area. <u>Specs:</u> <u>Other</u> Use of the snowmobile trail during snowmobile season for harvesting will not be allowed. Trail may be crossed only during winter months. <u>Comments:</u> Some areas of the plantation have rows which are getting very tight to operate. These should be evaluated at time of sale prep and whole rows may need to be removed in areas. <u>Next</u> Thin again next year of entry. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013</p>										



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
10	41081015-Cut	488.2	4110 - Sugar Maple Association	High Density Log	90	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<p><u>Prescription</u> Mark hardwood according complete marker standards. Designate all beech to be cut. Some areas of stand have beech bark disease present. If resistant trees are found, mark those to leave. Also leave some large mast producing beech with bear claw marks. Make sure that sufficient regeneration holes are created.</p> <p><u>Specs:</u></p> <p><u>Other</u> Winter harvest for deer yard management. In areas that were harvested heavily 20 years ago sugar maple regenerated well and out competed the beech. It is very important that overall residual basal area is lower than 80 and sufficient large regen holes are present.</p> <p><u>Comments:</u></p> <p>Some sinkholes and vernal ponds are located NE of county road 455. No trees should be marked in these areas and equipment should be kept out.</p> <p><u>Next Steps:</u> Check regeneration next year of entry.</p> <p><u>Proposed Start Date:</u> 11/05/2012</p>										
22	41081022-Cut	11.9	4119 - Mixed Northern Hardwoods	High Density Pole	80	111-140	Harvest	Group Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal
<p><u>Prescription</u> Create large canopy gaps, 60 to 120 feet diameter, to favor regeneration of intolerant and mid tolerant species. Paths should be marked for equipment to travel from gap to gap.</p> <p><u>Specs:</u></p> <p><u>Other</u> Cut in winter for deer yard management. Creek buffer should be 100 feet at least or on edge of conifer transition zone.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Check regeneration next year of entry.</p> <p><u>Proposed Start Date:</u> 11/05/2012</p>										
23	41081023-Cut	5.1	4136 - Aspen, Mixed Conifer	High Density Pole	52		Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Cut all trees except hemlock and oak.</p> <p><u>Specs:</u></p> <p><u>Other</u> Winter harvest for deer yard management. Buffer creek 100 feet minimum, larger buffer along dense conifer. Do not use 2 inch spec on hardwood.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Check regeneration next year of entry.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
10	41081026-Cut	33.8	4110 - Sugar Maple Association	High Density Log	90	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<p><u>Prescription</u> Mark hardwood according complete marker standards. Designate all beech to be cut. Some areas of stand have beech bark disease present. If resistant trees are found, mark those to leave. Also leave some large mast producing beech with bear claw marks. Make sure that sufficient regeneration holes are created.</p> <p><u>Specs:</u></p> <p><u>Other</u> Winter harvest for deer yard management. In areas that were harvested heavily 20 years ago sugar maple regenerated well and out competed the beech. It is very important that overall residual basal area is lower than 80 and sufficient large regen holes are present.</p> <p><u>Comments:</u></p> <p>Some sinkholes and vernal ponds are located NE of county road 455. No trees should be marked in these areas and equipment should be kept out.</p> <p><u>Next Steps:</u> Check regeneration next year of entry.</p> <p><u>Proposed Start Date:</u> 11/05/2012</p>										



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
28	41081028_sm all-Cut	25.0	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	80		Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<u>Prescription:</u> Cut all trees except hemlock and oak. <u>Specs:</u> <u>Other Comments:</u> Winter harvest for deer yard management required. Buffer creek 100 feet or more depending on slope and conifer component adjacent to creek. <u>Next Steps:</u> Check regeneration next year of entry. <u>Proposed Start Date:</u> 10/01/2013										
32	41081032-Cut	1.2	42110 - Planted Red Pine	High Density Pole	76	171-200	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> Thin to 120 basal area. <u>Specs:</u> <u>Other Comments:</u> Stand is already on contract. <u>Next Steps:</u> <u>Proposed Start Date:</u> 05/01/2012										
8	41081037-Cut	254.6	42110 - Planted Red Pine	High Density Log	65	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> Thin stand to 120 basal area. <u>Specs:</u> <u>Other Comments:</u> Use of the snowmobile trail during snowmobile season for harvesting will not be allowed. Trail may be crossed only during winter months. Some areas of the plantation have rows which are getting very tight to operate. These should be evaluated at time of sale prep and whole rows may need to be removed in areas. <u>Next Steps:</u> Thin again next year of entry. <u>Proposed Start Date:</u> 10/01/2013										
38	41081038-Cut	24.3	4130 - Aspen	High Density Pole	59		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription:</u> Cut all species except hemlock, oak, red pine, and white pine. <u>Specs:</u> <u>Other Comments:</u> Protect all conifer regeneration. <u>Next Steps:</u> Check regeneration next year of entry. <u>Proposed Start Date:</u> 10/01/2013										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
42	41081042-Cut	3.5	4132 - Aspen, Jack Pine	High Density Pole	53		Harvest	Clearcut	4132 - Aspen, Jack Pine	Cmpt. Review Proposal
<u>Prescription:</u> Cut all species except hemlock and oak if present. <u>Specs:</u> <u>Other</u> Snowmobile trail may not be used for harvesting operations. Stand will likely regenerate to aspen, but will also be used heavily every 10 years as <u>Comments:</u> a decking area for adjacent red pine stand and an absence of regeneration is acceptable. <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
46	41081046-Cut	21.9	4130 - Aspen	High Density Pole	58		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription:</u> Cut all trees except hemlock and oak. <u>Specs:</u> <u>Other</u> Leave trees of assorted species should be painted for retention. Focus leaving red pine and white birch clumps. Also, leave trees where needed <u>Comments:</u> along M149 for visual management. <u>Next</u> Check regeneration next year of entry. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
8	41081058-Cut	58.7	42110 - Planted Red Pine	High Density Log	65	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> Thin stand to 120 basal area. <u>Specs:</u> <u>Other</u> Use of the snowmobile trail during snowmobile season for harvesting will not be allowed. Trail may be crossed only during winter months. <u>Comments:</u> Some areas of the plantation have rows which are getting very tight to operate. These should be evaluated at time of sale prep and whole rows may need to be removed in areas. <u>Next</u> Thin again next year of entry. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
64	41081064_sm all-Cut	3.7	4132 - Aspen, Jack Pine	High Density Pole	25		Harvest	Clearcut	4132 - Aspen, Jack Pine	Cmpt. Review Proposal
<u>Prescription:</u> Cut all trees except hemlock and oak if present. <u>Specs:</u> <u>Other</u> Treatment is a portion of a larger stand that was left as a buffer strip. Stand behind buffer strip is now well stocked aspen and this strip can be <u>Comments:</u> removed. <u>Next</u> Check regeneration next year of entry. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
69	41081069-Cut	58.5	4311 - Pine, Aspen Mix	Low Density Pole	22		Harvest	Clearcut with Reserves	3102 - Grass	Cmpt. Review Proposal
<p><u>Prescription:</u> Cut all trees except hemlock and oak if they exist. Leave all cherry. Exclude areas of younger cherry regeneration which is growing along the edges of stand 7. Do not cut juneberry.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Chipping is required. Winter harvest for deer yard management. Stand is being managed for grass. Less than 3% retention acceptable due to grass management objective.</p> <p><u>Next Steps:</u> Burn stand 36 following harvest. Plant hard or soft mast producing trees along edges of stands. Species recommendations will depend on wildlife objectives and tree availability at time of planting.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
73	41081073-Cut	7.3	4311 - Pine, Aspen Mix	High Density Pole	62		Harvest	Clearcut with Reserves	4311 - Pine, Aspen Mix	Cmpt. Review Proposal
<p><u>Prescription:</u> Cut all trees except hemlock and oak if present. Jack pine can be designated for harvest, but all other conifer trees should be marked in orange paint. Leave those conifers that would make the stand more visually appealing.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Protect all conifer regeneration. Red line placement should protect younger conifer near corner of stand.</p> <p><u>Next Steps:</u> Check regeneration next year of entry.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
74	41081074-Spray	18.4	42111 - Planted Red Pine, Mixed Deciduous	Medium Density Sapling	3		Pesticide	Other - Specify in Comments	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Spray hardwood competition if determined needed by TMS.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> FTP C41-1165 is currently written and being kept open for possible release work.</p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 05/01/2012</p>										

**Total Treatment
Acreage Proposed: 1341.5**

Table 4 -- Treatments Prescribed with a Limiting Factor



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

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Error

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

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

Year of Entry: 2014



Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
41009014-Cut1	5.2	6120 - Lowland Cedar	High Density Pole	141		Harvest	Patch or Strip Clearcut	6120 - Lowland Cedar	Cmpt. Review Proposal - Incomplete

Prescription patch cut app. 5 acres, determined at time of prep
Specs:

Other Comments:

Next Steps: Monitor according to work instructions.

Proposed Start Date: 10/01/2011

41044_OutOfY OE-Cut	0.9					Harvest	Crown Thinning	42210 - Natural Red Pine	Cmpt. Review Proposal - Incomplete
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Prescription Mark red pine and white pine to 80 sq.ft. where densities are high enough. Cut all other species except hemlock, oak, and cedar.
Specs:

Other Comments: Retention will be a portion of the red pine and white pine trees remaining.

Next Steps: Possible regeneration harvest next year of entry.

Proposed Start Date: 10/01/2013

41172002-Cut	4.4	4112 - Maple, Beech, Cherry Association	High Density Pole	49		Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
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Prescription Treatment=Thin stand down to 80 BA on average while putting in regen gaps to promote species diversity and Sugar Maple. Put stand up with adjacent hardwood in comp 169 in 2014.
Specs: MO=Un-even aged hardwoods with quality Sugar Maple stems
Retention=Residual BA

Other Comments:

Next Steps: Natural regen survey to follow harvest during the next inventory cycle.

Proposed Start Date: 10/01/2014

**Total Treatment
Acreage Proposed: 10.5**



Stand	Shingleton Mgt. Unit			5 – Forested Stands		Compartment: 081 Year of Entry: 2014
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42110 - Planted Red Pine	High Density Pole	3.5	51	111-140	First thinning occurred in 2005, North Riley Road Red Pine, 41-006-04-01. Residual basal area was 130.
2	4139 - Aspen, Mixed Deciduous	Medium Density Pole	5.3	60		New stand added.
3	4112 - Maple, Beech, Cherry Association	High Density Pole	4.0	80	81-110	
4	4116 - Mixed N. Hardwood - Aspen	High Density Log	9.7	70	111-140	New stand added. half ba is aspen and beech
5	4130 - Aspen	High Density Pole	6.5	32		
6	42110 - Planted Red Pine	High Density Log	13.3	63	141-170	Cut in 2005 North Riley Road Red Pine.41-006-04-01
7	4110 - Sugar Maple Association	Low Density Pole	24.6	40		old grass opening
8	42110 - Planted Red Pine	High Density Log	78.7	65	111-140	Stand was row thinned in 1987, second thinning in 1995, third thinning in 2005.
9	4130 - Aspen	High Density Pole	4.7	22		
10	4110 - Sugar Maple Association	High Density Log	199.1	90	111-140	10 plots taken in stand. south 20 acres is heavy to beech. scale heavy in south, not bad in north
12	42350 - Upland Hemlock	High Density Log	3.2	90		vernal pond
13	4130 - Aspen	High Density Pole	15.5	29		Stand was converted from hardwood to aspen for deer browse.
14	42110 - Planted Red Pine	High Density Log	11.5	65	111-140	Stand was cut in 2004 with North Riley Road Red Pine Sale, 41-006-04-01. Residual basal area was 110 red pine 10 cherry.
15	4111 - S.Maple, Hard Mast Association	High Density Log	488.2	90	111-140	Cut in 1997 and 1998.
16	4111 - S.Maple, Hard Mast Association	High Density Log	23.7	90	81-110	Stand cut in 2005, 4 Buck No Luck sale.
17	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	30.3	70		stand should get a closer look next time. Many thick patches of hemlock and cedar exist, but the more open areas could be delineated out and cut.
18	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	4.5	100		vernal pond

S t a n d	Shingleton Mgt. Unit		5 – Forested Stands			Compartment: 081	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
20	6120 - Lowland Cedar	High Density Pole	54.9	70			
21	4130 - Aspen	High Density Pole	27.1	35			
22	4119 - Mixed Northern Hardwoods	High Density Pole	11.9	80	111-140		
23	4136 - Aspen, Mixed Conifer	High Density Pole	5.1	52			
24	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	33.5	100			
25	4130 - Aspen	High Density Pole	13.1	40			mixed ages
26	4112 - Maple, Beech, Cherry Association	High Density Log	33.8	90	141-170		
28	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	39.2	80			
29	4133 - Aspen, Mixed Pine	High Density Pole	10.8	28			
30	4130 - Aspen	High Density Pole	22.2	31			
31	4130 - Aspen	High Density Pole	11.6	31			
32	42110 - Planted Red Pine	High Density Pole	1.2	76	171-200		Stand was prescribed at 2011 Compartment Review to be treated with C82, stand 16, it is now on proposal Bread Box Pine 35-11, Unit 2. Residual basal area 132ft red pine, red maple 6 ft.
33	4130 - Aspen	High Density Sapling	58.4	6			Stand cut in December 2004, 4 Buck No Luck 41-023-04-01. TSI work occurred in 2005.
35	4130 - Aspen	High Density Pole	15.1	31			
36	4132 - Aspen, Jack Pine	Low Density Pole	8.7	30			burn was prescribed last year of entry, but no records of completion
37	42110 - Planted Red Pine	High Density Pole	258.2	65	111-140		Thinned in 1987 and 2005. variable basal areas
38	4130 - Aspen	High Density Pole	24.3	59			Stands comments last year of entry stated to leave stand for visual management since it was converting to white pine.





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
39	4130 - Aspen	High Density Sapling	3.1	13		
40	4130 - Aspen	Medium Density	5.8	12		
41	42200 - Natural White Pine	High Density Log	8.1	70	81-110	Stand was cut in 1995 in which everything was cut except red pine and white pine.
42	4132 - Aspen, Jack Pine	High Density Pole	3.5	53		New stand added.
43	42220 - Natural Jack Pine	High Density Sapling	28.5	15		Stand was cut and scarified in summer 1996.
44	42110 - Planted Red Pine	High Density Pole	28.2	48	51-80	Stand was species thinned with Red Pine Alley Sale in 2006. Residual basal area is 56 sq. ft.
45	4130 - Aspen	High Density Pole	36.6	33		
46	4130 - Aspen	High Density Pole	21.9	58		treatment delayed last entry
47	4130 - Aspen	High Density Sapling	44.9	22		Stand is a series of aspen strip cuts which occurred between 1989 and 1995.
48	4132 - Aspen, Jack Pine	High Density Pole	44.1	44		
49	4130 - Aspen	High Density Pole	58.6	33		
50	6120 - Lowland Cedar	High Density Pole	8.6	90		
51	42111 - Planted Red Pine, Mixed Deciduous	Low Density Sapling	14.8	3		Cut in 2004 Dufour Headwaters Sale (41-015-04-01) FTP W41-1387 was completed in 2008. This was an FTP written to remove submerchantable Scotch Pine. Stand was planted with red pine in spring 2008. 2010 regen check showed 692 red pine.
52	6125 - Lowland Black Spruce, Jack Pine	High Density Sapling	6.8	16		Regen check in 2005 revealed a fully stocked black spruce stand with jack pine and tamarack present as well.
53	4130 - Aspen	High Density Pole	3.5	33		
55	4130 - Aspen	High Density Sapling	10.8	6		Stand cut in December 2004, 4 buck no luck, 41-023-04-01. TSI work occurred in 2005. Regen walkthrough passed in 2009.
56	42121 - Planted Jack Pine, Mixed Deciduous	Low Density Sapling	21.5	3		Cut with Dufour Headwaters Sale (41-015-04-01). Stand was planted in 2009. 2010 Regen check showed 834 jack pine, 14 other conifer.

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Shingleton Mgt. Unit

5 – Forested Stands

Compartment: 081
Year of Entry: 2014

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
57	4130 - Aspen	High Density Pole	39.2	37		
58	42110 - Planted Red Pine	High Density Log	58.7	60	111-140	Stand was pruned in 1989 with corrections. Thinned in 1987, and 2005. Residual basal area from last thinning (Red Pine Alley Sale) was 104 sq. ft.
62	4130 - Aspen	High Density Pole	3.8	29		
63	4130 - Aspen	High Density Pole	4.8	22		
64	4132 - Aspen, Jack Pine	High Density Pole	17.9	25		
65	42120 - Planted Jack Pine	Low Density Sapling	47.3	3		Cut with sale 41-015-04-01 Dufour Headwaters. Stand was planted to jack pine in 2009, 2010 regen check showed 894 jack pine, 14 other conifer. Sprayed in fall 2010.
66	4130 - Aspen	Medium Density	14.7	3		New stand added. portion may have been sprayed. cut in 2009 . doufor headwaters
67	4132 - Aspen, Jack Pine	High Density Pole	9.0	28		
68	4132 - Aspen, Jack Pine	High Density Pole	24.8	31		Stand is an old grass stand that is filling in. Some pockets remain still. multiple ages present
69	4311 - Pine, Aspen Mix	Low Density Pole	25.1	22		Stand was burned in 2011. Has a history of garbage dumping in area.
70	6120 - Lowland Cedar	High Density Pole	10.8	100		
71	4132 - Aspen, Jack Pine	High Density Pole	6.0	28		
73	4311 - Pine, Aspen Mix	High Density Pole	7.3	62		Stand had salvage work done in 1997.
74	42111 - Planted Red Pine, Mixed Deciduous	Medium Density	3.7	3		Stand cut with Dufour Headwaters Sale 41-015-04-01. Planted to red pine in 2009. 2010 regen check was 692 red pine.
75	42120 - Planted Jack Pine	Low Density Sapling	3.0	3		Cut with sale 41-015-04-01 Dufour Headwaters. Stand was planted to jack pine in 2009, 2010 regen check showed 894 jack pine, 14 other conifer.
76	4132 - Aspen, Jack Pine	High Density Pole	3.4	31		



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:	
11	122 - Road/Parking Lot	15.7	N/A	Unspecified		
19	11 - Low Intensity Urban	1.7	N/A	Unspecified		
27	50 - Water	7.7	N/A	Unspecified		
34	310 - Herbaceous Openland	4.6	N/A	Unspecified		
54	122 - Road/Parking Lot	18.3	N/A	Unspecified		
59	3102 - Grass	2.0	No	Unspecified	New stand added.	Stand swapped from Forested to Non-Forested.
60	622 - Lowland Shrub	13.5	N/A	Unspecified		
61	310 - Herbaceous Openland	1.9	N/A	Unspecified		
72	31022 - Warm Season Grass	9.4	Yes	High (NonForested)		



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



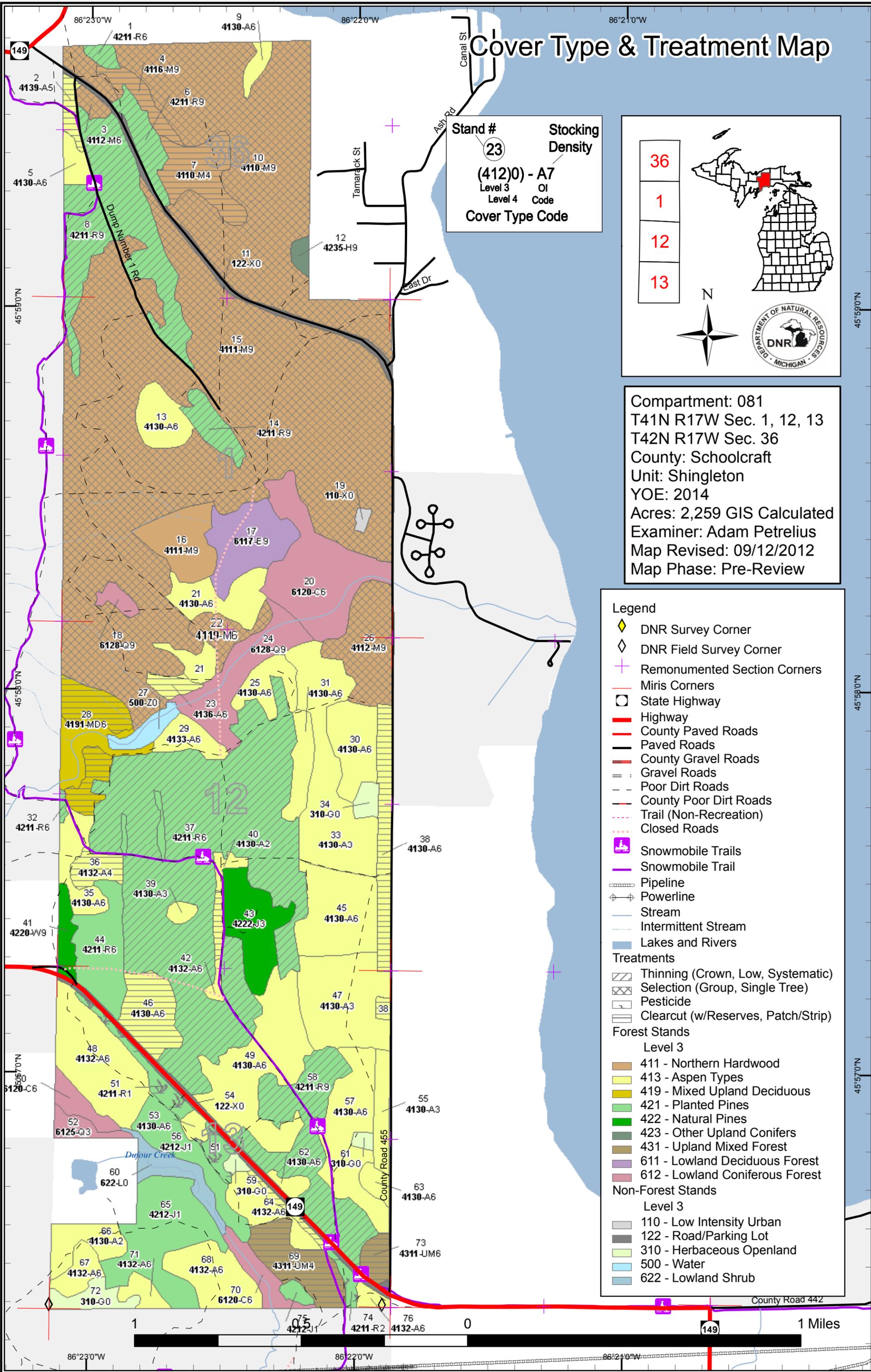
8 – DEDICATED CONSERVATION AREA DETAILS

* 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.
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.
SCA	Visual Management Area	An area of general social appreciation that is managed to recognize and preserve a particular visual value. Examples of these areas include scenic vistas, scenic or natural beauty roads, and lakeshore areas.

Cover Type & Treatment Map



Stand #
 23
(412)0) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

Stocking Density

- 36
- 1
- 12
- 13



Compartment: 081
 T41N R17W Sec. 1, 12, 13
 T42N R17W Sec. 36
 County: Schoolcraft
 Unit: Shingleton
 YOE: 2014
 Acres: 2,259 GIS Calculated
 Examiner: Adam Petrelius
 Map Revised: 09/12/2012
 Map Phase: Pre-Review

- Legend**
- ◆ DNR Survey Corner
 - ◇ DNR Field Survey Corner
 - ⊕ Remonumented Section Corners
 - Miris Corners
 - State Highway
 - Highway
 - County Paved Roads
 - Paved Roads
 - County Gravel Roads
 - Gravel Roads
 - Poor Dirt Roads
 - County Poor Dirt Roads
 - Trail (Non-Recreation)
 - Closed Roads
 - ⊕ Snowmobile Trails
 - Snowmobile Trail
 - Pipeline
 - ⊕ Powerline
 - Stream
 - Intermittent Stream
 - Lakes and Rivers
- Treatments**
- ▨ Thinning (Crown, Low, Systematic)
 - ▩ Selection (Group, Single Tree)
 - ▭ Pesticide
 - ▭ Clearcut (w/Reserves, Patch/Strip)
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3
- 110 - Low Intensity Urban
 - 122 - Road/Parking Lot
 - 310 - Herbaceous Openland
 - 500 - Water
 - 622 - Lowland Shrub



86°23'0"W 86°22'0"W 86°21'0"W

Stand Boundary Map

Stand # **23**
 Stacking Density
(412)0) - A7
 Level 3 OI
 Level 4 Code
 Cover Type Code

- 36
- 1
- 12
- 13



Compartment: 081
 T41N R17W Sec. 1, 12, 13
 T42N R17W Sec. 36
 County: Schoolcraft
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 YOE: 2014
 Acres: 2,259 GIS Calculated
 Examiner: Adam Petrelius
 Map Revised: 09/12/2012
 Map Phase: Pre-Review

Legend

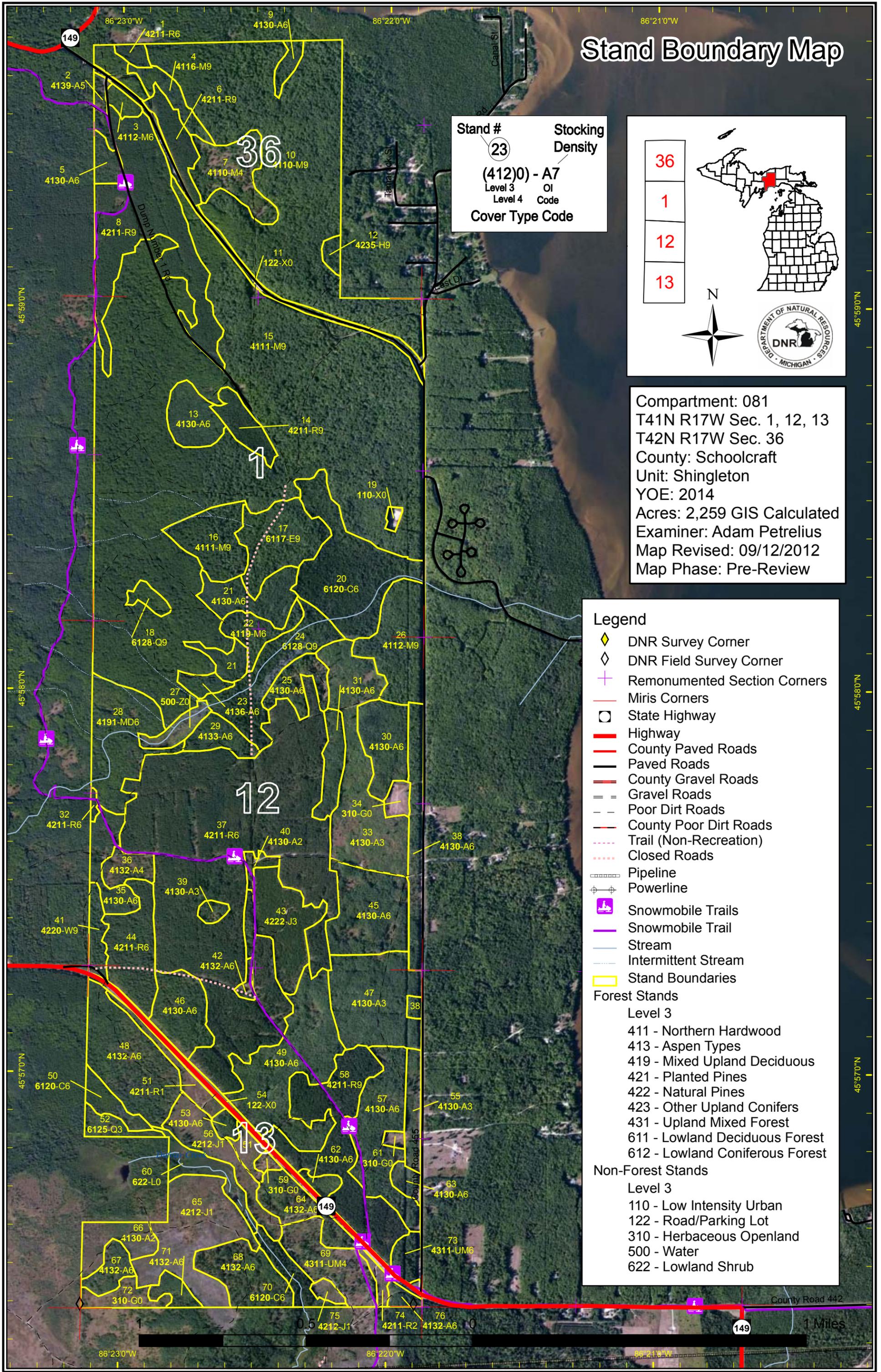
- DNR Survey Corner
- DNR Field Survey Corner
- Remonumented Section Corners
- Miris Corners
- State Highway
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Pipeline
- Powerline
- Snowmobile Trails
- Snowmobile Trail
- Stream
- Intermittent Stream
- Stand Boundaries

Forest Stands

- Level 3
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest

Non-Forest Stands

- Level 3
- 110 - Low Intensity Urban
 - 122 - Road/Parking Lot
 - 310 - Herbaceous Openland
 - 500 - Water
 - 622 - Lowland Shrub



86°23'0"W 86°22'0"W 86°21'0"W 45°59'0"N 45°58'0"N 45°57'0"N 45°56'0"N

1 0.5 0 1 Miles

Dedicated & Proposed Special Conservation Area Map

Stand #
23
(412)0) - A7
 Level 3 OI
 Level 4 Code
 Cover Type Code

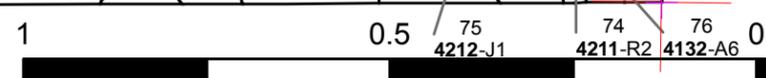
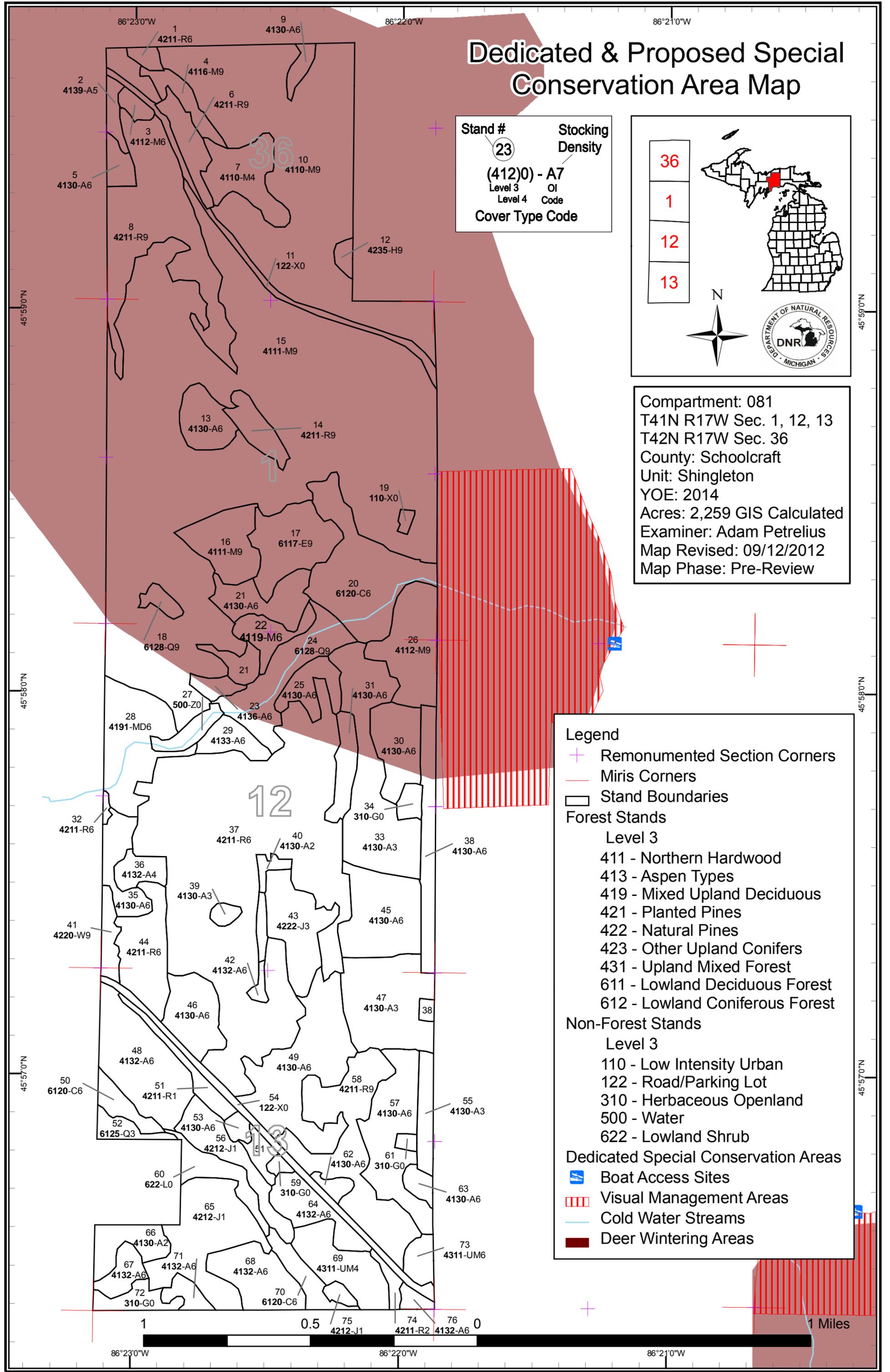
Stocking
 Density

- 36
- 1
- 12
- 13



Compartment: 081
 T41N R17W Sec. 1, 12, 13
 T42N R17W Sec. 36
 County: Schoolcraft
 Unit: Shingleton
 YOE: 2014
 Acres: 2,259 GIS Calculated
 Examiner: Adam Petrelius
 Map Revised: 09/12/2012
 Map Phase: Pre-Review

- Legend**
- + Remonumented Section Corners
 - Miris Corners
 - Stand Boundaries
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3
- 110 - Low Intensity Urban
 - 122 - Road/Parking Lot
 - 310 - Herbaceous Openland
 - 500 - Water
 - 622 - Lowland Shrub
- Dedicated Special Conservation Areas**
- 🚤 Boat Access Sites
 - ▨ Visual Management Areas
 - Cold Water Streams
 - Deer Wintering Areas



1 Miles