



**PIGEON RIVER COUNTRY MANAGEMENT UNIT  
COMPARTMENT REVIEW PRESENTATION**

**COMPARTMENT 34 ENTRY YEAR: 2014**

**Compartment Acreage: 1901      County: Otsego**

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**Review Date:**

August 22, 2012

**Stand Examiner:**

Greg Rekowski

**Legal Description:**

T32N - R01W Sections 7, 8 and 9

**RMU (if applicable):**

Not Applicable

**Management Goals:**

Maintain current species mix and apply appropriate management techniques to mature stands of timber that are in need of treatment.

**Soil and Topography:**

Flat to gently rolling terrain. Sandy soils, such as Leelanau loamy sands and Lindquist sands, predominate except for a narrow band of organics located along the Pigeon River. Isolated leatherleaf peat bogs are found in the north half of section 8.

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

Entirely state-owned lands.

**Unique, Natural Features (include only non-site specific and non-sensitive information):**

The Ram's Head Lady's Slipper and an active Northern Goshawk nest have been documented to occur in this compartment.

**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):**

The Management Unit Office complex is located along the southern edge of section 9 with one structure lying partially within stand #91. P.S. Lovejoy's Monument is located in stand #104.

**Special Management Designations or Considerations:**

The Pigeon River is a State-designated Natural River.

**Watershed and Fisheries Considerations:**

A portion of the Pigeon River flows through the southeast corner of the compartment. Ford Lake is a sinkhole lake and has special restrictions in place for recreational fishing.

**Wildlife Habitat Considerations:**

This compartment is dominated by upland pine. Oak is also present in varying densities throughout the compartment. There is aspen present on the west side of the compartment. Two stands are prescribed to be clearcut in order to maintain the aspen type and provide early successional habitat. Other treatments will maintain or increase the oak type and other early successional habitat. The prescriptions for this compartment considered the compartments to the north, east and south which have similar vegetation.

**Mineral Resource and Development Concerns and/or Restrictions:**

Surface sediments consist of coarse-textured glacial till and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 800 feet. Beneath the glacial drift is the Devonian Antrim Shale, quarried for clay/shale and cement products elsewhere in the State. The nearest gravel pit is one-half mile to the south, and potential is considered good on the upland areas. The Antrim Shale has been developed around this compartment and some of the State land is leased and in production. The Guelph (Niagaran) reef trend produces to the southeast and potential is minimal. There is oil and gas potential for known producing formations in this compartment.

**Vehicle Access:**

There is good access to most, if not all, of the compartment. Most of the interior forest roads in Sections 8 and 9, however, have been closed to wheeled motorized vehicles with virtually all those closures still intact.

**Survey Needs:**

None required.

**Recreational Facilities and Opportunities:**

The Pigeon River State Forest Campground is in the southeast corner of the compartment. The Shingle Mill Pathway runs the full length of Sections 8 and 9 within the compartment. A portion of the High Country Pathway runs through the compartment.

**Fire Protection:**

Access is generally good in case of any fire suppression efforts. Wildfire potential is moderate-to-high as this compartment is dominated by pine cover types. Most road systems are closed with berms.

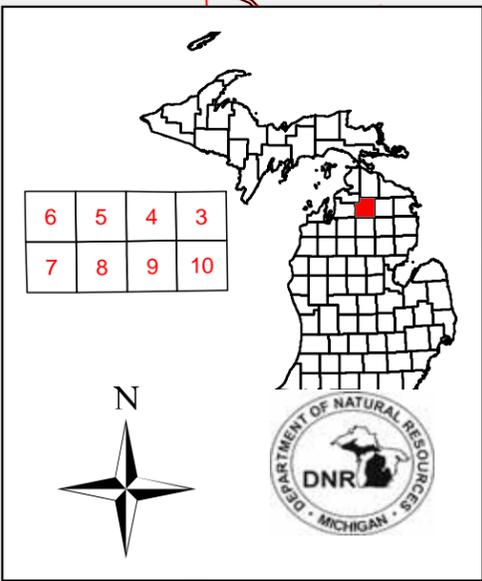
**Additional Compartment Information:**

Beech scale is present throughout stand #'s 8, 9, and 19. Emerald ash borer (EAB) was found on the few ash that were present in stand #19.

A small Garlic Mustard infestation was found just past the north border of stand #91, along a small slope leading down to the Pigeon River.

- **The following 9 reports from the IFMAP Inventory System are attached:**
  - ◆ **Cover Type by Age Class**
  - ◆ **Cover Type by Harvest Method**
  - ◆ **Treatments with No Limiting Factor**
  - ◆ **Treatments with Limiting Factor**
  - ◆ **Out of YOE Treatments**
  - ◆ **Forested Stands**
  - ◆ **Nonforested Stands**
  - ◆ **Proposed SCAs**
  - ◆ **Dedicated SCAs**
  
- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - ◆ **Base feature information, stand numbers, cover types, road access system**
  - ◆ **Proposed treatments**
  - ◆ **Special ecological designations**
  - ◆ **Recreational facilities**

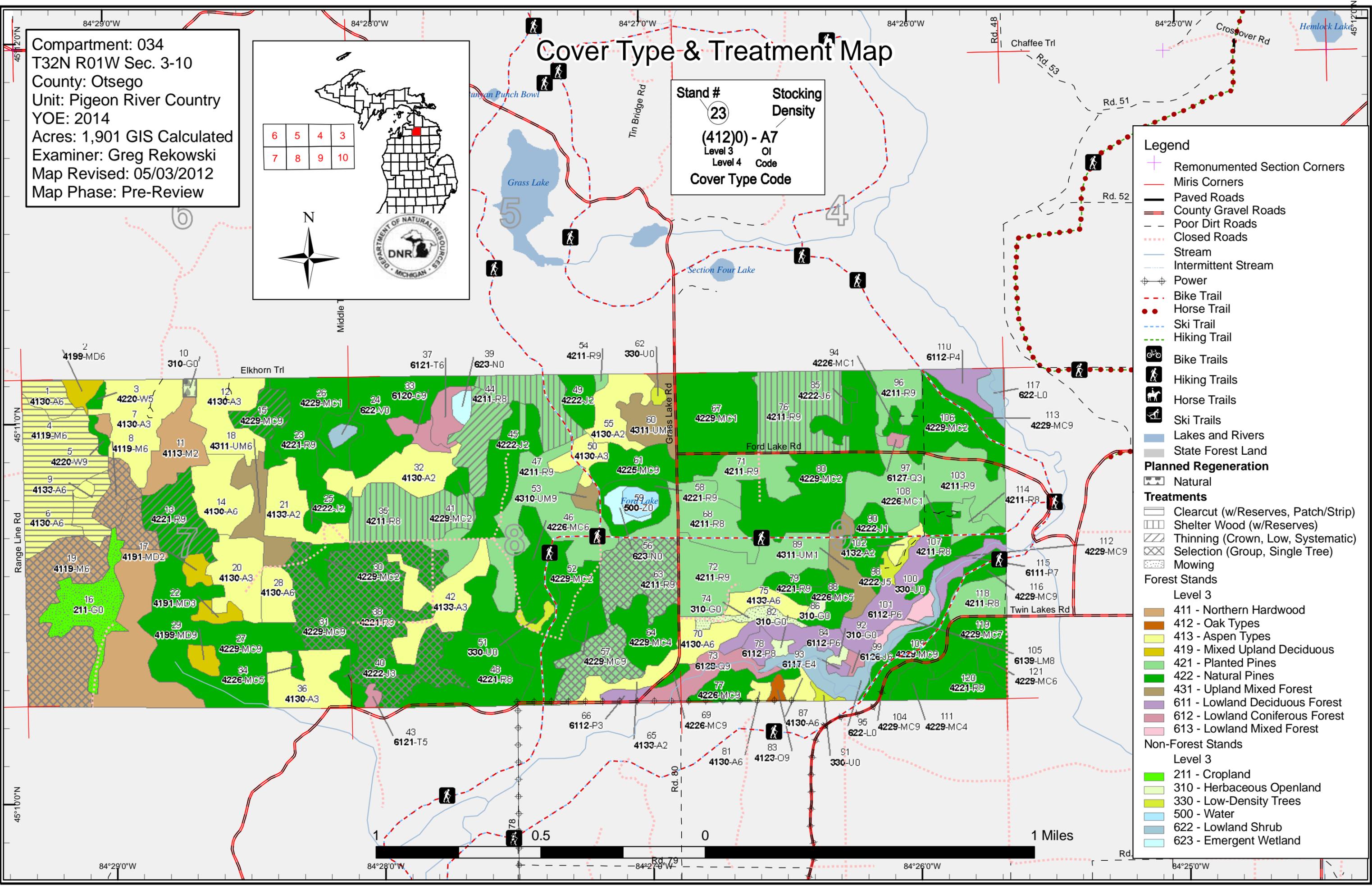
Compartment: 034  
 T32N R01W Sec. 3-10  
 County: Otsego  
 Unit: Pigeon River Country  
 YOE: 2014  
 Acres: 1,901 GIS Calculated  
 Examiner: Greg Rekowski  
 Map Revised: 05/03/2012  
 Map Phase: Pre-Review



# Cover Type & Treatment Map

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

- Legend**
- ✚ Remonumented Section Corners
  - Miris Corners
  - Paved Roads
  - County Gravel Roads
  - Poor Dirt Roads
  - Closed Roads
  - Stream
  - Intermittent Stream
  - ⊕ Power
  - - - Bike Trail
  - Horse Trail
  - - - Ski Trail
  - - - Hiking Trail
  - 🚲 Bike Trails
  - 🚶 Hiking Trails
  - 🐎 Horse Trails
  - 🎿 Ski Trails
  - 🟦 Lakes and Rivers
  - 🟤 State Forest Land
  - Planned Regeneration**
  - 🌳 Natural
  - Treatments**
  - 👉 Clearcut (w/Reserves, Patch/Strip)
  - 👉 Shelter Wood (w/Reserves)
  - 👉 Thinning (Crown, Low, Systematic)
  - 👉 Selection (Group, Single Tree)
  - 👉 Mowing
  - Forest Stands**
  - Level 3
  - 🟤 411 - Northern Hardwood
  - 🟤 412 - Oak Types
  - 🟡 413 - Aspen Types
  - 🟡 419 - Mixed Upland Deciduous
  - 🟢 421 - Planted Pines
  - 🟢 422 - Natural Pines
  - 🟤 431 - Upland Mixed Forest
  - 🟣 611 - Lowland Deciduous Forest
  - 🟣 612 - Lowland Coniferous Forest
  - 🟣 613 - Lowland Mixed Forest
  - Non-Forest Stands**
  - Level 3
  - 🟢 211 - Cropland
  - 🟡 310 - Herbaceous Openland
  - 🟡 330 - Low-Density Trees
  - 🟦 500 - Water
  - 🟦 622 - Lowland Shrub
  - 🟦 623 - Emergent Wetland



# Stand Boundary Map

Compartment: 034  
 T32N R01W Sec. 3-10  
 County: Otsego  
 Unit: Pigeon River Country  
 YOE: 2014  
 Acres: 1,901 GIS Calculated  
 Examiner: Greg Rekowski  
 Map Revised: 05/03/2012  
 Map Phase: Pre-Review

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

**Legend**

- Remonumented Section Corners
- Miris Corners
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- Closed Roads
- Stream
- Intermittent Stream
- Power
- Bike Trail
- Horse Trail
- Ski Trail
- Hiking Trail
- Bike Trails
- Hiking Trails
- Horse Trails
- Ski Trails
- Stand Boundaries

**Forest Stands**

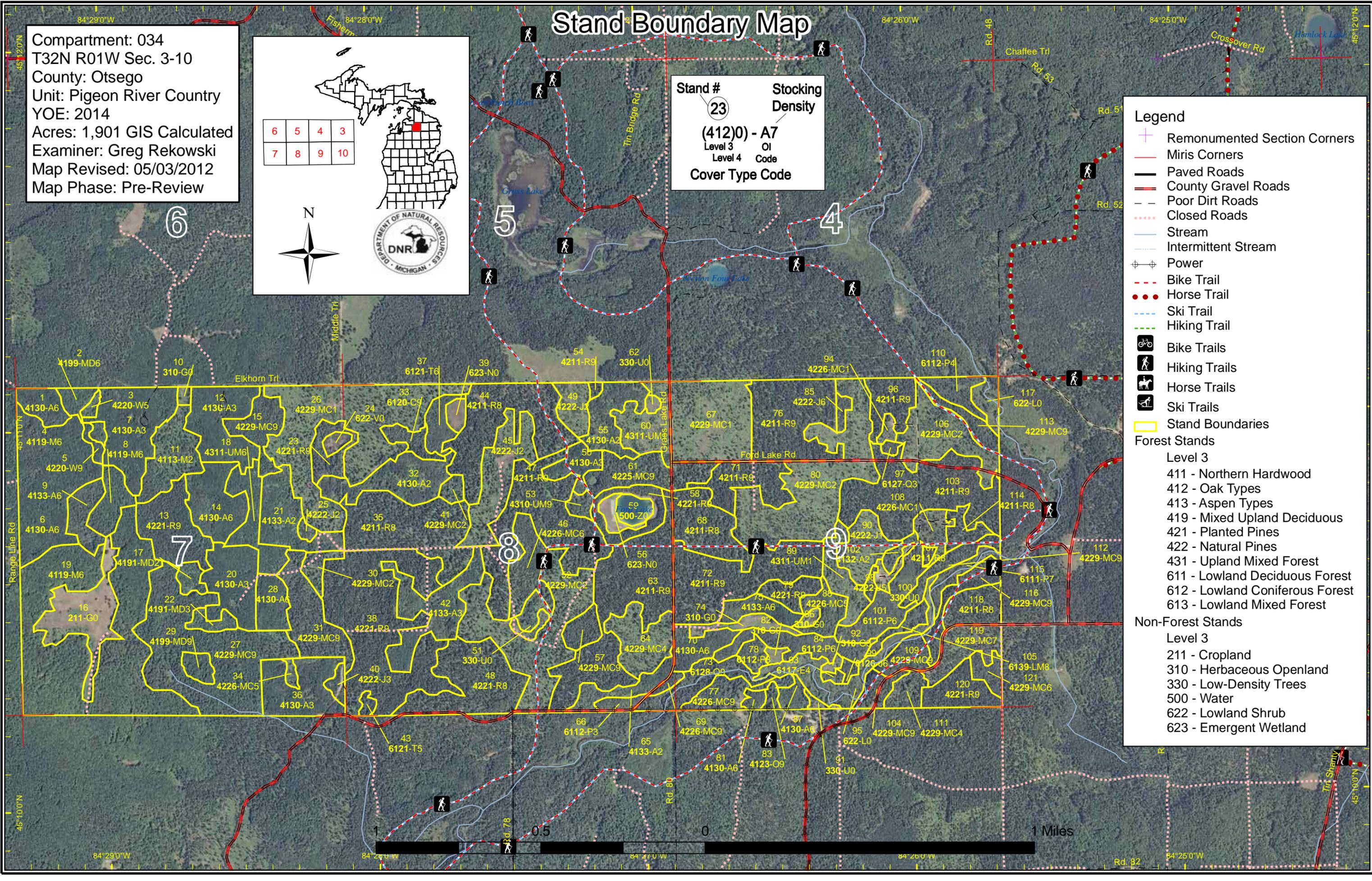
Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
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- 613 - Lowland Mixed Forest

**Non-Forest Stands**

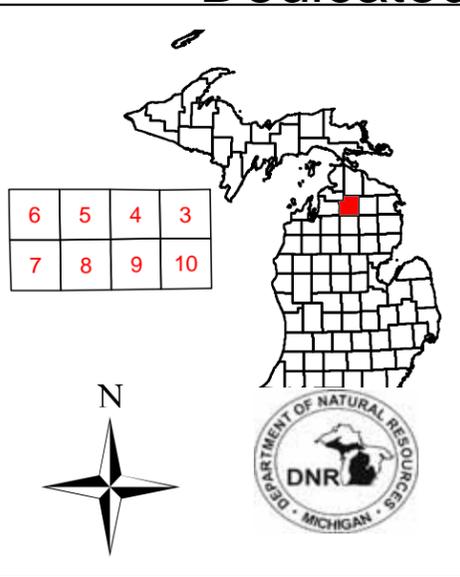
Level 3

- 211 - Cropland
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland



# Dedicated & Proposed Special Conservation Area Map

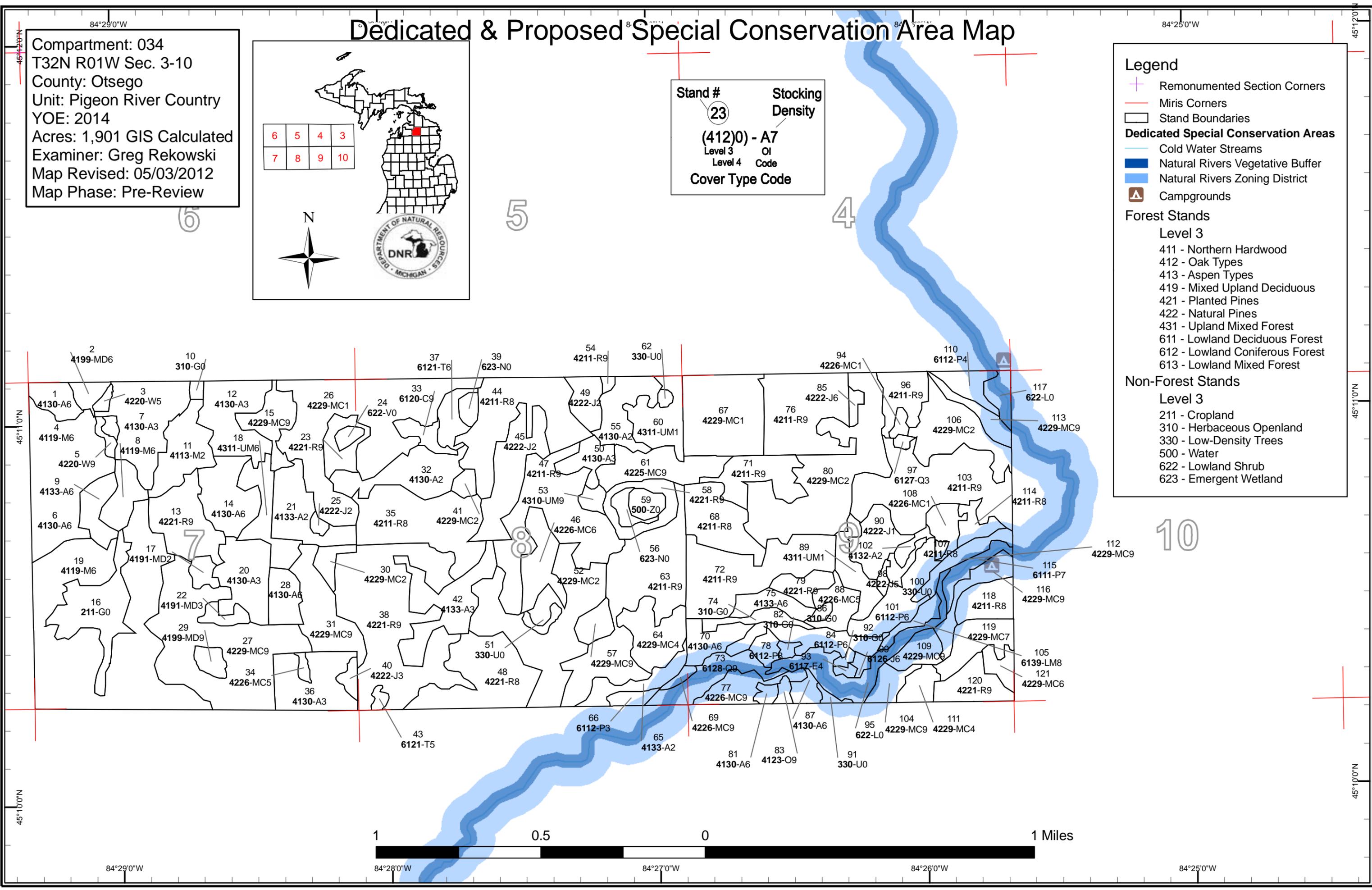
Compartment: 034  
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 Map Revised: 05/03/2012  
 Map Phase: Pre-Review



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

**Legend**

- ⊕ Remonumented Section Corners
- Miris Corners
- Stand Boundaries
- Dedicated Special Conservation Areas**
- Cold Water Streams
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- ▲ Campgrounds
- Forest Stands**
- Level 3**
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
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- 613 - Lowland Mixed Forest
- Non-Forest Stands**
- Level 3**
- 211 - Cropland
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland



84°29'0"W 84°28'0"W 84°27'0"W 84°26'0"W 84°25'0"W

45°11'0"N  
45°10'0"N

45°12'0"N  
45°11'0"N  
45°10'0"N

**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	0	3	214	50	50	19	0	0	0	0	0	0	0	0	336
Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6
Cropland	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Herbaceous Openland	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Jack Pine	0	49	5	4	2	0	0	0	0	0	0	0	0	0	59
Low-Density Trees	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Lowland Aspen/Balsam Poplar	0	0	4	35	11	8	0	0	0	0	0	0	0	0	57
Lowland Conifers	0	1	0	0	0	0	0	15	0	0	0	0	0	0	17
Lowland Deciduous	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Lowland Mixed Forest	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5
Lowland Shrub	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Marsh	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Mixed Upland Deciduous	0	0	9	0	5	0	0	0	5	0	0	0	0	0	18
Natural Mixed Pines	0	265	21	9	25	12	43	113	30	11	0	0	0	0	530
Northern Hardwood	0	0	20	0	0	0	0	11	110	0	0	0	0	0	140
Oak	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Red Pine	0	0	0	0	0	0	79	314	97	12	0	0	0	77	579
Tamarack	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10
Upland Mixed Forest	0	0	29	16	0	0	0	3	0	0	0	0	0	0	48
Water	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
White Pine	0	2	0	0	0	0	0	0	2	0	0	0	0	0	4
<b>Total</b>	<b>90</b>	<b>320</b>	<b>300</b>	<b>120</b>	<b>92</b>	<b>39</b>	<b>121</b>	<b>459</b>	<b>244</b>	<b>23</b>	<b>10</b>	<b>0</b>	<b>6</b>	<b>77</b>	<b>1901</b>



**Table 2 – Proposed Treatment Summaries**

**Acres by Treatment Type**

Commercial Harvest - 434	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 33	Tree Seeding - 0	Pesticide - 0	

**Cover Type by Harvest Method**

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	67	0	0	0	0	0	67
Natural Mixed Pines	0	22	0	0	11	0	33
Northern Hardwood	0	73	0	0	0	0	73
Red Pine	0	124	0	95	42	0	261
<b>Total</b>	<b>67</b>	<b>219</b>	<b>0</b>	<b>95</b>	<b>53</b>	<b>0</b>	<b>434</b>



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	53034001-Cut	8.4	4130 - Aspen	High Density Pole	53		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> -Clearcut all aspen and maple. Do not cut any red pine or oak or other species that may be rare in the stand. Mark to leave the larger white pine.</p> <p><u>Specs:</u>            -Mark scattered aspen (&gt;10" DBH) of poor quality as cut and leave trees.            -Leave retention pockets in areas where pine is heavy.            -There are no known T&amp;E species that will be affected by this treatment.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> -Acceptable regeneration will be any mix of pine, aspen, and maple.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
6	53034006-Cut1	50.0	4130 - Aspen	High Density Pole	46		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> -Enhance tree species diversity by leaving all rare species in the stand, such as oak, white pine, and balsam fir.</p> <p><u>Specs:</u>            -Mark poor quality trees (&gt;10" DBH) of any species as cut and leave trees for future CWD.            -Leave 3-10% in interior retention pockets.            -There are no known T&amp;E species that will be affected by this treatment.</p> <p><u>Other Comments:</u> -A few pockets of oak/hardwood poles and saplings in the south end of the stand that should be excluded from harvest. In addition, there are a few scattered open areas throughout the stand that may have to be excluded from the treatment boundary as well.</p> <p><u>Next Steps:</u> -Acceptable regeneration will be a mix of aspen, hardwoods, and conifers.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
8	53034008-Cut	10.6	4119 - Mixed Northern Hardwoods	High Density Pole	79	111-140	Harvest	Group Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal
<p><u>Prescription</u> -In areas where beech is not a major component, mark down to 70 sq. ft. of basal area. Cut all beech but evaluate the health of beech at the time of timber sale prep and mark to leave any beech that appear to be unaffected by beech scale.</p> <p><u>Specs:</u>            -Retain most of the oak and pine. Do not mark any birch or hemlock or other under-represented species.            -In areas heavy to beech and red maple, create large canopy gaps (&gt;66 feet). Maintain white pine and oak around the edges of these gaps.            -Mark trees of poor form and quality (&gt;10"DBH) as cut and leave trees as a source of large CWD.            -Retention will be in the form of under-represented tree species that will not be cut.            -There are no known T&amp;E species that will be affected by this treatment.</p> <p><u>Other Comments:</u> -BBD is present in this stand.</p> <p><u>Next Steps:</u> -Mechanically scarify canopy gaps to promote oak and pine.            -Acceptable regeneration after scarification will be a mix of hardwoods and conifers.            -Regeneration check in 2-3 years post-scarification.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
9	53034009-Cut	8.7	4133 - Aspen, Mixed Pine	High Density Pole	52		Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
<p><u>Prescription</u> -Mark to leave scattered trees (up to 10-20 sq. ft. per acre) that are representative of the current species mix. Leave all oak and any other species that are rare in the stand.</p> <p><u>Specs:</u>            -Retention will be in the form of under-represented species that will not be harvested.            -No known T&amp;E species will be affected by this treatment.</p> <p><u>Other Comments:</u> -Some quality oak and white pine regeneration that should be protected from harvesting damage.            -A stick nest is known from the NW corner of this stand and has been excluded from harvest.</p> <p><u>Next Steps:</u> -Acceptable regeneration will be mix of aspen, hardwoods, and pine.</p> <p><u>Proposed 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
13	53034013-Cut	23.9	42210 - Natural Red Pine	High Density Log	75	141-170	Harvest	Crown Thinning	42210 - Natural Red Pine	Cmpt. Review Proposal
<u>Prescription</u> -Crown thinning down to 110-120 sq. ft. per acre. Leave all trees that would qualify as "legacy trees." <u>Specs:</u> -Leave interior retention pockets equal to 3-10% of the stand's acreage. - No known T&E species will be affected by this treatment. <u>Other</u> -Scattered trees with orange paint in this stand. Use a different color of paint for mark-to-cut trees to avoid confusion. <u>Comments:</u> -Access to this stand will need to be determined during sale preparation. <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
15	53034015-Cut	10.8	42290 - Natural Mixed Pine	High Density Log	64	141-170	Harvest	Crown Thinning	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<u>Prescription</u> -Crown thinning down to average ba/acre of 110 sq. ft. Do not mark any paper birch, red oak, jack pine, or any larger "old-growth" like red pine. <u>Specs:</u> -Retention will be the south finger of the stand. - No known T&E species will be affected by this treatment. <u>Other</u> <u>Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
19	53034019-Cut	62.4	4119 - Mixed Northern Hardwoods	High Density Pole	87	111-140	Harvest	Group Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal
<u>Prescription</u> -Utilize a combination of single-tree selection and group selection. In areas of better quality trees, mark BA down to 70-80 sq. ft. per acre. In areas of lower quality or where beech is heavy, create large (>100 feet) canopy gaps. Number and size of gaps will be determined by stand composition and quality. <u>Specs:</u> -BBD is present throughout the stand. Cut all beech but evaluate the health of beech when marking and leave any trees that appear to be of good health. - Avoid marking any species that are rare in the stand such as; birch, cherry, pine, and oak. - Mark trees of poor form and quality (>10" DBH) as cut and leave trees to enhance the large CWD component. - There are no known T&E species that will be affected by this treatment. <u>Other</u> -GPS the location of canopy gaps (point, not polygon). <u>Comments:</u> <u>Next Steps:</u> -Mechanically scarify large gaps created through harvest. - Acceptable regeneration will be any mix of hardwood and conifer species. - Monitor regeneration success 2-3 years after scarification. <u>Proposed Start Date:</u> 10/01/2013										
31	53034031-Cut	22.1	42290 - Natural Mixed Pine	High Density Log	76	111-140	Harvest	Single Tree Selection	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<u>Prescription</u> -Thin to residual ba/acre of 80 sq. ft.. In areas of heavier stocking, avoid removing more than 1/3rd of the stand when thinning. Create large canopy gaps (66 ft. in diameter) throughout the stand, roughly one for every two acres. <u>Specs:</u> -Avoid marking large diameter trees that may qualify as "legacy trees." - Retention will be in the form of two unmarked interior pockets that are equal to 3-10% of the stand's area. - Place a no-cut buffer around the stick nest that is present in this stand (see OFS point layer). <u>Other</u> <u>Comments:</u> <u>Next Steps:</u> -Acceptable regeneration will any mix of pine species. <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
35	53034035-Cut	35.1	42110 - Planted Red Pine	Medium Density Log	74	81-110	Harvest	Shelter Wood with Reserves	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<u>Prescription</u> -Seed tree/shelterwood harvest leaving 20-30 sq. ft. per acre. Leave all oak and white pine. <u>Specs:</u> -Create multiple retention pockets (3-10% of stands area) to promote more variable structure. - No known T&E species will be affected by this treatment. <u>Other</u> -Consider adding whole-tree skidding spec to increase scarification. <u>Comments:</u> <u>Next</u> -Burn after harvest to expose mineral soil and promote red pine regeneration. <u>Steps:</u> -Acceptable regeneration will be any mix of jack, red, or white pine, as well as oak. <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
38	53034038-Cut	72.3	42210 - Natural Red Pine	High Density Log	80	111-140	Harvest	Single Tree Selection	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<u>Prescription</u> -Single tree selection, marking down to 100 sq. ft. of basal area per acre. However, do not remove more than 1/3 of the stand in areas of higher stocking. Do not mark any oak. <u>Specs:</u> -Promote Big-Tree silviculture in this stand, leaving most of the large, old pine that are greater than 20" DBH. Make a few small retention pockets around areas of larger pine. - Create large (roughly 66 feet in diameter) canopy gaps at a rate of 1 for every two acres. - Protect white pine regeneration as much as possible. - Put small, no-cut buffers around stick nests. <u>Other</u> <u>Comments:</u> <u>Next</u> -Acceptable regeneration will be mix of red, white, and jack pine. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
44	53034044_Thin-Cut	18.3	42110 - Planted Red Pine	Medium Density Log	74	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> -Crown thinning down to 80-90 sq. ft. per acre. Do not remove more than 1/3rd of the stand at any given point. Leave all large, old pine (both red and white). -Leave a 1/2 chain uncut buffer around the wetland as well as a buffer around the stick nest (see OFS point layer). <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
44	53034044-Cut	22.0	42110 - Planted Red Pine	Medium Density Log	74	111-140	Harvest	Shelter Wood with Reserves	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<u>Prescription</u> -Shelterwood leaving residual ba/acre of 20-30 sq. ft. Leave all oak. <u>Specs:</u> -Leave a retention pocket around the unthinned area with the steeper slopes, located in the NW corner of the stand near the road. - Shingle Mill Pathway passes through this stand. Add specs to protect the trail from harvesting damage. <u>Other</u> -When putting in treatment boundary, go around areas of lesser stocking where pine regeneration is already present, mostly on the east side. <u>Comments:</u> <u>Next</u> -Mechanically scarify this stand after harvest is completed. <u>Steps:</u> -Acceptable regeneration will be any mix of pine and oak. <u>Proposed</u> <u>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
63	53034063-Cut	51.6	42110 - Planted Red Pine	High Density Log	76	111-140	Harvest	Single Tree Selection	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<p><u>Prescription</u> -Single tree selection, marking down to 80-90 sq.ft. per acre. However, in higher stocked areas do not remove more than 1/3rd of the stand and a higher BA will be acceptable.</p> <p><u>Specs:</u></p> <ul style="list-style-type: none"> <li>-Avoid marking large, old trees. Do not mark any oak, paper birch, jack pine or other species that may be rare in the stand.</li> <li>-In areas of lower stocking, create large (&gt;66' diameter) canopy gaps, roughly one for every two acres.</li> <li>-Leave two unmarked interior retention pockets equal to 3-10% of the stand's area.</li> <li>-Shingle Mill Pathway will be the north boundary of this treatment. Add timber sale spec's to protect it from damage.</li> <li>-No known T&amp;E species will be affected by this treatment.</li> </ul> <p><u>Other Comments:</u> -Add shortwood spec to limit damage to white pine regeneration.</p> <p><u>Next Steps:</u> -Acceptable regeneration will be any mix of pine and/or oak.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										

76	53034076-Cut	37.9	42110 - Planted Red Pine	High Density Log	68	81-110	Harvest	Shelter Wood with Reserves	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<p><u>Prescription</u> -Shelterwood treatment reducing stand basal area down to 30 sq. ft. per acre. Do not cut any oak or white pine.</p> <p><u>Specs:</u></p> <ul style="list-style-type: none"> <li>-Protect existing regeneration from harvesting damage.</li> <li>-Leave 2-3 interior retention pockets equal to 3-10% of the stands acreage.</li> <li>-No known T&amp;E species will be affected by this treatment.</li> </ul> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> -Mechanically scarify after harvesting to promote pine regeneration. -Acceptable regeneration will be any mix of pine species and/or oak.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										

16	NF_53034016-NonFor	26.9	2113 - Forage Crops				Non-Forest Management	Mowing	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal
<p><u>Prescription</u></p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> Unspecified</p>										

74	NF_53034074-NonFor	6.2	3105 - Mixed Upland Herbaceous				Non-Forest Management	Mowing	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal
<p><u>Prescription</u></p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> Unspecified</p>										

**Total Treatment  
Acreage Proposed: 467.3**

**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
53056_OutOfYOE-Burn	18.2					Prescribed Burn	Unspecified	3205 - Mixed Upland Shrub	Cmpt. Review Proposal
<u>Prescription</u> -Moderate intensity burn to reduce encroaching woody vegetation, mainly black cherry. <u>Specs:</u>  <u>Other Comments:</u>  <u>Next Steps:</u>  <u>Proposed Start Date:</u> Unspecified									

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**Total Treatment Acreage Proposed: 18.2**

Stand	Pigeon River Country Mgt. Unit			5 – Forested Stands		Compartment: 034	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
1	4130 - Aspen	High Density Pole	8.4	53			-Other species that were present but rare included red maple, and red oak.
2	4199 - Other Mixed Upland Deciduous	High Density Pole	4.6	45			-Two-aged stand with quite a bit of diversity. Other species that were present but rare included; red pine, balsam fir, paper birch, and red oak. -Pockets of mostly pine along the NE and SW corners of the stand and along the stand's east edge.
3	42200 - Natural White Pine	Medium Density Pole	1.7	17	1-50		-Old open area that is filling in with pine and red maple.
4	4119 - Mixed Northern Hardwoods	High Density Pole	1.7	85	81-110		-Small acreage for management, let this stand grow.
5	42200 - Natural White Pine	High Density Log	2.2	85	81-110		-Small acreage stand, leave it for structural diversity.
6	4130 - Aspen	High Density Pole	50.0	46			-Site quality becomes better as you move south and/or east in the stand. As a result, hardwood species become more common in these areas. The aspen is also smaller in these areas, probably due to the competition with the hardwood species. Larger aspen is concentrated mostly in the NW quarter of the stand. -Other species that were present but rare included balsam fir, red pine, and white spruce. -A couple of small openings within the stand that are filling in with pine regeneration. Have the treatment boundary go around these areas.
7	4130 - Aspen	High Density Sapling	31.9	25			-Lack of vertical structure and tree species diversity. -In some areas elk are stripping the bark off of red maple saplings, causing a lot of damage. -Other species that were present but rare included; red pine, red oak, balsam fir, and sugar maple.
8	4119 - Mixed Northern Hardwoods	High Density Pole	10.6	79	111-140		-Beech scale is present in this stand and heavy in some areas. Beech is the dominant species in the southern half of this stand. -EAB is present on the few ash that are present in this stand. Several of the ash are already experiencing mortality. -Other species that were present but rare included hemlock, basswood, paper birch, yellow birch, and white ash. -Massive white pine stump found in this stand. The remnants of it measured 47 inches in diameter.
9	4133 - Aspen, Mixed Pine	High Density Pole	10.3	52			-A lot of poor quality stems in this stand. Aspen especially is very low quality. -BBD and EAB are present in this stand. -Other species that were present but rare included; white ash, red pine, red oak, and paper birch. -A few pockets of heavy white pine regeneration. Also, some nice red oak poles and saps scattered throughout the stand. -Small stick nest in NW area of stand (see OFS layer).



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## Pigeon River Country Mgt. Unit

## 5 – Forested Stands

Compartment: 034  
Year of Entry: 2014

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
11	4113 - R.Maple, Conifer	Medium Density	19.7	26		<ul style="list-style-type: none"> <li>-The past treatment of this stand was a removal of the overstory red pine, leaving scattered clumps of pine. The treatment released the understory, which at the time was called "hardwoods" but is predominantly red maple. A poor decision, as the future development of this stand will consist of low quality timber.</li> <li>-Elk are stripping the bark off of the lower bole of many red maple saplings.</li> <li>-Other species that were present but rare included; sugar maple, red oak, and beech.</li> </ul>
12	4130 - Aspen	High Density Sapling	25.1	25		<ul style="list-style-type: none"> <li>-Lack of vertical structure and overstory tree species diversity in this stand.</li> <li>-Other species that were present but rare included; red pine, red oak, and jack pine.</li> </ul>
13	42210 - Natural Red Pine	High Density Log	23.9	75	141-170	<ul style="list-style-type: none"> <li>-High quality natural pine stand.</li> <li>-Old orange and red paint on trees from a harvest that was never implemented.</li> <li>-Other species that were present in the overstory but rare included; red oak, red maple, and bigtooth aspen.</li> <li>-Some red pine and white pine in this stand that are very large (20-30 inches in diameter).</li> <li>--Pretty heavy red maple understory in some spots. Consider re-introducing fire in this stand to reduce red maple competition if a regeneration treatment is prescribed during the next entry period.</li> </ul>
14	4130 - Aspen	High Density Pole	20.6	33		<ul style="list-style-type: none"> <li>-Other species that were present but rare included; red pine, sugar maple, and red oak.</li> </ul>
15	42290 - Natural Mixed Pine	High Density Log	13.1	64	141-170	<ul style="list-style-type: none"> <li>-Some of the red pine in the stand may have been planted; difficult to tell.</li> <li>-Jack pine was also present in the stand but rare.</li> </ul>
17	4191 - Mixed Upland Deciduous with Conifer	Medium Density	4.3	25		
18	4311 - Pine, Aspen Mix	High Density Pole	15.8	35		<ul style="list-style-type: none"> <li>-Other species that were present but rare included; jack pine and quaking aspen.</li> </ul>
19	4119 - Mixed Northern Hardwoods	High Density Pole	108.0	87	111-140	<ul style="list-style-type: none"> <li>-The SE quarter of this stand has higher quality hardwoods and was thinned in 2006 (The Rock Hardwoods). The remainder of the stand is low-medium quality hardwoods with a heavy component of beech.</li> <li>-Beech scale are present in this stand, with a few trees looking like they've had BBD for several years. No evidence of BBD induced mortality yet, but it won't be very long.</li> <li>-EAB also present on the few ash that are in this stand. Mortality imminent.</li> <li>-Other species that were present in this stand included; white pine, red pine, paper birch, white ash, ironwood, and yellow birch.</li> <li>-Replace loss of beech mast by planting hard mast species such as oak and hickory. Also, consider planting hemlock and white spruce to add to diversity.</li> </ul>
20	4130 - Aspen	High Density Sapling	21.9	27		<ul style="list-style-type: none"> <li>-Other species that were present but rare included; red oak and red pine.</li> <li>-Small opening at the south end of the stand.</li> </ul>

S t a n d	Pigeon River Country Mgt. Unit		5 – Forested Stands			Compartment: 034	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
21	4133 - Aspen, Mixed Pine	Medium Density	20.8	25			
22	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	4.4	25			-A few areas where red maple has been browsed severely.
23	42210 - Natural Red Pine	High Density Log	9.1	70			-This stand serves as a buffer around the adjacent leatherleaf bog, with parts of the stand being lowland. Leave this stand unmanaged. -Some very large pine in this stand. Measured a white pine 34" at DBH.
25	42220 - Natural Jack Pine	Medium Density	1.6	25			
26	42290 - Natural Mixed Pine	Low Density Sapling	73.3	16	1-50		-Sapling layer developed after a 1996 timber sale in this stand. Subsequent harvest in 2005 removed most of the overstory, leaving scattered clumps of mature red pine, white pine, and red oak (avg. ba/acre=26 sq. ft.). Since the overstory removal in 2005, red pine is starting to seed in quite nicely in some areas. At the next inventory cycle this will likely be a R2 stand, but as of now the red pine regeneration has not reached 3 feet in height. -There are only a few pockets of aspen regeneration that made it past the browsing level. -Some scattered pockets of abundant jack pine saplings.
27	42290 - Natural Mixed Pine	High Density Log	70.2	76	81-110		-Variable density and quality throughout this stand. Many portions of this stand appeared to have been thinned in the past which likely removed all aspen and red maple. Other parts of the stand haven't been thinned for a while. -Other species that were present in the overstory but rare included; sugar maple, paper birch, and basswood. -Some large white pine (>30" DBH) scattered throughout the stand. -Map shows an intermittent stream running through the south part of this stand. Did not see any evidence of this stream, instead an old logging road runs where the map shows the stream to be located.
28	4130 - Aspen	High Density Pole	10.1	36			-Still quite a few unmerchantable stems in the stand, hold for at least another entry period. -White pine is thicker around the edges of the stand. -Other species that were present but rare included; red maple, red pine, and red oak.
29	4199 - Other Mixed Upland Deciduous	High Density Log	4.6	88	51-80		-Other species that were present but rare included; sugar maple, striped maple, and basswood. -This stand should be managed with the surrounding pine stand.
30	42290 - Natural Mixed Pine	Medium Density	5.0	17	1-50		-Jack pine regeneration thick in some areas, other areas are more sparsely stocked. -Scattered log-size white pine left throughout the stand.



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## Pigeon River Country Mgt. Unit

## 5 – Forested Stands

Compartment: 034  
Year of Entry: 2014

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	42290 - Natural Mixed Pine	High Density Log	23.4	76	111-140	-Dry site with the following understory species; wintergreen, bracken fern, and moss. As you move towards the west, site quality becomes a little better; this is where the red maple begins to increase in the understory. -Heavy browse pressure on the red maple understory. -Multiple ages of pine in this stand. Some large red and white pine that are likely much older than the average-age trees for the stand. Old charred pine stumps scattered throughout suggest that fire was an important ecosystem process in this stand.
32	4130 - Aspen	Medium Density	23.0	24		-Some nice pockets where mixed pine regenerated well. -Scattered log-size oak throughout the stand. -Other species that were present but rare included; balsam fir and white spruce.
33	6120 - Lowland Cedar	High Density Log	5.8	124		-Very wet in some areas. -Areas of blowdown in the center of the stand.
34	42260 - Natural Pine, Mixed Deciduous	Medium Density Pole	1.7	25		
35	42110 - Planted Red Pine	Medium Density Log	43.1	74	81-110	
36	4130 - Aspen	High Density Sapling	23.7	25		-On the verge of becoming a poletimber stand.
37	6121 - Tamarack	High Density Pole	7.7	103		-Mix of standing water and mossy hummocks on which tamarack is growing. -Other species that were present but rare included; white pine, red maple, and white spruce.
38	42210 - Natural Red Pine	High Density Log	77.2	Uneven Age	111-140	-High quality pine stand. -Parts of this stand were likely artificially planted. However, the multiple age classes of pine in the overstory suggest that portions of the stand are natural and in an uneven-aged condition. For example, the following four ages were recorded from red pine within the stand; 62 years, 80 years, 86 years, and 108 years. -Three large stick nests found throughout the stand. -A few open areas in the south end with lower BA and heavy regeneration should be excluded from the treatment boundary.
40	42221 - Natural Jack Pine, Mixed Deciduous	High Density Sapling	3.0	25		
41	42290 - Natural Mixed Pine	Medium Density	3.2	21		
42	4133 - Aspen, Mixed Pine	High Density Sapling	26.4	25		-Some nice pockets of mixed pine.
43	6121 - Tamarack	Medium Density Pole	1.8	104		-This is a bog-like stand with leatherleaf dominating the more open areas.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	42110 - Planted Red Pine	Medium Density Log	41.4	74	111-140	<ul style="list-style-type: none"> <li>-Most of the stand appears to have been planted, however some larger pine scattered throughout that were definitely not planted.</li> <li>-Quality of the stand becomes much better in the SW finger of the stand. Red maple and aspen understory is more prevalent in this area. Heavy browse damage on the red maple regeneration.</li> <li>Northern part of the stand is a drier site with less understory development.</li> <li>-Some very large white pine the SW portion of the stand. Measured several over 30" in diameter.</li> <li>-Small area with somewhat steep slopes near the road in the NW corner of the stand that hasn't been thinned. Use this area as retention.</li> <li>-A few areas along the eastern edge where stocking is quite low and pine regeneration is already becoming established.</li> <li>-Shingle Mill Pathway passes through the east part of this stand.</li> <li>-Stick nest in the south part of the stand.</li> </ul>
45	42220 - Natural Jack Pine	Medium Density	25.4	12		<ul style="list-style-type: none"> <li>-Only a few pockets of aspen that made it past the browsing level.</li> <li>-Jack pine saplings real thick in some areas.</li> <li>-This stand was partially harvested in 1994 and then an overstory removal was completed in 2005 to release the regeneration. Some residual white pine left from previous harvest.</li> </ul>
46	42260 - Natural Pine, Mixed Deciduous	High Density Pole	15.7	24	1-50	<ul style="list-style-type: none"> <li>-Excellent natural red pine regeneration.</li> <li>-Two small pockets of mature aspen.</li> </ul>
47	42110 - Planted Red Pine	High Density Log	50.2	74	111-140	<ul style="list-style-type: none"> <li>-Highly variable stand density.</li> <li>-More oak in this stand than adjacent stand 55.</li> <li>-Shingle Mill Pathway passes through a part of this stand.</li> <li>-Other species present in this stand but rare included; bigtooth aspen, paper birch, and red maple.</li> <li>-Leave this stand until next entry period.</li> </ul>
48	42210 - Natural Red Pine	Medium Density Log	36.3	86	81-110	<ul style="list-style-type: none"> <li>-This stand has been thinned in the past; removing some red pine and likely all aspen and red maple. Browsing eliminated most of the aspen and some of the red maple. Some of the gaps created by thinning are filling in nicely with natural red pine.</li> <li>-Most of the oak is in the SW portion of the stand.</li> <li>-Other species that were present but rare included; paper birch and white spruce.</li> <li>-Hold this stand until next entry period and manage as a two-aged/uneven-aged stand.</li> <li>-Small sinkhole depression in the SE part of the stand.</li> </ul>
49	42220 - Natural Jack Pine	Medium Density	8.9	17		<ul style="list-style-type: none"> <li>-Red pine seeding in nicely in some of the more open areas.</li> <li>-A few scattered log-size red oak and white pine.</li> </ul>
50	4130 - Aspen	High Density Sapling	8.6	25		<ul style="list-style-type: none"> <li>-Other species that were present but rare included; jack pine, white pine, and red oak.</li> </ul>
52	42290 - Natural Mixed Pine	Medium Density	53.4	12	1-50	<ul style="list-style-type: none"> <li>-Previous treatment of this stand was an overstory removal aimed at releasing red maple, however red maple is quite rare in the stand. Mixed pine has seeded in nicely in some areas, others areas are more barren. Scattered mature pine left from previous harvest, average ba/acre around 20 sq. ft.</li> <li>-Age of white pine saplings an estimate from counting whorls.</li> <li>-Shingle Mill Pathway runs through the stand.</li> </ul>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
53	4310 - Pine, Oak Mix	High Density Log	3.3	74	51-80	
54	42110 - Planted Red Pine	High Density Log	1.1	73	111-140	-Leave this stand for vertical structure as there are mostly saplings stands in the immediate vicinity.
55	4130 - Aspen	Medium Density	16.3	25		-Size and stocking of aspen increase as you move northward in the stand. -Pockets of unhealthy quaking aspen affected by hypoxylon canker. -White pine and balsam fir were also present but rare.
57	42290 - Natural Mixed Pine	High Density Log	6.7	71	111-140	-Dense stand with a lot of white pine poles. Some XL size white and red pine mixed in the stand as well. -Jack pine is also present in the stand but much of it is decadent and breaking up. -Leave this stand alone to let the white pine poles grow as there aren't many stands in the area that are unmanaged. Consider thinning during the next entry period.
58	42210 - Natural Red Pine	High Density Log	10.7	70		-This stand provides an uncut buffer around Ford Lake.
60	4311 - Pine, Aspen Mix	Low Density Sapling	16.7	25		-Low-stocked stand with a lot of poor-quality, multi-forked stems, especially the jack pine and white pine. -Quaking aspen is very unhealthy in some areas, with dying tops and hypoxylon canker.
61	42250 - Pine, Oak	High Density Log	21.0	66	81-110	-Let this stand grow another entry period. -The red pine in this stand was likely planted. -Small sinkhole with a wetland in it at the west end of this stand. Steep slopes surround the sinkhole. There are relatively steep slopes down to Ford Lake as well. -9 basal area plots were taken with an average of 104 sq. ft. per acre.
63	42110 - Planted Red Pine	High Density Log	57.6	76	111-140	-Likely a planted stand, however past thinnings and XL sized pine make this stand appear more natural. -Variable stocking throughout the stand, with some areas thinned much heavier than others. -Some very large XL sized pine throughout the stand. Measured a 37" DBH white pine. -Shingle Mill Pathway passes through the north part of this stand. This will be the north boundary of the treatment. Include spec's to protect the pathway. -Protect existing pine regeneration. White pine understory is heavier in the south finger of the stand. -Keep an eye out for stick nests as this stand has good habitat for close canopy raptors.
64	42290 - Natural Mixed Pine	Low Density Pole	18.6	47	1-50	-Previous treatment was an overstory removal which left a lot of the smaller, overtopped pine. The residual pine are highly variable in size and age, with most being in the sapling and pole size classes. -Open areas are not seeding in well. Consider burning or supplemental planting during the next inventory cycle if regeneration is still inadequate.

Stand	Pigeon River Country Mgt. Unit		5 – Forested Stands			Compartment: 034
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014
						General Comments:
65	4133 - Aspen, Mixed Pine	Medium Density	10.1	25		-Other species present but rare included; paper birch, white spruce, and balsam fir.
66	6112 - Lowland Aspen	High Density Sapling	3.6	25		
67	42290 - Natural Mixed Pine	Low Density Sapling	38.3	10		-Overstory removal harvest in 2006. Prescription called for trenching to scarify soil after harvest; however I don't think this was ever implemented. Number of red pine seed trees is much lower than what was called for in the prescription. As a result, regeneration is lacking in many areas. -Most of the red pine regeneration is either just above or just below the 3 foot seedling/sapling threshold.
68	42110 - Planted Red Pine	Medium Density Log	22.4	68	81-110	-Thinned heavily in some areas. Let this stand grow and consider a regeneration treatment next entry period. -Resembles more of a natural stand due to mix of oak and white pine in the stand. -Not a great site for red pine. -Shingle Mill Pathway passes through this stand.
69	42260 - Natural Pine, Mixed Deciduous	High Density Log	2.0	73	81-110	-Small parking area in this stand that provides access to the river. -Steep slope along the edge of this stand leading down to the river.
70	4130 - Aspen	High Density Pole	10.4	33		-Wait at least another ten years until considering treatment for this stand. -Other species that were present but rare included; red oak, balsam fir, and white spruce.
71	42110 - Planted Red Pine	High Density Log	18.2	66	111-140	-Varying stand density throughout. Gaps created from previous harvest filling in with red and white pine regeneration. -XL size natural pine scattered throughout the stand. Aged a large red pine at 95 years old. -Hold this stand until next cycle and manage along with adjacent stand 61.
72	42110 - Planted Red Pine	High Density Log	43.0	73		-Unique stand with highly variable stocking. Three distinct age classes in this stand; planted pine with XL and sapling sized natural pine mixed in. Areas that were thinned heavily resemble more of a natural stand with a heavy understory of white pine filling in the gaps. Other areas that were thinned more lightly resemble a more traditional red pine plantation. -A lot of nice, large snags in this stand. -While not displaying old-growth characteristics yet, this stand should be managed with big-tree silviculture on an uneven-aged basis promoting a pine dominated stand of large trees and diverse vertical structure. -Other species that were present but rare included; white spruce, bigtooth aspen, and red maple.
73	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	15.3	73		-The Pigeon River runs through this stand. -Some minor beaver activity in a few areas. -Some areas of blowdown. Good amounts of CWD. Close to being an uneven-aged stand. -Other species that were present but rare included; willow and paper birch. -Some large cedar in this stand, measured one at 27" DBH.





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
75	4133 - Aspen, Mixed Pine	High Density Pole	8.7	33		-Other species that were present but rare included; red oak, sugar maple, balsam fir, and white spruce.
76	42110 - Planted Red Pine	High Density Log	37.9	68	81-110	-A few areas that were thinned heavily during previous thinning. Pine regeneration is seeding in nicely into these gaps. -Some short, steep slopes at the NW end of the stand. -13 basal area plots were taken with an average of 107 sq. ft. per acre.
77	42260 - Natural Pine, Mixed Deciduous	High Density Log	11.2	91	81-110	-There is a steep ridge along the N and W boundaries of this stand that leads down to the Pigeon River. Most of the better quality pine is along this ridge. -Diverse stand. Other species that were present in the overstory but rare included; balsam fir, white spruce, black cherry, and paper birch.
78	6112 - Lowland Aspen	Medium Density Log	4.3	45		-Some blowdown occurring in this stand. -Thick understory of lowland shrubs in this stand.
79	42210 - Natural Red Pine	High Density Log	7.7	75	141-170	-Highly variable stocking within the stand, probably as a result of a past species removal harvest which likely took out all jack pine and aspen.
80	42290 - Natural Mixed Pine	Medium Density	60.3	10		-Previous harvest was an overstory removal in 2006 to release advanced regeneration. Multiple size classes of pine were left as residual. Previous prescription (from 2002) called for mechanical scarification to expose mineral soil following harvest; however not sure if this was ever implemented because of the amount of advanced regeneration. -Most red pine regeneration is in the range of 2-5 feet tall. -Only a few small pockets of aspen regeneration that made it past the browsing level. -This is developing into a nice mixed pine stand.
81	4130 - Aspen	High Density Pole	2.3	27		
83	4123 - Red Oak	High Density Log	2.0	74	51-80	-Other species that were present but rare included; balsam fir and white spruce. -Thick white pine regeneration in some spots.
84	6112 - Lowland Aspen	High Density Pole	16.1	33		-Other species that were present but rare included; paper birch, red pine, balsam fir, white pine, elm, and hawthorn. -Some scattered pockets of larger aspen. -Well developed understory of lowland shrubs.
85	42220 - Natural Jack Pine	High Density Pole	2.4	30		
87	4130 - Aspen	High Density Pole	4.3	27		

Stand	Pigeon River Country Mgt. Unit		5 – Forested Stands			Compartment: 034	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
88	42260 - Natural Pine, Mixed Deciduous	Medium Density Pole	9.4	36	51-80	-Variable sizes of pine in this stand. Aspen doesn't appear to be very healthy. -Steep slopes along the edges of this stand that border the adjacent opening to the west. -Other species that were present but rare include; red maple, white spruce, and red oak.	
89	4311 - Pine, Aspen Mix	Low Density Sapling	11.9	25		-Aspen regenerated very poorly in this stand, likely due to elk.	
90	42220 - Natural Jack Pine	Low Density Sapling	14.2	10	1-50	-Previous harvest of this stand was an overstory removal, leaving scattered red pine. The prescription from the previous inventory called for mechanical scarification of this stand, however there is no on-the-ground evidence that this ever happened. Slash from previous harvest is still intact and there doesn't appear to be any disturbance to the ground. -Red pine is starting to seed into some areas however there are still areas, mostly in the southern half, devoid of regeneration. -Shingle Mill Pathway passes through this stand. -Jack pine age an estimate because there were no jack pine large enough to get an age at this time.	
93	6117 - Lowland Deciduous, Mixed Coniferous	Low Density Pole	1.3	37			
94	42260 - Natural Pine, Mixed Deciduous	Low Density Sapling	2.2	16		-The north part of this stand has a non-designated camping area. -There were no suitable jack pine to obtain an age, so age was estimated from a whorl counts of red pine saplings.	
96	42110 - Planted Red Pine	High Density Log	13.0	76	81-110	-Gaps created from previous harvest have filled in with dense pine regeneration (mostly white pine).	
97	6127 - Lowland Pine	High Density Sapling	1.3	17		-This stand is a forested leatherleaf bog in a sinkhole-like depression. -Stand age is an average of several whorl counts of white and red pine saplings. -A few scattered log-size red pine and jack pine.	
98	42220 - Natural Jack Pine	Medium Density Pole	1.7	46			
99	6126 - Lowland Jack Pine	High Density Pole	1.8	36			
101	6112 - Lowland Aspen	High Density Pole	18.5	31		-This stand is a mix of upland and lowland aspen. The N and SW 1/4's of the stand are mostly upland, while the central portion of the stand is lowland. The upland portions of the stand are where most of the conifers are as well as the black cherry and serviceberry understory. The lowland portion of the stand is where the lowland shrub understory predominates. -Other species that were present but rare included; white spruce, balsam fir, and paper birch.	
102	4132 - Aspen, Jack Pine	Medium Density	3.0	10		-Age an estimate because the aspen saplings have not grown large enough to obtain an age via an increment borer. -Mostly aspen in the south half, more pine in the north half.	





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
103	42110 - Planted Red Pine	High Density Log	53.5	84	81-110	-Highly variable stocking throughout this stand. Previous harvest removed all jack pine, red maple, and aspen. Gaps created through previous harvest are filling in nicely with all three species of native pine. -Several age classes of pine in this stand, giving it a more "natural" look. XL sized red pine scattered throughout, measured some in the 24-27" DBH range. -Other species that were present but rare included jack pine and red oak. Understory species primarily included wintergreen, moss, and blueberry. Sweetfern, beech, and witch hazel were rare in the understory.
104	42290 - Natural Mixed Pine	High Density Log	6.5	50	81-110	-This is a good stand to leave unmanaged as it provides a nice visual buffer along Twin Lakes Road and the Pigeon River. In addition, the P.S. Lovejoy Monument is located in this stand and the High Country Pathway passes through the stand. -There is a small opening at the south end.
105	6139 - Mixed Lowland Forest	Medium Density Log	5.0	36		-Good diversity of lowland shrubs in this stand.
106	42290 - Natural Mixed Pine	Medium Density	25.4	17		-Jack pine is more prevalent on the west half of the stand, with white pine more dominant on the east half. -Wide range of white pine size and age. Stand age determined by averaging whorl counts from several white pine saplings. -Some areas where regeneration has not been successful but overall this is a nice mixed pine stand.
107	42110 - Planted Red Pine	Medium Density Log	1.1	84	81-110	-This stand has been burned, with charred bark 5-6 feet up the stem. All trees appear to be healthy.
108	42260 - Natural Pine, Mixed Deciduous	Low Density Sapling	7.5	10	1-50	-The Shingle Mill Pathway passes through this stand. -The part of this stand south of the Pathway appears to have been burnt. -Jack pine age an estimate because there were no trees large enough to obtain an age with the increment borer.
109	42290 - Natural Mixed Pine	High Density Log	8.3	82	111-140	-This is a good stand to leave alone and let natural succession take place. It provides a nice visual buffer along Twin Lakes Road and the Pigeon River. In addition, the High Country Pathway runs through this stand. There are several areas of steep slopes in this stand as well. -A lot of the aspen is either dead or close to it. Some blowdown is occurring. -Other species that were present but rare included; balsam fir, white spruce, cedar, and jack pine.
110	6112 - Lowland Aspen	Low Density Pole	7.8	52		-Other species that were present but rare included; red maple, paper birch, white spruce, and willow. -Good amount of large CWD in the stand due to ongoing windthrow.
111	42290 - Natural Mixed Pine	Low Density Pole	6.7	42	1-50	-Poor quality open grown timber. Some scattered large pine, oak, and aspen mixed in.

S t a n d	Pigeon River Country Mgt. Unit		5 – Forested Stands			Compartment: 034	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
112	42290 - Natural Mixed Pine	High Density Log	8.7	69	111-140	-The majority of this stand lies on a steep slope which runs down to the Pigeon River. The south 1/4 of this stand becomes more of a lowland stand, but still dominated by pine. -This stand should be left unmanaged as it provides a buffer for the Pigeon River and the steep slopes would create serious erosion problems. -Other species that were present but rare included; paper birch, balsam fir, and white spruce.	
113	42290 - Natural Mixed Pine	High Density Log	7.1	83	81-110	-Stand lies on a steep ridge overlooking the Pigeon River. -High Country Pathway passes through a portion of this stand.	
114	42110 - Planted Red Pine	Medium Density Log	6.2	80		-Other species that were present but rare included; red maple, beech, and red oak. -Nice diversity of mast-producing shrubs in the understory. Hawthorn, serviceberry, and witch hazel were all present in the stand (although not common enough to be included in the sub-canopy listing).	
115	6111 - Lowland Balsam Poplar	Low Density Log	6.7	48		-Pigeon River runs through this stand. -Other species that were present but rare included; red pine, white pine, balsam fir, and white spruce.	
116	42290 - Natural Mixed Pine	High Density Log	10.7	78	51-80	-Pigeon River State Forest Campground is located in this stand. -The High Country Pathway passes through this stand. -Other species that were present but rare included; white spruce, red oak, and paper birch.	
118	42110 - Planted Red Pine	Medium Density Log	12.1	92	81-110	-Per the instructions from the previous inventory, this stand will be managed on an extended rotation. -A portion of this stand was burnt in a wildfire that probably occurred 2 or 3 years ago. A plow line weaves through the stand. No health issues on the pine, all appear to be healthy. Bark scorch 3-4 feet up the stem. -Red oak was also present in this stand, but rare.	
119	42290 - Natural Mixed Pine	Low Density Log	14.7	86	1-50	-Past treatment in 2006 was a red pine seed-tree/shelterwood with the prescription calling for post-harvest scarification. Don't think the scarification was ever implemented based on the amount of intact slash on the ground. Quite a bit of residual white pine advanced regeneration was left after the harvest as well. -Regeneration has not been successful. Consider burning this stand during the next entry period when the white pine saplings have gotten large enough to withstand fire scarring.	
120	42210 - Natural Red Pine	High Density Log	13.4	72	111-140	-A few of the XL sized white pine are very large (30"+ DBH). -Let this stand grow and treat during the next entry period.	
121	42290 - Natural Mixed Pine	High Density Pole	5.5	54	81-110	-The majority of the pine in this stand is still quite small. Let it grow for at least another entry period before considering treatment.	





Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
10	3105 - Mixed Upland Herbaceous	1.5	Natural Regen	Natural Mixed Pines	
16	2113 - Forage Crops	26.9	Yes	High (NonForested)	-The majority of this stand is a managed wildlife opening.
24	6225 - Bog	2.6	No	Unspecified	
39	6239 - Mixed Emergent Wetland	3.2	No	Unspecified	
51	3303 - Mixed Low Density Trees	2.5	No	Unspecified	
56	6239 - Mixed Emergent Wetland	4.0	No	Unspecified	
59	50 - Water	5.4	No	Unspecified	Ford Lake
62	3303 - Mixed Low Density Trees	1.3	No	Unspecified	
74	3105 - Mixed Upland Herbaceous	6.2	Yes	Low (NonForested)	Previous inventory notes indicated that this is a managed wildlife opening.
82	3105 - Mixed Upland Herbaceous	1.6	No	Unspecified	
86	3105 - Mixed Upland Herbaceous	1.6	No	Unspecified	
91	3303 - Mixed Low Density Trees	1.4	No	Unspecified	-This is essentially the backyard of the Pigeon River Field Office.
92	3105 - Mixed Upland Herbaceous	1.3	No	Unspecified	
95	6229 - Mixed lowland shrub	21.1	No	Low (NonForested)	-Pigeon River flows through this stand.
100	3303 - Mixed Low Density Trees	3.4	No	Unspecified	-This W-SW part of this stand appears to be used by campers/hunters.
117	6229 - Mixed lowland shrub	6.0	No	Unspecified	-Pigeon River flows through this stand. -Some relatively recent beaver activity on the larger balsam poplar. -There is a small upland inclusion (~.5 acres) of red and jack pine in the NE corner of the stand. This area is adjacent to Elk Hill Campground.



### 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
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**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	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.
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.