



Compartment Review Presentation

Pigeon River Country Forest Management Unit

Compartment 53040

Entry Year 2019

Acreage: 1,582

County Otsego

Management Area: Pigeon River Country

Revision Date: 2017-05-25

Stand Examiner: Greg Rekowski

Legal Description:

T32N R01W Section 28, 29, and 30

Identified Planning Goals:

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

Soil and topography:

Leelanau loamy sands are the dominant soil type in upland areas with smaller amounts of Menominee, Lindquist, Rubicon, and Croswell sands. Lowland areas are predominantly Tawas-Lupton mucks.

Topography is flat to gently rolling. The southeast corner of Section 28 is mostly lowland.

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

Sections 28 and 29 are solid state ownership while Section 30 has a mix of private ownership to the south, west, and north.

Unique Natural Features:

Bald eagle nests have been documented in this Compartment.

Archeological, Historical, and Cultural Features:

None identified.

Special Management Designations or Considerations:

None identified.

Watershed and Fisheries Considerations:

Round Lake is located in Section 29. In Section 30 a small trail runs from the end of Road 90 down to the Pigeon River and provides access for fisherman. The recently acquired Skiba parcel on the west side of the Pigeon River provides additional fishing opportunities. A small portion of the Black River passes through the southeast corner of Section 28.

Wildlife Habitat Considerations:

A Wildlife representative will be available for comment at both the Open House and Compartment Review.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and coarse-textured glacial till. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Devonian Antrim Shale that is quarried for cement products elsewhere in the State. An inactive gravel pit is located in Section 30 and potential is good on the upland areas. However, page 30 of the Concept of Management for the PRC says that extraction of surface minerals will rarely be allowed. This area was previously leased for Niagaran oil and gas development and one well was drilled, a dry hole. Producing wells are located just to the south and additional Niagaran reefs may be located in the Compartment. The Antrim Shale is present and also has potential. The closest Antrim production is one mile to the west. However, the entire compartment is in the Consent Order area and, as provided on page 33 of the Concept of Management, no new leases will be issued in this Area.

Vehicle Access:

There is good vehicle access throughout this Compartment. A new state forest road is in the process of being completed and will provide access to the newly acquired Skiba parcel in the west half of Section 30.

Survey Needs:

None

Recreational Facilities and Opportunities:

Round Lake State Forest Campground is in the Compartment. A spur of the High Country Pathway which travels to and from Round Lake Campground is also in the Compartment.

Fire Protection:

Fire risk is moderate to high in this Compartment due to the dominance of pine cover types. Access is good in the event of fire suppression activities with most closed roads having berms in place.

Additional Compartment Information:

The following reports from the Inventory are attached:

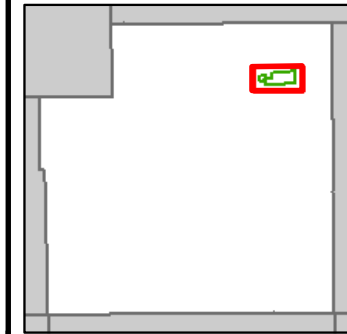
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

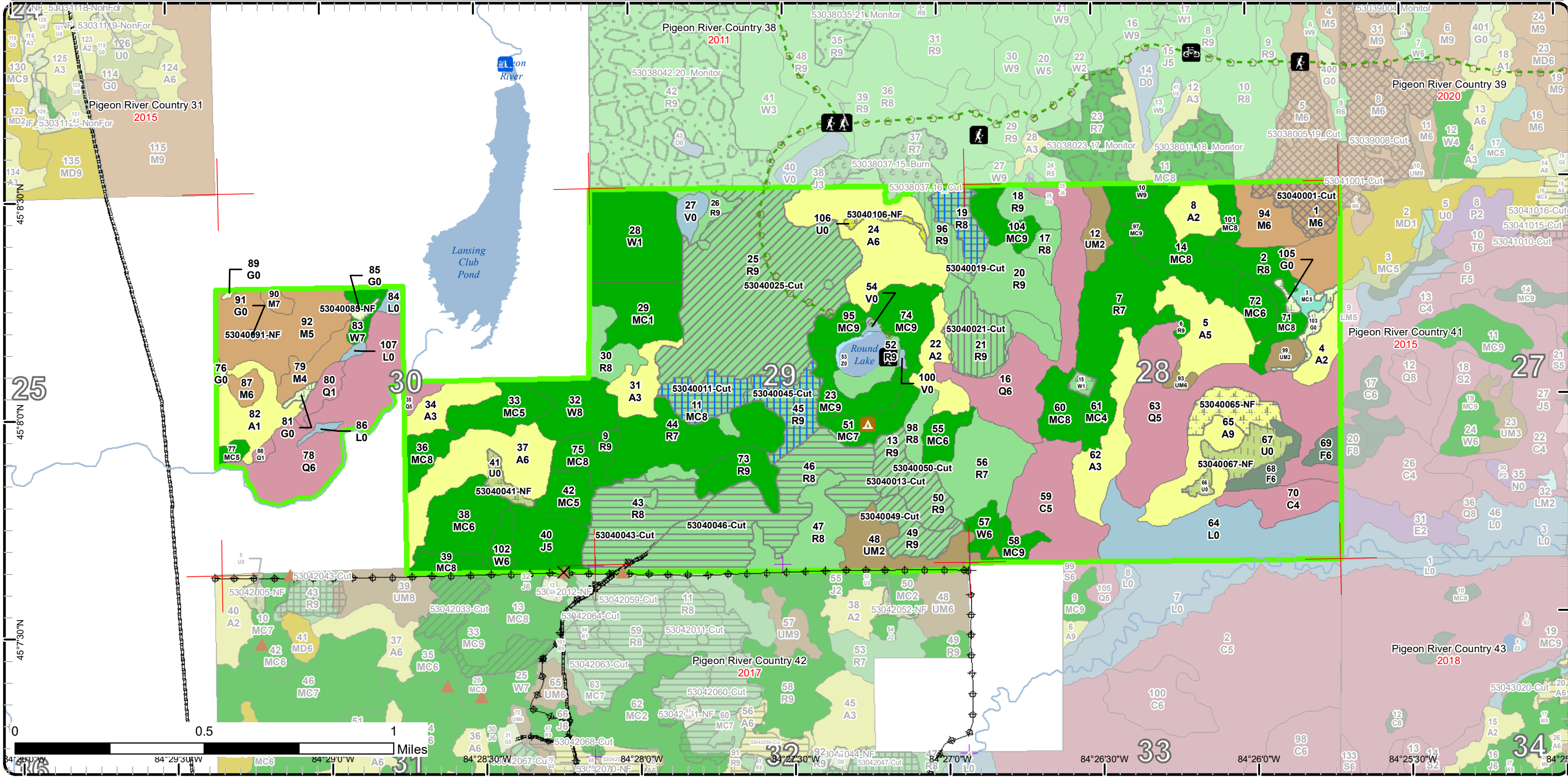
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 40
 T32N, R01W, Sec: 28, 29, 30
 County: Otsego
 Unit: Pigeon River Country
 Mgmt Area: Pigeon River Country
 YOE: 2019
 Acres: 1582.3 GIS Calculated
 Examiner: Greg Rekowski
 Map Revised: 1/10/2018
 Map Phase: Post-Review



- Miris Corners
- + Remonumented Section Corners
- Counties
- X Gate
- ▲ Berms
- Dams
- ▲ Campground
- 🚲 Bike Trails
- 🚶 Hiking Trails
- 🏂 Ski Trails
- - - Designated Hiking Trails
- - - Designated Bicycle Trails
- - - Designated Ski Trails
- - - Designated Snowshoe Trails
- Streams
- Lakes and Rivers All
- Pipeline
- ⚡ Powerline
- Compartment Boundary
- Other Treatment - See Comments
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Shelter Wood (w/Reserves)
- Opening Maintenance
- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- Lakes

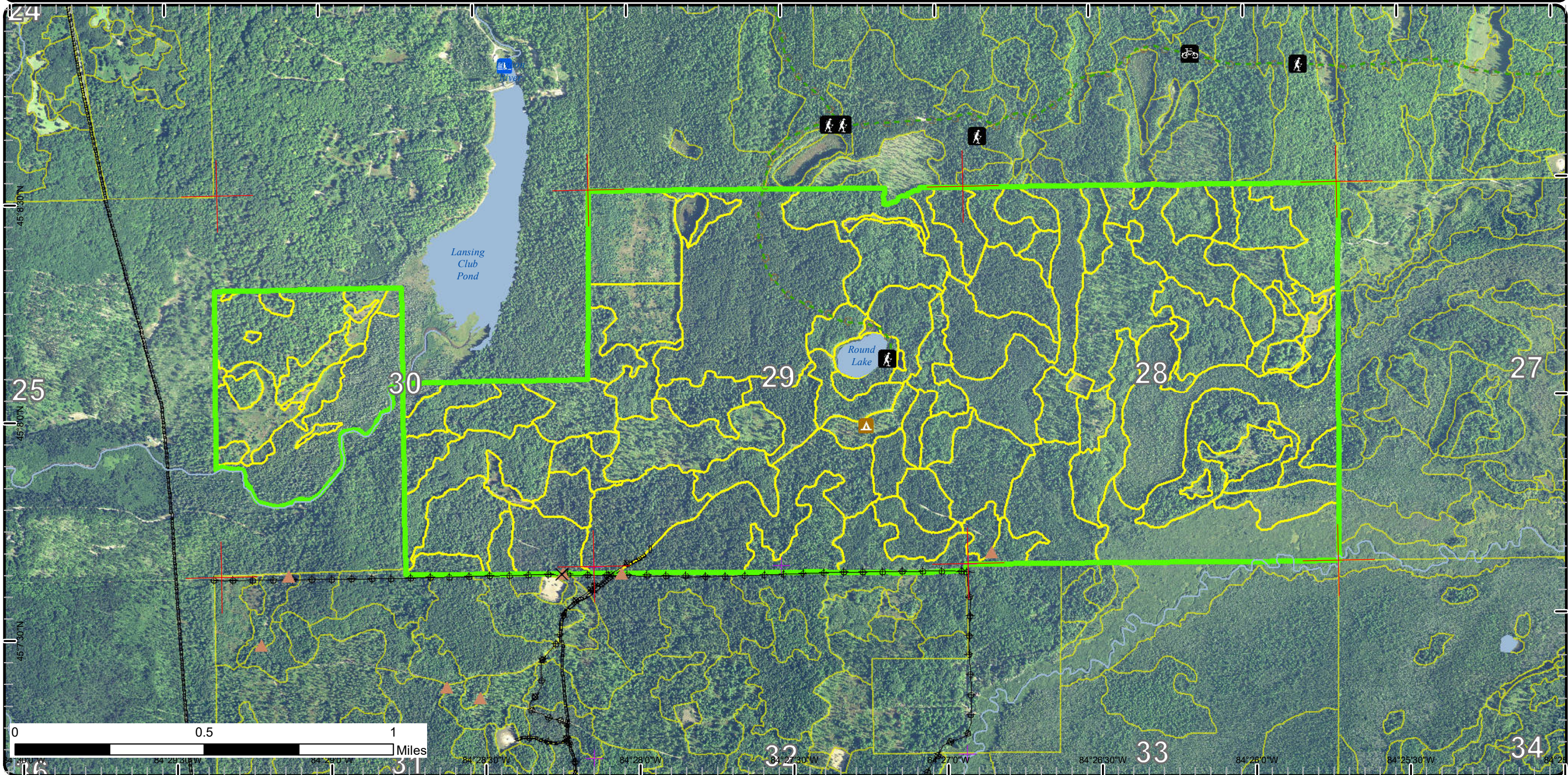


Stand Boundary Map

Compartment:
 T32N, R01W, Sec: 28, 29, 30
 County:
 Unit:
 Mgmt Area:
 YOE:
 Acres: GIS Calculated
 Examiner:
 Map Revised: 1/10/2018
 Map Phase: Post-Review



- Miris Corners
- + Remonumented Section Corners
- Counties
- X Gate
- ▲ Berms
- Dams
- ▲ Campground
- 🚲 Bike Trails
- 🚶 Hiking Trails
- 🏂 Ski Trails
- - - Designated Hiking Trails
- - - Designated Bicycle Trails
- - - Designated Ski Trails
- ◊ Designated Snowshoe Trails
- Streams
- Lakes and Rivers All
- Pipeline
- ⚡ Powerline

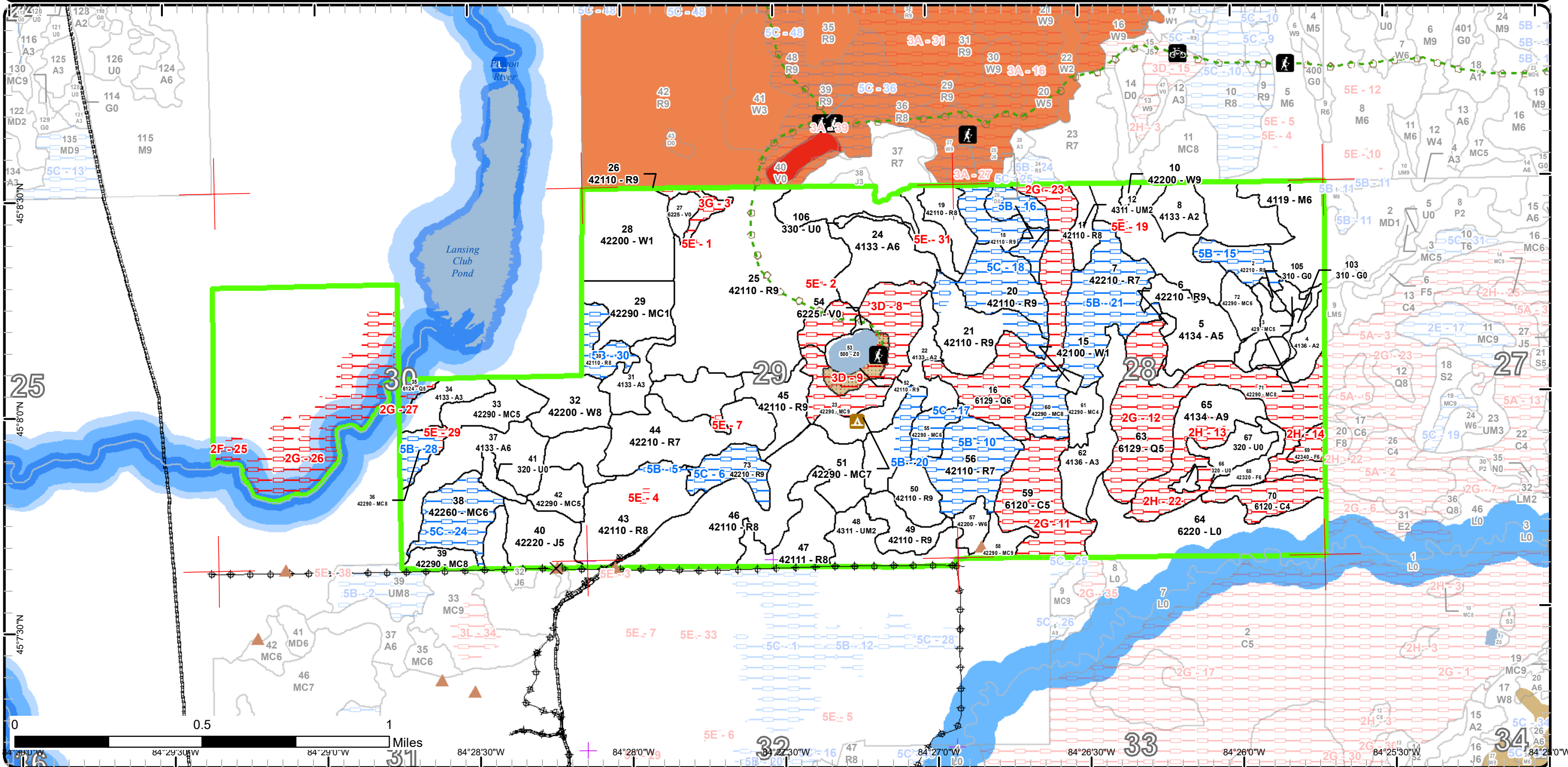


Special Conservation Areas & Site Conditions Map

Compartment: 40
 T32N, R01W, Sec: 28, 29, 30
 County: Otsego
 Unit: Pigeon River Country
 Mgmt Area: Pigeon River Country
 YOE: 2019
 Acres: 1582.3 GIS Calculated
 Examiner: Greg Rekowski
 Map Revised: 1/10/2018
 Map Phase: Post-Review



- Miris Corners
- ✚ Remonumented Section Corners
- ▭ Counties
- ✕ Gate
- ▲ Berms
- ⓘ Dams
- ⚡ Campground
- 🚲 Bike Trails
- 🚶 Hiking Trails
- 🏂 Ski Trails
- Designated Hiking Trails
- - - Designated Bicycle Trails
- Designated Ski Trails
- Designated Snowshoe Trails
- Streams
- Lakes and Rivers All
- Pipeline
- Powerline
- ▭ Compartment Boundary
- ▭ SCA Proposed
- Available w/ Constraints
- Unavailable
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3D: Recreational / Scenic values
- 3G: Other Influence zones - See comments
- 5E: Long-Term Retention
- ▭ Stand Boundaries
- ▭ Ecological Reference Areas
- ▭ Natural Rivers Vegetative Buffer
- ▭ Natural Rivers Zoning District
- ▭ Forest Habitat Core Interior
- ▭ Cold Water Streams
- ▭ High Priority Trout Stream Buffer
- ▭ State Forest Campground
- ▭ Other Habitat Area



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	11	67	102	0	0	0	0	32	0	0	0	0	0	0	0	0	212
Bog	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Cedar	0	0	0	0	0	0	0	0	0	0	0	14	34	0	0	0	0	0	48
Herbaceous Openland	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Jack Pine	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	19
Low-Density Trees	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Conifers	0	0	0	0	0	0	0	0	48	0	0	0	74	0	0	0	0	0	122
Lowland Shrub	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
Natural Mixed Pines	0	0	0	29	8	0	0	0	0	58	20	20	0	0	0	0	0	22	157
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	26
Red Pine	0	0	0	0	0	0	0	11	0	440	11	39	0	0	0	0	0	0	501
Upland Conifers	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Upland Mixed Forest	0	0	8	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Upland Shrub	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Upland Spruce/Fir	0	0	0	0	0	0	0	7	0	4	0	0	0	0	0	0	0	0	11
Water	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
White Pine	0	0	40	0	6	0	0	0	0	19	0	2	0	0	0	0	0	0	67
Total	90	0	59	119	116	19	0	18	48	553	57	75	108	0	0	0	0	22	1284



Report 2 – Treatment Summary

Acres of Harvest

Commercial Harvest - 292
Harvests with Site Condition - 0
Next Step Harvest - 17
Habitat Cut - 17

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Northern Hardwood	0	14	0	0	0	0	0	0	0	14
Red Pine	95	0	0	28	17	138	0	0	0	278
Total	95	14	0	28	17	138	0	0	0	293

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	293	0	0	0	0	0	0	38		331
Next Step	17	113	113	0	11	0	280	17	0	550
Total	310	113	113	0	11	0	280	17	38	881



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
1	53040001-Cut	14.3	4119 - Mixed Northern Hardwoods	Poetimber Well	95	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Field Boundary

Habitat Cut: No Site Condition:

Prescription Thin down to 80 sq ft per acre. Focus on removing most of the beech except leave some of the larger mast trees as well as any that appear free of scale. Create large canopy gaps (>66 ft) where opportunities exist in pockets dominated by beech. Do not mark in hemlock pockets and leave a higher BA around the edges of these pockets. Do not mark any rare species in the stand.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Any mix of species will be acceptable.
Regen:

Other Protect any stick nests found.
Comment:

Proposed Start Date: 10/01/2014

15	53040015-NF	1.9	42100 - Planted White Pine	Sapling Poor	18	Immatu re	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No Site Condition:

Prescription Mow, plant, brush,burn, or herbicide to maintain openings. Plant hard or soft mast.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

19	53040019-Cut	11.2	42110 - Planted Red Pine	Sawtimber Medium	84	81-110	Harvest	Seed Tree	42210 - Natural Red Pine	Two-Aged	Draft Field Boundary
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Habitat Cut: No Site Condition:

Prescription Mark to leave 10 square feet of the largest and best quality red and white pine. No area retention but to break up the homogenous structure mark 1-2 clumps per acre of 3-5 trees. Try to focus these clumps on any existing patches of natural red pine that may be present. Roundwood harvest only and ensure slash is evenly scattered. Burn post-harvest. Seek outside funding for this burn. Also check with Mark Monroe to see if it can be added to WLD priority planning for potential cost sharing of the burn. Consult with the FRD Silviculturalist, TMS, and WLD staff to see if any of the methods being used in stand 21 to the south can be also be utilized in this treatment.

Evaluate regeneration success with a regen survey 4 years after burning. If regen is unsuccessful, discussions at next inventory should focus on whether to re-burn, leave as is, or trench and re-plant.

Next Step Burn, Understory; Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable A moderately stocked stand dominated by red pine (>60%) with any additional mix of species being acceptable.
Regen:

Other Achieving natural regeneration is a stated goal of pine management in the PRC. Per Page 18 of the PRC Concept of Management, "Natural regeneration will be the primary means of establishing regeneration. Planting will be used where natural regeneration is not successful and pine management is the objective. Planting usually will not be the first choice for regeneration." Treatments in other stands will utilize whole-tree harvesting to try and achieve desirable natural regeneration. A large block of nearly 100 acres is scheduled to be clearcut and will be trenched and re-planted to red pine.

Proposed Start Date: 10/01/2017



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
21 53040021-Cut	17.3	42110 - Planted Red Pine	Sawtimber Well	84	111-140	Harvest	Shelterwood	4211 - Planted Red Pine	Even-Aged	Field Boundary

Habitat Cut: No

Site Condition:

Prescription Mark to leave 40 square feet in primarily red pine. Leave any white pine over 18" in diameter. Add 2" spec, low stumps, and chipping of tops to facilitate post harvest operations.

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

Acceptable Regen: Fully stocked stand of red pine. A small component of white pine, red maple, and spruce will likely seed in as well.

Other Comment: This stand is part of a cone production experiment. The site will be fertilized post-harvest to stimulate cone production on the residual trees. The trees will then be destructively sampled in order to collect all cones. Following all of these operations, the site will be trenched and replanted to red pine.

Proposed Start Date: 10/01/2016

25 53040025-Cut	115.0	42110 - Planted Red Pine	Sawtimber Well	85	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Crown thin/thin from below down to an average of 100-110 square feet per acre. Focus on removing suppressed red pine poletimber as well as red pine saw-timber from the smaller size classes. Retain all white pine and oak. Retain all large, natural XL-sized red pine and go around any clumps of these that may be present as well. Leave a few areas of unmarked trees scattered throughout to maintain some structural diversity.

Next Step Treatments:

Acceptable Regen:

Other Comment: Place retention around the 2 depressions and add more if additional ones are found.

Add trail specs and signage requirements for the High Country Pathway which runs through the stand. Contact PRD at time of sale-prep as they have indicated they may be interested in re-routing the HCP that goes through the stand.

See MNFI layer for an occurrence outside of the stand boundary but which may affect harvest timing. Do a site check for this occurrence.

Proposed Start Date: 10/01/2018

41 53040041-NF	4.2	320 - Upland Shrub	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Mow, plant, brush,burn, or herbicide to maintain openings. Plant hard or soft mast.

Specs:

Next Step Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2018



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
43	53040043-Cut	32.8	42110 - Planted Red Pine	Sawtimber Medium	85	51-80	Harvest	Clearcut with Retention	42110 - Planted Red Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Clearcut and replant to red pine. Do not cut oak. Use retention in the center of the stand for the pocket of large natural pine (already excluded).

Specs: Utilize additional small retention pockets to protect areas of jack pine advanced regeneration, incorporate some larger red pine into these pockets. The far northeast corner of the stand has been excluded because there is thick regeneration and a much lower residual BA.

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

Treatments:

Acceptable A fully-stocked stand of planted red pine with any additional mix of species being acceptable.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

45	53040045-Cut	16.4	42110 - Planted Red Pine	Sawtimber Well	85	111- 140	Harvest	Seed Tree with Retention	42290 - Natural Mixed Pine	Two-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Mark to leave 20 square feet per acre of the largest red and white pine. There may be a few small clumps of large natural pine which should be

Specs: marked to leave as well. Leave any oak which may be present. Add area retention along the east edge of the stand near West Round Lake Road.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable A well-stocked stand dominated by red and white pine. Any additional mix of species is acceptable.

Regen:

Other

Require whole-tree skidding in snow-free months to maximize ground scarification.

Comment:

Regen survey at next inventory cycle, if regen falls below a well-stocked mixed pine stand, consider burning or scarification first, in conjunction with stand 44 to the west.

Proposed Start Date: 10/01/2018

46	53040046-Cut	62.4	42110 - Planted Red Pine	Sawtimber Medium	85	51-80	Harvest	Clearcut with Retention	42110 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clearcut and re-plant to red pine. Leave any oak if present. Utilize retention to protect pockets of advanced jack pine regeneration. Incorporate

Specs: larger red pine into these pockets.

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

Treatments:

Acceptable Fully-stocked stand of planted red pine.

Regen:

Other

The far east end of this stand has a large pocket of nearly pure jack pine saplings. May be worth it to just exclude this area from the treatment boundary.

Comment:

Proposed Start Date: 10/01/2018

49	53040049-Cut	12.1	42110 - Planted Red Pine	Sawtimber Well	84	111- 140	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Crown thin to 110 sq. ft. per acre. Focus on removing suppressed red pine poletimber. Do not mark any of the larger natural pine. Do not do a

Specs: species removal harvest. Retain the majority of the jack pine and aspen component. Protect snags.

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
50 53040050-Cut	11.0	42110 - Planted Red Pine	Sawtimber Well	60	111-140	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Crown thin down to 110 square feet. Focus on removing small, suppressed red pine poletimber. Go around areas heavy to white pine saplings or poletimber. Avoid marking large, natural red pine.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

65 53040065-NF	12.7	4134 - Aspen, Spruce/Fir	Sawtimber Well	82	111-140	NonForestMgt	Other - Specify	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Non-commercial walk-in treatment. Cut all trees within treatment boundary except do not cut any incidental cedar, hemlock, or supercanopy white pine. South half of the stand will be excluded at this time due to potential MNFI concerns.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Aspen is the desired goal but any mix of species is acceptable in the regeneration.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

66 53040066-NF	1.9	320 - Upland Shrub	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Mow, plant, brush,burn, or herbicide to maintain openings. Plant hard or soft mast.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

67 53040067-NF	10.6	320 - Upland Shrub	Nonstocked		Unspec ified	NonForestMgt	Brush Cutting	320 - Upland Shrub		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Walk in treatment. Focus on cutting encroaching cherry, poplar, pine, fir, and spruce saplings. Retain larger diameter spruce, pine, basswood, maple, and birch. Do not cut the clump of trees around the wetland pocket near the middle of the stand.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
103	53040103-NF	3.8	310 - Herbaceous Openland	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Mow, plant, brush,burn, or herbicide to maintain openings. Plant hard or soft mast.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

105	53040105-NF	1.3	310 - Herbaceous Openland	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Mow, plant, brush,burn, or herbicide to maintain openings. Plant hard or soft mast.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

106	53040106-NF	2.0	330 - Low-Density Trees	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Mow, plant, brush,burn, or herbicide to maintain openings. Plant hard or soft mast.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

**Total Treatment
Acreage Proposed: 330.9**

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit

Compartment: 40

Greg Rekowski : Examiner

Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available		Dominant Site Conditions									
		With Condition				5B	5C	2F	2G	2H	3D	3G	5E		
231	211	0		19	Aspen					19					
6	6	0		1	Bog						1				
48	0	0		48	Cedar				48						
10	10	0		0	Herbaceous Openland										
19	19	0		0	Jack Pine										
2	2	0		0	Low-Density Trees										
181	7	0		174	Lowland Conifers				174						
58	58	0		0	Lowland Shrub										
242	138	60		44	Natural Mixed Pines	19	41	3			39				3
93	93	0		0	Northern Hardwood										
15	14	0		1	Planted Mixed Pines										1
527	359	154		14	Red Pine	111	44				7	5			2
3	3	0		0	Upland Conifers										
34	34	0		0	Upland Mixed Forest				0						
17	17	0		0	Upland Shrub										
12	7	0		4	Upland Spruce/Fir					4					
7	7	0		0	Water										
77	77	0		0	White Pine										
1,582	1,062	214		307	Total Forested Acres	129	85	3	223	24	46	5			6
	67%	14%		19%	Relative Percent										

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Retention to protect a small, wet sinkhole-like depression.							
2	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Retention to protect a small sinkhole-like depression.							

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit
Greg Rekowski : Examiner

Compartment: 40
Year of Entry: 2019

3	Unavailable	3G: Other Influence zones - See comments	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Buffer for the bog.							
4	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	5B: Maintain for regeneration purposes	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Unavailable	3D: Recreational / Scenic values	39	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments: This site condition encompasses a several stands around both Round Lake Campground and Round Lake. These stands have never been managed and should be left as is.							

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit
Greg Rekowski : Examiner

Compartment: 40
Year of Entry: 2019

9	Unavailable	3D: Recreational / Scenic values	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Round Lake Campground							
10	Available	5B: Maintain for regeneration purposes	28	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	34	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	85	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Very wet, poor quality stands.							
13	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	5	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments: Pocket of hardwoods that will not be included in the non-commercial treatment.							
14	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit
Greg Rekowski : Examiner

Compartment: 40
Year of Entry: 2019

15	Available	5B: Maintain for regeneration purposes	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Available	5B: Maintain for regeneration purposes	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
18	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	41	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This was a retention pocket for the surrounding harvest.							
20	Available	5B: Maintain for regeneration purposes	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit
Greg Rekowski : Examiner

Compartment: 40
Year of Entry: 2019

21	Available	5B: Maintain for regeneration purposes	50	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	15	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
Comments: See OFS layer for wildlife occurrence in south half of stand. Reserve the southern area of stand from the noncommercial treatment at this time.							
23	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	48	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
24	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	22	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
25	Unavailable	2F: Too steep	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
26	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	52	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit

Compartment: 40

Greg Rekowski : Examiner

Year of Entry: 2019

27	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
28	Available	5B: Maintain for regeneration purposes	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
29	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
30	Available	5B: Maintain for regeneration purposes	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
31	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Round Lake Campground	Concentrated Recreation Area	State Forest Campground	Proposed SCA	7
Comments				



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

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

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4119 - Mixed Northern Hardwoods	Poletimber Well	25.9	95	81-110	The north half of this stand is currently under contract as part of 4 Corner Hardwoods, #53-010-15-01, bought by Precision. Primary focus of the sale is to remove beech infected with BBD. Standard selection thinning techniques were used in areas not heavy to beech. Oak becomes dominant in the NW part of the stand. The south half of the stand was excluded from harvest due to a lower amount of beech and lower overall stocking. Hemlock component is primarily at the far southern end of the stand. Current canopy %'s came from residual BA's that were recorded during cruising of the sale. Residual ba/acre = 89 square feet.
2	42210 - Natural Red Pine	Sawtimber Medium	11.0	92	51-80	Stand cut as part of "Rattling Pine" timber sale, # 53-002-09-01. Bought by Welch Land & Timber, roundwood job. This stand had orange marked red and white pine cut, and all aspen, maple, spruce, birch, and fir were removed as well. Regen is mostly red maple and white pine at this point, stand passes mixed regen standards. The red maple however is being browsed very heavily as is the re-sprouting witch hazel. Average ba/acre from 4 plots = 68 square feet.
3	429 - Mixed Upland Conifers	Poletimber Medium	3.0	27	Immature	Stand cut as part of Round Lake East Aspen timber sale, #53-014-89-01, bought by Georgia Pacific. One clone of aspen regenerated in the center of the stand, the remainder is dominated by white pine and other conifers.
4	4136 - Aspen, Mixed Conifer	Sapling Medium	9.2	27	Immature	Stand was harvested as part of Round Lake East Aspen, #53-014-89-01, bought by Georgia Pacific. Aspen regenerated quite well. Diameters on the aspen tend to vary quite a bit. Some larger spruce and pine are present along the southeast edge. Several wetland pockets are present throughout, easily seen on imagery. Some of the black cherry is decent form and will be merchantable. Trace of tamarack and paper birch. Heavy deer and elk use.
5	4134 - Aspen, Spruce/Fir	Poletimber Medium	23.9	36	51-80	Stand was cut in 1982 by George Kimball, primary volume removed was aspen, red pine, white pine, and paper birch. Aspen regenerated quite well except for some areas in the middle that are now predominantly pine. Diameters tend to vary quite a bit on the aspen. The fir component increases in the south half. There is a wet drainage all along the north line, regeneration is spotty here as well. Trace of paper birch regen. There is a pocket of larger pine at the south end. Average ba/acre from 8 plots = 73 square feet. Stand will likely be ready for a harvest next entry.
6	42210 - Natural Red Pine	Sawtimber Well	1.2	84	141-170	Small stand that was not included when the adjacent pine to the west was cut. The red pine looks planted although no planting records exist for this area. Trace of balsam fir, black spruce, and paper birch in the overstory. Average ba/acre from 3 plots = 150 square feet.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
7	42210 - Natural Red Pine	Sawtimber Poor	38.7	106	1-50	<p>Stand cut as part of the "Rattling Pine" timber sale, # 53-002-09-01. Bought by Welch Land & Timber, roundwood job. This stand had everything cut except for all white pine, oak, and cherry as well as green leaf trees. The residual pine trees are high quality for the most part. Residual BA/acre from 8 plots = 39 square feet. The majority of regeneration present is advanced regeneration that was protected during harvesting operations. In-growth is minimal at this point. No tree planting records exist for this stand and the age was verified from a 16" red pine, all signs point to this being a natural stand. Maintain these overstory trees until the second age class matures. Manage for a natural pine stand.</p> <p>Regen survey results from 8 1/100th acre plots: white pine 313 TPA (10'), red maple 113 TPA (10'), red pine 75 TPA (5'). Average TPA is 501 which falls below the 600 TPA required for a mixed stand so this is a regeneration failure. Accept regen as is and expect white pine to continue to fill in. Evaluate at next inventory cycle and consider burning this stand if regen is still inadequate.</p>
8	4133 - Aspen, Mixed Pine	Sapling Medium	10.7	16	Immature	<p>Stand was harvested as part of Kerry's Last Stand, #53-016-99-01, bought and cut by Northern Timberlands. Primary volume removed was red and white pine, aspen, and paper birch. Aspen has regenerated best in the central portions of the stand but does not appear overly healthy. Elk are girdling many of the aspen, red maple, and cherry stems towards the north end. Pine regen is more prevalent along the edges. Regeneration is most dense closer to the road, this is where most of the oak saplings are located. Heavy browse on the red maple component has kept most of that below 5 feet tall. Trace of paper birch regen. Some lower stocked areas of U (cherry brush) mixed in.</p>
10	42200 - Natural White Pine	Sawtimber Well	1.5	105	81-110	<p>About half of this stand is wet with a small non-forested, bog-like area along the west edge. Thick red maple understory in spots and elk are stripping off the bark of most of these. Average ba/acre from 3 plots = 90 square feet.</p>
12	4311 - Pine, Aspen Mix	Sapling Medium	7.9	16	Immature	<p>This was coded as an aspen stand last entry but there is not much aspen at all. There are a couple of clones in the north half but that's about it. The south half of the stand is dominated by pine, including some nice natural red pine regeneration. Stand was harvested as part of Kerry's Last Stand, #53-016-99-01, bought by Northern Timberlands. Primary volume removed was red pine, white pine, aspen, and paper birch. Birch did not regenerate, similar to all the other stands in the area in which the birch was cut.</p>
15	42100 - Planted White Pine	Sapling Poor	1.9	18	Immature	<p>This old well site was planted with various tree species in the fall of 2006 with a tree spade. The trees and shrubs were taken from the surrounding area. For the most part the trees are healthy with the exception of a few dying white pine.</p>
16	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	48.3	75	81-110	<p>Moderate quality swamp conifer stand with a lot of small diameters. The south half is mostly dominated by tamarack and has a good amount of white pine and red pine. The north half of the stand (thin finger) is dominated by black spruce. Cedar is mostly along the far edges of the stand, mostly on the east edge. Average ba/acre from 10 plots = 95 square feet.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	42110 - Planted Red Pine	Sawtimber Medium	4.7	84	81-110	Stand had a species removal harvest in the early 1980's and has come back well to white pine. There are some larger white pine mixed in as well. The residual red pine overstory is somewhat sporadic and doesn't resemble a plantation. Average ba/acre from 3 plots = 90 square feet.
18	42110 - Planted Red Pine	Sawtimber Well	8.1	84	81-110	Stand was recently harvested as part of Big Buck Pine, #53-020-09-01. All aspen, red maple, birch, spruce, and fir were removed from the stand as well as orange-marked red and white pine. Regeneration up to this point is primarily white pine. Residual pine are high quality. The white pine component is natural and was not planted. Average ba/acre from 5 plots = 94 square feet.
19	42110 - Planted Red Pine	Sawtimber Medium	11.2	84	81-110	Stand had a species removal harvest in 1992. As a result the residual stocking is somewhat variable. Jack pine has regenerated into some of the more open areas. Diameters tend to vary and there is a small component of larger, natural red pine. Average ba/acre from 5 plots = 96 square feet.
20	42110 - Planted Red Pine	Sawtimber Well	22.1	84	111-140	This stand did not have a species removal harvest like most others in the area did. A lot of the jack pine is now dead. Although the red pine was planted, this stand does not resemble a plantation. Nice white pine understory. Some larger, natural pine the further east you move in the stand. Average ba/acre from 6 plots = 120 square feet.
21	42110 - Planted Red Pine	Sawtimber Well	26.3	84	111-140	All aspen, jack pine, and hardwoods as well as some marked red and white pine were cut in 1999 in the Magnetic Red Pine Block sale. Residual stand is pretty high quality. Basal areas are relatively consistent throughout the stand with an average of 122 square feet from 12 plots. Diameters tend to vary a little, some areas have poletimber mixed in while others, mostly in the narrow east finger, have some large natural pine mixed in. Rolling terrain but no slopes that would impact harvesting operations.
22	4133 - Aspen, Mixed Pine	Sapling Medium	12.7	27	Immature	Stand was cut as part of the Round Lake East Aspen timber sale, #53-014-89-01, bought by Georgia Pacific. Stand has regenerated quite well to aspen with a nice mix of natural pine. Quite a bit of variability in aspen diameters. The oak component is mostly in the north half, aspen stocking declines here. Trace of red oak and paper birch regeneration, mostly near the roads.
23	42290 - Natural Mixed Pine	Sawtimber Well	13.4	84	111-140	Nice mixed species stand. Planting records show the red pine was planted however the white pine component is natural. The majority of this stand does not resemble a plantation due to the mixed species component. The only exception is the northern finger of the stand where red pine is dominant. A few slight depressions are present but none appear wet. Average ba/acre from 7 plots = 134 square feet.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4133 - Aspen, Mixed Pine	Poletimber Well	45.1	36	51-80	<p>Stand was harvested in the North Round Lake sale, #53-011-80-01, bought by Rhinold Schleben. Previous stand had 175 cords of aspen, 126 cords of paper birch, and 185 cords of red pine cut out. Smaller amounts of jack pine, red maple, and white pine were cut as well. Paper birch did not regenerate.</p> <p>Present day stand has some nice pockets of natural mixed pine. The aspen is generally low quality, some mortality was noticed. Some short steep slopes are present, mostly in the south half. The witch hazel understory is being heavily browsed. Average ba/acre from 10 plots = 80 square feet. Might be ready in ten years but 20 years is probably more realistic.</p>
25	42110 - Planted Red Pine	Sawtimber Well	115.7	85	141-170	<p>Pretty nice red pine stand that hasn't been worked in for some time. Stand had all jack pine, aspen, red maple, and birch removed in Round Lake Northwest, #53-006-89-01, bought by Georgia Pacific. 815 cords of jack pine, 131 cords of aspen, and 46 cords of paper birch were cut. Quite a bit of residual damage evident on the red pine. As a result of the species removal, there is some variability in stocking with a few pockets of lower stocking (see 98DOQ imagery). Found two small sinkhole-like depressions, one towards the east side and another on the west side close to stand 26 and the bog. The western one was wet at time of inventory. While the majority of this stand was planted there is a small percentage of larger, natural pine in the stand as well as some scattered old fire-charred stumps. The High Country Pathway travels through the stand. Average ba/acre from 17 plots = 146 square feet.</p>
26	42110 - Planted Red Pine	Sawtimber Well	4.9	85	201+	<p>Bog buffer. It is likely that the majority of this stand was planted although there are some larger natural-origin trees. Leave unmanaged. Average ba/acre from 5 plots = 226 square feet.</p>
28	42200 - Natural White Pine	Sapling Poor	37.8	18	Immature	<p>This stand was harvested in the Song of the Morning Block timber sale, #53-009-99-01, bought by AJD. The previous stand was a fully-stocked mixed species stand as seen on 98DOQ imagery and from the following harvest volumes: 190 cords of mixed aspen, 119 cords of white pine, 197 cords of red pine, 143 cords of red maple, and 137 cords of paper birch. Unfortunately deer and elk browse has eliminated almost all deciduous species regeneration from this stand. Only a few small pockets of aspen made it. The remaining regeneration is poorly-stocked and the stems are mostly low-quality and open-grown. Large areas of little to no regeneration are found in the interior of the stand. Only areas of decent quality are found along the west 1/3rd of the stand where white pine has filled in heavy in areas. This is likely a result of the white pine seed source that is present on the Song of the Morning property to the west. Browse is still very heavy as seen on the cherry and witch hazel shrub component. Trace amount of red oak and red pine supercanopy trees. Rolling terrain. Not much of a merchantable future unless white pine can somehow fill in the eastern half of the stand.</p>
29	42290 - Natural Mixed Pine	Sapling Poor	21.7	27	1-50	<p>This stand was harvested as part of the Lansing Club Aspen sale, #53-009-89-01, bought by Georgia Pacific. Resulting pine regeneration is very poorly-stocked and the stems are mostly low-quality and open-grown. Only areas of decent quality are found at the northwest corner and along the western stand boundary. At time of harvest this was an aspen stand but browsing has killed almost all of the aspen regeneration, except for some small pockets along the southwest part of the stand. Browse is still very heavy as evidence on the cherry and witch hazel shrub component. Not much of a merchantable future here, only hope is for white pine to continue to fill in.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
30	42110 - Planted Red Pine	Sawtimber Medium	10.7	84	81-110	This stand had a species removal harvest at some time and as a result the residual stocking is highly variable. The north-running finger of the stand has lower stocking, a higher amount of white pine, and more of the advanced regeneration component. The east running portion has higher stocking, with the far east end being an R9. Most of the red pine in this stand was planted but there does seem to be a small component of larger, natural trees mixed in. Average ba/acre from 5 plots = 106 square feet.
31	4133 - Aspen, Mixed Pine	Sapling Well	11.5	27	1-50	This stand was harvested as part of the Lansing Club Aspen sale, #53-009-89-01, bought by Georgia Pacific. Aspen regenerated ok here but there are also many patches of nearly mixed pine regeneration. Quaking aspen quality is poor in the central parts of the stand.
32	42200 - Natural White Pine	Sawtimber Medium	19.0	85	81-110	This stand was harvested as part of the Badger Den Pine sale, #53-022-09-01, bought by Northern Timberlands. Residual BA tends to vary somewhat with some clumps of higher BA mixed in. There are also a few small areas near the eastern edge that were marked but not cut for some reason. The white pine is pretty nice quality with a wide variety of diameters, including a large percentage of poletimber. No planting records exist for this QQ so it appears this is natural. Average ba/acre from 6 plots = 85 square feet. Retain the overstory trees and manage for a multi-aged pine stand. Regen survey results: red maple 683 TPA (2'), beech 33 TPA (3'), quaking aspen 16 TPA (3'), white pine 83 TPA (4'). Stand passes as a mixed stand, which was stated as acceptable in the prescription. White pine and red maple should continue to fill in.
33	42290 - Natural Mixed Pine	Poletimber Medium	15.6	84	81-110	This stand was cut as part of the Lansing Club Aspen timber sale, #53-009-89-01, bought by Georgia Pacific. This stand, along with stand 34 to the west, was coded as a B6 stand at time of harvest. No birch regenerated. Clumps of residual pine poletimber were left uncut during the harvest, most of that is now reaching sawtimber size but is relatively short for its age. In between the residual pine, there are areas of nice mixed species regeneration, including a small component of red pine. Average ba/acre from 6 plots = 82 square feet. Let the younger age class continue to develop.
34	4133 - Aspen, Mixed Pine	Sapling Well	11.7	27	Immature	This stand was cut as part of the Lansing Club Aspen timber sale, #53-009-89-01, bought by Georgia Pacific. This stand, along with stand 33 to the east, was coded as a B6 stand at time of harvest. No birch regenerated. Clumps of residual pine poletimber were left uncut during the harvest. Aspen regenerated well in most areas. There is a small area along the north edge where beavers removed the aspen, most of this damage appears quite old. The west edge of the stand is a slope going down to the swamp. Most of this slope was harvested except for some steeper spots.
35	6124 - Lowland Spruce-Fir	Poletimber Medium	3.6	115	51-80	Moderate quality swamp conifer stand which is in close proximity to the Pigeon River. Quality and stocking decline sharply as you move to the northwest corner of the stand. There must be a slight change in elevation or wetness here. The remainder of the stand has some nice quality black spruce but some of the cedar component is showing signs of decline. Average ba/acre from 4 plots = 73 square feet. No management due to the proximity to the river. There is a small hiking trail which leads to a river access site at the northwest corner of the stand. There are the remnants of a few old row boats at this spot.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	42290 - Natural Mixed Pine	Sawtimber Medium	8.4	106	51-80	Stand was recently harvested as part of Big Buck Pine, #53-020-09-01. Orange marked red and white pine were cut as well as all other species except for oak. Residual trees are pretty high quality with some variation in diameters. This is natural pine, no planting records exist for the section. An area along the east part of the stand was excluded from harvest and must have been intended as retention. Regeneration of red maple and white pine has been quite successful up to this point and I would expect these two species to continue to fill in. Some browse damage but not as severe as nearby stands. Average ba/acre from 5 plots = 90 square feet.
37	4133 - Aspen, Mixed Pine	Poletimber Well	33.2	38	81-110	Stand was harvested in 1979 by Harry Moran, #53-049-79-01. Volume cut was mostly aspen and red pine with a little red oak. Aspen regenerated very well. Quaking aspen is rare but the majority of it appears very unhealthy. White pine regenerated well, especially in the east half of the stand where there are some pockets of W6. A small amount of red oak regenerated and is found primarily in the far east/southeast portion of the stand. Diameters on the aspen tend to vary, some areas are barely merchantable while others are in the 7-8" diameter class. Average ba/acre from 10 plots = 93 square feet. Stand should be ready to harvest in ten years.
38	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	22.2	72	111-140	A nice multi-aged stand of white pine with a variety of diameters, including some very large 20"+ trees. White pine quality is not the best in some areas but should increase as the trees grow. And although white pine is dominant throughout, there tends to be some variability in species composition. Many areas of the interior are dense MC9 or W9 but there are some small pockets intermixed with aspen where the stocking declines. The red maple component starts to pick up along the west and north edges while jack pine is primarily along the east edge. Average ba/acre from 8 plots = 121 square feet. Continue to let the white pine grow and improve in quality. Management in the future should strive to maintain the uneven-aged structure of the stand.
39	42290 - Natural Mixed Pine	Sawtimber Medium	6.2	97	51-80	Stand was harvested as part of Big Buck Pine, #53-020-09-01. All red maple, spruce, fir, birch, and aspen were cut as well as orange-marked red and white pine. Residual trees are high quality. Regeneration primarily white pine and stump-sprout red maple. Browse impacts don't appear to be too bad here. No planting records for this quarter-quarter so assuming this pine is natural. Average ba/acre from 3 plots = 77 square feet.
40	42220 - Natural Jack Pine	Poletimber Medium	19.2	44	81-110	Moderate quality jack pine stand with a lot of sub-merchantable stems at this point in time. Stocking is variable as there are some areas with quite a few dead jack pine. This is likely a result of a heavy snowstorm in the winter of 2012 which damaged similar jack pine stands in nearby compartments. Larger white and red pine are mixed in throughout with highest concentrations along the east end of the stand. There appears to be a pocket of wetter ground at about the center of the stand on the east side of the road. Difficult to tell how large of an area it is due to the snow on the ground at time of inventory. Average ba/acre from 7 plots = 83 square feet. Harvest next entry period.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	42290 - Natural Mixed Pine	Poletimber Medium	10.4	85	1-50	It looks like this stand had some sort of shelterwood cut done in the past, leaving all red pine and scattered larger jack pine. Most of these larger jack pine are very poor quality. The younger age class of jack pine is better quality and more numerous in the south half of the stand. The majority of white pine are very poor quality. The red pine is large but variable in stocking, often present in clumps, with the densest clumps in the east half of the stand. Average ba/acre from 6 plots = 80 square feet. Harvest next entry period along with the adjacent jack pine stand to the south.
43	42110 - Planted Red Pine	Sawtimber Medium	36.4	85	51-80	This stand had a species removal harvest as part of The Wave Jack Pine timber sale, #53-016-91-01, bought by Georgia Pacific. Everything was cut except red pine, white pine, and oak. Jack pine regenerated well in some areas, seems heavier in the eastern half of the stand, although it is often overtopped by the residual. Red pine quality is mediocre with quite a bit of variety in diameters. There is a small component of larger, natural red pine mixed in throughout. Northeast corner has a low residual and heavy regeneration. Heavy browse on the few spots where red maple is in the understory. Average ba/acre from 7 plots = 71 square feet.
44	42210 - Natural Red Pine	Sawtimber Poor	37.0	85	1-50	Stand had a seed-tree harvest last entry. There is a component of larger natural pine in the residual. Regeneration is quite sparse at this point. Previous harvest was a cut-to-length so scarified areas are limited. Red pine and jack pine regen mostly limited to scarified areas like skid trails. Some advanced white pine regeneration was protected during harvest operations. Would expect white pine and red maple to dominate this stand if nothing is done. Residual ba/acre from 7 plots = 46 sq ft. Scarification or burning should be considered next entry if regeneration is still inadequate. Spring 2016 regen survey results: RP 167 TPA 6", JP 33 TPA 2", WP 183 TPA 2", RM 183 TPA 1'
45	42110 - Planted Red Pine	Sawtimber Well	16.4	85	111-140	This stand had a species removal harvest as part of The Wave Jack Pine timber sale, #53-016-91-01, bought by Georgia Pacific. Everything was cut except red pine, white pine, and oak. Red pine is pretty nice quality although there is considerable variation in diameters. BA's are a little lower than the stand to the north. A small percentage of large, natural red pine is present. Average ba/acre from 6 plots = 123 square feet.
46	42110 - Planted Red Pine	Sawtimber Medium	62.6	85	51-80	This stand had a species removal harvest as part of The Wave Jack Pine timber sale, #53-016-91-01, bought by Georgia Pacific. Everything was cut except red pine, white pine, and oak. Jack pine regenerated quite well throughout with heavier amounts in the eastern half of the stand. The red pine is pretty nice quality. Small component of larger, natural red pine mixed in. Two old roads pass through this stand (see 98DOQ). Average ba/acre from 15 plots = 88 square feet.
47	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Medium	22.2	85	51-80	Stand was thinned last entry, which left a lot of smaller, suppressed red pine poletimber. There is also a moderate component of large, natural red pine in the stand. That combined with the red maple and aspen component make this stand appear natural, although planting records do exist for the area. Average ba/acre from 6 plots = 70 square feet.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
48	4311 - Pine, Aspen Mix	Sapling Medium	20.2	27	Immature	Stand cut as part of Round Lake East Aspen, #53-014-89-01, bought by Georgia Pacific. Aspen regenerated best in the eastern thin finger but overall is low quality and shows signs of browse damage. Jack pine has regenerated naturally quite well and is most abundant in the west half.
49	42110 - Planted Red Pine	Sawtimber Well	12.1	84	111-140	One of the few stands in this compartment that did not have a species removal cut. It doesn't look like this stand has been thinned before either. As a result there is a good amount of jack pine snags in the stand. Red pine BA's are variable, with some dense pockets but also areas of lower stocking in pockets that were heavy to jack pine. Trace of paper birch. Average ba/acre from 8 plots = 138 square feet.
50	42110 - Planted Red Pine	Sawtimber Well	11.0	60	111-140	A little bit younger red pine than the surrounding stands. Some scattered areas are heavy to white pine saplings and poletimber. A few small areas on the northwest side that have most of the jack pine. A small component of large, natural red pine is present. Average ba/acre from 7 plots = 137 square feet.
51	42290 - Natural Mixed Pine	Sawtimber Poor	10.8	84	1-50	Stand was cut as part of the Badger Den Pine sale, #53-022-09-01, bought by Northern Timberlands. Regeneration up to this point is primarily red maple, aspen, and white pine. Most of the red maple and aspen component is in the east half of the stand and is being browsed heavily. Regeneration is more sparse in the west half. Pockets of advanced pine regeneration were protected from damage, mostly in the west half. Witch hazel is sprouting back abundantly in some areas. Average ba/acre of the residual = 39 square feet. Prescription stated a mix of red pine, white pine, jack pine, aspen, red maple, and oak is acceptable for regeneration. Based on regen survey results (see below), this stand does not meet the standards for a mixed species stand and is a failure. Regen survey results (7 1/100th acre plots) - red maple 357 TPA (2'), white pine 71 TPA (4'), quaking aspen 29 TPA (3'). Total TPA of 457 is less than the required 600 TPA for a mixed stand.
52	42110 - Planted Red Pine	Sawtimber Well	7.2	84	141-170	Round Lake Campground is in this stand. High quality pine in this stand. Planting records exist for the red pine but not the white pine. Average ba/acre from 4 plots = 153 square feet.
55	42290 - Natural Mixed Pine	Poletimber Well	7.9	85	111-140	Very nice natural pine stand, although diameters are still quite small at this point. There is a second age class of large, old pine in the stand. Verified age of 130 years from a 19" red pine. Most of the oak is in the northwest corner. Red pine becomes more dominant in the finger that stretches to the east. Trace of paper birch. Average ba/acre from 7 plots = 137 square feet. Leave this stand unmanaged for the time being.
56	42110 - Planted Red Pine	Sawtimber Poor	28.4	84	1-50	Stand was harvested in Black River Seed Tree Block, #53-017-99-01, bought and cut by Northern Timberlands. All jack pine was removed as well as some red and white pine. Pockets of advanced regeneration were protected as much as possible. This regeneration is primarily white pine and is most abundant in the north half of the stand, with some areas resembling more of a W3 or W6. The red pine overstory is more abundant in the south half. A few pockets of red pine regeneration are present. Average ba/acre from 5 plots = 42 square feet. Retain the overstory red pine trees and manage for the understory.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
57	42200 - Natural White Pine	Poletimber Well	6.1	37	81-110	Sale was cut in the early 1980's, leaving a scattered residual for seed source. White pine regeneration has been excellent. Average ba/acre from 4 plots = 103 square feet.
58	42290 - Natural Mixed Pine	Sawtimber Well	6.2	93	51-80	Nice stand of natural white pine. Red pine tends to be closer to the road. Stand becomes wetter to the north and east, most spruce and fir are located along these edges. Average ba/acre from 6 plots = 143 square feet.
59	6120 - Lowland Cedar	Poletimber Medium	34.0	113	51-80	Wet, poor-quality swamp conifer stand. Thick understory in many places. Quality is best along the east edge and northeast corner, this is where most of the red maple and hemlock is located. A lot of smaller spruce and fir stems towards the south end, there is also an old, overgrown road here running northwest-southeast. Average ba/acre from 7 plots = 89 square feet.
60	42290 - Natural Mixed Pine	Sawtimber Medium	11.7	105	51-80	Stand cut as part of "Rattling Pine" timber sale, # 53-002-09-01. Bought by Welch Land & Timber, roundwood job. This stand had orange marked red and white pine cut, as well as all aspen, maple, spruce, birch, and fir. Variety of sizes on the residual pine trees with some very large diameters mixed in. There might be a little bit of wet ground at the south end but difficult to tell with the snow. Trace of red oak. Average ba/acre from 5 plots = 76 square feet. No planting records exist for the stand, maintain the overstory pine and manage for a natural stand. Regen survey results: beech 20 TPA (3'), white pine 20 TPA (10'), quaking aspen 40 TPA (3'). Regeneration very limited at this time and falls below the standard for a mixed stand. Accept as is and expect white pine to fill in considerably due to the abundant seed source present.
61	42290 - Natural Mixed Pine	Poletimber Poor	7.6	27	1-50	Stand was cut at the same time as the aspen stand to the east, Round Lake East Aspen, #53-014-89-01, bought by Georgia Pacific. Present day stand is poorly stocked and low quality. Best stocking is in a few patches along the west edge but the remainder is open grown and bushy. Quite a bit of porcupine damage on the red pine. The sweet fern is being browsed.
62	4136 - Aspen, Mixed Conifer	Sapling Well	22.2	27	Immature	Stand cut as part of Round Lake East Aspen, #53-014-89-01, bought by Georgia Pacific. Prior to being cut this stand was dominated by paper birch. None of the birch component regenerated. Aspen regenerated well for the most part with only a few open areas. Quite a bit of variation on the aspen diameters. The red maple and pine component becomes more prevalent at the north end. Trace of jack pine and tamarack. Several red pine and tamarack with porcupine damage.
63	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	70.6	113	51-80	Wet, poor-quality swamp conifer stand. Much of the cedar is in decline or dead. Tamarack becomes abundant in the western half of the stand. There is a 2-3 acre upland spruce/aspen pocket in the northeast portion of the stand, adjacent to the young aspen stand. This could be mapped out separately next time. Did not visit the thin central part or the far northwestern finger of the stand. Trace of paper birch and red maple. Average ba/acre from 8 plots = 66 square feet.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
65	4134 - Aspen, Spruce/Fir	Sawtimber Well	32.2	82	111-140	<p>- Upland island stand surrounded by wet swamps. Diverse mix of species with a variety of diameters. Some lowland mixed in along the edges as well as a few wet pockets of hemlock and cedar at the far southwestern end. There is a 2-3 acre pocket of primarily red maple with some basswood and birch along the north edge of the larger U stand (stand #67). Large, fire-charred white pine stumps are scattered throughout. Trace of red oak, balsam poplar, and sugar maple. Average ba/acre from 13 plots = 118 square feet. No management recommended due to the remote character of the stand. Leave undisturbed as this is the only mature aspen stand in the Compartment.</p> <p>- FTP records from 2010 indicate that manually cutting of 1/2 of this stand was to take place. There are a few small areas along the southern edge adjacent to the stand 67 that were cut but they are relatively small.</p>
68	42320 - Upland Spruce	Poletimber Well	7.2	65	111-140	<p>Nice stand of spruce that sits on an upland/lowland transition. Areas of best quality are the southwest 1/4 and the far north end. Stocking and quality tend to decline on the wetter ground. Average ba/acre from 6 plots = 115 square feet.</p>
69	42340 - Upland Spruce/Fir	Poletimber Well	4.4	82	51-80	<p>This was previously coded as an aspen stand but there isn't really any aspen at all here. Variety of sizes on the spruce. Called it all white but there is likely a good amount of black in here as well. Cedar is primarily along the edges. Trace of paper birch. Some scattered areas of lower stocking. Average ba/acre from 4 plots = 80 square feet.</p>
70	6120 - Lowland Cedar	Poletimber Poor	14.3	101	1-50	<p>Very wet and poor-quality swamp conifer stand. Black ash used to be the dominant species in this stand but it is now all dead. The east end has a few areas of decent stocking as well as the far west end but the remainder is basically non-forested. Most of the cedar is in decline. This can likely be called an L type next entry. Average ba/acre from 4 plots = 38 square feet.</p>
71	42290 - Natural Mixed Pine	Sawtimber Medium	7.6	92	51-80	<p>Stand cut as part of "Rattling Pine" timber sale, # 53-002-09-01. Bought by Welch Land & Timber, roundwood job. This stand had orange marked red and white pine cut, and all aspen, maple, spruce, birch, and fir were cut as well. Red maple and white pine are the primary species regenerating at this time. The red maple and re-sprouting witch hazel is being browsed hard. Patches of white pine poletimber, mostly along the northeast edge. Average ba/acre from 5 plots = 74 square feet.</p>
72	42290 - Natural Mixed Pine	Poletimber Well	8.3	36	81-110	<p>Stand was cut at the same time as the aspen stand to the west but this one came back to mostly white pine. The aspen component is mostly at the south end while the red maple component is more prominent at the far north end. The white pine is not that great quality yet but should improve as it grows. Average ba/acre from 5 plots = 106 square feet.</p>



S t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
73	42210 - Natural Red Pine	Sawtimber Well	13.4	85	111-140	<p>While planting records exist for this area, a large portion of the pine in this stand appears natural, some of which have old fire scars. The majority of the deciduous component is in the east half of the stand, with most of the aspen being north of the road. The portion south of the road is on a slight ridge. The west half looks like it may have been lightly thinned at one point in time. Average ba/acre from 7 plots = 133 square feet. Per previous stand examiners, this stand is being retained as a representation of original stands in the area. Leave the option open to thin this stand in the future but manage on a longer rotation and maintain the deciduous component.</p> <p>OPIC - FMD: 2007 THIS STAND IS BEING RETAINED AS A REPRESENTATION OF ORIGINAL STANDS IN THE AREA.</p>



Stand	Cover Type	Acres	Managed Site	General Comments:
27	6225 - Bog	4.7	No	Leatherleaf bog.
41	320 - Upland Shrub	4.2	No	Old notes indicate a portion of this stand was worked at one time as a wildlife opening. There is some trash here where people often camp.
53	500 - Water	7.3	No	ROUND LAKE
54	6225 - Bog	0.9	No	Appears to be dominated by leatherleaf despite all of the snow on the ground. A majority of the white pine that was filling in this stand is now dead.
64	6220 - Alder/willow	53.1	No	
66	320 - Upland Shrub	1.9	No	Not much encroachment from the surrounding stand.
67	320 - Upland Shrub	10.6	No	Nice opening with a mix of species and good amount of cover. Black spruce tends to be more common at the east end along with the reindeer moss. The larger, open-grown black spruce have branches right down to the ground level and are providing excellent cover. A small wetland is present in the middle of the stand. Spruce and fir have seeded in a little but not to the point of overtaking the opening.
103	310 - Herbaceous Openland	3.8	No	A few small clumps of pine present. The thin southern finger of the stand is basically just an old road. Heavy deer and elk use throughout.
105	310 - Herbaceous Openland	1.3	No	Stand has filled in with quite a bit of pine. An old road runs through the stand.
106	330 - Low-Density Trees	2.0	No	This was a road and landing complex that was created when the surrounding aspen stand was clearcut. Following the harvest, it was briefly maintained as an opening. It hasn't been used for many years and has filled in to pine, heaviest at the east and west ends. The central part of the stand is still relatively open.