



Compartment Review Presentation

Pigeon River Country Forest Management Unit

Compartment 52

Entry Year 2016

Acreage: 1,598

County Otsego

Management Area: Pigeon River Country

Revision Date: 08/29/2014

Stand Examiner: Greg Rekowski

Legal Description:

T31N R01W, Sections 25, 26, 27, 35, and 36

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:

Upland soils are a mix of sands and loams with Kalkaska sands being the most prevalent, with small, scattered pockets of the following; Lindquist sand, East Lake-Rubicon sand, Mancelona-Rubicon sand, Blue Lake loamy sand, and Ossineke fine sandy loam. The lowland soils are mostly Tawas-Lupton mucks.

The area south of Johnson's Crossing Road is steep terrain dominated by upland oak, hardwoods, and aspen types. The north portion of the compartment is flat and occupied mostly by swamp conifer types.

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

The compartment itself is comprised of a solid block of state ownership, however most of the boundaries are adjacent to private lands. Heavy Antrim gas development has taken place in and around this compartment.

Unique Natural Features:

The headwaters of the Black River are found within this compartment. Numerous springs, seeps, and small streams come to surface at the upland/lowland transition north of Johnson's Crossing Road. There has been a documented occurrence of red-shouldered hawk within this compartment. In addition, an example of a Rich Conifer Swamp Natural Community has been identified in this compartment.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

A proposed Special Conservation Area (SCA) would encompass the majority of the swamp conifer complex within the compartment.

Watershed and Fisheries Considerations:

The Black River flows through this compartment.

Wildlife Habitat Considerations:

A Wildlife Division representative will be available to participate in the formal compartment review.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and an end moraine of medium-textured till. The glacial drift thickness varies between 600 and 1,000 feet. Beneath the glacial drift are the Mississippian Coldwater and Sunbury Shales and the Devonian Berea Sandstone and Bedford Shale. The Ellsworth is quarried for cement products elsewhere in the State. The nearest gravel pit is just to the east and potential is considered good, especially 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 is leased for oil and gas development with production from the Niagaran reef trend and the Antrim Shale. Additional Niagaran reefs are possible in the compartment. 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 to this compartment.

Survey Needs:

None needed at this time.

Recreational Facilities and Opportunities:

Johnson's Crossing Group Camp is located in section 26. In addition, the North Spur of the Shore to Shore horse trail passes through this compartment.

Fire Protection:

Wildfire potential is relatively low in this compartment due to the lack of conifers in upland areas. Access is good if fire suppression activities are needed.

Additional Compartment Information:

Numerous experimental cedar harvests were conducted in the past with no current evidence of successful cedar regeneration in any of the stands.

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**

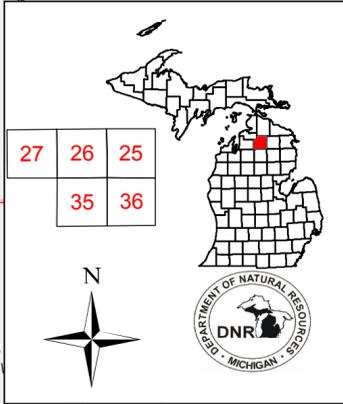
The following information is displayed, where pertinent, on the attached compartment maps:

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

Cover Type & Treatment Map

Compartment: 052
 T31N R01W Sec. 25, 26, 27, 35, 36
 County: Otsego
 Unit: Pigeon River Country
 YOY: 2016
 Acres: 1,598 GIS Calculated
 Examiner: Greg Rekowski
 Map Revised: 6/27/2014
 Map Phase: Pre-Review

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



Legend

- Miris Corners
- Remunented Section Corners
- PLSS Corner
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Pipeline
- Powerline
- Hiking Trail
- Horse Trail
- Hiking Trails
- Horse Trails
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)
- Mowing

Forest Stands

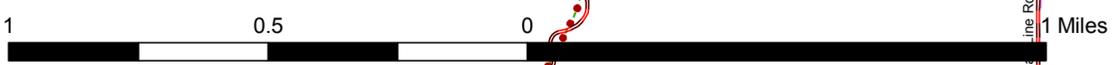
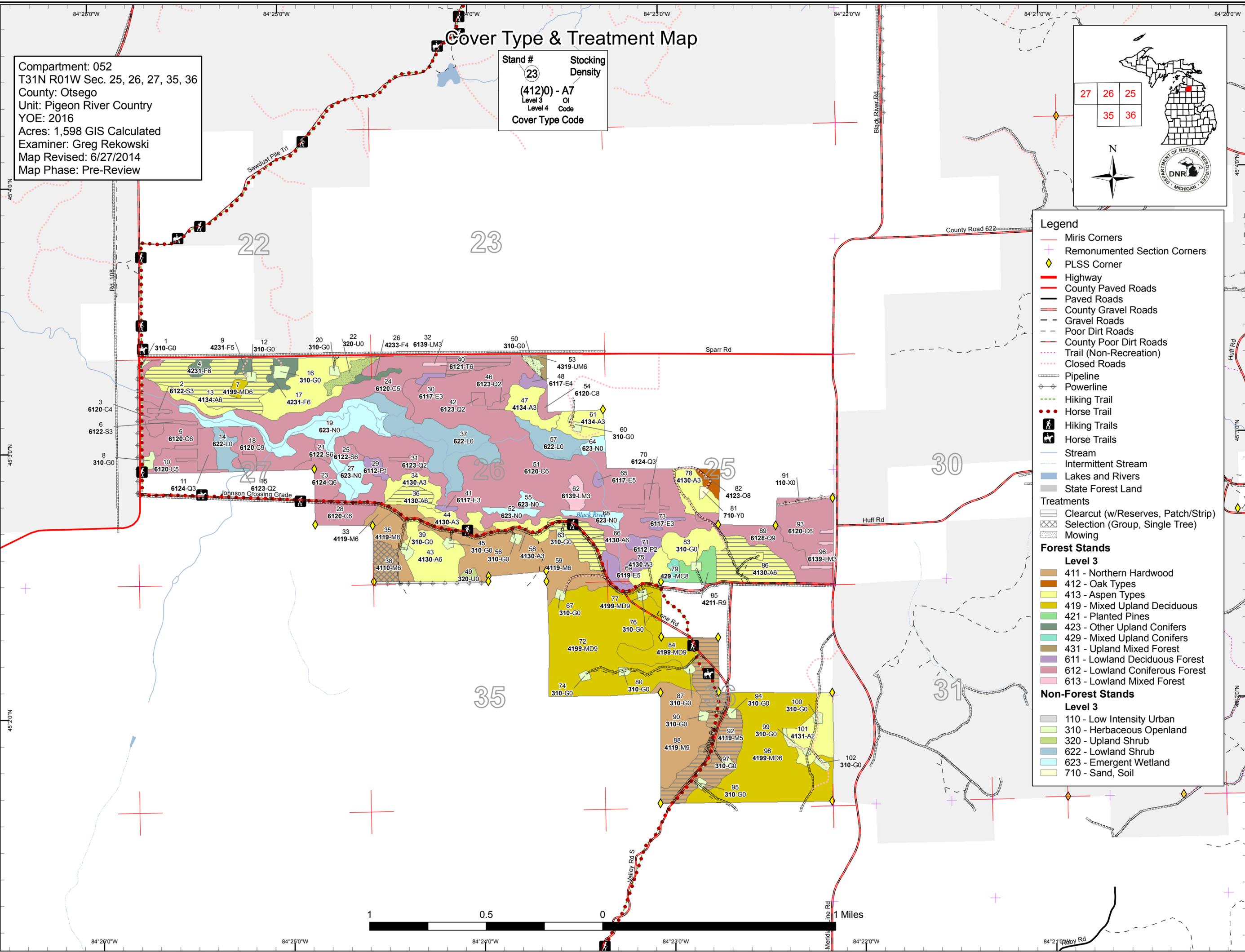
Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

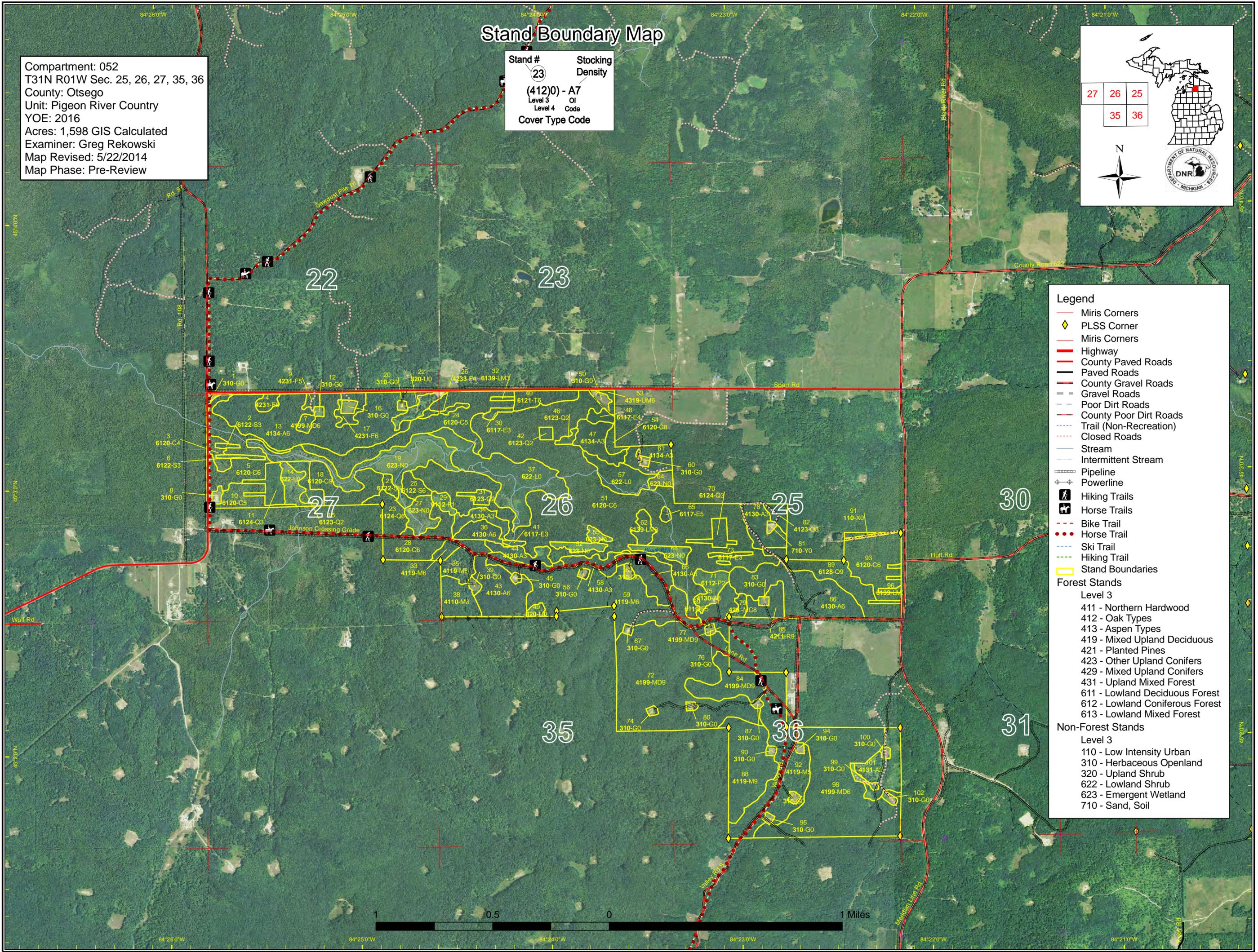
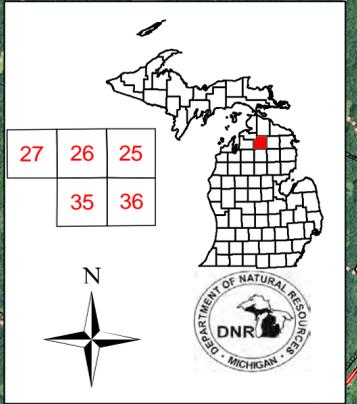
- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 710 - Sand, Soil



Stand Boundary Map

Compartment: 052
 T31N R01W Sec. 25, 26, 27, 35, 36
 County: Otsego
 Unit: Pigeon River Country
 YOE: 2016
 Acres: 1,598 GIS Calculated
 Examiner: Greg Rekowski
 Map Revised: 5/22/2014
 Map Phase: Pre-Review

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



Legend

- Miris Corners
- ◆ PLSS Corner
- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Stream
- Intermittent Stream
- Pipeline
- Powerline
- Hiking Trails
- Horse Trails
- Bike Trail
- Horse Trail
- Ski Trail
- Hiking Trail
- Stand Boundaries

Forest Stands

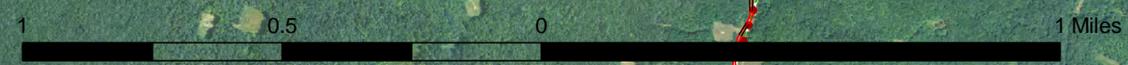
Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
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Non-Forest Stands

Level 3

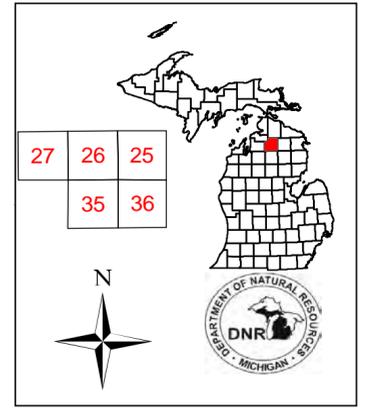
- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 710 - Sand, Soil



Special Conservation Areas & Site Conditions Map

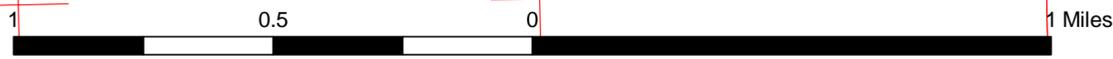
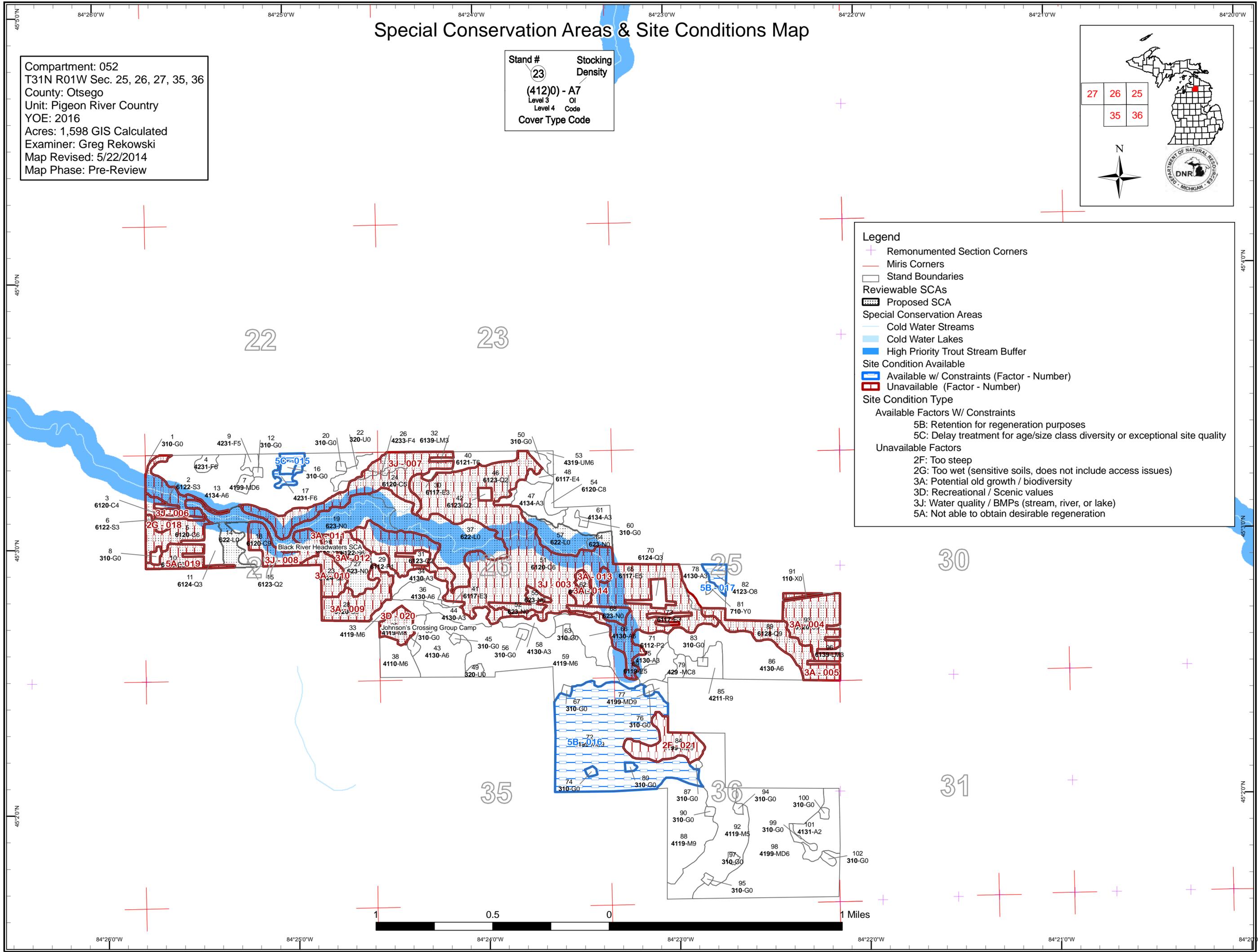
Compartment: 052
 T31N R01W Sec. 25, 26, 27, 35, 36
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 YOE: 2016
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 Examiner: Greg Rekowski
 Map Revised: 5/22/2014
 Map Phase: Pre-Review

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



Legend

- + Remonumented Section Corners
- Miris Corners
- Stand Boundaries
- ▨ Reviewable SCAs
- ▩ Proposed SCA
- Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Site Condition Available
- ▭ Available w/ Constraints (Factor - Number)
- ▭ Unavailable (Factor - Number)
- Site Condition Type
- Available Factors W/ Constraints
- 5B: Retention for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable Factors
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Potential old growth / biodiversity
- 3D: Recreational / Scenic values
- 3J: Water quality / BMPs (stream, river, or lake)
- 5A: Not able to obtain desirable regeneration



Report 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	73	57	52	117	0	0	0	0	0	0	0	0	0	298
Cedar	0	0	0	0	0	0	0	0	0	24	313	111	0	0	448
Herbaceous Openland	32	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Lowland Aspen/Balsam Poplar	0	15	0	0	0	0	0	0	0	0	0	0	0	0	15
Lowland Conifers	0	0	2	31	0	0	0	0	0	12	29	0	0	0	74
Lowland Deciduous	0	0	4	6	0	8	0	0	0	0	0	0	0	0	18
Lowland Mixed Forest	0	0	0	11	0	0	0	0	0	0	0	0	0	0	11
Lowland Shrub	76	0	0	0	0	0	0	0	0	0	0	0	0	0	76
Lowland Spruce/Fir	0	0	0	3	0	0	0	0	9	0	0	0	0	0	12
Marsh	74	0	0	0	0	0	0	0	0	0	0	0	0	0	74
Mixed Upland Deciduous	0	0	0	0	0	0	0	111	25	129	0	0	0	0	266
Northern Hardwood	0	0	0	0	0	0	0	0	139	76	0	0	0	0	215
Oak	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
Red Pine	0	0	0	0	11	0	0	0	0	0	0	0	0	0	11
Sand, Soil	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tamarack	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11
Upland Conifers	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Upland Mixed Forest	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Upland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Upland Spruce/Fir	0	0	0	0	6	6	0	3	0	0	0	0	0	0	15
Urban	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	194	88	62	102	134	15	5	114	184	247	342	111	0	0	1598



Report 2 – Proposed Treatment Summaries

Iron River Country Mgt. Unit
Year of Entry 2016

Compartment 052
Total Compartment Acres: 1,598

Acres by Treatment Type

Commercial Harvest - 185 Tree Planting - 0 Other - 0
Habitat Cut - 0 Opening Maintenance - 10

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen Types	106	0	0	0	0	0	106
Lowland Coniferous Forest	11	0	0	0	0	0	11
Northern Hardwood	57	11	0	0	0	0	68
Total	174	11	0	0	0	0	185



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
13 53052013-Cut	47.4	4134 - Aspen, Spruce/Fir	High Density Pole	42	111-140	Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal

Prescription -Clearcut w/ reserves. Cut all aspen, red maple, and fir, as well as all spruce under 10 inches DBH. Do not cut any other species. Mark to leave scattered individuals of the above species mix that will serve as future snags. In addition, mark 1-3 cut and leave trees per acre for drumming logs (trees >10" DBH).
Specs: -Create multiple retention pockets equal to 3-10% of the stand's acreage. Place a 1/2 chain buffer around any wetland inclusions. Utilize retention pockets to protect any hemlock/cedar clumps as well as areas thick with spruce regeneration.
 -Protect all existing coarse woody debris. Do not allow any chipping on this site.

Other Comments:

Next Steps: -Acceptable regeneration will be at least a medium-stocked stand dominated by aspen with any additional mix of species being acceptable.
 -Regen survey at the appropriate interval.

Proposed Start Date: 10/01/2015

36 53052036-Cut	7.0	4130 - Aspen	High Density Pole	46	141-170	Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
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Prescription -Clearcut all aspen, red maple, and fir. Leave all other species. -Retention has already been excluded from treatment boundary and is the stream buffer along the Johnson's Crossing RR grade.

Other Comments: -Add brush pile spec for hare. Mark to leave clumps of 5 trees (1 clump per acre), which will be felled by the logger. They should be cut so that the trees are overlapping on the ground.

Next Steps: -Acceptable regen will be at least a medium stocked stand dominated by aspen with a mix of spruce, fir, pine, and maple also acceptable.

Proposed Start Date: 10/01/2015

38 53052038-Cut	11.2	4110 - Sugar Maple Association	High Density Pole	81	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal
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Prescription -Cut all ash.
Specs: -Stand has not been thinned before so additional species may need to be marked for access to the ash.
 -Create large canopy gaps in areas that are predominantly ash.
 -Residual ba/acre target of 80 sq. ft.

Other Comments: -Move stand up to 2015 YOE due to presence of EAB in the stand.
 -Johnson's Crossing Campground is immediately adjacent to this stand and has a component of ash that will become hazard trees. Work with rec specialist or PRD to see if these trees can be included as part of the salvage harvest.

Next Steps: -Regen survey in canopy gaps at TCR + 4 years. Acceptable regeneration will be any mix of hardwood species.

Proposed Start Date: 10/01/2014

40 53052040-Cut	10.7	6121 - Tamarack	High Density Pole	87	141-170	Harvest	Clearcut with Reserves	6121 - Tamarack	Cmpt. Review Proposal
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Prescription -Cut all tamarack, cedar, fir, aspen and maple. Mark to leave clumps of cedar and tamarack (> 5 trees) roughly every hundred feet. Focus these leave trees in areas with a higher cedar component.
Specs: -Utilize retention pockets around wetter drainages.
 -Winter harvest only. Add 2" spec to knock down all alder and balsam fir. No chipping permitted to protect soil quality.

Other Comments: -Drier ground extends east into the adjacent stand and goes all the way to the opening. Push the red line all the way to this opening as this is the only logical place for a landing.
 -High potential for flooding this site, ensure the ground is frozen.
 -Eastern larch beetle is in this stand. Move start date up to 2015 POW due to potential for heavy mortality.

Next Steps: -Acceptable regeneration will be any mix of species dominated by swamp conifers.

Proposed Start Date: 10/01/2014



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
66 53052066-Cut	18.3	4130 - Aspen	High Density Pole	42		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal

Prescription -Cut all aspen, red maple, and balsam fir. Do not cut any other species.
Specs: -Utilize retention pockets to create visual buffers along Johnson's Crossing Road.
Other -Protect all oak regeneration (most prevalent along edges of stand).
Comments: -Add 2" spec to ensure all ironwood and balsam fir regen is knocked down.
Next Steps: -Acceptable regeneration will be at least a medium-stocked stand dominated by aspen.
Proposed Start Date: 10/01/2015

86 53052086-Cut	33.2	4130 - Aspen	High Density Pole	37	81-110	Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
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Prescription -Cut all aspen, maple, and fir. Leave all other species.
Specs: -Use 3-10% of the treatment acreage as retention pockets. Focus this retention along Johnsons Crossing Road, in lower stocked areas where oak is more dominant.
 -Mark to leave scattered poor-quality aspen (>10" DBH) to serve as future snags and coarse woody debris.
Other -Protect all hawthorn, serviceberry, and witch hazel clumps.
Comments:
Next Steps: -Acceptable regeneration will be at least a medium-stocked stand dominated by aspen with any additional mix of species also being acceptable.
Proposed Start Date: 10/01/2015

92 53052092_sm all-Cut	21.7	4119 - Mixed Northern Hardwoods	Medium Density Pole	86	51-80	Harvest	Clearcut with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
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Prescription -Clearcut with reserves. Cut all oak, aspen, maple, ironwood, beech, and basswood. Leave all other species. Mark to leave less than 10 sq. ft. per acre in sawlog-sized oak, maple, and basswood.
Specs: -Retention will be in the form of individual trees marked to leave.
Other -Add oak wilt seasonal specs.
Comments: -Add 2" spec to ensure all IW regen is knocked down.
Next Steps: -Acceptable regeneration will be at least a medium-stocked stand with at least a 25% representation of oak as well as a mix of aspen, hardwoods, and pine. A greater than 50% representation of ironwood will not be acceptable. Regen survey at three years due to likelihood of browsing. If ironwood and browsing result in an unacceptable species mix, plant white pine and oak in the stand.
Proposed Start Date: 10/01/2015

92 53052092-Cut	35.3	4119 - Mixed Northern Hardwoods	Medium Density Pole	86	51-80	Harvest	Clearcut with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
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Prescription -Clearcut with reserves. Cut all oak, aspen, maple, ironwood, beech, and basswood. Leave all other species. Mark to leave less than 10 sq. ft. per acre in sawlog-sized oak, maple, and basswood.
Specs: -Retention will be in the form of individual leave trees.
Other -Add 2" spec to ensure all IW regen is knocked down.
Comments: -Midland to Mackinac trail runs through this stand. Add the appropriate trail specs. Mark a higher concentration of leave trees along the pathway.
 -Add oak wilt seasonal specs.
Next Steps: -Acceptable regeneration will be at least a medium-stocked stand with at least a 25% representation of oak as well as a mix of aspen, hardwoods, and pine. A greater than 50% representation of ironwood will not be acceptable. Regen survey at three years due to likelihood of browsing. If ironwood and browsing result in an unacceptable species mix, plant white pine and oak in the stand.
Proposed Start Date: 10/01/2015



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
22 NF_53052022-NonFor	7.2	3205 - Mixed Upland Shrub				Non-Forest Management	Mowing	3205 - Mixed Upland Shrub	Cmpt. Review Proposal

Prescription -Maintain the nonforested condition of this stand either through herbicide, prescribed burning, or mechanical means.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: Unspecified

50 NF_53052050-NonFor	2.5	3105 - Mixed Upland Herbaceous				Non-Forest Management	Mowing	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal
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Prescription -Maintain the nonforested condition of this stand either through herbicide, prescribed burning, or mechanical means.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: Unspecified

**Total Treatment
Acreage Proposed: 194.4**



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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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#Type! #Type!

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Type!

Limiting Factor

Total Treatment Acreage Proposed: 0.0

Availability for Management

Availability for Management			Dominant Site Conditions									
Total Acres	Acres Available	Acres Not Available		No	5C	5B	5A	3J	3D	3A	2G	2F
298	297	1	Aspen	297				1				
448	4	444	Cedar	4			13	367		59	6	
15	15		Lowland Aspen/Balsam Poplar	15								
74	33	41	Lowland Conifers	33						41		
18	16	1	Lowland Deciduous	16						1		
11	5	6	Lowland Mixed Forest	5						6		
12	3	9	Lowland Spruce/Fir	3						9		
266	244	22	Mixed Upland Deciduous	114		129						22
215	204	11	Northern Hardwood	204					11			
5	5		Oak			5						
11	11		Red Pine	11								
11	11		Tamarack	11								
3	3		Upland Conifers	3								
2	2		Upland Mixed Forest	2								
15	13	3	Upland Spruce/Fir	6	6			3				
1,403	864	539	Total Forested Acres	723	6	135	13	371	11	117	6	22
	62%	38%	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	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
003	Not Available	3J: Water quality / BMPs (stream, river, or lake)	266	3A: Potential old growth / biodiversity			
Comments: Headwaters of the Black River. Vegetative buffer for Black River falls within this site condition. Part of proposed SCA.							
004	Not Available	3A: Potential old growth / biodiversity	34				
Comments: This stand falls under the MNFI rich conifer swamp category, part of the larger Green Swamp to the east in the Atlanta unit. Nominated as part of the larger Black River Headwaters SCA.							

Report 5 – Site Conditions

Pigeon River Country Mgt. Unit
 Greg Rekowski : Examiner

Compartment 052
 Year of Entry 2016

005	Not Available	3A: Potential old growth / biodiversity	29	5A: Not able to obtain desirable regeneration	
Comments: Nominated as part of the Black River Headwaters SCA.					
006	Not Available	3J: Water quality / BMPs (stream, river, or lake)	33	3A: Potential old growth / biodiversity	
Comments: Black River flows through this stand. Nominated as part of the Black River Headwaters SCA.					
007	Not Available	3J: Water quality / BMPs (stream, river, or lake)	51	3A: Potential old growth / biodiversity	5A: Not able to obtain desirable regeneration
Comments: Much of this stand provides a buffer for the Black River. Nominated as part of the Black River Headwaters SCA.					
008	Not Available	3J: Water quality / BMPs (stream, river, or lake)	21	3A: Potential old growth / biodiversity	5A: Not able to obtain desirable regeneration
Comments: Provides a buffer for the Black River. Nominated as part of the Black River Headwaters SCA. Old cedar cuts throughout the compartment have all failed due to deer browse.					
009	Not Available	3A: Potential old growth / biodiversity	24	5A: Not able to obtain desirable regeneration	
Comments: Nominated as part of Black River Headwaters SCA. Past cedar cuts throughout the compartment have failed due to deer browse.					
010	Not Available	3A: Potential old growth / biodiversity	12	5A: Not able to obtain desirable regeneration	
Comments: Nominated as part of the Black River Headwaters SCA. Past cedar cuts throughout the compartment have all failed due to deer browse.					

Report 5 – Site Conditions

Pigeon River Country Mgt. Unit

Compartment 052

Greg Rekowski : Examiner

Year of Entry 2016

011	Not Available	3A: Potential old growth / biodiversity	3
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Comments:

Nominated as part of Black River Headwaters SCA.

012	Not Available	3A: Potential old growth / biodiversity	6
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Comments:

Nominated as part of Black River Headwaters SCA.

013	Not Available	3A: Potential old growth / biodiversity	2
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Comments:

Nominated as part of Black River Headwaters SCA.

014	Not Available	3A: Potential old growth / biodiversity	6	2G: Too wet (sensitive soils, does not include access issues)
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Comments:

Nominated as part of Black River Headwaters SCA.

015	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6
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Comments:

Hold ten years and then treat.

016	Available	5B: Maintain for regeneration purposes	130
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Comments:

Thinned in last ten years.

017	Available	5B: Maintain for regeneration purposes	5	
Comments: Previous shelterwood harvest.				
018	Not Available	2G: Too wet (sensitive soils, does not include access issues)	6	3A: Potential old growth / biodiversity
Comments: Very wet, low quality. Part of proposed SCA.				
019	Not Available	5A: Not able to obtain desirable regeneration	13	3A: Potential old growth / biodiversity
Comments: Heavy deer use in area, adjacent cedar cuts did not regenerate cedar. Part of proposed SCA.				
020	Not Available	3D: Recreational / Scenic values	11	
Comments:				
021	Not Available	2F: Too steep	22	
Comments: Small portions of this stand may be operable but the majority is too steep.				



Report 6 – 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
Johnson's Crossing Group Camp	Concentrated Recreation Area	State Forest Campground	SCA	10.7
Comments Examiner approved 9/12/2013				
Black River Headwaters SCA	Spring-Seeps, Riparian Areas	Riparian Area	SCA	657.1
Comments Examiner approved 9/12/2013				



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	6122 - Black Spruce	High Density Sapling	1.2	34		-Old cedar cut, no cedar regeneration.
3	6120 - Lowland Cedar	Low Density Pole	5.9	119	1-50	-Dying cedar throughout this stand. Next inventory cycle this will likely be a F3. -Very wet stand with standing water and cattails in spots. Likely the reason for the cedar mortality.
4	42311 - Planted Spruce, Mixed Deciduous	High Density Pole	3.7	47	141-170	-Planted spruce, still quite small at this point. The central part of the stand is where most of the aspen, maple, and fir are located. -Other species that were present but rare include paper birch, red pine, white pine, and red oak.
5	6120 - Lowland Cedar	High Density Pole	32.9	119	171-200	-Decent quality cedar stand. Wetter areas are showing signs of decline. -Heavy deer use. -Other species that were present but rare include BAM, paper birch, black ash, red maple, and hemlock.
6	6122 - Black Spruce	High Density Sapling	2.0	34		-Old cedar cut, no cedar regeneration. -Other species that were present but rare include white spruce, willow, and BAM.
7	4199 - Other Mixed Upland Deciduous	High Density Pole	2.8	76	111-140	-Aspen mostly around the perimeter of the stand. Vein of white spruce running through the middle of stand, may be planted. -Lowland inclusion at south end of stand that looks like an old gravel pit.
9	42310 - Planted Spruce	Medium Density Pole	2.5	47	51-80	-An old road runs through the middle of this stand.
10	6120 - Lowland Cedar	Medium Density Pole	13.0	119	81-110	-Cedar is dying and falling over throughout this stand. Small upland Q type at the SW portion of the stand. -Very heavy deer use throughout which has resulted in a dense sedge understory. The black ash regeneration is browsed hard.
11	6124 - Lowland Spruce-Fir	High Density Sapling	10.6	30		-Old cedar clearcut that was harvested in several small chunks from 1982-1986. Objective was to feed deer. Cedar seedlings are present in a few areas but severely browsed.
13	4134 - Aspen, Spruce/Fir	High Density Pole	89.7	42	111-140	-Diverse stand. Bigtooth aspen and hardwoods mainly in the east half of the stand. Diameters become smaller in the east half as hardwood competition increases. -Two stick nests in stand (see OFS layer). Scattered wetland inclusions in the stand. Good amount of coarse woody debris. -Other species that were present but rare include ironwood, white ash, sugar maple, red oak, basswood, white pine, black cherry, red pine, hemlock, and cedar. -Ridge along the southern edge of the stand that overlooks the Black River.
15	6123 - Lowland Fir	Medium Density	7.8	30		-Old cedar clearcut that was harvested in small blocks over the years of 1982-1986. Cedar seedlings present in a few areas but severely browsed. -Site has been flooded in a few areas and overall the stand seems to have been reduced in productivity.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	42310 - Planted Spruce	High Density Pole	6.4	54	81-110	-Other species that were present but rare include balsam fir, black cherry, basswood, sugar maple, paper birch, and BAM.
18	6120 - Lowland Cedar	High Density Log	21.3	117	171-200	-This stand gently slopes down to the north. Numerous small streams originate from this stand, flowing into the adjacent wetland to the north. -Very high quality cedar throughout the stand. Quality declines as you move north, closer to the wetland.
21	6122 - Black Spruce	High Density Pole	2.9	87	81-110	
23	6124 - Lowland Spruce- Fir	High Density Pole	12.2	96	111-140	-Wet stand, stream flowing north through the NW part of the stand. -Heavy deer use in this stand. Black ash understory heavily browsed, seedlings look like a stunted shrub. -Cedar mostly in the central part of the stand.
24	6120 - Lowland Cedar	Medium Density Pole	48.7	107	81-110	-This is a wet stand with many areas of low stocking. A couple of old blowdown areas that have nice paper birch and BAM regen. -Did not visit the far SW finger of the stand.
25	6122 - Black Spruce	High Density Pole	6.0	87	111-140	-Cedar becomes more common in the E1/2 of the stand. -Sphagnum understory. -Medium quality black spruce, quite a few small diameters.
26	42330 - Upland Fir	Low Density Pole	2.8	74	1-50	-Upland strip running through the surrounding swamp. -Lot of balsam blowdown, not much quality.
28	6120 - Lowland Cedar	High Density Pole	24.3	93	200+	-Several areas of very high quality cedar. In the wetter areas, quality declines. -A stream and several other drainages run north through the stand. -Other species that were present but rare include quaking aspen, black ash, and hemlock.
29	6112 - Lowland Aspen	Low Density Sapling	3.8	17		-#53-012-96-01, Swamp Edge Aspen Blocks, cut by AJD. Cut stumps indicate there was a high cedar component in this stand. No cedar regeneration evident. NW corner of stand is now flooded and only cattails are growing. -Beaver activity along the SW edge of stand. Looks like they are dragging aspen saplings back west to the adjacent stand that they have flooded.
30	6117 - Lowland Deciduous, Mixed Coniferous	High Density Sapling	2.1	34		-Close to being a poletimber stand. -This was a cedar clearcut however no cedar regenerated.
31	6123 - Lowland Fir	Medium Density	3.5	30		-This stand is an old cedar clearcut. No cedar regeneration observed. -West finger of stand has nice paper birch regeneration. The remainder of the stand is very wet and appears somewhat stagnant.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
32	6139 - Mixed Lowland Forest	High Density Sapling	1.0	34		-Old cedar clearcut. No cedar regeneration. -Scattered porcupine damage on the tamarack.
33	4119 - Mixed Northern Hardwoods	High Density Pole	8.2	84	81-110	-This stand is adjacent to Johnson's Crossing Campground and should be left unmanaged for aesthetics. -Part of stand south of Johnson's Crossing Road is more of a aspen, red maple, birch type, while the portion north of the road is a northern hardwood type.
34	4130 - Aspen	High Density Sapling	8.9	17		-Swamp Edge Aspen Blocks, #53-012-96-01, bought by AJD. -Stand is on a upland/lowland transition. -Other species that were present but rare include balsam fir, white spruce, and black ash.
35	4119 - Mixed Northern Hardwoods	Medium Density Log	10.7	80	51-80	-Johnson's Crossing Campground lies in this stand. -All ash in stand has EAB.
36	4130 - Aspen	High Density Pole	9.1	46	141-170	-Decent quality aspen that is ready to harvest. Good amount of balsam fir blowdown in the stand. -Other species that were present but rare included sugar maple, paper birch, cedar, and black cherry. -The old Johnson's Crossing RR grade borders this stand to the south. Directly adjacent to the grade is a stream which flows east to the swamp conifer stand.
38	4110 - Sugar Maple Association	High Density Pole	14.9	81	111-140	-Quite a bit of ash but a lot of small diameters, EAB is in the stand. Trace of beech, paper birch, bigtooth aspen. - Some steep slopes in stand. - Johnson's Crossing Campground borders this stand to the north.
40	6121 - Tamarack	High Density Pole	10.7	87	141-170	-High quality tamarack. West 1/2 of stand appears a little drier while the east 1/2 of stand is wetter and has at least two small drainages. Buttressed tamarack roots indicate the potential for flooding the stand if it is harvested. -Very small upland inclusion at the west end of stand adjacent to Sparr Road. -Eastern larch beetle is present on scattered trees. -Tamarack site index = 57 for a 16" tree, 86 years old, 74 feet tall. -Other species that were present but rare include paper birch, willow, spruce, and BAM.
41	6117 - Lowland Deciduous, Mixed Coniferous	High Density Sapling	1.3	34		-Wet stand, portions of a stream flow through this stand.
42	6123 - Lowland Fir	Medium Density	1.9	34		-Old cedar cut, no cedar regeneration observed. -Very wet site.
43	4130 - Aspen	High Density Pole	29.2	28		-#53-029-84-01, aspen/hardwood clearcut bought by Donald Powinski. -Excellent growth on the aspen stems. -Scattered poles of SM and beech that were left from previous harvest. -Well developed sugar maple understory.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	4130 - Aspen	High Density Sapling	9.3	17		-Swamp Edge Aspen Blocks, #53-012-96-01, bought by AJD. Some cedar was cut out of this stand.
46	6123 - Lowland Fir	Medium Density	2.0	21		-Cedar clearcut, #53-004-93-01, Black River East Cedar, cut by James Burkhart of Onaway. -No cedar regeneration observed.
47	4134 - Aspen, Spruce/Fir	High Density Sapling	14.8	29		-#53-024-84-01, bought by Gary Haskill. Aspen/hdwd/cedar/spruce-fir clearcut. -No sign of any cedar regeneration. -Mostly an upland stand but there are inclusions of lowland around the edges and on the far east side of the stand.
48	6117 - Lowland Deciduous, Mixed Coniferous	Low Density Pole	3.5	29		-Drainage runs east-west through the middle of this stand. Alder mostly in the middle of the stand, while aspen is on the perimeter.
51	6120 - Lowland Cedar	High Density Pole	264.4	107	171-200	-The majority of this stand is very high quality cedar. The portion of the stand north of the main branch of the Black River is the only area where quality starts to decline. -Heavy deer use, barren understory throughout most of the stand. -Other species that were present but rare include hemlock, BAM, tamarack, and white pine. -Multiple small streams that feed into the Black River.
53	4319 - Mixed Upland Forest	High Density Pole	2.1	64	51-80	-Paper birch is starting to fall out of stand. -Other species that were present but rare include white pine, white spruce, and sugar maple.
54	6120 - Lowland Cedar	Medium Density Log	3.5	118	51-80	-Very wet stand. Poor quality timber.
58	4130 - Aspen	High Density Sapling	8.2	17		-Swamp Edge Aspen Blocks, #53-012-96-01, bought by AJD. Some cedar was cut out of this stand.
59	4119 - Mixed Northern Hardwoods	High Density Pole	75.9	91	81-110	-Oak Hills Again #53-007-04-02, Oak Hills Revisited #53-009-01-01. Stand has been thinned however many slopes are/were inoperable. -Did not observe any oak wilt in the stand. -Other species that were present but rare include hemlock and white ash.
61	4134 - Aspen, Spruce/Fir	High Density Sapling	12.6	29		-#53-024-84-01, bought by Gary Haskill. Aspen/hdwd/cedar/spruce-fir clearcut. -Other species that were present but rare include white pine, tamarack, and white spruce. -Thick clump of autumn olive in NE corner of stand, near the private property. -West of the well pad starts to transition to lowland.
62	6139 - Mixed Lowland Forest	High Density Sapling	6.1	34	1-50	-A lot of old cedar blowdown in this stand. Cedar seedlings are present in a few areas but are severely browsed.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
65	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	1.5	52	51-80	-A stream runs along the eastern edge of this stand.
66	4130 - Aspen	High Density Pole	18.3	42		-This stand could be harvested if needed but would benefit from another ten years of growth. -Most of the quaking aspen and balsam fir is on the E/NE side of the road. -Scattered red oak saps/poles throughout the stand that should be protected if a treatment is prescribed. -Other species that were present but rare include white pine, sugar maple, and white ash.
69	6119 - Mixed Lowland Deciduous Forest	Medium Density Pole	7.0	54		-Most of the black ash has EAB and appears close to death. -Very wet stand. Dense layer of sedge at ground level.
70	6124 - Lowland Spruce-Fir	High Density Sapling	6.7	32		-Cedar clearcut in 1982. No cedar grew back and no current evidence of any cedar regeneration. -Dense balsam fir in many areas.
71	6112 - Lowland Aspen	Medium Density	10.7	17		-53-015-96-01, Johnson's Crossing Blocks, cut by Ralph Walker. -Pretty good white birch regeneration, heavy browse on black ash. -Old gas well at south end of stand, just under one acre.
72	4199 - Other Mixed Upland Deciduous	High Density Log	129.5	91	81-110	-Oak Hills Again, #53-007-04-02 and Oak Hills Revisited, #53-009-01-01. Stand was thinned, however many slopes were inoperable. -Scattered pockets of oak mortality throughout which was due to a combination of factors (defoliation, chestnut-borer, etc.) . There doesn't appear to be any new mortality. Forest health specialist made a site visit and determined that oak wilt was likely not the cause of mortality. More site visits will be made to verify the presence/absence of oak wilt.
73	6117 - Lowland Deciduous, Mixed Coniferous	High Density Sapling	2.5	31		-Cedar clearcut strips cut by Michael Wener in 1982. No cedar has grown back.
75	4130 - Aspen	High Density Sapling	9.7	17		-53-015-96-01, Johnson's Crossing Blocks, cut by Ralph Walker.
77	4199 - Other Mixed Upland Deciduous	High Density Log	3.3	80	81-110	-Mix of oak, aspen, and red maple. Other species that were present but rare include sugar maple, white ash, and balsam fir.
78	4130 - Aspen	High Density Sapling	15.0	17		-Johnson's Crossing Block, #53-015-96-01. Steep slopes within stand yet all were able to be harvested. -Illegal ORV trail cuts through this stand, up to the oil pad. -The old Johnson's Crossing RR grade borders this stand to the south.
79	429 - Mixed Upland Conifers	Medium Density Log	3.3	64	51-80	-N1/2 of stand had all aspen removed and left all pine and oak. SW part of stand is a small buffer against private property that was not cut.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
82	4123 - Red Oak	Medium Density Log	5.2	94	51-80	-Johnson's Crossing Block, #53-15-96-01, heavy oak shelterwood. Oak seedlings are present in a few areas but overtopped by hdwd regeneration.
84	4199 - Other Mixed Upland Deciduous	High Density Log	22.2	81	81-110	-The majority of this stand lies on very steep slopes. -Bigtooth aspen is limited to a small pocket at the east end. Portion of the west end of this stand were thinned as part of the "Oak Hills Again" timber sale. -Red oak quality is much lower on the south facing aspects.
85	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	10.6	45	111-140	-Aspen mixed in throughout, and where present, it is overtopping the red pine. -6 BA plots with an average of 118 sq. ft. per acre.
86	4130 - Aspen	High Density Pole	51.6	37	81-110	-Almost appears to be two ages of aspen in this stand. Mixture of small pole/saps and scattered pockets of larger aspen. West finger of stand is barely merchantable. -There is a well pad in the east part of the stand but it is less than 1 acre. Some lowland pockets along the northern edge of stand. -Trace of white pine, sugar maple, hemlock, cedar and paper birch. Trace of hawthorn, witch hazel, and serviceberry in the shrub layer.
88	4119 - Mixed Northern Hardwoods	High Density Log	43.1	81	81-110	-North half of stand has very steep slopes that would not be operable. -Decent amount of ash in this stand but not a lot of quality sawlogs, most are in the 10-12" diameter classes. -Trace of YB, PB, and BW. -Red oak site index = 63, for a 15" tree, 81 years old, 80 feet tall.
89	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	29.2	107	171-200	-Very diverse stand with pockets of exceptional cedar. This stand would probably qualify as an ERA. -Barren understory in most spots, evidence of heavy deer use. -Small inclusion of upland hardwoods bordering Johnson's Crossing Road. Small inclusion of paper birch saps near NW corner of stand (old cedar cut). -Other species that were present but rare include basswood, yellow birch, BAM, and red oak. -Most of the black ash has EAB.
92	4119 - Mixed Northern Hardwoods	Medium Density Pole	61.8	86	51-80	-Low quality oak and hardwoods. Stand almost appears as if it were highgraded. A few pockets of nice sugar maple regen, however ironwood dominates the regeneration. -Possible oak wilt in this stand. Scattered dead red oak. -Trace of paper birch, hemlock, and white pine. -Red oak site index = 46 for a 12" tree, 86 years old, 66 feet tall.
93	6120 - Lowland Cedar	High Density Pole	34.4	111	171-200	-Overall a decent quality cedar stand. There are a few areas of standing water with declining cedar. -Barren understory, heavy deer use.
96	6139 - Mixed Lowland Forest	High Density Sapling	3.5	30		-This stand is a series of 4 small cedar cuts that were done in the mid 1980's. Cedar seedlings are present in all of the stands but are heavily browsed. I did not observe any over 2 feet tall. -A small stream running to north cuts through the middle of the northern three stands.



S t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
98	4199 - Other Mixed Upland Deciduous	High Density Pole	108.1	75	81-110	<ul style="list-style-type: none"> -Red oak quality depends on slope position and aspect, but overall red oak quality is pretty high. -Very steep slopes throughout the entire stand. There are only a few ridges that would be workable. -Trace of white ash, yellow birch, hemlock, red pine, and white pine. -Red oak site index = 66 and 53 for two sample trees.
101	4131 - Aspen, Oak	Medium Density	22.0	12	1-50	<ul style="list-style-type: none"> -53-007-01-01, Johnson's Crossing Blocks 2, aspen/oak/maple clearcut. -Decent amount of oak was cut out of this stand however quite a few of the stump sprouts made it past the browse level. Oak seedlings are present in the open areas throughout the stand but they are severely browsed. Heavy browse damage to the aspen in the SW part of the stand. -Residual oak overstory averages about 10 sq. ft. per acre.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	3105 - Mixed Upland Herbaceous	1.0	No	Unspecified	
8	3105 - Mixed Upland Herbaceous	1.7	No	Unspecified	Gas well. Some trash dumped at the north end. There is also some cedar theft at this end.
12	3105 - Mixed Upland Herbaceous	1.1	No	Unspecified	
14	6229 - Mixed lowland shrub	9.2	No	Unspecified	-Old cedar clearcut. Small buffer was placed around the stream that passes through this stand but all of those trees have died and tipped over. No cedar regen present. Site appears to have flooded in the past.
16	3105 - Mixed Upland Herbaceous	2.2	No	Unspecified	Previously this was a unsuccessful Niagaran oil pad.
19	6239 - Mixed Emergent Wetland	45.4	No	Unspecified	
20	3105 - Mixed Upland Herbaceous	1.1	No	Unspecified	Active gas well in stand.
22	3205 - Mixed Upland Shrub	7.2	No	Unspecified	
27	6239 - Mixed Emergent Wetland	10.4	No	Unspecified	-This stand has been flooded by beavers. Standing dead cedar throughout. -Observed 2 clumps of phragmites, one near the SW corner, the other near the SE corner. Usure if they are the invasive phragmites.
37	6220 - Alder/willow	50.3	No	Unspecified	-Only visited the edges of this stand.
39	3105 - Mixed Upland Herbaceous	1.8	No	Unspecified	Gas well. U around the edges.
45	3105 - Mixed Upland Herbaceous	1.1	No	Unspecified	Gas well
49	3205 - Mixed Upland Shrub	2.3	No	Unspecified	This stand was clearcut with the adjacent aspen stand to the west however browsing impeded regeneration.
50	3105 - Mixed Upland Herbaceous	2.5	No	Unspecified	Some evidence of illegal ORV use adjacent to Sparr Road that is causing some soil erosion.
52	6233 - Wet Meadow	4.8	No	Unspecified	The old Johnsons Crossing RR grade borders this stand to the north. A stream follows the RR grade.
55	6239 - Mixed Emergent Wetland	2.7	No	Unspecified	-Standing dead cedar throughout. -Two streams converge in this stand.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
56	3105 - Mixed Upland Herbaceous	1.2	No	Unspecified	Gas well
57	6229 - Mixed lowland shrub	16.7	No	Unspecified	-The headwaters of the Black River flow through this stand. -There is a small inclusion of cedar in the NW part of the stand. Scattered swamp conifers throughout the rest of the stand but not enough to be considered forested.
60	3105 - Mixed Upland Herbaceous	1.3	No	Unspecified	Active gas well
63	3105 - Mixed Upland Herbaceous	1.6	No	Unspecified	Gas well.
64	6239 - Mixed Emergent Wetland	4.0	No	Unspecified	-Standing dead cedar throughout with the exception of the far NE corner which has a clump of live cedar. -A stream runs through this stand and joins with the Black River in the adjacent stand to the west.
67	3105 - Mixed Upland Herbaceous	1.0	No	Unspecified	Gas well
68	6239 - Mixed Emergent Wetland	6.8	No	Unspecified	
74	3105 - Mixed Upland Herbaceous	1.0	No	Unspecified	Gas well
76	3105 - Mixed Upland Herbaceous	1.2	No	Unspecified	-Gas well.
80	3105 - Mixed Upland Herbaceous	1.1	No	Unspecified	Gas well
81	710 - Sand, Soil	1.0	No	Unspecified	-Ward Lake Energy gas well lying at the top of a slope. Quite a bit of soil erosion/exposed sand. Permit # 45036, State Charlton C2-25. This should be put in the RDR database. -There is a large pile of shingles at the south end of the stand. -An illegal ORV trail runs up to this pad, coming from the adjacent stand to the south.
83	3105 - Mixed Upland Herbaceous	1.1	No	Unspecified	Old gas well.
87	3105 - Mixed Upland Herbaceous	1.0	No	Unspecified	Gas well
90	3105 - Mixed Upland Herbaceous	1.1	No	Unspecified	Gas well
91	11 - Low Intensity Urban	1.1	No	Unspecified	-This stand is a driveway/powerline that cuts west to the adjacent private property.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
94	3105 - Mixed Upland Herbaceous	1.1	No	Unspecified	Gas well
95	3105 - Mixed Upland Herbaceous	1.0	No	Unspecified	Gas well
97	3105 - Mixed Upland Herbaceous	1.3	No	Unspecified	Gas well
99	3105 - Mixed Upland Herbaceous	2.1	No	Unspecified	
100	3105 - Mixed Upland Herbaceous	1.2	No	Unspecified	Gas well
102	3105 - Mixed Upland Herbaceous	1.5	No	Unspecified	Gas well