



Compartment Review Presentation

Pigeon River Country Forest Management Unit

Compartment 53039

Entry Year 2020

Acreage: 1,912

County Otsego

Management Area: Pigeon River Country

Revision Date: 2018-05-26

Stand Examiner: Greg Rekowski

Legal Description:

T32N - R01W
Sections 22, 23, and 24

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:

The majority of this compartment is upland with gently rolling terrain. Site quality varies considerably, reflected by a wide mix of soil types. The most common of these types are Leelanau loamy sands, Morganlake-Ossineke sands, Ossineke fine sandy loams, and East-Lake Rubicon sands. A thin area of lowland swamp conifer runs through the middle of the compartment and is characterized by Tawas-Lupton muck organic soil.

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

This compartment is entirely state-owned and is surrounded by state land on all sides.

Unique Natural Features:

Occurrences of wood turtle have been documented in this compartment by MNFI.

Archeological, Historical, and Cultural Features:

A historical site has been identified in this compartment.

Special Management Designations or Considerations:

None identified for this compartment.

Watershed and Fisheries Considerations:

Hardwood Creek travels through the long swamp conifer stand in the middle of the compartment. Lloyd Lake is located in section 24.

Wildlife Habitat Considerations:

A wildlife representative will be available for comment at the public Open House and will participate in the formal Compartment Review.

Mineral Resource and Development Concerns and/or Restrictions

Active sand/gravel pits are not located in the area, but potential is considered to be good within the compartment. 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 active lease remains in Section 22, which is held by production. The Antrim Shale is present and has potential. In addition, there may be potential for additional Niagaran reef reservoirs. There is no known metallic mineral potential in this part of the state. 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:

The existing road system is adequate to serve recreational needs and to accomplish proposed cover type management prescriptions.

Survey Needs:

None needed.

Recreational Facilities and Opportunities:

The High Country Pathway is a hiking trail and passes through the western half of the compartment. The Shore to Shore Trail is a horse trail and passes through Section 23, following Road 84.

Fire Protection:

Fire risk is generally low in the compartment due to the amount of hardwoods. Access is good, through both open and closed roads, if suppression efforts are needed.

Additional Compartment Information:

Elk browse continues to be a factor influencing successful tree regeneration in the compartment. Numerous cuts from the past 10 years have failed to achieve adequate aspen and hardwood regeneration.

The following reports from the Inventory are attached:

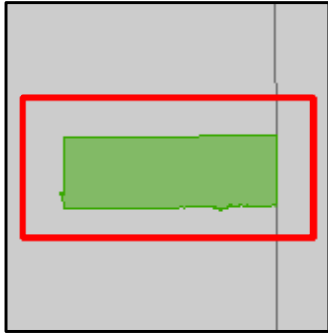
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

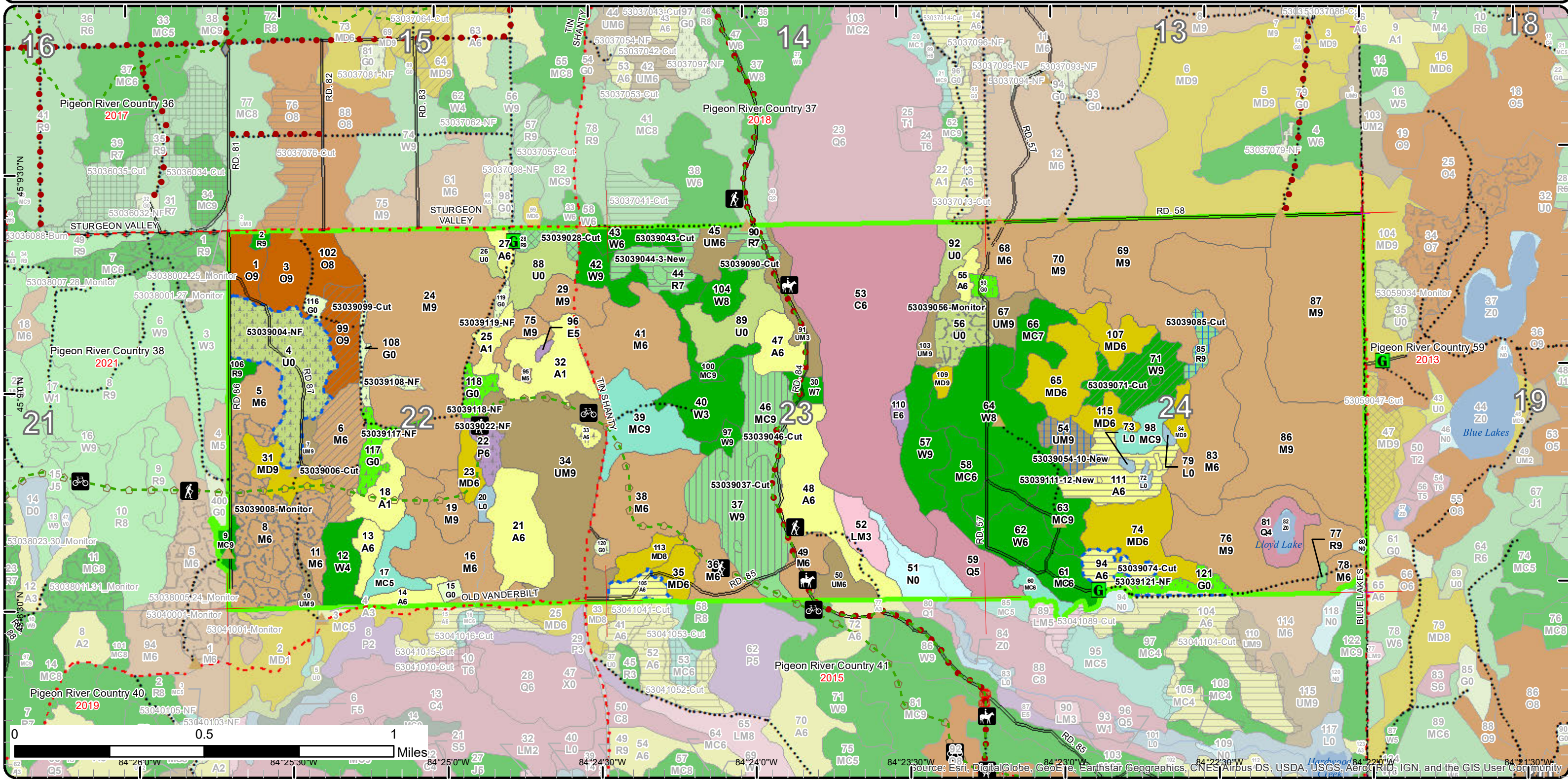
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 39
 T32N, R01W, Sec: 22, 23, 24
 County: Otsego
 Unit: Pigeon River Country
 Mgmt Area: Pigeon River Country
 YOE: 2020
 Acres: 1,913 GIS Calculated
 Examiner: Greg Rekowski
 Map Revised: 10/3/2018
 Map Phase: Post-Review

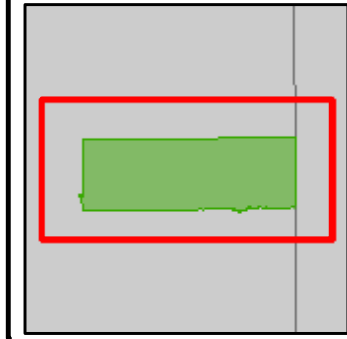


- Miris Corners
- Remonumented Section Corners
- ◆ Field Grade Corners
- ▭ Counties
- DNR - Secondary Forest Road
- - - County - Gravel Road
- 🚶 Hiking Trails
- 🚴 Bike Trails
- 🐎 Horse Trails
- 🏂 Ski Trails
- - - Designated Hiking Trails
- - - Designated Bicycle Trails
- Designated Equestrian Trails
- Designated Ski Trails
- ◊ Designated Snowshoe Trails
- ▲ Berms
- ⛔ Gate
- 🛑 Sign
- 🏠 Structures
- 🌲 Tree (marking)
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- ⚡ Powerline
- ▭ Compartment Boundary
- ▭ Treatments with Site Conditions
- ▭ Other Treatment - See Comments
- ▭ Selection (Group, Single Tree)
- ▭ Clearcut (w/Reserves)
- ▭ Seed Tree (w/Reserves)
- ▭ Thinning (Crown, Low, Systematic)
- ▭ Regeneration Survey
- ▭ Shelter Wood (w/Reserves)
- ▭ 411 - Northern Hardwood
- ▭ 412 - Oak Types
- ▭ 413 - Aspen
- ▭ 419 - Mixed Upland Deciduous
- ▭ 421 - Planted Pines
- ▭ 422 - Natural Pines
- ▭ 429 - Mixed Upland Conifers
- ▭ 430 - Upland Mixed Forest
- ▭ 611 - Lowland Deciduous Forest
- ▭ 612 - Lowland Coniferous Forest
- ▭ 613 - Lowland Mixed Forest
- ▭ 211 - Cropland
- ▭ 310 - Herbaceous Openland
- ▭ 320 - Upland Shrub
- ▭ 500 - Water
- ▭ 622 - Lowland Shrub
- ▭ 623 - Emergent Wetland
- ▭ Lakes

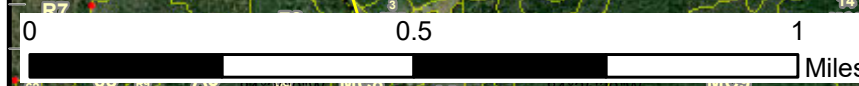
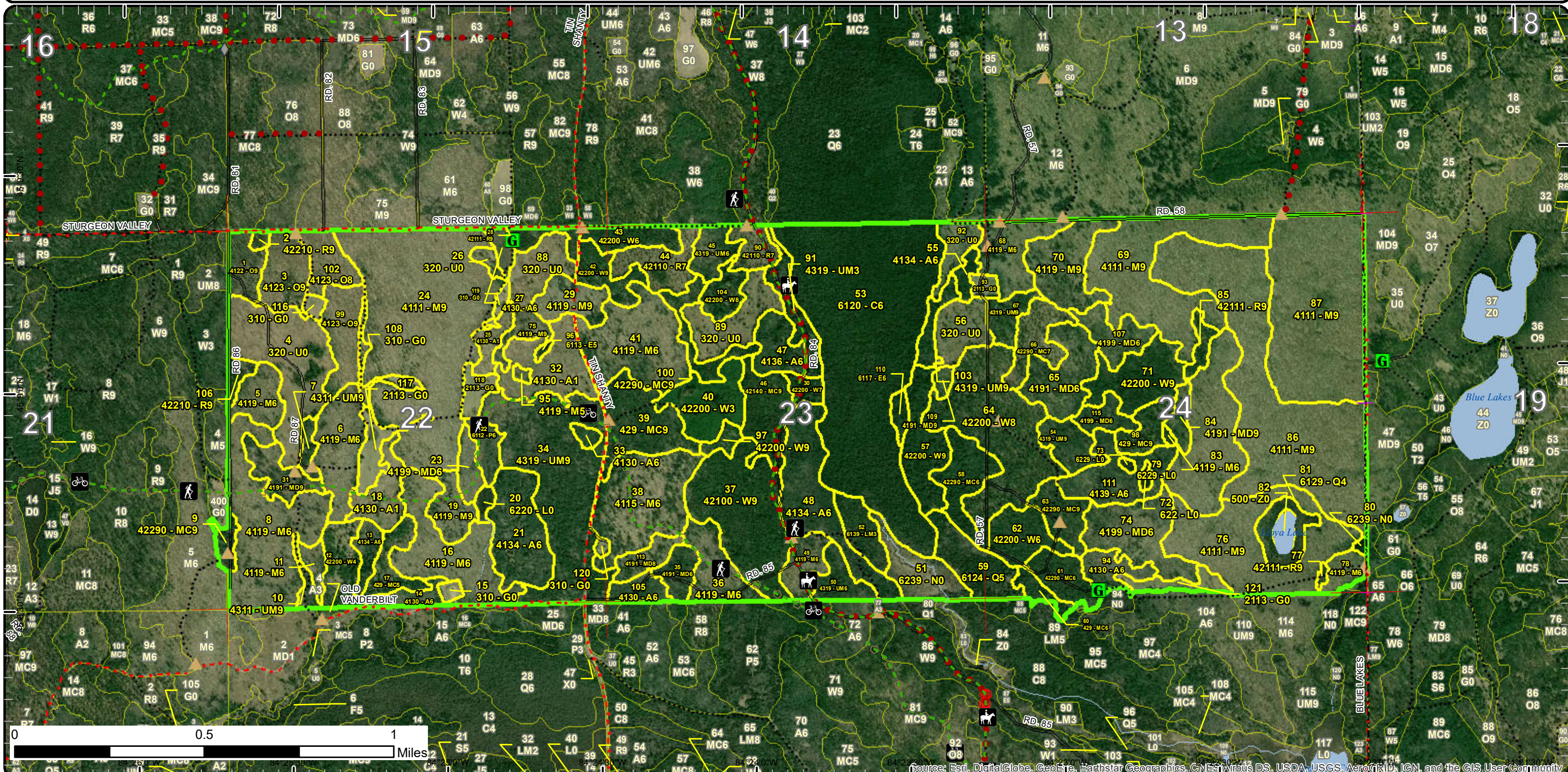


Stand Boundary Map

Compartment: 39
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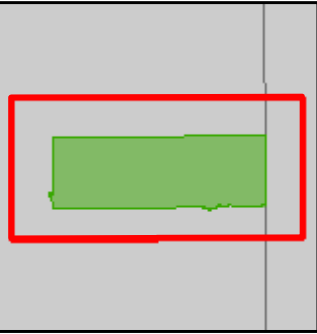


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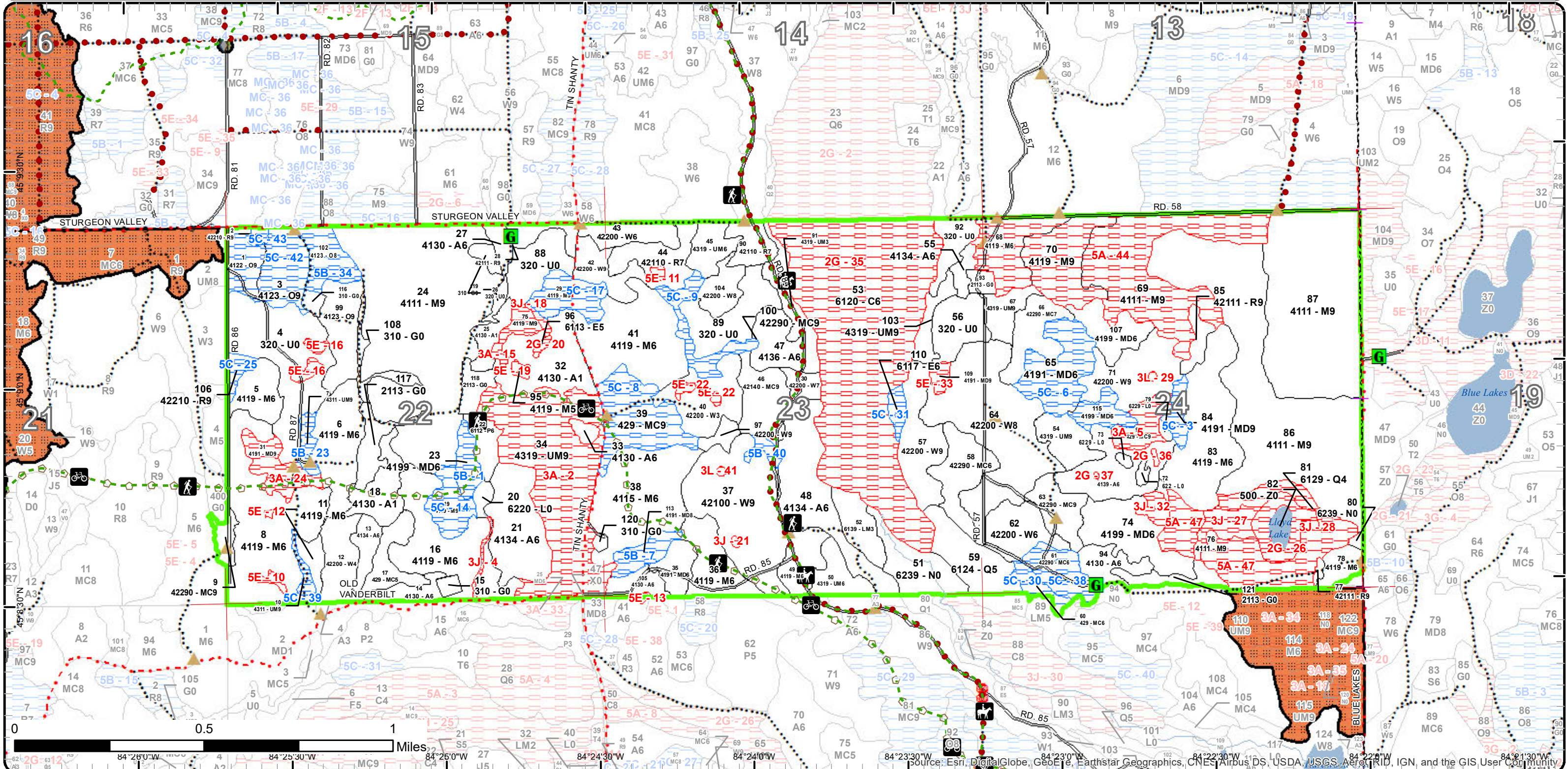


Special Conservation Areas & Site Conditions Map

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- Lake/Pond
- Perennial River
- Lakes and Rivers All
- ⚡ Powerline
- ▭ Compartment Boundary
- ▭ Available w/ Constraints
- ▭ Unavailable
- ▭ Stand Boundaries
- ▭ SCA
- Cold Water Streams
- Cold Water Lakes
- Other Habitat Area
- Customary Use Area
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Conservation Values incompatible with harvest at this time
- 3J: Water quality / BMPs (stream, river, or lake)
- 3L: Other wildlife concerns
- 5A: Not able to obtain desirable regeneration
- 5E: Long-Term Retention



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	41	0	0	89	6	31	0	0	0	0	0	0	0	0	0	0	0	167
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	0	141	0	0	0	0	141
Cropland	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Herbaceous Openland	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6
Lowland Conifers	0	0	0	0	17	0	0	10	0	0	0	0	0	0	0	0	0	0	27
Lowland Deciduous	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	4
Lowland Mixed Forest	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Shrub	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Marsh	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Mixed Upland Deciduous	0	0	0	0	0	7	18	0	25	34	0	18	0	0	0	0	0	0	102
Natural Mixed Pines	0	0	0	0	0	16	11	0	0	38	0	0	0	0	0	0	0	0	65
Northern Hardwood	0	0	0	0	0	0	0	0	19	244	368	99	0	0	0	0	0	0	730
Oak	0	0	0	0	0	0	0	0	0	51	0	0	0	0	0	0	0	0	51
Planted Mixed Pines	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	18
Red Pine	0	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	37
Upland Conifers	0	0	0	0	10	5	0	0	0	33	0	0	0	0	0	0	0	0	48
Upland Mixed Forest	0	0	0	11	18	0	0	0	0	100	0	0	0	0	0	0	0	0	129
Upland Shrub	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95
Water	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
White Pine	0	0	19	0	13	0	23	0	0	167	0	0	0	0	0	0	0	0	222
Total	152	41	19	21	147	34	89	10	45	725	368	117	0	141	0	0	0	0	1909



Report 2 – Treatment Summary

Acres of Harvest

Commercial Harvest - 179
Harvests with Site Condition - 16
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	20	0	0	0	0	0	0	0	0	20
Mixed Upland Deciduous	8	0	0	0	0	0	0	0	0	8
Northern Hardwood	2	0	0	0	0	22	0	0	0	24
Oak	0	0	0	0	0	16	0	0	0	16
Planted Mixed Pines	0	0	0	0	15	0	0	0	0	15
Red Pine	21	5	0	5	0	0	0	0	0	31
Upland Mixed Forest	6	0	0	10	0	0	0	0	0	16
White Pine	3	0	0	0	42	21	0	0	0	66
Total	60	5	0	15	57	58	0	0	0	195

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	195	0	0	0	0	0	61	0	79	334
Next Step	0	24	24	0	0	0	161	0	0	209
Total	195	24	24	0	0	0	222	0	79	543



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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
83 53039_OutOfY OE_1-Cut1	2.1	4119 - Mixed Northern Hardwoods	Poletimber Well	93	81-110	Harvest	Clearcut	413 - Aspen	Even-Aged	Field Boundary

Habitat Cut: No **Site Condition:** Age-Class or Site Quality

Prescription -Clearcut all aspen and red maple as well as all pine under 10 inches DBH. Group this stand with the adjacent stand to the south in Comp 41.

Specs: -No area retention needed due to stand's small size.

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Well stocked-stand of aspen with any additional mix of species being acceptable.

Regen:

Other Old next step comments: -Acceptable regeneration will be any mix of species dominated by aspen.

Comment: -Regen check at the appropriate interval.

Proposed Start Date: 10/1 /2014

34 53039_OutOfY OE-Cut1	6.0	4319 - Mixed Upland Forest	Sawtimber Well	85	111- 140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Field Boundary
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Habitat Cut: No **Site Condition:** Conservation Values

Prescription -Clearcut all aspen, fir, and red maple as well as any spruce or pine less than 10 inches DBH. Do not cut any other species. If present, protect

Specs: hemlock clumps with a 1/2 chain buffer.

-Leave interior retention pockets equal to 3-10% of the treatment acreage.

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Well-stocked stand dominated by aspen with any additional mix of species being acceptable.

Regen:

Other -Group this stand with the adjacent clearcuts to the south in Comp 41. Old next step comments: -Acceptable regeneration will be any mix of

Comment: aspen, maple, and conifers resulting in at least a medium stocked stand.

-Regen check at three years due to possibility of browse impacting regen.

Proposed Start Date: 10/1 /2014

4 53039004-14- New	0.0	320 - Upland Shrub	Nonstocked	0	Unspec ified	Harvest	ERROR			Incomplete Proposal
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Habitat Cut: No **Site Condition:**

Prescription

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

4 53039004-NF	40.1	320 - Upland Shrub	Nonstocked	0	Unspec ified	NonForestMgt	Fruit Tree/Shrub Planting	320 - Upland Shrub		Draft Field Boundary
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Habitat Cut: No **Site Condition:** Long-Term Retention

Prescription Browse has limited shrub species in the stand to black cherry and leatherwood. Increase diversity by planting a mix of native shrubs including

Specs: species such as hawthorn, black chokeberry, mountain ash, sumac, and beaked hazelnut. Fencing will be needed to protect new plantings.

Next Step

Treatments:

Acceptable

Regen:

Other This stand still has a forested objective but browse is limiting successful regeneration at this time.

Comment:

Proposed Start Date: 10/1 /2019



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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
6 53039006-Cut	21.8	4119 - Mixed Northern Hardwoods	Poletimber Well	102	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Crown thin to 80-90. Focus on thinning from the poletimber and small sawlog size classes. Cut all beech except leave large diameter wildlife trees and those that do not show any signs of BBD. Do not cut any red or white pine. No canopy gaps at this time due to the small timber. Mark around hemlock pockets (do not enter).

Next Step
Treatments:

Acceptable
Regen:

Other Add trail specs for the High Country Pathway.

Comment: Winter harvest to prevent damage to the adjacent G type which will need to be utilized for access and decking.

Proposed Start Date: 10/1 /2019

8 53039008-Monitor	47.7	4119 - Mixed Northern Hardwoods	Poletimber Well	102	81-110	Monitoring	Natural Regen (Re-Inventory)	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Monitor regen gaps.

Specs:

Next Step
Treatments:

Acceptable Any mix of hardwood species.

Regen:

Other Percent to Treat = 100%

Comment:

Proposed Start Date: 10/1 /2021

22 53039022-NF	6.4	6112 - Lowland Aspen	Poletimber Well	53	111-140	NonForestMgt	Other - Specify	6112 - Lowland Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Non-commercial clearcut., preferably during the dormant season (fall/winter) to enhance sprouting and limit damage to wet soils. Cut all species except for any incidental cedar, hemlock, basswood, elm, or birch.

Next Step
Treatments:

Acceptable Regeneration dominated by aspen with any other mix of species being acceptable.

Regen:

Other Protect the High Country Pathway from any damage, including blue-marked trees.

Comment:

Proposed Start Date: 10/1 /2019

28 53039028-Cut	5.2	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	88	141-170	Harvest	Group Selection	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Create canopy gaps (>66 feet in diameter) in areas with greater amounts of maple and aspen. Crown thin the remaining areas to a residual of 110 square feet. Retain large diameter trees. Do not cut hemlock.

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

Acceptable Any mix of conifers and deciduous species is acceptable in canopy gaps.

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
33	53039033-NF	2.1	4130 - Aspen	Poletimber Well	58	81-110	NonForestMgt	Other - Specify	413 - Aspen	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Non-commercial clearcut. Cut all species except for any oak, hemlock, or cedar.

Specs:

Next Step
Treatments:

Acceptable Regeneration dominated by aspen with any other mix of species acceptable.

Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

37	53039037-Cut	42.0	42100 - Planted White Pine	Sawtimber Well	88	111-140	Harvest	Shelterwood with Retention	42260 - Natural Pine, Mixed Deciduous	Two-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription - Shelterwood with a target residual of 30-40 square feet. Maintain the current species mix and focus on leaving the largest diameter trees.

Specs: Retain all legacy size white pine over 26" DBH. Do not cut any oak or hemlock.

- Protect patches of white and red pine regeneration, and the oak and birch component if possible. Remove the rest of the understory species.
- Utilize retention to protect stick nests and vernal pools (already excluded). Create a few more small retention pockets around areas of dense stocking and/or large diameter trees.

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

Acceptable Well stocked stand dominated by red and white pine regeneration with any other mix of species acceptable in the remaining amount.

Regen:

Other - Require tops to be chipped in snow-free months in order to increase ground scarification.

Comment: - Add appropriate signage to Roads 84 and 85, as well as the High Country and Shore to Shore trails.
- Southern treatment boundary will be against Road 85 as well as where the High Country Pathway passes into the stand. Do not cross either of these two.

Proposed Start Date: 10/1 /2019

43	53039043-Cut	3.1	42200 - Natural White Pine	Poletimber Well	52	81-110	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Clearcut all species in this portion of stand 43 that is primarily larger timber and does not have as much white pine poletimber. If present, retain any white pine legacy trees. No area retention due to the small size of the stand. Add chipping and low stump specs.

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

Acceptable Fully-stocked stand of planted red pine. Any additional mix of species that seed in will be acceptable.

Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

44	53039044-3-New	13.2	42110 - Planted Red Pine	Sawtimber Poor	88	1-50	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Clearcut all species. Use the same retention pocket that was created in the previous harvest. Chipping and low stump specs.

Specs:

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
Comment:

Proposed Start Date: 10/1 /2019



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
46	53039046-Cut	14.9	42140 - Planted Mixed Pine	Sawtimber Well	88	111- 140	Harvest	Shelterwood with Retention	42260 - Natural Pine, Mixed Deciduous	Two-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription - Shelterwood with a target residual of 30-40 square feet. Maintain the current species mix and focus on leaving the largest diameter trees.

Specs: Retain all legacy size white pine over 26" DBH. Do not cut any oak or hemlock.

- Protect patches of white regeneration as much as possible, and the oak, red pine, and birch component if it is feasible.
- Create a small retention pocket or two around areas of dense stocking and/or large diameter trees. Protect stick nests if found.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Well stocked stand dominated by red and white pine with any additional mix of species acceptable in the remaining regeneration.

Regen:

Other - Require tops to be chipped in snow-free months in order to increase ground scarification.

Comment: - Add appropriate signage to Road 84 which is also the Shore to Shore trail.

- An area of dense regeneration with a wet drainage running through the middle has been excluded from the south end.

Proposed Start Date: 10/1 /2019

54	53039054-10- New	10.2	4319 - Mixed Upland Forest	Sawtimber Well	88	111- 140	Harvest	Seed Tree with Retention	4319 - Mixed Upland Forest	Two-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Seed-tree harvest leaving 10-20 square feet per acre of the largest and best quality oak and pine. Mark to leave some clumps of hardwoods

Specs: (focus mostly on PB and SM) in the areas where they are more common and are of better quality (more in the eastern half of the stand), include some pine in these clumps. Exclude any wet depressions or areas of large diameter white pine that may be present along the eastern boundary or use retention to protect them.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any mix of species is acceptable with the expectation that red maple and white pine will be the dominant regenerating species.

Regen:

Other Use sale specs to encourage ground scarification.

Comment:

- Add 2" spec to knock down all regeneration. Protect white oak saplings.

Proposed Start Date: 10/1 /2019

56	53039056- Monitor	12.9	320 - Upland Shrub	Nonstocked	0	Unspec ified	Monitoring	Natural Regen (Re-Inventory)	4319 - Mixed Upland Forest	Even-Aged	Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Natural regen survey at re-inventory. If below a fully-stocked stand, come up with alternatives to restore stocking to desired levels.

Specs:

Next Step

Treatments:

Acceptable OI Rx comments: Aspen, red maple, oak and birch as well as white and red pine would be expected to regenerate in this stand.

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2027

71	53039071-Cut	20.7	42200 - Natural White Pine	Sawtimber Well	88	141- 170	Harvest	Crown Thinning	42200 - Natural White Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Crown thin to 110 square feet per acre. Focus thinning on the poletimber and small sawlog size classes. Retain large diameter trees. Avoid

Specs: marking species other than red or white pine. 1 chain buffer around the stick nest in the interior of the stand, protect additional ones if found.

Next Step

Treatments:

Acceptable

Regen:

Other Access is possible via overgrown roads from the north. Utilize these as opposed to putting in a new road.

Comment:

Proposed Start Date: 10/1 /2019



Standard

Treatment ID	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
74	53039074-Cut	8.0	4199 - Other Mixed Upland Deciduous	Poletimber Well	75	81-110	Harvest	Clearcut	413 - Aspen	Even-Aged	Field Boundary

Habitat Cut: No **Site Condition:** **Age-Class or Site Quality**

Prescription Clearcut with no area retention due to the small size of the stand. Leave all oak and any supercanopy pine. Leave any other rare species that may be present in the stand such as hemlock, red pine, birch, elm, or basswood.

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Regen: At least a medium-stocked stand dominated by aspen. Any other mix of species will be acceptable in the remaining regeneration.

Other -Winter cut recommended to help alleviate browse concerns.

Comment: -This part of stand 74 is dominated by aspen and maple with a small oak and pine component. Out of year of entry proposed to group this stand with the stands to the south in Comp 41 that are being cut.

Proposed Start Date: 10/1 /2014

85	53039085-Cut	4.5	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	88	111-140	Harvest	Seed Tree	4191 - Mixed Upland Deciduous with Conifer	Two-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition:**

Prescription Seed tree leaving 10-20 square feet per acre of the largest diameter red and white pine trees. Instead of area retention mark to leave a few clumps of trees scattered throughout. Retain hardwoods except for beech, ironwood, and ash. In specs, protect the few small areas with advanced sugar maple regeneration. Keep an eye out for stick nests and protect any that are found.

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Regen: A fully-stocked mix of hardwood and conifer species is acceptable however any mix dominated by ironwood and beech will be considered unacceptable.

Other Utilize old roads to the north/northwest as access. Avoid creating new roads.

Comment: Get the operators to scarify as much as possible but this may be impractical since the harvest will be grouped with the adjacent roundwood thinning.

Proposed Start Date: 10/1 /2019

90	53039090-Cut	7.8	42110 - Planted Red Pine	Sawtimber Poor	88	1-50	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition:**

Prescription Clearcut all species, no retention. Add chipping and low stump specs. Add horse trail specs as Road 84 is a route on the Shore to Shore Trail.

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

Acceptable Regen: Fully-stocked stand of planted red pine.

Other
Comment:

Proposed Start Date: 10/1 /2019

93	53039093-NF	2.7	2113 - Forage Crops Nonstocked	Unstocked	0	Unspec	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No **Site Condition:**

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Specs:

Next Step
Treatments:

Acceptable Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
99	53039099-Cut	15.6	4123 - Red Oak	Sawtimber Well	88	111-140	Harvest	Crown Thinning	4123 - Red Oak	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Thin down to 80 square feet. Focus on removing suppressed stems from the poletimber and small sawlog size classes, as well as any heavily forked trees. Maintain large diameter trees. Do not cut any pine.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

108	53039108-NF	4.7	310 - Herbaceous Openland	Nonstocked		Unspecified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

111	53039111-12-New	19.8	4139 - Aspen, Mixed Deciduous	Poletimber Well	50	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Clearcut with retention. Protect all wetland areas with a 1/2 chain buffer and include any defined drainages, expect these boundaries to shift somewhat from what is shown on the treatment layer. These areas will serve as retention. Mark to leave red oak in clumps. Cut red and white pine but protect all legacy size trees. Do not cut the following species which may be present in trace amounts: cedar, hemlock, elm, yellow birch, white oak, or basswood.

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Fully-stocked stand of aspen with any additional mix of species being acceptable. Regeneration less than the aspen stocking guidelines will be considered a failure.
Regen:

Other Roundwood harvest in winter months to protect the soils from damage.

Comment: Add brush pile spec and mark some cut and leave trees for drumming logs.

Utilize the existing road network within the stand for main skid trails and access the stand via the closed road from the west/northwest.

Proposed Start Date: 10/1 /2019



Stand Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
117 53039117-NF	8.2	2113 - Forage Crops	Nonstocked		Unspecified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Specs:
Do not damage the High Country Pathway which is at the south end of the stand (but may be outside of stand boundary).

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

118 53039118-NF	5.3	2113 - Forage Crops	Nonstocked		Unspecified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

119 53039119-NF	1.9	310 - Herbaceous Openland	Nonstocked		Unspecified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

120 53039120-NF	1.0	310 - Herbaceous Openland	Nonstocked		Unspecified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019



Standard	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
121	53039121-NF	6.2	2113 - Forage Crops	Nonstocked		Unspecified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Brush, mow, plant, burn and/or herbicide to maintain opening. Planting of hard and soft mast.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

Total Treatment Acreage Proposed: 334.1

Report 4 – Site Conditions

Pigeon River Country Mgt. Unit

Compartment: 39

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Year of Entry: 2020

Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available		Dominant Site Conditions								
		With Condition				5B	5C	2G	3A	3J	3L	5A	5E	
167	166	0	1		Aspen			1		0				0
141	0	0	141		Cedar			141						
22	22	0	0		Cropland									
11	11	0	0		Herbaceous Openland									
6	6	0	0		Lowland Aspen/Balsam Poplar									
27	17	0	10		Lowland Conifers			10						
4	0	3	1		Lowland Deciduous		3	1						
10	10	0	0		Lowland Mixed Forest									
5	5	0	0		Lowland Shrub									
16	16	0	0		Marsh									
103	41	46	17		Mixed Upland Deciduous	13	33		11	3				2
66	43	21	1		Natural Mixed Pines		21							1
730	555	21	154		Northern Hardwood		21		5	10		136		3
51	16	36	0		Oak	11	25							
17	15	3	0		Planted Mixed Pines	3								
37	32	5	1		Red Pine		5							1
48	10	29	9		Upland Conifers		29		9					
128	52	7	69		Upland Mixed Forest	4	3		69					
95	92	0	3		Upland Shrub									3
3	3	0	0		Water									
222	220	0	2		White Pine				0	1				1
1,912	1,334	171	408		Total Forested Acres	31	140	152	94	14	1	136		11
	70%	9%	21%		Relative Percent									

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

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	5B: Maintain for regeneration purposes	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Manage for hardwoods using standard selection/thinning techniques. Stand does not meet BA criteria at this time.							

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2	Unavailable	3A: Conservation Values incompatible with harvest at this time	69	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Unique stand with a 50/50 mix of upland and lowland. Pit and mound topography present. Heavy component of hemlock.							
3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Thin when the adjacent hardwood stand to the east is thinned. No final harvest due to the intense elk browse pressure in the area.							
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This site condition protects an intermittent stream. It is visible on 98DOQ imagery.							
5	Unavailable	3A: Conservation Values incompatible with harvest at this time	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: High quality stand of natural pine with a hemlock component. Has never been thinned before. Large vernal pool in north half.							
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	28	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Available	5B: Maintain for regeneration purposes	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	25	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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15	Unavailable	3A: Conservation Values incompatible with harvest at this time	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Surrounded by recent cuts on three sides, and cut off from the adjacent hardwood stand due to a drainage. This stand is a good candidate to leave unmanaged.							
16	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: These areas were retention pockets for the harvest in stand 4.							
17	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
18	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Wet drainage/vernal pool complex travels through this area.							
19	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
20	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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21	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Vernal pool, protect with 1/2-1 chain buffer when surrounding treatment is set up.							
22	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
23	Available	5B: Maintain for regeneration purposes	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
24	Unavailable	3A: Conservation Values incompatible with harvest at this time	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Hemlock dominated stand, High Country Pathway runs through, stick nest present.							
25	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
26	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							

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27	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	8	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments: Seasonally wet vernal pool/drainage complex characterized by pit and mound topography, lower BA, and smaller trees. A portion of this appears to drain south into the maintained wildlife opening. The remainder heads east and down to the lake. Expect the shape of this to change after the treatment lines are put in.</p>							
28	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	0	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments: Vernal pools.</p>							
29	Unavailable	3L: Other wildlife concerns	0	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments: 1 chain buffer for stick nest.</p>							
30	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments:</p>							
31	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	3	Unspecified	Unspecified	Unspecified	Unspecified
<p>Comments:</p>							
32	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	3	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<p>Comments: Large vernal pool complex. Mostly aspen in the overstory but there are scattered yellow birch, elm, and maple mixed in.</p>							

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33	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This area serves as retention for stand 56 which was recently cut.							
34	Available	5B: Maintain for regeneration purposes	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
35	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	141	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
36	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Wetland/lowland shrub pocket.							
37	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Wetland/vernal pool.							
38	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

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39	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
40	Available	5B: Maintain for regeneration purposes	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Area of dense regeneration with a wet drainage running through the middle.							
41	Unavailable	3L: Other wildlife concerns	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stick nest							
42	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	25	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stands 1 and 3 were prescribed for a clearcut in the 2020 YOE but the proposal was terminated due to concerns over browsing.							
43	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Consider leaving this stand as long term retention due to its small size.							
44	Unavailable	5A: Not able to obtain desirable regeneration	94	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Variance was proposed to harvest these stands Out-of-YOE to salvage beech and thin remaining trees. Proposal rejected by Wildlife over concerns about browse and regeneration. Agree with these concerns. Do not prescribe until deer and elk browse issues are resolved.							

Report 4 – Site Conditions

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Compartment: 39

Year of Entry: 2020

47	Unavailable	5A: Not able to obtain desirable regeneration	42	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Variance was proposed to harvest these stands Out-of-YOE to salvage beech and thin remaining trees. Proposal rejected by Wildlife over concerns about browse and regeneration. Agree with these concerns. Do not prescribe until deer and elk browse issues are resolved.							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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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.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4122 - Oak, Pine	Sawtimber Well	9.4	81	51-80	<p>Moderate quality oak that sits on a slight west-facing slope. Site quality is not as great as the adjacent oak stands to the east. Stand was last cut by Georgia Pacific in 1992 as part of the Section 22 Pine sale, #53-008-90-01. All aspen, birch, jack pine, and mixed hardwoods were removed. Somewhat irregular stocking due to the species removal harvest, a few areas of lower BA are mixed in throughout. Variable diameters on the pine with a couple large, XL-sized trees present. Average ba/acre from 7 plots = 80 square feet.</p> <p>06/15/2018 Stand proposed for a clearcut at Pre-review but decided to cancel the treatment due to browse concerns.</p>
2	42210 - Natural Red Pine	Sawtimber Well	1.4	88	141-170	<p>Stand was cut by Georgia Pacific in 1992 as part of the Section 22 Pine sale, #53-008-90-01. All aspen, birch, jack pine, and mixed hardwoods were removed except for oak, and some orange-marked red and white pine were cut. Residual red pine is high quality. Unsure if this is planted as there are some trees that appear of natural origin and the orientation doesn't align in rows everywhere. Average ba/acre from 3 plots = 163 square feet.</p>
3	4123 - Red Oak	Sawtimber Well	15.1	81	81-110	<p>Moderate to high quality oak on a transitional site. East half of the stand is on hardwood soils while the west half declines somewhat. Stand last cut in 1991 by AJD as part of Section 22 Oak sale, #53-007-90-01. All species except oak were removed. Harvested volumes were primarily basswood, maple, birch, and aspen. Stocking is somewhat variable due to the species removal harvest. A few clumps of pine at the south end. Sparsely stocked area at the far south end adjacent to the G type. Overall, average ba/acre from 9 plots = 83 square feet. Small opening at the northeast corner which is a popular camping area.</p> <p>06/15/2018 Stand proposed for a clearcut at Pre-review but decided to cancel the treatment due to browse concerns.</p>
5	4119 - Mixed Northern Hardwoods	Poletimber Well	10.8	86	81-110	<p>Moderate to low quality, small diameter hardwoods with a component of larger oak and pine. The east half of the stand lies on a slight east-facing slope and has decent quality hardwoods. The remainder of the stand is not as good and has a lot of small red maple stems. Old OI notes indicate a partial harvest took place here in 1968 which may explain the amount of small stems. Although rare, there is some advanced oak regeneration which is now in the poletimber size class. Average ba/acre from 8 plots = 105 square feet. Do not manage using even-aged techniques due to the browse pressure. Let grow some more and look at thinning next entry.</p>
6	4119 - Mixed Northern Hardwoods	Poletimber Well	21.9	102	111-140	<p>Hardwood stand dominated by poletimber of varying quality and stocking. Center of the stand sits on a slight north-south running ridge with gentle slopes running down on each side. Quality and stocking is best in the east half, while it seems to decline somewhat in the west half, with red maple and beech becoming more of a component. A few scattered clumps of hemlock here and there. Most beech appears to have BBD. No ash. Pine is almost exclusively along the far east and west edges. Trace of bigtooth aspen. Average ba/acre from 10 plots = 115 square feet. High Country Pathway runs east-west through the southern end.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
7	4311 - Pine, Aspen Mix	Sawtimber Well	3.8	88	81-110	Stand seems to alternate between clumps of aspen and white pine. Old notes indicate a partial harvest took place, and besides the white pine being left, there were also a few larger aspen and hardwoods that were not cut. White pine is wolfy and not great quality, although there are some very large diameters. A few patches of decent advanced hardwood regeneration is present, mostly underneath the white pine clumps, but there is also a lot of ironwood regeneration mixed in. Average ba/acre from 5 plots = 100 square feet.
8	4119 - Mixed Northern Hardwoods	Poletimber Well	50.0	102	81-110	Stand thinned in summer of 2018, 4 Corner Hardwoods (#53-010-15-01) bought by Precision. All ash and the majority of beech removed and the rest of the stand was thinned using hardwood selection techniques. Some large gaps are being created in areas heavy to beech.
9	42290 - Natural Mixed Pine	Sawtimber Well	4.3	88	81-110	This stand is split down the middle by Road 86. White pine is mostly on the west side of the road and is very poor quality. East of the road is mostly red pine which is pretty low quality as well with quite a bit of variation in diameters (there are a few XL-sized trees mixed in). Hardwoods scattered throughout, including a couple nice black cherry in the west half. Trace of jack pine. Average ba/acre from 6 plots = 110 square feet. The red pine was likely planted but I doubt the white pine was, due to it's sporadic stocking.
10	4311 - Pine, Aspen Mix	Sawtimber Well	3.2	88	81-110	Stands sit in somewhat of a small valley. An old road runs north-south through the middle for the entire length of the stand. Some big diameter white pine but some of it has very poor form. Aspen and hardwoods tend to vary in diameter with smaller stems more common the further north you go. Average ba/acre from 6 plots = 110 square feet. Small acreage for management, especially with the road running right through the middle.
11	4119 - Mixed Northern Hardwoods	Poletimber Well	4.2	80	81-110	Stand of small diameter hardwoods that wasn't included with the adjacent harvest to the north and west. Not the greatest hardwood quality, the white pine is nice though. Average ba/acre from 5 plots = 110 square feet. Do not consider even-aged management due to the extreme browse pressure in the area, look to the adjacent stand to the east for evidence of that.
12	42200 - Natural White Pine	Poletimber Poor	13.2	36	51-80	Stand cut in 1982 by Champion as part of 1-22 Aspen, #53-023-80-01. Primary species harvested were aspen, paper birch, and mixed hardwood. Based on past OI notes the aspen and hardwood component was wiped out of the stand by browse. Even now there is evidence of very heavy browse on almost any deciduous species present including beech and sweetfern (the exception is cherry). As a result the stand is very poor quality with a lot of open grown stems. There are a few patches with denser stocking along the edges of the stand but those are the only places of decent stem quality. A few larger red and sugar maple were left over from the original harvest. Spruce/fir component is mostly along the southeastern edge adjacent to stand 13. Average ba/acre from 9 plots = 57 square feet.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
13	4134 - Aspen, Spruce/Fir	Poletimber Well	6.0	36	81-110	Stand cut in 1982 by Champion as part of 1-22 Aspen, #53-023-80-01. Primary species harvested were aspen, paper birch, and mixed hardwood. Aspen regenerated well as compared to the adjacent stands that were cut at the same time. This stand sits in somewhat of a valley and a small drainage runs north-south disappearing at the south end. Trace of sugar maple and white spruce. Average ba/acre from 6 plots = 88 square feet. Will be ready for a final harvest next entry.
14	4130 - Aspen	Poletimber Well	5.6	36	51-80	Stand cut in 1982 by Champion as part of 1-22 Aspen, #53-023-80-01. Primary species harvested were aspen, paper birch, and mixed hardwood. Aspen came back well in this stand. A couple small areas that have a nice white pine/red pine component. Northeastern part of the stand has most of the hardwoods. Average ba/acre from 5 plots = 74 square feet. Diameters are too small to consider a final harvest at this point.
16	4119 - Mixed Northern Hardwoods	Poletimber Well	33.3	86	81-110	Pretty nice hardwood stand although stocking and quality tend to vary considerably. Largest diameters and best stocking is in the central part of the stand. Diameters decline considerably in the northern finger of the stand as well as the far southeastern end. An intermittent stream runs north/south through the eastern part of the stand originating from the L type stand to the north and travels south all the way to Old Vanderbilt Road (see 98 imagery). Stand last had a light selection harvest by Frank Barnby in 1980. Average ba/acre from 14 plots = 101 square feet. Stand will be ready for a thinning next entry. Protect intermittent stream with a 1/2-1 chain buffer on each side.
17	429 - Mixed Upland Conifers	Poletimber Medium	9.9	36	51-80	Stand cut in 1982 by Champion as part of 1-22 Aspen, #53-023-80-01. Primary species harvested were aspen, paper birch, and mixed hardwood. This is a hardwood quality site but browse has eliminated most aspen and hardwood regeneration with the exception of a few pockets. There is an old elk enclosure in the central part of the southern half, the majority of the fencing has now fallen over. However the effectiveness of the enclosure is easily apparent as there is red maple and sugar maple regeneration in addition to fully-stocked aspen poletimber. The remainder of the stand is now dominated by conifers with a good representation of natural red pine, however overall stocking is not great and quality is quite low due to the open nature of the stand. Average ba/acre from 9 plots = 78 square feet.
18	4130 - Aspen	Sapling Poor	12.2	7	Immature	Stand cut as part of "Taxidea Mix" (#53-024-10-01), bought by AJD, roundwood harvest summer 2011. Regeneration failure because stocking levels fall below minimum guidelines for aspen. In general the south half of the stand has decent regeneration but the north finger of the stand is very poorly stocked and has been impacted by severe browsing. Unsure how much of the aspen will actually survive. Grass/sedge is starting to take over the understory in large portions. Wet drainage in south part of stand. Regen survey results; quaking aspen 1160 tpa, ironwood 180 tpa, white pine 100 tpa, beech 20 tpa, red maple 40 tpa. Aspen and white pine are the only species above the 3 foot threshold at this point to be in the overstory coverage. Black cherry is also present but will not be a merchantable tree.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4119 - Mixed Northern Hardwoods	Sawtimber Well	9.7	102	111-140	Very nice stand of hardwoods that doesn't appear to have been thinned before. Large diameter trees are present. Some porcupine damage to the hemlock as some of it appears unhealthy. A nice vernal pond exists in the northern portion of this stand. The High Country Pathway meanders throughout. Average ba/acre from 6 plots = 140 square feet. Do not manage at this time.
21	4134 - Aspen, Spruce/Fir	Poletimber Well	26.2	36	51-80	Stand cut in 1982 by Champion as part of 1-22 Aspen, #53-023-80-01. Primary species harvested were aspen, paper birch, and mixed hardwood. Resulting regeneration is nearly pure aspen and fir with little overstory or understory diversity. Several open areas mixed in throughout that did not regenerate well. Some wet ground is mixed in as well, this seems to be primarily in the north half. Trace of tamarack and red pine at the south end where the landing and haul road were located. Average ba/acre from 11 plots = 76 square feet. Stand should be ready for a final harvest next entry.
22	6112 - Lowland Aspen	Poletimber Well	6.4	53	111-140	A good portion of this stand is wet, imagery shows somewhat of a north/south drainage pattern. The NE corner and far southern end are very wet. Western and northwestern portions transition up to higher ground. A few larger, older trees are mixed in, must have been missed when the stand was originally cut. Trace of hemlock. Average ba/acre from 8 plots = 115 square feet. Due to the wet soils and small acreage, a non-commercial cut would probably be best here.
23	4199 - Other Mixed Upland Deciduous	Poletimber Well	6.2	86	81-110	Stand had all the aspen removed at one point. Hardwoods are moderate quality but still quite small for a thinning. Long and narrow north-south running drainage along the northwestern edge of the stand (see 98DOQ imagery), a few small yellow birch are mixed in here. Remainder of the stand is gently rolling with a few elongated small ridges. Trace of red oak. Average ba/acre from 6 plots = 110 square feet. High Country Pathway travels through a large portion of the stand. Let the stand grow some and then manage for hardwoods.
24	4111 - S.Maple, Hard Mast Association	Sawtimber Well	113.3	86	81-110	Nice hardwood stand that was last harvested in 1992 by Gary Haskill in the Section 22 Tri-Block sale, #53-009-90-01. All aspen, birch, and ironwood were removed as well as some marked hardwoods. As a result of the species removal, residual BA's are quite variable, and tend to be lowest along the eastern and western edges, and highest in the interior. Many areas are due to be thinned but as of this time the stand averages only 107 square feet from 22 plots. High quality, large diameter oak throughout, although most prevalent in the NW corner. Red and white pine are mostly along the edges. East half of stand is on a gentle east facing downslope. Middle of the stand is on a slight ridgetop. Evidence of high elk use. Should be ready for a thinning next entry.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
25	4130 - Aspen	Sapling Poor	5.9	7	Immature	<p>"Taxidea Mix" (#53-024-10-01) harvested summer 2011. AJD, roundwood job. Stand fails regeneration standards for an aspen management objective. Deer and elk browse is having a significant effect on the southern 2/3rds of the stand. Most species are showing heavy browse damage. Majority of the bigtooth aspen is either dead or close to it. The far northern 1/3rd of the stand has a clump of quaking aspen that surpassed the browse and is now 10-20 feet tall. Encroachment of grass and sedge in heavily browsed areas. Likely another U type at next inventory cycle. What to do here?</p> <p>- Cut volumes were 18 mbf basswood, 3 cords sugar maple, 15 cords red maple, 23 cords basswood, 8 cords white pine, 13 cords ironwood, 71 cords aspen.</p> <p>05/31/2016 Regen Survey Results - BTA 733 TPA (4.5'), QA 233 TPA (2.5'), IW 300 TPA (2'), BW 67 TPA (1'), RO 67 TPA (1.5').</p>
27	4130 - Aspen	Poletimber Well	3.8	36	51-80	<p>Stand cut in 1982 by Champion as part of 1-22 Aspen, #53-023-80-01. Regeneration came back well here. Nice component of sugar maple regeneration is present, especially in the northwestern part of the stand, some oak is present as well. Average ba/acre from 5 plots = 70 square feet.</p>
28	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	5.2	88	141-170	<p>Stand was put up as part of Screaming Pine (#53-021-10-01) but this unit was never cut and was dropped from the sale. Nice red pine although there tends to be some variability in diameters. Far west end of the stand is almost pure red pine, the remainder has scattered aspen and white pine mixed in. Site appears to be somewhat of a transition between hardwoods and lower quality soils. There used to be a component of jack pine but that is now all dead. Average ba/acre from 8 plots = 160 square feet.</p>
29	4119 - Mixed Northern Hardwoods	Sawtimber Well	11.6	102	111-140	<p>Nice hardwood stand with some big diameters. Looks to me like a second age class of large, old trees is present. Quality and stocking decline somewhat east of Tin Shanty Road, this is where the beech and ironwood understory pick up. Most overstory beech showing signs of BBD. Stand was last thinned in 1991. Thin next entry when the adjacent stand 41 to the south is ready. Protect the large hemlock pocket in the southeast corner. Current average ba/acre from 9 plots = 133 square feet. Trace of red pine.</p>
30	42200 - Natural White Pine	Sawtimber Poor	4.1	88	51-80	<p>Stand of supercanopy white pine (including some very large trees) with a well developed understory. The balsam fir and white pine regeneration is approaching poletimber size while the remaining species are mostly still saplings. Stand was last cut in 1992 by Alan Lamberson as part of the Mile Long Pine sale, #53-020-90-01. All species were cut except for unmarked red and white pine, and all hemlock, red oak, and white oak. Stand sits on an upland/lowland transition. Trace of residual cedar and hemlock. Average ba/acre from 6 plots = 63 square feet. Road 84 travels through the middle of the stand.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	11.1	102	141-170	Diverse, densely stocked hardwood stand with pockets of hemlock mixed in throughout. Diameters on the hardwoods tend to be much larger in the northwest part of the stand and decrease at the far southeastern end. Some of the hemlock does not appear very healthy. I suspect it's likely a result of porcupine damage to the crowns as I noticed pockets of damage to younger maple saplings. BBD on most of the beech. All ash dead from EAB. Large stick nest in a 16" sugar maple in the NW part of the stand. High Country Pathway travels through most of the southern half. Average ba/acre from 6 plots = 150 square feet.
32	4130 - Aspen	Sapling Poor	22.8	7	Immature	- "Taxidea mix" (#53-024-10-01), cut summer 2011 by AJD, roundwood job. Scattered wet ground throughout, operators did a nice job of laying down slash. Rutting impacts very minimal. Cut volumes were 9 mbf sugar maple, 6 mbf red maple, 6 mbf basswood, 5 mbf paper birch, 77 cords sugar maple, 139 cords red maple, 8 cords basswood, 17 cords beech, 137 cords paper birch, 179 cords aspen. - Regen failure. Deer and elk browse have had a significant impact on the stand. Any deciduous species that stump sprouted have been hit the hardest. Significant component of sugar maple, basswood, and paper birch were harvested from the stand but these species have mostly been eliminated from the regeneration. Some seedlings are present but it's notable that even after 6 years they are no more than 1-2 feet tall. Sedge and grass encroachment in the most heavily browsed areas. Black cherry abundant in spots but it will not be anything more than shrub quality. A few clumps of QA here and there that have made it past the browse, seem to be most prevalent near Tin Shanty Road. What to do here? -05/31/2016 Regen Survey - QA 633 TPA (4.5'), BTA 50 TPA (7'), WA 150 TPA (2'), RM 250 TPA (2.5'), PB 17 TPA (1'), BE 117 TPA (2'), WP 50 TPA (2'), BF 17 TPA (4'), RO 167 TPA (1').
33	4130 - Aspen	Poletimber Well	2.1	58	81-110	Prison crew cut this stand in 1960, objective was to feed deer. A few areas of wet ground in the east half. Trace of cedar and red oak. Average ba/acre from 3 plots = 110 square feet. Too small to manage commercially on it's own. Another WLD non-commercial treatment would be best here.
34	4319 - Mixed Upland Forest	Sawtimber Well	69.0	85	111-140	Unique stand that must have a perched water table as there are numerous pockets of wet ground throughout. Diverse species mix but dominated by hemlock and red maple. Diameters on the hardwoods tend to vary quite a bit. Cedar component is found in both upland and lowland areas. Black ash used to be a large component of some of the wet pockets but it is now all dead due to EAB. Hemlock appears healthy for the most part. Trace of red pine, yellow birch, spruce, and elm. Very heavy deer and elk use. Average ba/acre from 16 plots = 123 square feet. No management due to sensitive soils and the species mix.
35	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	7.3	49	81-110	Poletimber stand with a mixed bag of species. Road 85 bisects the stand, most of the hemlock is south of the road and there are a few patches of nice young hardwood regeneration here. Scattered log-size trees were left from the previous harvest, these were mostly pine, oak, and hemlock but there are some red maple and sugar maple sawlogs present as well. Aspen component is best in the southwest corner and northern edges of the stand. There is a small amount of red oak that regenerated and is now in the poletimber/small sawlog size class. Trace of white spruce. Average ba/acre from 7 plots = 96 square feet.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	4119 - Mixed Northern Hardwoods	Poletimber Well	15.6	93	81-110	Moderate quality hardwood stand dominated by red maple. Quality is best in the interior of the stand but declines along the edges as cover types start to transition. The far south end transitions to more of a red maple/aspen/birch type. There are some very large white pine in this part of the stand. Some areas along the south and west look like they may have had a partial harvest at one point as there are some clumps of smaller stems. This includes a small percentage of red oak ingrowth which are now in the poletimber/small sawlog size classes. Northeast corner of stand has a small wet area with white pine in it. Average ba/acre from 8 plots = 98 square feet. Stand may potentially be ready for a thinning next entry. The High Country Pathway passes through the middle of the stand.
37	42100 - Planted White Pine	Sawtimber Well	45.5	88	111-140	Stand was cut in 1992 by Alan Lamberson as part of the Mile Long Pine sale, #53-020-90-01. All species cut except for red and white pine, hemlock, red oak, and white oak. Residual stand is very high quality, lots of big diameters and very tall trees. The red pine component tends to be somewhat clumpy and is not uniform throughout. Regeneration is mostly white pine, fir and undesirable hardwoods. There are some nice patches of white pine regeneration present. In many areas the hardwood understory is below 5 feet due to the high browse pressure. One large stick nest found and there are likely more as this is good goshawk habitat. Vernal pool on the southwest side of the stand (see OFS layer). Rolling terrain. Average ba/acre from 12 plots = 117 square feet. Retain the residual supercanopy trees indefinitely after harvest and manage for a mixed pine stand in the future.
38	4115 - Y.Birch, Hemlock NH	Poletimber Well	37.8	93	81-110	Royal Hardwoods, #53-012-10-01, sale cut in the winter of 2012-13 by Tulgestka. Quite a bit of damage when the producer first started, but got much better as the sale went on. Hemlock pockets are scattered throughout and the marker went around most of these. High Country Pathway travels through the stand and BA was left a little higher around this. This is a definite regeneration failure as several canopy gaps were made but deer and elk browse has been extremely heavy, even the beech and striped maple show signs of heavy browse damage. A few small areas around the G type stand were excluded from the harvest, this is where most of the fir is located. A thin strip of hemlock, fir, and cedar is adjacent to Tin Shanty Road and there is a little bit of wet ground mixed in. Most beech shows sign of BBD. Average ba/acre from 12 plots = 105 square feet.
39	429 - Mixed Upland Conifers	Sawtimber Well	24.5	88	111-140	Nice mixed species stand with some large diameter white pine present. Red pine component is mostly in the north half. Hardwoods and aspen are intermixed throughout but most common along the east/northeast edges. Hemlock pockets scattered throughout but more common along the south stand line. Far southern finger may have a little bit of seasonally wet ground. Trace of white spruce. Average ba/acre from 9 plots = 138 square feet. The High Country Pathway passes through the southwestern portion of the stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
40	42200 - Natural White Pine	Sapling Well	18.9	17	Immature	This was formerly a mixed pine/hardwood/aspen stand that was clearcut as part of Pine Island Block, #53-010-00-01, bought by AJD. Records indicate it was cut by a shortwood crew in January and February of 2001. Two small retention islands were left. Browse has eliminated almost all deciduous species from the stand. The few ironwood and beech that show up in the understory are still being heavily browsed. However, white pine regeneration has been excellent and is very dense through the entire portion of the stand I walked through. May be the thickest pine regeneration I've ever seen. There is also a nice component of natural red pine. Some weevil damage noticed on the white pine but I think the dense stocking will help correct it. Should be a very nice stand in the future. Trace of white spruce and red maple. Rolling terrain.
41	4119 - Mixed Northern Hardwoods	Poletimber Well	36.0	99	81-110	Quite a diverse hardwood stand but relatively low quality. Dominated by poletimber but there are quite a few larger diameter cull/wildlife trees as well. Best stem quality is in the eastern half. Old notes indicate a heavy partial harvest took place here in 1966. A few small aspen clones regenerated following that harvest and are scattered throughout. A few areas along the southern edge start to transition to more of an oak/red maple/pine type. Pockets of hemlock scattered throughout. Some areas are heavy to beech, most appear to have BBD. There is a small area in the southwest corner adjacent to the road that looks seasonally wet and is where most of the fir is located. Gently rolling terrain. 2-3 old logging roads are present. Average ba/acre from 11 plots = 109 square feet. Stand is in need of a TSI to get rid of the poor poletimber, should be ready next entry. Do not manage using even-aged techniques due to the intense browse pressure in the area, as evidenced in the adjacent stand to the west.
42	42200 - Natural White Pine	Sawtimber Well	10.2	88	141-170	The northwest corner of the stand looks like planted pine but as you move south it transitions to a natural stand with very large white pine and pockets of hemlock and hardwoods intermixed. Trace of beech and bigtooth aspen in the overstory. Two stick nests were found. Average ba/acre from 9 plots = 156 square feet. Unique, high quality stand that should be left unmanaged for the time being.
43	42200 - Natural White Pine	Poletimber Well	9.4	52	81-110	Stand cut in 1984 by George Kimball as part of the Tin Shanty Jack Pine sale. All jack pine, aspen, and hardwoods were removed as well as some marked red and white pine. As a result the stand is two-aged. White pine came back well. There is some variation in diameters as I'm guessing advanced white pine regeneration was protected when the stand was harvested. Red pine tends to be in clumps and seems more prevalent in the east half of the stand. Far eastern end is more of an MC9. Trace of paper birch, beech, balsam poplar, and white spruce. Average ba/acre from 8 plots = 102 square feet.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	42110 - Planted Red Pine	Sawtimber Poor	14.1	88	1-50	<p>Stand harvested as part of Screaming Pine (#53-021-10-01), whole-tree harvest by Randy Nash, cut in the spring of 2014. One retention pocket left. Sale cut volumes were 51 mbf white pine, 143 mbf red pine, 104 cords white pine, 71 cords red pine. Scattered leave trees left, average ba/acre from 6 plots = 35 square feet.</p> <p>Regeneration is sparse at this point and appears to be primarily red maple, beech, and ironwood, most of which is only about 1-2 feet tall and heavily browsed. Stand prescription comments call for scarification.</p> <p>Original OI Rx comments: Scarify the stand after cutting if harvest doesn't do it. RED AND WHITE PINE AS WELL AS SOME ASPEN AND RED MAPLE WOULD BE EXPECTED TO REGENERATE THE STAND.</p>
45	4319 - Mixed Upland Forest	Poletimber Well	8.5	36	51-80	<p>Stand cut in 1982 as part of the sale Hardwood Trail Block, bought by Rhinold Schleben, cut by Tom Catalano. All species cut except for oak and hemlock, a few larger aspen and white pine were left, mainly along the western edge. White pine as well as red and sugar maple have regenerated well. Most of the sugar maple stump sprouts are still in the sapling size class so I'm guessing the current poletimber were small trees that were not cut during the original harvest. Many areas are heavy to red maple saplings and as the stand continues to grow it will increase in prevalence in the canopy. Rolling terrain with a few steep slopes. Average ba/acre from 7 plots = 71 square feet.</p>
46	42140 - Planted Mixed Pine	Sawtimber Well	17.5	88	111-140	<p>Very nice mixed pine stand. Diameters tend to be larger in the east/northeast part of the stand. Many of the larger trees appear to be of natural origin. Stand was last cut in 1992 by Alan Lamberson as part of the Mile Long Pine sale, #53-020-90-01. All species were cut except for unmarked red and white pine, hemlock, and red oak. Regeneration came back well to white pine and there isn't nearly as much of a hardwood component as the W9 stand to the south. Areas with lower stocking have some nice patches of other species regeneration as well. Average ba/acre from 9 plots = 120 square feet. Drainage at the far south end which forms a small pond next to the road. Retain the residual supercanopy trees indefinitely after harvest and manage for a mixed pine stand in the future.</p>
47	4136 - Aspen, Mixed Conifer	Poletimber Well	11.4	37	81-110	<p>Stand clearcut in 1982 as part of the sale Hardwood Trail Block, bought by Rhinold Schleben, cut by Tom Catalano. All species cut except for oak and hemlock and a few supercanopy red and white pine. Resulting stand is highly variable. Aspen clones are mostly in the northwest and southeast quarters of the stand. A large vein of hemlock runs north-south through the middle of the stand and not much is growing underneath it. Southwest corner of the stand has a lot of the white pine component. Average ba/acre from 7 plots = 110 square feet. Stand should be ready for a final harvest next entry.</p>
48	4134 - Aspen, Spruce/Fir	Poletimber Well	32.6	36	111-140	<p>Good looking stand of young aspen poletimber. Some areas heavy to fir. Stand was clearcut in 1982 as part of the sale Hardwood Trail Block, bought by Rhinold Schleben, cut by Tom Catalano. Trace of paper birch and black spruce poletimber as well as a few scattered log-size hardwoods (sugar maple, basswood, elm, hemlock). A couple patches of residual cedar were left as well. Stand transitions to wet ground along the east edge. Rolling terrain with an east-facing aspect and a series of ridges and valleys. Average ba/acre from 13 plots = 117 square feet. Stand will be ready for a final harvest next entry.</p>



Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
4119 - Mixed Northern Hardwoods	Poletimber Well	10.0	96	81-110	<p>Mediocre hardwood stand. A lot of smaller maple stems with a component of larger oak and pine. Some clumps of hemlock mostly at the north end. Steeper slopes present at the north end as well. Some areas may have had a partial harvest when the adjacent stands to the east were cut. Average ba/acre from 8 plots = 105 square feet. No management at this time.</p> <p>Intersection of Roads 84 and 85 in this stand, the Shore-to-Shore Horse trail passes through as well.</p>
4319 - Mixed Upland Forest	Poletimber Well	9.1	36	111-140	<p>Stand cut in 1982 as part of the sale Hardwood Trail Block, bought by Rhinold Schleben, cut by Tom Catalano. All species cut except for oak and hemlock. A few scattered residual hardwoods were left as there are a couple larger paper birch, basswood, and sugar maple mixed in (but overall rare). The eastern edge of the stand lies on a steep side slope. The remainder is on top of a ridge and flat. Aspen component is best in the southeast and southwest portions of the stand. Average ba/acre from 8 plots = 116 square feet.</p>
6139 - Mixed Lowland Forest	Sapling Well	9.9	26	Immature	<p>Stand cut in 1992 by James Burkhart in the Hardwood Creek Southwest sale, #53-021-90-01. Volumes harvested were as follows: 59 cords and 17 mbf of cedar, 53 cords and 3 mbf of spruce, 7 cords of fir, 9 cords of aspen, and 6 cords of mixed hardwood. A few areas of patchy stocking but for the most part the stand has regenerated well, with the exception of cedar, which is now absent from the stand. Nice representation of paper birch. Harvest lines went very close to Hardwood Creek which was likely the cause for the subsequent beaver flooding of stand 51.</p>
6120 - Lowland Cedar	Poletimber Well	141.2	128	141-170	<p>Large swamp conifer stand of varying quality. Some areas of low quality and trees that appear stagnant. Other areas of dense stocking and high quality cedar and spruce. Cedar is for the most part healthy and not much decline was noticed. Hardwood Creek meanders throughout the stand. Understory is mostly sphagnum and Labrador tea. Average ba/acre from 13 plots = 158 square feet. Quite a bit of deer and elk activity throughout the stand.</p>
4319 - Mixed Upland Forest	Sawtimber Well	10.2	88	111-140	<p>Nice natural pine stand with a large component of red maple. Similar to adjacent stands in the area, this stand had a partial harvest in 1968. Somewhat variable composition as there are a few areas with more hardwoods than pine. Some large diameter, old trees are present, mostly white and red pine. White pine poletimber is mostly low quality and overtopped. Trace of balsam fir, white spruce, and jack pine in the overstory. Average ba/acre from 7 plots = 117 square feet. Central and northeastern part of the stand sits on somewhat of a knob, the remainder is mostly flat or on a slight side slope.</p>
4134 - Aspen, Spruce/Fir	Poletimber Well	3.6	38	111-140	<p>Pretty good diameters for aspen of this age. Fir is a large component of the canopy, however a lot of it has blown over. Stand sits on somewhat of a ridge overlooking lower ground to the west. Trace of upland cedar on the far western edge. Average ba/acre from 6 plots = 133 square feet. Stand should have been cut when the adjacent stand to the west was, as it is very small to manage on it's own. It is still young though and will hold for many years.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
57	42200 - Natural White Pine	Sawtimber Well	19.6	88	111-140	Very nice natural stand with a variety of white pine diameters including some very large trees. Heavy balsam fir understory is starting to recruit into the overstory. A few natural canopy gaps have been created from blowdown. White pine has a lot of lichen growing on it. Trace of red oak and paper birch. There may be a little bit of wet ground along the west edge where the stand transitions into the swamp. Average ba/acre from 10 plots = 127 square feet.
58	42290 - Natural Mixed Pine	Poletimber Well	15.8	48	81-110	Conifer dominated stand of moderate to high quality poletimber. Variety of sizes of white pine as the previous harvest must have left some scattered residual. Fir seems to increase in canopy percentage further south. Mostly flat terrain. Average ba/acre from 5 plots = 86 square feet. Let the white pine grow for several more entries.
59	6124 - Lowland Spruce-Fir	Poletimber Medium	17.4	37	51-80	Stand cut by Champion in 1981. Old OI notes indicate there was some beaver damage along the west side of the stand which likely reduced the aspen abundance. Mix of upland hummocks and lowland. Lot of nannyberry, although heavily browsed in areas. A few very wet areas that are poorly stocked. Some scattered larger red maple are mixed in, more so in the far north end. Average ba/acre from 6 plots = 80 square feet.
60	429 - Mixed Upland Conifers	Poletimber Well	4.8	47	111-140	Aspen more dominant in the W/NW half, quality and abundance decrease in the rest of the stand. A couple of larger jack pine, white pine, and red pine are scattered throughout. A lot of porcupine damage on the jack pine. Stand lies at the base of a small ridge. Mostly upland but there may be a few small areas of seasonally wet ground. Average ba/acre from 4 plots = 118 square feet.
61	42290 - Natural Mixed Pine	Poletimber Well	11.4	57	111-140	Stand was cut in 1961, a scattered residual of larger red and white pine were left. Pretty decent stand of poletimber although quite a few of the jack pine have broken tops and are dead. As a result of that there is a good amount of smaller coarse woody debris. Some porcupine damage to the jack pine, more so along the west/southwest line. Oak, maple, and bigtooth aspen mostly along the northeast edge. Trace of paper birch. Flat terrain. Average ba/acre from 7 plots = 121 square feet. Let grow and manage for the white pine.
62	42200 - Natural White Pine	Poletimber Well	13.9	57	81-110	Stand was cut in 1961 with a scattered residual of larger white pine and red pine left. Came back nicely to white pine. Fir component seems to increase along the southwest side. Although rare, there is a component of overstory white oak. Trace of paper birch, bigtooth aspen, and white spruce. Flat terrain. Average ba/acre from 6 plots = 110 square feet. Let this stand continue to grow and then thin.
63	42290 - Natural Mixed Pine	Sawtimber Well	11.1	88	81-110	Somewhat variable stand that tends to alternate between patches of dense MC9 and other areas where white pine poletimber is dominant. Old OI notes indicate a partial harvest took place here in 1968 which is the year of origin for the smaller timber. East side of stand is on a slight slope. Hardwoods pick up along the east line. Average ba/acre from 7 plots = 103 square feet. Retain until the second age class matures.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
64	42200 - Natural White Pine	Sawtimber Medium	54.9	88	81-110	<p>Stand cut in 2015 as part of Kerr Mason Pine, #53-017-10-01, bought by Hydrolake, cut by Precision. Some areas thinned quite heavily. Site quality increase the further north and east you go, as such so does the quality of white pine. Trees tend to be smaller in the south half. Average ba/acre from 11 plots = 83 square feet.</p> <p>OPIC - FMD: 2008 thin and do group selection to encourage white pine. Leave most of aspen for wildlife. White jack and red pine as well as aspen and some hardwoods would be expected to regenerate the stand.</p>
65	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	20.9	88	141-170	<p>This is a nice stand of natural pine and mixed hardwoods. The pine tends to be clumpy in nature and is more prevalent in the south half of the stand. Denser stocking and better quality overall in the south half. North half has a few areas that may have been partially harvested as there are pockets of smaller stems. Maple mostly moderate quality but there are some nicer stems in the south. Series of small N-S ridges. Trace of white oak and hemlock. Average ba/acre from 8 plots = 159 square feet. Let the maple component grow a little more and then manage using an uneven-aged or two-aged approach, retaining species diversity and large diameter trees.</p>
66	42290 - Natural Mixed Pine	Sawtimber Poor	13.1	88	1-50	<p>Stand cut as part of Kerr Mason Pine in summer of 2015, #53-017-10-01, bought by Hydrolake, cut by Precision. Quite a bit of residual damage to the pine. Current regeneration is mostly red maple and beech with a little white pine and balsam fir.</p> <p>Evidence of heavy browse on the deciduous species. There wasn't much scarification that took place so I doubt any red pine will seed in. However, let the stand go a couple more years to see if regen will respond and then do a regen survey. Average ba/acre from 5 plots = 44 square feet. There is a bowl-like depression in the north-central part of the stand.</p> <p>There are some dead oak in the stand, mostly near the NE corner. Need to consult with Forest Health Specialist to see if this is oak wilt.</p>
67	4319 - Mixed Upland Forest	Sawtimber Well	7.8	88	111-140	<p>Nice stand of natural pine and other mixed species. Some very large white pine are present. Red maple is moderate quality. Old OI notes indicate a partial harvest was done here in 1969 which is evident with some areas of smaller stems. There is a small percentage of oak that regenerated following that harvest and is now in the poletimber/small sawlog size classes. Fir understory more prevalent in the north half. Average ba/acre from 6 plots = 127 square feet. Let the maple grow some more and then manage using an uneven-aged or two-aged approach. Retain species diversity and the large white pine.</p>
68	4119 - Mixed Northern Hardwoods	Poletimber Well	17.7	73	111-140	<p>Variance was proposed to harvest these stands Out-of-YOE to salvage beech and thin remaining trees. Proposal rejected by Wildlife over concerns about browse and regeneration. Agree with these concerns. Do not prescribe until deer and elk browse issues are resolved.</p> <p>Stand of moderate quality hardwoods with a lot of smaller poletimber, records indicate it was heavily cut in 1968. The aspen component is what regenerated following that harvest, most of this can be found along the edges of the G type opening. Beech becomes heavy in the northeast finger of the stand, most have BBD although I did notice a few without scale.</p> <p>A lot of the larger beech have significant rot and are good wildlife trees. West of the road has a lot of smaller stems and is on a side slope. Average ba/acre from 10 plots = 122 square feet.</p>



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
69	4111 - S.Maple, Hard Mast Association	Sawtimber Well	54.4	88	111-140	<p>08/13/2018 Variance was proposed to harvest these stands Out-of-YOE to salvage beech and thin remaining trees. Proposal rejected by Wildlife over concerns about browse and regeneration. Agree with these concerns. Do not prescribe until deer and elk browse issues are resolved.</p> <p>Old OI notes indicate this stand was heavily cut in during the late 60's. It has recovered from that past cutting and is now a high quality stand for the most part. There are a few areas of lower stocking and smaller stems scattered here and there, most notably in the finger that extends east. Site quality starts to decline in the south/southwest portions of the stand and transitions to more of a pine/oak/red maple type. A few areas are heavy to beech and BBD was noticed on about 1/2 of them. A few of the younger ash appear alive but all of the larger ash are dead from EAB. Gently rolling terrain. A few small areas of old blowdown. Trace of white pine and hemlock. Evidence of heavy browse in some areas, as there is a distinct line of 2-3 feet tall ironwood and beech. A couple of old roads travel through the stand. Average ba/acre from 13 plots = 111 square feet.</p>
70	4119 - Mixed Northern Hardwoods	Sawtimber Well	22.1	88	111-140	<p>08/13/2018 Variance was proposed to harvest these stands Out-of-YOE to salvage beech and thin remaining trees. Proposal rejected by Wildlife over concerns about browse and regeneration. Agree with these concerns. Do not prescribe until deer and elk browse issues are resolved.</p> <p>Old OI notes indicate this stand was heavily cut in during the late 1960's. This is evident more in the south half where there are areas of smaller stems mixed in. The remainder of the stand is a mixed bag of everything. There are a few nice pockets of oak and hardwoods, more so along the east and west edges. Beech becomes dominant in the north half, noticed BBD on most. Quite a few large diameter beech wildlife trees. Pockets of hemlock throughout, some porcupine damage was noticed. Trace of white oak at the south end. Rolling terrain. Site quality decreases the further south you go and transitions to more of a pine-oak type. A couple of old roads travel throughout. Average ba/acre from 9 plots = 120 square feet.</p>
71	42200 - Natural White Pine	Sawtimber Well	21.0	88	141-170	<p>A nice stand of white pine. Even though no sale records exist it appears as if this has been thinned before. No planting records found for this stand although I'm betting it's likely planted. Trace of white oak. Hardwoods are mostly along the edges. Large stick nest found in the central portion, unsure if active, assuming it's goshawk. Heavy deer and elk use. Average ba/acre from 9 plots = 143 square feet.</p>
74	4199 - Other Mixed Upland Deciduous	Poletimber Well	25.3	75	81-110	<p>A diverse stand that is a mixed bag of pretty much everything. Hardwood quality is only mediocre although there are a few pockets of nicer poletimber in the central part of the stand. Some nice pockets of pine as well, more so in the south half. Small aspen clones are scattered throughout, which regenerated after the stand was heavily cut in 1968. A large drainage/vernal pool complex is present in the northeast end. Trace of elm. Site quality decreases along the south and west ends. Gently rolling terrain. An old road cuts north-south through the eastern half. Average ba/acre from 7 plots = 91 square feet per acre. Let this stand grow and manage for mixed hardwoods/oak/pine.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
75	4119 - Mixed Northern Hardwoods	Sawtimber Well	6.0	102	111-140	Nice, diverse hardwood stand with big diameters. Stand wasn't thinned when the adjacent stand to the northeast was, a wet drainage/vernal pool complex separates the stands along the northeastern boundary. Cuts have taken place on the remaining sides of this stand which along with the small acreage doesn't make management very feasible here. Far southern end of the stand is wet with mostly paper birch and small maple. BBD on most of the beech. Average ba/acre from 5 plots = 136 square feet.
76	4111 - S.Maple, Hard Mast Association	Sawtimber Well	50.0	93	111-140	08/13/2018 Variance was proposed to harvest these stands Out-of-YOE to salvage beech and thin remaining trees. Proposal rejected by Wildlife over concerns about browse and regeneration. Agree with these concerns. Do not prescribe until deer and elk browse issues are resolved. Nice stand of hardwoods that hasn't been thinned for a while, if ever. There is a large seep/vernal pool/drainage complex in the west/northwest part of the stand. Part of this seems to go down to the lake, another finger drains south into the maintained wildlife opening. Pit and mound topography is evident in these wet areas and stocking and diameters are much lower. An old railroad grade runs north-south at the far eastern end. Old roads are present throughout. A few larger ash may be hanging on. Trace of hemlock, white pine, elm, and yellow birch. The hemlock is unhealthy and has a lot of porcupine damage. Average ba/acre from 14 plots = 116 square feet.
77	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	0.9	88	111-140	Small stand of large diameter red pine. Old notes indicated this 40 was planted with red pine by the CCC but this is the only pocket that survived. Some of the ash are hanging on. Trace of white pine, BAM, and red maple. Average ba/acre from 3 plots = 140 square feet.
78	4119 - Mixed Northern Hardwoods	Poletimber Well	6.1	82	81-110	Moderate quality hardwood stand, oak displays the best growth. Site quality seems to decline the further east you travel. Stand was heavily cut during the late 60's and is the source of the smaller aspen. Trace of red pine, white pine, and hemlock. Average ba/acre from 5 plots = 96 square feet.
81	6129 - Mixed Coniferous Lowland Forest	Poletimber Poor	9.7	60	1-50	Sparsely stocked stand surrounding Lloyd Lake. There used to be a much larger component of cedar but it is mostly dead now. It looks like this stand periodically floods dependent on the water levels of Lloyd Lake. The portion of the stand that extends east is mostly a wetland and stops at an old railroad grade. Tamarack is more dominant on the north and east sides of the stand. The west side has most of the birch and maple, including some nice yellow birch regeneration. In addition to the alder and cattails, sphagnum and leatherleaf are widespread at the ground level. Average ba/acre from 9 plots = 28 square feet.
83	4119 - Mixed Northern Hardwoods	Poletimber Well	37.2	93	81-110	For the most part this is a high quality northern hardwood poletimber stand. Diameters tend to vary quite a bit, with some areas where the stems are quite small. Most beech has BBD. All ash is dead from EAB, although it was a minor component to start with. Relatively flat throughout. Several vernal pools are present. Trace of red pine and hemlock. Some areas with a barren understory. Several old roads appear to meander through this stand. Average ba/acre from 9 plots = 107 square feet. Stand should be ready for a thinning next entry.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
84	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	4.9	88	111-140	Nice stand of oak and pine that seems to be a transition between the hardwoods to the east and pine dominated stands to the west. A few small patches of hemlock, more so in the north half. Areas of smaller red maple are mixed in, possibly two-aged. Dense white pine understory in spots. Trace of white oak. Average ba/acre from 5 plots = 112 square feet.
85	42111 - Planted Red Pine, Mixed Deciduous	Sawtimber Well	4.5	88	111-140	Nice stand of pine that appears to have been planted as the red pine is oriented in rows. More white pine at the south end. Old OI notes indicate this stand was thinned at some time although the year is not given. Larger hardwoods mixed in along the edges. Advanced hardwood regen is mixed in, most is undesirable ironwood and ash but there are a few small pockets of sugar maple. Trace of white oak and paper birch. A small area of blowdown in the center. Average ba/acre from 5 plots = 150 square feet.
86	4111 - S.Maple, Hard Mast Association	Sawtimber Well	102.7	93	81-110	High quality northern hardwood stand with some large diameter trees. Last thinned in 2003 by Watson Forest Products in the sale Lloyd Lake Hardwoods, #53-013-01-01. BA's tend to vary somewhat as some areas were thinned heavier than others. Some old blowdown in the thin middle part of the stand. Ash used to be about 10 square feet of basal area but it is now all dead and mostly on the ground. Thick understory of undesirable species. Heavy deer and elk use. Average ba/acre from 15 plots = 94 square feet. Stand won't be ready for a thinning for another 20 years.
87	4111 - S.Maple, Hard Mast Association	Sawtimber Well	79.0	93	81-110	Stand cut in 1992 by AJD in the sale Meridian Line Hardwoods, #53-003-90-01. Selection harvest, primarily pulpwood removed. Nice looking stand with some high quality oak. Stand was evaluated in 2013 during the ash and beech initiative, QD was collected at that time and is reflected in the canopy and BA numbers. Stand was not salvaged as there was only about 10 square feet of white ash and limited beech. The ash was primarily in the southern half of the stand and with all of it being dead, the BA now averages about 100 square feet from 12 prism plots. Stand should be ready for a thinning next entry.
90	42110 - Planted Red Pine	Sawtimber Poor	7.8	88	1-50	Stand harvested in spring of 2014, Screaming Pine (#53-021-10-01), cut by Randy Nash, whole-tree harvest. Cut volumes were 18 mbf white pine, 64 mbf red pine, 54 cords white pine, 38 cords red pine. OI Rx comments: Red and white pine as well as red maple and possibly some oak would be expected to regenerate the stand. Scattered leave trees were left and residual ba/acre from 6 plots = 32 square feet. Regeneration up to this point is not looking very good but more seedlings are showing up as compared to stand 89 to the south. It passes as a mixed stand (>600 TPA) due to the red maple seedlings which are mostly along the west side of the stand. Browse is definitely occurring as most deciduous species are still only about a foot tall after 4 years of growth. Deer and elk appear to be using the stand a lot. Heavily scarified landing and skid trails have some red pine seeding in. Regen survey results from 6 1/100th acre plots (average height in parentheses): white pine 150 TPA (1'), red maple 583 TPA (1'), beech 133 TPA (1.5'), ironwood 17 TPA (2'), red pine 17 TPA (1'), white spruce 17 TPA (1').



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
91	4319 - Mixed Upland Forest	Sapling Well	10.6	26	Immature	Stand was cut in 1992 by Alan Lamberson as part of the Mile Long Pine sale, #53-020-90-01. Stand regenerated well to a wide mix of species. Aspen is not uniform throughout, occurs in a few scattered clumps. Supercanopy of white pine includes some very large trees and tends to be more numerous in the part of the stand that is west of the road. A few large red pine and hemlock were left as well. Stand sits on an upland/lowland transition.
94	4130 - Aspen	Poletimber Well	8.5	50	81-110	Stand is currently under contract as part of the Amoebic Aspen timber sale, #53-013-15-01, bought by Precision. Stand was set up out-of-YOE and was approved through the Chapter 7 variance procedure.
95	4119 - Mixed Northern Hardwoods	Poletimber Medium	1.1	70	1-50	Stand of small, poor quality hardwoods. Wet ground interspersed throughout. A lot of blowdown and coarse woody debris, most of which appears to be from old aspen. A few of the small white ash may be hanging on. Average ba/acre from 3 plots = 40 square feet. Stand serves as retention for the surrounding stand that was cut.
96	6113 - Lowland Maple	Poletimber Medium	0.9	70	51-80	Small, wet stand dominated by red maple. Most trees are on the perimeter of the stand as there is a very wet drainage running through the middle. There used to be some black ash in this wet part but it is now all dead. Nice component of healthy yellow birch on the west/northwest side. Trace of white pine and basswood. Average ba/acre from 4 plots = 80 square feet.
97	42200 - Natural White Pine	Sawtimber Well	3.4	88	141-170	Small W9 stand with a component of small diameter hardwoods. Did not have a species removal like the adjacent stands to the east did. Trace of hemlock. Average ba/acre from 4 plots = 158 square feet. No management at this time.
98	429 - Mixed Upland Conifers	Sawtimber Well	8.8	88	141-170	Exceptional stand of natural white pine with a nice hemlock component. Very tall trees. Vernal pool/depression in the north end. I don't think this stand has ever been managed and it should remain unmanaged. Average ba/acre from 7 plots = 169 square feet.
99	4123 - Red Oak	Sawtimber Well	15.6	88	111-140	High quality oak on a hardwood site. Stand last cut in 1991 by AJD as part of Section 22 Oak sale, #53-007-90-01. All species except oak were removed, mostly hardwoods, paper birch, and aspen. Stocking tends to vary somewhat due to the species removal. Pine component is mostly on the far eastern and western edges. A small north-south running ridge travels through the center of the stand with slight slopes on each side. Average ba/acre from 8 plots = 113 square feet.
100	42290 - Natural Mixed Pine	Sawtimber Well	9.9	88	111-140	Long narrow stand that wasn't included as a part of any of the adjacent harvests. White pine appears natural but there are a few pockets dominated by red pine that must have been planted. A few small aspen clones at the far northeast end. Hardwood understory picks up in the area adjacent to stand 41, evidence of heavy browse, even on the ironwood and beech. Trace of hemlock and sugar maple. Average ba/acre from 7 plots = 126 square feet. The long, narrow shape of the stand and the fact it is situated between recently cut stands will make management here difficult. Leave as is for now and in the future manage for big trees and on a longer rotation.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
102	4123 - Red Oak	Sawtimber Medium	11.0	88	51-80	High quality oak stand. Stand was last cut in 1991 by AJD as part of Section 22 Oak sale, #53-007-90-01. All species except oak were removed, primary harvested volumes were basswood, sugar maple, paper birch, and bigtooth aspen. Residual stocking is variable due to the species removal harvest. Regeneration in the south half of the stand is dominated by ironwood but as you move north closer to the road there are some nice pockets of red and sugar maple regeneration. Average ba/acre from 7 plots = 74 square feet.
103	4319 - Mixed Upland Forest	Sawtimber Well	6.2	88	111-140	High quality natural stand that sits on a side slope running down to the swamp. Some very large diameter white pine are present. Trace of white spruce, sugar maple, white oak, and hemlock. Average ba/acre from 7 plots = 120 square feet. Very similar stand to the north was recently harvested with inadequate results due to browse. As a result do not manage this stand at this time.
104	42200 - Natural White Pine	Sawtimber Medium	8.0	88	81-110	Stand was cut in 1992 by Alan Lamberson as part of the Mile Long Pine sale, #53-020-90-01. All species cut except for red and white pine, hemlock, and red oak. A few scattered hardwoods were left as well. Residual stand has a supercanopy of massive trees, notably the white pine. Regeneration has come back well to white pine. Areas of heavy browse on the beech and ironwood understory. Rolling terrain with some steep slopes. Average ba/acre from 7 plots = 101 square feet. Retain the supercanopy trees and manage for a multi-aged white pine stand.
105	4130 - Aspen	Poletimber Well	6.2	49	81-110	Stand is currently set-up for a clearcut and is part of the sale Boreal Mix, #53-012-015-01, bought by Precision. Trace of hemlock, spruce, and paper birch.
106	42210 - Natural Red Pine	Sawtimber Well	3.4	88	111-140	Old notes indicate stand had a partial harvest in 1992. Some of the more open areas following the harvest are still visible and have filled in with regeneration. The remainder of the stand is well-stocked with sawtimber, however there is some variation in diameters with a component of large, XL-sized trees present. Oak is more prevalent in the north half of the stand. Average ba/acre from 4 plots = 128 square feet.
107	4199 - Other Mixed Upland Deciduous	Poletimber Well	11.4	50	81-110	Stand was cut in 1968 leaving most oak and pine according to old OI notes. A few larger maple and aspen were left here and there as well. Maple quality is only mediocre. A few small clones of aspen mixed in. Decent amount of oak regenerated, more so in the west/northwest part of the stand. Trace of white spruce, balsam fir, and beech. Average ba/acre from 8 plots = 106 square feet. Let the younger age class grow another entry or two and then manage using even-aged techniques.
109	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	2.2	81	81-110	Small little oak/maple knob that was not included as part of the adjacent Kerr Mason Pine sale (#53-017-10-01). This area was left as retention for the clearcut unit to the north (stand 56). Average ba/acre from 3 plots = 103 square feet.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
110	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	3.1	81	111-140	Stand is on an upland/lowland transition, can't tell exactly how wet it is due to the snow. Old notes indicate a winter deer cut was done here in 1970 but they left a scattered residual which would explain the variety of diameters that are present. Some very large trees are mixed in, mostly white pine but also a couple XL size paper birch and red maple. Average ba/acre from 4 plots = 118 square feet.
111	4139 - Aspen, Mixed Deciduous	Poletimber Well	20.3	50	111-140	Diverse stand with numerous wet areas mixed in throughout. With the exception of stands 72 and 73, these areas are too small to map out on their own. Some of the wet areas appear to be connected by drainages. Old OI notes indicate this stand had a harvest in 1968. Looks like everything was cut except for most oak and pine as well as scattered larger hardwoods. A small amount of red oak regenerated and is in the poletimber size class. Some scattered inclusions of a red maple/paper birch/red oak cover type. The white pine component is mostly in the west end. Larger trees seem to be concentrated around the wetlands, including some very large white pine, as it looks like these areas were protected during previous harvest operations. Trace of cedar, balsam poplar, beech, white oak, elm, white spruce, red pine, hemlock, and basswood. Although largely overgrown, there is an old road system in this stand. Average ba/acre from 16 plots = 123 square feet. Heavy deer and elk use throughout.
113	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Medium	7.1	100	51-80	Two-aged stand with a supercanopy of large hemlock, oak, hardwoods, and white pine. The second age class is starting to recruit into the overstory and has a nice representation of hardwood regeneration. Retain the overstory trees and manage for the understory hardwoods. Average ba/acre from 5 plots = 80 square feet.
115	4199 - Other Mixed Upland Deciduous	Poletimber Well	6.8	53	111-140	Somewhat different composition than surrounding stands of the MD type. This stand is dominated by mostly red maple and paper birch and does not have as much pine. Aspen occurs in a few spots, mostly the west end, but is not common throughout. A second age class of larger, older trees is mixed in (mostly pine and oak). A couple pockets of hemlock are in the middle of the stand. A few small, wet depressions are present. Trace of white spruce and sugar maple. Average ba/acre from 7 plots = 124 square feet.



Stand	Cover Type	Acres	Managed Site	General Comments:
4	320 - Upland Shrub	40.1		<p>07/09/2018 Decided not to trench and plant during a meeting attended by FRD and WLD personnel.</p> <p>Stand harvested as part of Screaming Pine (#53-021-10-01), whole-tree harvest by Randy Nash, unit was cut in winter of 2014. Cut volumes were 61 mbf white pine, 150 mbf red pine, 215 cords white pine, 108 cords red pine. Some red oak were left as residual trees, all of these are in the north half of the stand. Regeneration is very sparse up to this point. The best is found in the north half but is mostly below 2 feet and being heavily browsed. All stump sprout regeneration appears dead. The south finger has little to no regeneration and has a heavy component of black cherry. Pine has seeded into a few spots throughout the stand but they are limited in nature. Regen survey results from 14 1/100th acre plots: white pine 64 TPA (2.5'), red pine 50 TPA (1'), red maple 364 TPA (1'), beech 279 TPA (1'), ironwood 250 TPA (2'). Red oak residual = 8 square feet per acre.</p> <p>OPIC - FMD: 2008 UNDERSTORY IS A MIXED BAG OF U (SOME OF IT LEATHERWOOD), M1, W1, AND SOME OAK. FAIRLY HEAVY BROWSING. LEAVE ONE TO 3 ACRES FOR RETENTION. THERE MAY BE SOME ASPEN COME INTO THIS STAND WHEN CUT. WILL CONVERT TO U, PINE , M AND ASPEN.</p>
15	310 - Herbaceous Openland	1.8	No	Active oil well site, Corwith 3-22B. There is a small structure on the south end of the pad as well.
20	6220 - Alder/willow	2.3	No	Very wet stand with a dense coverage of alder. Quite a bit of red maple and elm are present but they appear somewhat stagnant, likely due to the amount of water. Black ash used to be a moderate component but is now all dead due to EAB. This stand appears to be the source of an intermittent stream that flows south through stand 16 (see 98DOQ imagery).
26	320 - Upland Shrub	2.5	No	Stand cut in 1982 by Champion as part of 1-22 Aspen, #53-023-80-01. Very heavy browsing in the past has wiped out almost all regen. A few clumps of residual hardwoods scattered throughout. White pine is now slowly filling in.
51	6239 - Mixed Emergent Wetland	15.4	No	Hardwood Creek flows through the stand and was formerly flooded by beavers which killed most of the trees. Water levels have now subsided and the stand is starting to fill back in. A couple cedar are still hanging on here and there. An old elevated blind is at the southeast end of the stand, near the creek.
56	320 - Upland Shrub	12.9		<p>Stand cut in 2015 as part of Kerr Mason Pine, #53-017-10-01, bought by Hydrolake, cut by Precision. Roundwood job. A lot of very large white pine were cut out of this stand as well as some oak, red pine, and birch. Scattered white pine, red pine, oak, and hemlock left.</p> <p>Regeneration has struggled due to the lack of scarification and the impacts of browsing. Best regen is along the north and east edges. The deciduous component is mostly along the eastern edge and near the road, it is being heavily browsed in all other areas, all stump sprouts appear dead. Little to no regen in the central and southern parts of the stand, sedge/grass appears to be taking over some of these areas. Regen survey results from 6 1/100th acre plots: white pine 267 TPA (2'), fir 50 TPA (2.5'), beech 217 TPA (2'), red maple 267 TPA (2.5'). This technically passes as a mixed stand but it does not look good. White pine may continue to seed in here over the years, evaluate at next inventory cycle.</p> <p>Old OI Rx Comments: LEAVE THE SOUTH ARM AS RETENTION AND AN ISLAND OR TWO IN THE MAIN PART OF THE STAND. CUT OAK IN THE MAIN PART OF THE STAND Aspen, red maple, oak and birch as well as white and red pine would be expected to regenerate in this stand.</p>
72	622 - Lowland Shrub	1.2	No	



Stand	Cover Type	Acres	Managed Site	General Comments:
73	6229 - Mixed lowland shrub	0.8	No	The edges of this lowland stand are not well defined as water seems to drain out to the north and west.
79	6229 - Mixed lowland shrub	0.8	No	Did not venture far into this stand. Edge call.
80	6239 - Mixed Emergent Wetland	0.8	No	
82	500 - Water	3.0	No	Lloyd Lake which is spring feed with no distinct inlet or outlet.
88	320 - Upland Shrub	13.5		Stand cut as part of Screaming Pine, cut by Nash in the spring of 2014. Scattered pockets of advanced hardwood regeneration were left. Poor looking regeneration that is being heavily impacted by deer and elk. Some aspen has sprouted but not sure how much of it is alive at this point due to the browsing. The remainder of the regeneration is beech and black cherry, both of which are also being browsed. What to do here? This is a hardwood quality site. Fence? Plant?
89	320 - Upland Shrub	18.0		Stand harvested as part of Screaming Pine (#53-021-10-01), whole-tree harvest by Randy Nash, Cut in early summer of 2014. Cut volumes were 158 mbf white pine, 99 mbf red pine, 159 cords white pine, 40 cords red pine. Scattered leave trees are primarily white pine with a few red pine, red oak, and hemlock mixed in. Average residual ba/acre from 8 plots = 10 square feet. OI Rx comments: "Do not cut Hemlock or Oak. Expect aspen, red maple as well as red, white pine to reproduce in the stand." Regeneration up to this point is very poor and is a failure by our standards. A few patches of white pine regen are present but most of these appear to be advanced regen that wasn't cut during the harvest. Heavy browse is occurring on all deciduous species even ironwood and beech, both deer and elk appear to be using the stand a lot. Many areas are converting to a grass/sedge mix. Regen survey results from 8 1/100th acre plots (average height in parentheses): white pine 338 TPA (2'), red maple 13 TPA (1'), beech 100 TPA (1.5'), ironwood 100 TPA (1.5'), red pine 13 TPA (1').
92	320 - Upland Shrub	8.0		Stand cut as part of Kerr Mason Pine, about 10 sq ft of residual oak, mostly in NE end. Bought by Hydrolake, cut by Precision. Lot of birch cut out of this stand. A few of the residual oak are dead, will have to monitor to ensure it's not oak wilt. Regeneration up to this point is very poor and being heavily impacted by deer and elk. No sign of any stump sprouts. All aspen shows browse damage, at this point not sure how much of it is alive. Even some of the balsam is being browsed. Regen survey results from 8 1/100th acre plots (height in parentheses): bigtooth aspen 188 TPA (2'), quaking aspen 300 TPA (1.5'), white pine 13 TPA (6"), balsam fir 125 TPA (1.5'), beech 38 TPA (2'). OI Rx Comments: Do not cut Oak or Hemlock. Acreage on this stand may not be what is coded. Hard to tell where sale line will run. Aspen, red maple, and soft wood species would be expected to reproduce in this stand
93	2113 - Forage Crops	2.7	Yes	Abandoned well pad. This stand was planted with saplings and shrubs from the surrounding area by wildlife in an attempt to return the site to its natural condition. However now it has been reverted back to a food plot. The western 1/3rd of the stand has not been planted and has a few cords of leftover wood from when this was used as a landing for the adjacent harvest to the south.



Stand	Cover Type	Acres	Managed Site	General Comments:
108	310 - Herbaceous Openland	4.7	No	Not a managed wildlife opening. The north, thin part of the stand is essentially just an old closed road. Then eastern finger is more of an opening and has some patches of white pine.
116	310 - Herbaceous Openland	1.9	No	Abandoned well pad. Does not appear to be a managed opening. Lot of spotted knapweed.
117	2113 - Forage Crops	8.2	Yes	The majority of this is a managed wildlife opening with the exception of the small finger which extends to the northeast.
118	2113 - Forage Crops	5.3	Yes	Managed wildlife opening.
119	310 - Herbaceous Openland	1.9	No	Open area that is not managed as a food plot. Fenced enclosure on the west side with shrubs that were planted by WLD Division.
120	310 - Herbaceous Openland	1.0	Yes	Small trail at the south end that needs to be bermed off.
121	2113 - Forage Crops	6.2	Yes	Managed wildlife opening.