



Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61052

Entry Year 2022

Acreage: 3,039

County Grand Traverse

Management Area: Boardman Plains

Revision Date: 2020-08-03

Stand Examiner: Pat Ruppen

Legal Description:

T26N R9W Sections 13,14,15,16,17,18

Identified Planning Goals:

Management Goals: This compartment is contained within LTAs 5111 and 5549 of Sub-Section VII 2.2. LTA 5111 is a broad flat outwash plain with few kettle lakes. Soils are generally excessively drained and wildfires were common; often spreading for miles. Pre-settlement vegetation varied for this LTA but Xeric Conifer Forests and Pine Barrens were common on the more fire prone sites. Forests dominated by white pine and oak mixed with other conifers were common on the less fire prone sites. Due to wildfire suppression and extensive conifer plantations, the extent of natural xeric pine associations, barrens, and prairie openings has been greatly reduced. An attempt should be made through vegetative management and the use of prescribed fire to reset the clock on some of these stands and to create some new pine, oak and aspen mixes. Due to fire exclusion Red Pine has not been regenerating naturally in many of these stands therefore it is recommended that Red Pine seedlings be inter-planted in some treated stands to retain this component of the xeric pine mix. Stands with high components of early succession species, (particularly jack pine and aspen), are aging and declining. A focus should be on regenerating these stands or salvaging these stands components. Browsing and poor quality stump sprouts have been a problem in the past when regenerating oak stands. Many of these low quality oak stands are remnants on soils and topography inclined to succession back to natural pine stands with a high component of white pine. A focus should be on encouraging succession back to natural pine stands while maintaining a considerable component of mixed oak in the canopy for mast production. A high quality oak/pine barrens community has been identified in Section 15. This area should be managed to enhance and maintain the functions of the barrens area. Several older oak and pine stands have been recommended for harvest and regeneration by planting red pine. Natural regeneration attempts have failed due to deer browsing, therefore planting is recommended. A red pine stand near the trail camp should be thinned to increase the health and vigor of the trees. Another mixed stand has been recommended for thinning to focus on releasing the younger age classes found in the stand and removal of most of the older declining trees. A stand adjacent to the managed barrens area on Jack Pine Road will be harvested to expand the managed barrens area. Most of the declining Jack Pine will be removed and other trees in this stand. LTA 5549 is a mosaic of lowland conifer, hardwood, shrub and emergent swamp associated with the river and creek drainages. Significant deer wintering habitat was observed.

Soil and topography:

Rubicon sand, Roselawn Sand and Lupton Muck near water courses. Mixed topography with broad flats, rolling terrain and steep slopes up to 50% adjacent to the Boardman River valley and Carpenter Creek Drainage which cuts through this compartment. Some pothole topography.

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

Sections 13 and 16 are block state ownership. The rest of compartment has mixed ownership with private in-holdings.

Unique Natural Features:

The Boardman River is a state designated wild and scenic river. Carpenter Creek is a designated trout stream. An Ecological Reference Area -Oak/pine Barrens Community occurs In Section 15.

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

The Boardman River is a state designated wild and scenic river. Carpenter Creek is a designated trout stream. A nominated Ecological Reference Area -Oak/pine Barrens Community occurs In Section 15.

Watershed and Fisheries Considerations:

This compartment is in the Boardman River watershed, and contains portions of Carpenter Creek, and the Boardman River. Appropriate buffers (as outlined in Water Quality Management Practices on Forest Land) and Natural Rivers zoning restrictions should be adhered to around all streams in this compartment. Existing buffers appear to be appropriate for the proposed treatments.

Wildlife Habitat Considerations:

This compartment falls primarily within a broad, flat outwash plain with few wetlands and excessively drained sand. This is a fire-driven landscape, so a range of habitat conditions from open barrens to some late-successional forests is appropriate. Thus, management should continue to promote various age classes and species mixes of oak-aspen-pine forest through burning and timber harvest. Final harvests should retain as many snags and downed logs as possible as well as a variety of residual live trees, especially oak. Tops should be left unchipped and in scattered piles around the sale area. Future management of the several pine stands here should consider incorporating small (2-5 acre) islands that are left relatively un-thinned within mature stands to provide winter roosting cover for turkeys. Deciduous species should be encouraged within conifer plantations for diversity.

Grassland/Barrens habitat should be maintained by periodic burning. Remnant high quality Oak Pine Barrens can be found in this compartment and these communities benefit greatly from burning. Also, opportunities exist to restore more of this exceptionally rare habitat type and should be pursued. Many rare as well as common wildlife species utilize the unique blend of habitat components provided by barrens. Several abandoned oil well sites will be replanted to annual rye to provide a spring/fall food source for deer using nearby winter cover and to eliminate invasive species. The compartment is also transected by the Boardman River and Carpenter Creek drainages. These riparian areas should be primarily managed for lowland mixed forest, including cedar and hemlock. Some deer use these areas for winter cover. Natural disturbances included beaver activity and small blowdown patches, which can be mimicked with occasional patch cuts if necessary.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Coldwater Shale. There is no current economic use for the Coldwater Shale. The nearest gravel pits are one and one-half miles to the southeast. Gravel potential in the compartment is considered good. This area is located in the Silurian Niagaran reef trend. Most of the State land is currently leased for oil and gas development and there may be additional reef potential. Portions of this Compartment have been recently leased for underground gas storage. The Antrim Shale has not been developed in this area, but may have some future potential.

Vehicle Access:

Access to some areas is good via county roads and two tracks. Other areas have challenging access due to slopes and sandy road conditions. The quality of many roads has been declining due to wide spread ORV use after use was legalized on state forest roads.

Survey Needs:

Recreational Facilities and Opportunities:

Schecks Campground and Trail Camp, Boardman Valley Snowmobile Trail, Grand Traverse Motorcycle Trail, Shore to Shore Hiking-Riding Trail

Fire Protection:

VFD Fire Protection is provided by Gr. Traverse Rural Fire Dept., Battalions 3 and 6. DNRE Fire Protection is from the Traverse City Field Office, however this entire compartment falls within Zone 6. On a Very High or an Extreme Fire rating, additional DNRE suppression equipment will automatically dispatch to the scene from Kalkaska and Manton to the fire scene, and units from other stations will shift to be closer in case they are needed. Urban Inner-face is not too much of an issue here with the exception of some areas in sections 17 and 18, and also located there are two state forest campgrounds. Access is adequate, and travel times are acceptable.

Additional Compartment Information:

The following reports from the Inventory are attached:

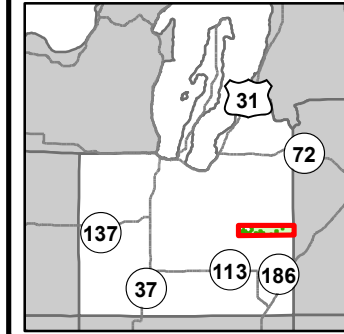
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

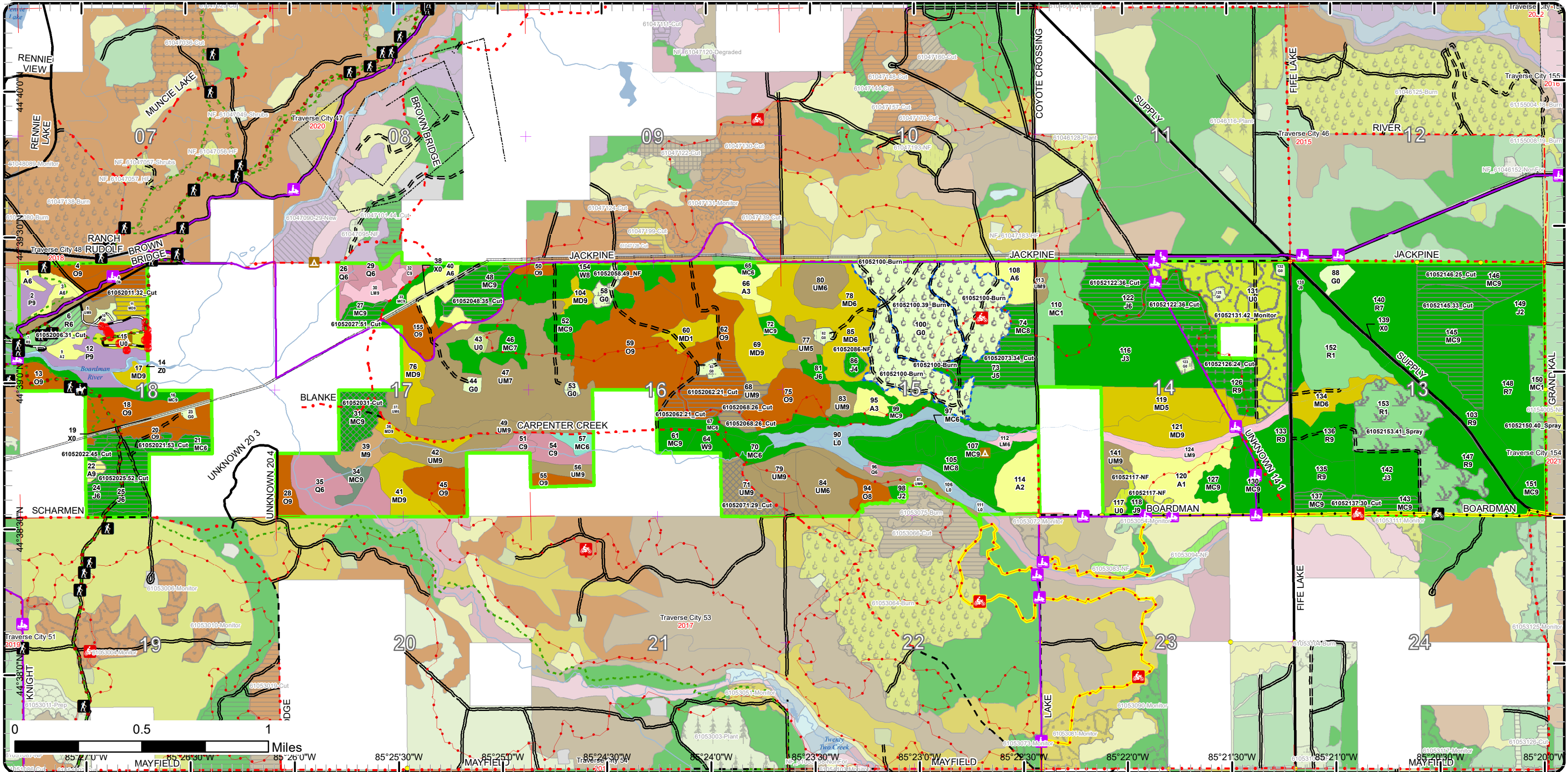
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 52
 T26N R09W 13-18
 County: Grand Traverse
 Unit: Traverse City
 Mgmt Area: Boardman Plains
 YOE: 2022
 Acres: 3,039.1 GIS Calculated
 Examiner: Pat Ruppen
 Map Revised: 1/25/2021
 Map Phase: Post-Review

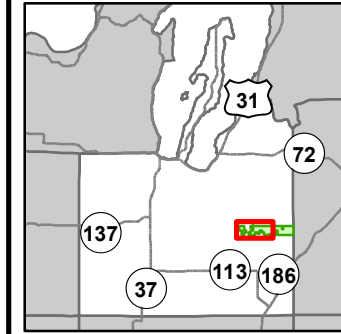


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|---|--|--|---|---|---|--|
| <ul style="list-style-type: none"> Miris Corners Remonumented Section Corners Survey Grade Corners Counties DNR - Primary Forest Road DNR - Secondary Forest Road DNR - Forest Access Route Federal / State / County - Paved Road | <ul style="list-style-type: none"> Federal / State - Dirt / Gravel Road County - Gravel Road County - Dirt Road (Seasonal) Hiking Trails Bike Trails Horse Trails Ski Trails Motorcycle Trails (SOS License) | <ul style="list-style-type: none"> Motorcycle Trails (DNR License) MCCCT Trails Snowmobile Trails Designated Hiking Trails Designated Bicycle Trails Designated Equestrian Trails Designated Ski Trails Designated Snowshoe Trails | <ul style="list-style-type: none"> ORV License ORV License & Trail Permit Designated Snowmobile Trails Michigan Cross Country Cycle Trail (MCCCT) Culvert Campground Parking Lot Sign Trailhead Intermittent Stream | <ul style="list-style-type: none"> Lake/Pond Perennial River Lakes and Rivers Pipeline Compartment Boundary Treatments with Site Conditions Pesticide Other Treatment - See Comments Selection (Group, Single Tree) Clearcut (w/Reserves) | <ul style="list-style-type: none"> Harvest, Overstory Removal Prescribed Burn Thinning (Crown, Low, Systematic) Regeneration Survey Opening Maintenance 411 - Northern Hardwood 412 - Oak Types 413 - Aspen Types 419 - Mixed Upland Deciduous | <ul style="list-style-type: none"> 421 - Planted Pines 422 - Natural Pines 423 - Other Upland Conifers 429 - Mixed Upland Conifers 430 - Upland Mixed Forest 611 - Lowland Deciduous Forest 612 - Lowland Coniferous Forest 613 - Lowland Mixed Forest 122 - Roads/Parking Lot 310 - Herbaceous Openland 320 - Upland Shrub Trees 330 - Low Density Trees 500 - Water 622 - Lowland Shrub 790 - Other Bare/Sparsely Vegetated |
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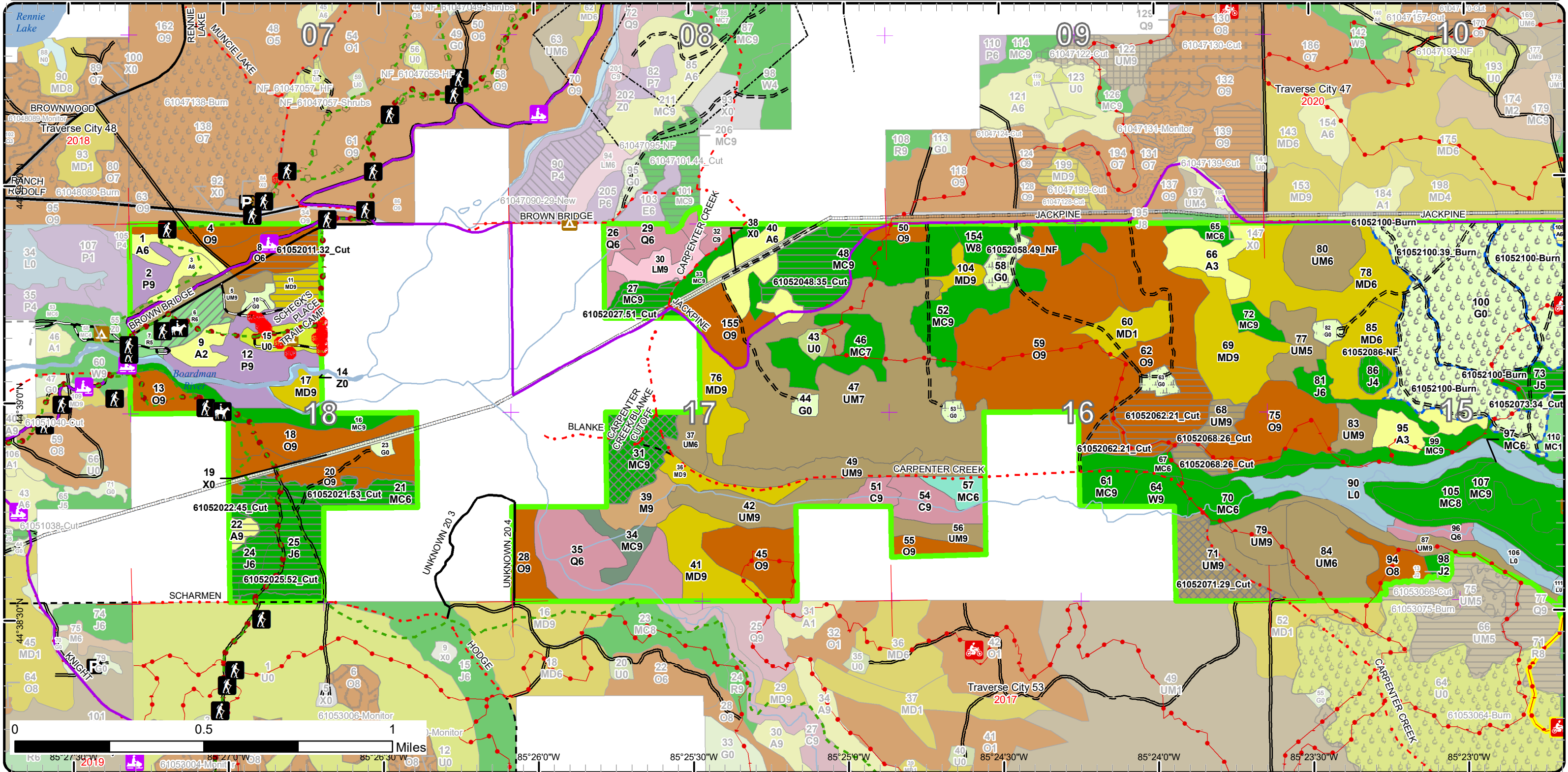


Cover Type & Treatments Map

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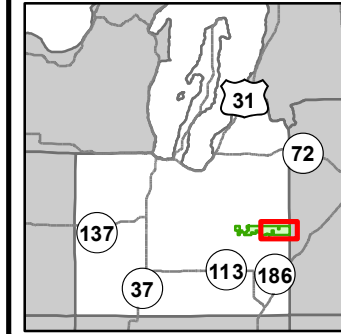


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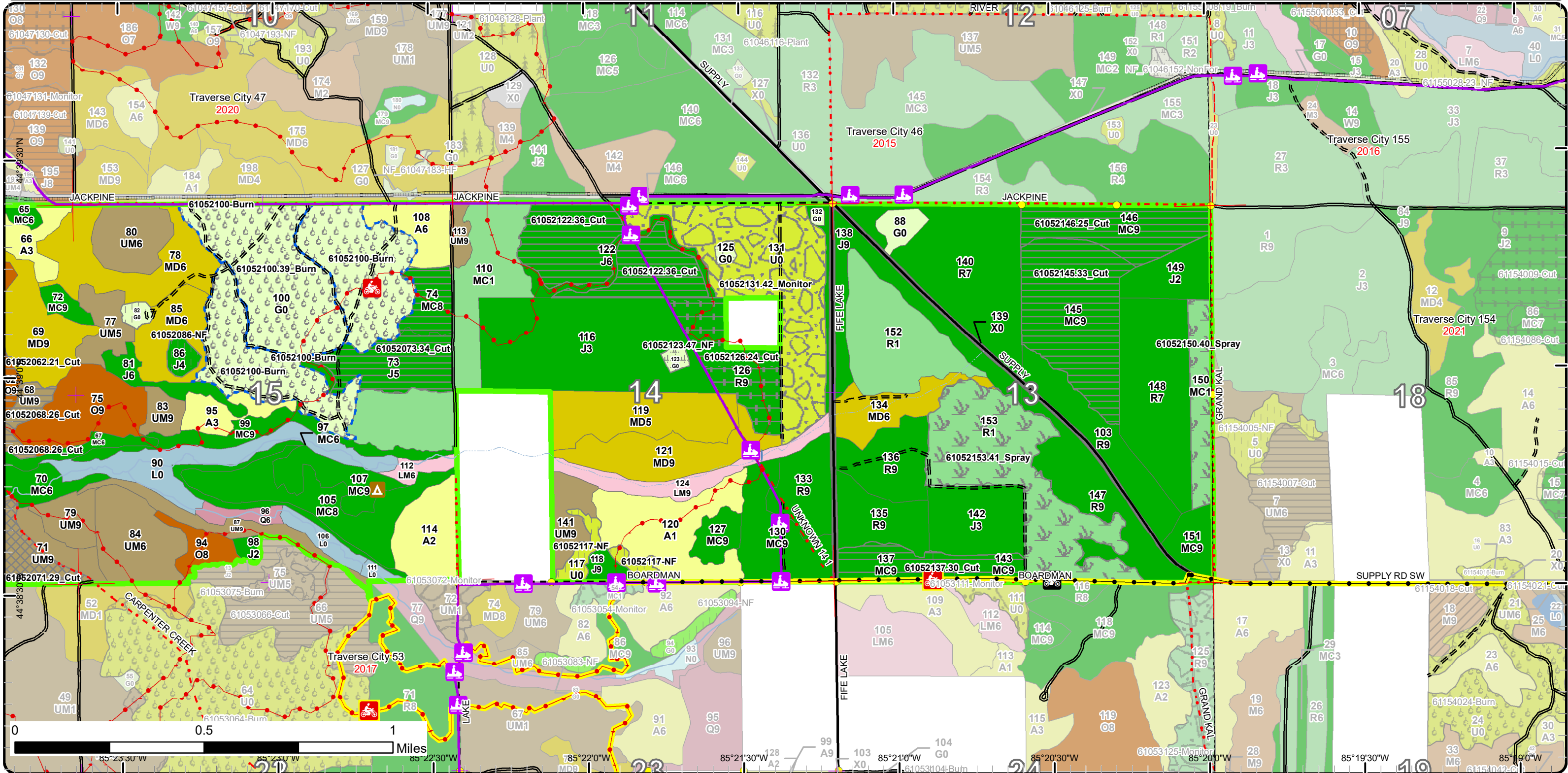


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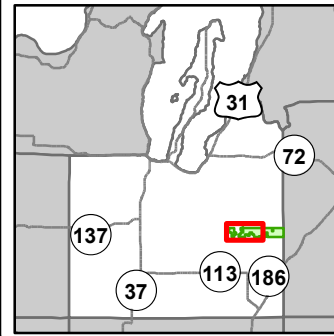


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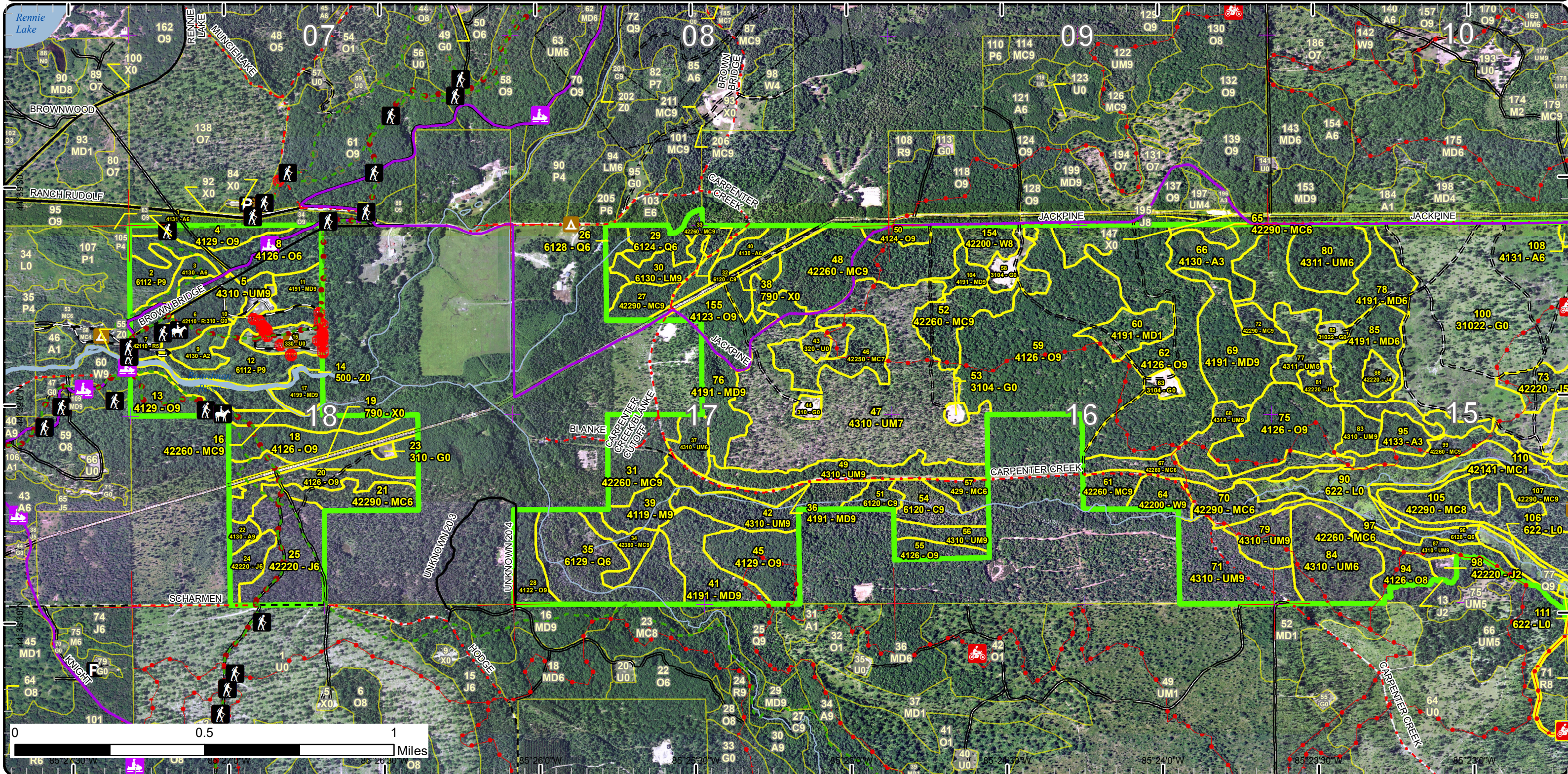


Stand Boundary Map

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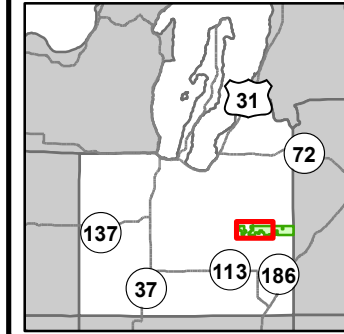


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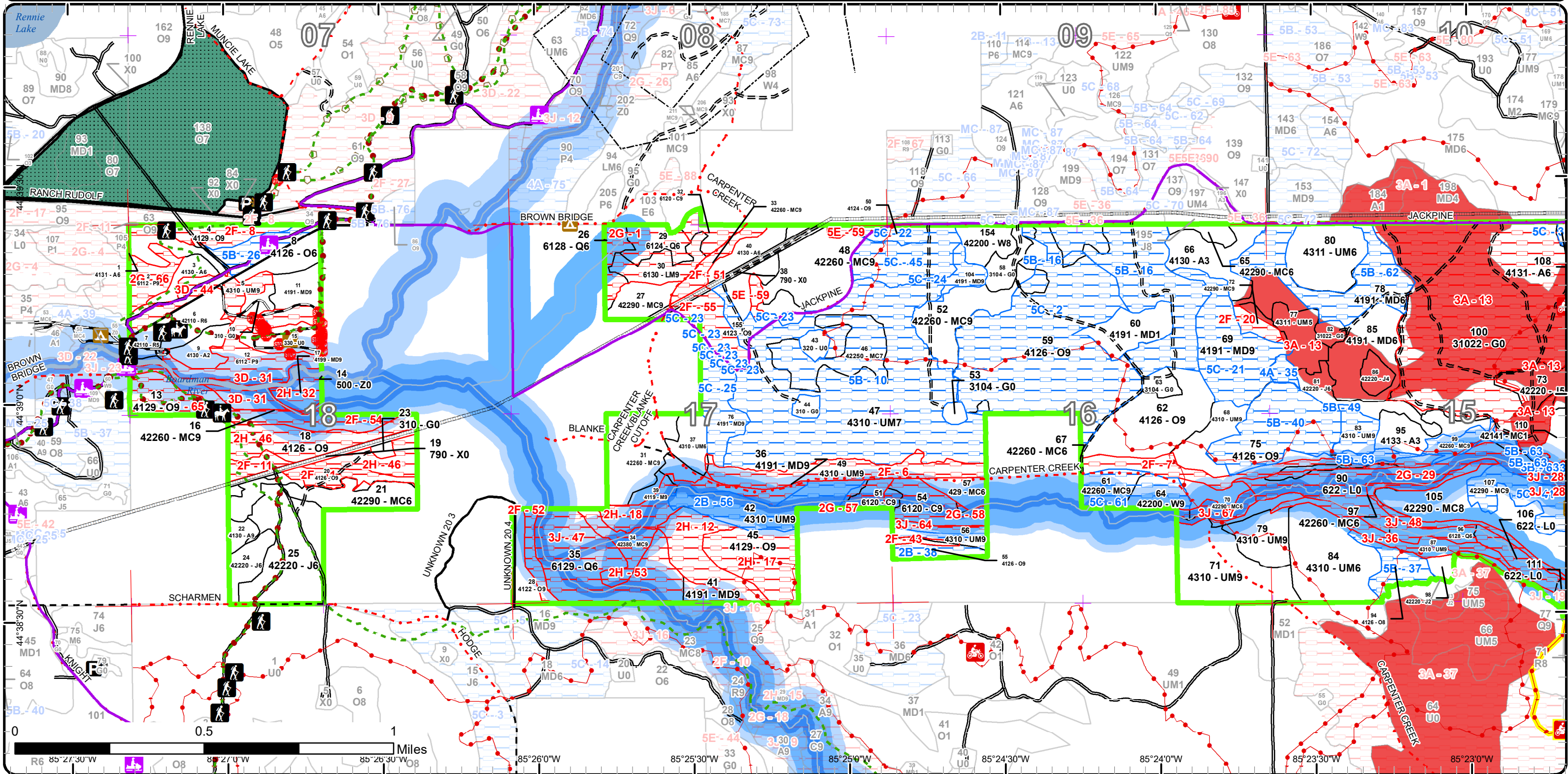


Special Conservation Areas

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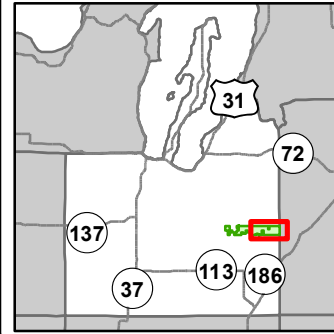


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|---|---|---|--|--|--|--|--|

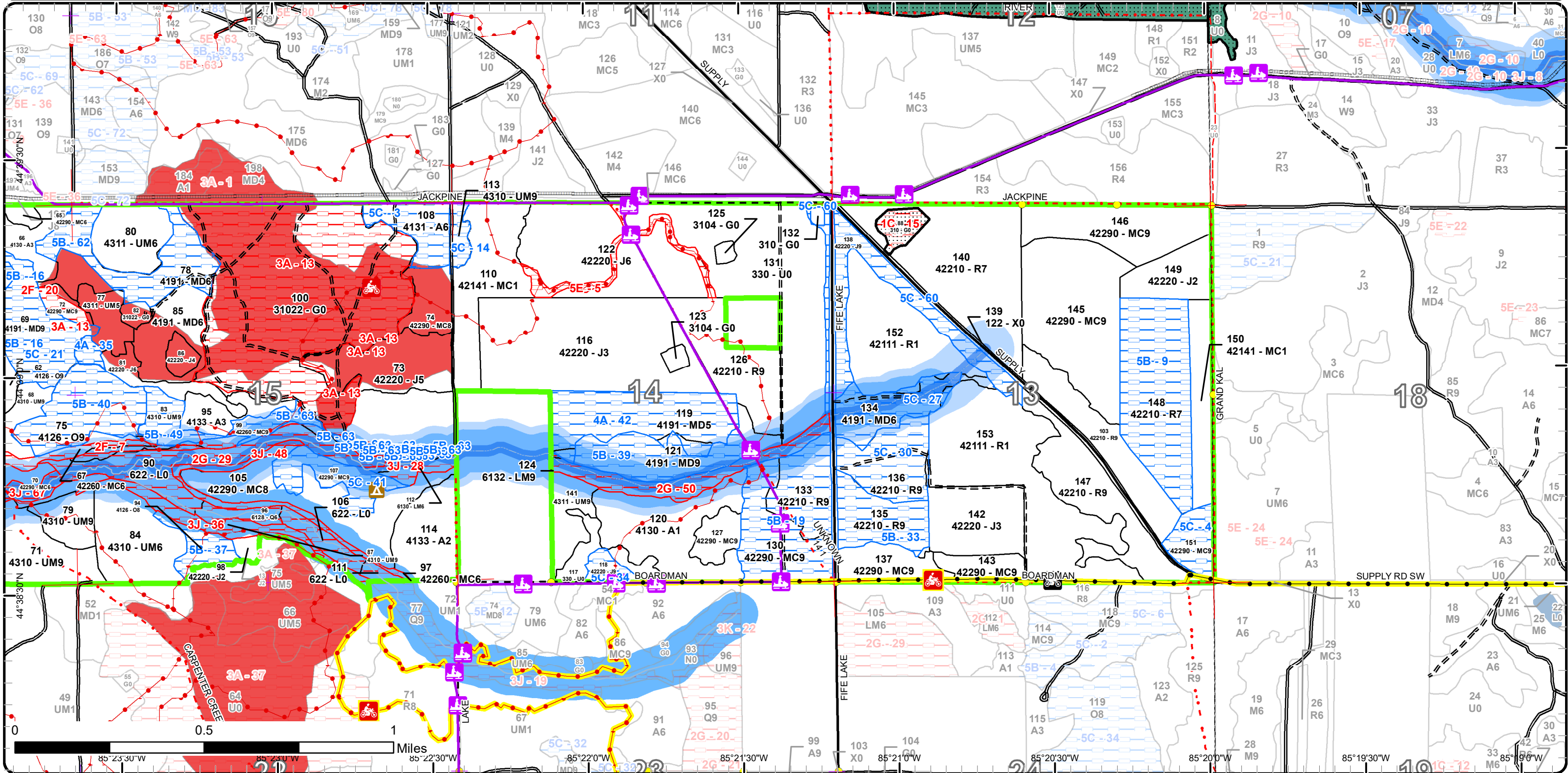


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- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 1C: Other dept or div proc/practices
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- 📏 Natural Rivers
- 📏 Vegetative Buffer
- 📏 Natural Rivers
- 📏 Zoning District
- 📏 Cold Water Streams
- 📏 High Priority Trout Stream Buffer
- 📏 Habitat Corridor



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	42	32	46	7	5	19	0	0	0	0	0	0	0	0	0	0	0	151
Bare/Sparsely Vegetated	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	23
Herbaceous Openland	193	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193
Jack Pine	0	0	0	137	0	0	52	0	136	0	0	0	0	0	0	0	0	0	324
Low-Density Trees	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	9	29	0	0	0	0	0	0	0	0	0	38
Lowland Conifers	0	0	0	0	0	0	0	0	0	9	0	0	0	47	0	0	0	6	61
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	15	0	0	19	0	0	0	0	34
Lowland Shrub	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
Mixed Upland Deciduous	0	0	0	13	0	33	80	0	8	0	0	66	61	0	0	0	0	0	260
Natural Mixed Pines	0	0	0	0	0	0	26	16	103	130	58	34	9	0	0	0	0	102	478
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	11
Oak	0	0	0	0	0	0	0	0	0	0	168	71	12	93	0	0	0	12	356
Planted Mixed Pines	0	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84
Red Pine	0	126	0	0	0	15	0	0	162	21	57	0	0	0	0	0	0	53	433
Upland Conifers	0	0	0	0	0	0	0	0	0	6	0	0	0	9	0	0	0	0	15
Upland Mixed Forest	0	0	0	31	0	21	21	57	39	13	157	22	0	0	0	0	0	0	361
Upland Shrub	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Urban	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Water	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
White Pine	0	0	0	0	0	0	0	0	20	0	0	0	0	8	0	0	0	0	28
Total	382	252	32	227	7	74	198	82	497	179	455	204	82	199	0	0	0	173	3039



Report 2 – Treatment Summary

Traverse City Mgt. Unit
Year of Entry: 2022

Acres of Harvest

Compartment 52
Total Compartment Acres: 3,039

Commercial Harvest - 450
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelleywood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	4	0	0	0	0	0	0	0	0	4
Jack Pine	134	0	0	0	0	0	0	0	0	134
Natural Mixed Pines	173	22	0	0	0	0	0	0	0	195
Oak	43	0	0	0	0	0	0	0	0	43
Red Pine	0	0	0	0	10	32	0	0	0	42
Upland Mixed Forest	11	21	0	0	0	0	0	0	0	32
Total	365	43	0	0	10	32	0	0	0	450

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	450	0	0	0	160	100	84	0	33	826
Next Step	0	249	312	0	208	242	276	0	0	1287
Total	450	249	312	0	368	342	360	0	33	2113



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	Habitat Cut
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Approved Treatments:

6	61052006.31_ Cut	10.3	42110 - Planted Red Pine	Poletimber Well	48	201+	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Reduce ba to 120-140. Some areas will need rows removed while in other areas the thinning may be within the rows. Some areas need</p> <p><u>Specs:</u> rows to be created.</p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u></p> <p><u>Regen:</u></p> <p><u>Other</u> Consider riding trail cutting through stand.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>											
8	61052011.32_ Cut	15.9	4126 - White, Black, N. Pin Oak	Poletimber Well	120	51-80	Harvest	Clearcut with Retention	42111 - Planted Red Pine, Mixed Deciduous	Even-Aged	No
<p><u>Prescription</u> harvest to 1"dbh and plant red pine after harvest. Retain some well formed oak and pine in treatment area. Consider trail along east edge.</p> <p><u>Specs:</u> Stand will be trenched and planted in a weave pattern. No herbicide unless absolutely necessary as this stand is adjacent to recreation areas and trails. This stand is being treated because of failure of natural regeneration after last treatment. Heavy browsing noted on regeneration. Attempt to grow stand in a more natural way.</p> <p><u>Next Step</u> ; Planting, Initial Plant; SitePrep, Trenching</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> red pine, white pine, red maple, oak, aspen.</p> <p><u>Regen:</u></p> <p><u>Other</u> Old fence wire along east side. Witness trees @ ne corner. Trail along east edge. Small east west slope in middle could be retention</p> <p><u>Comment:</u> pocket. Also need retention along trail on east side. May just also want to leave some scattered oak and pine. There are some good white oak.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>											
21	61052021.53_ Cut	17.2	42290 - Natural Mixed Pine	Poletimber Well	106	51-80	Harvest	Clearcut with Retention	4310 - Pine, Oak Mix	Even-Aged	No
<p><u>Prescription</u> --Patrick Ruppen : 05/25/2010 comments: Green mark some well formed oak and pine to retain for mast and seed production and harvest</p> <p><u>Specs:</u> remaining stems down to 2" dbh to prep site for planting.</p> <p><u>Next Step</u> SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Expect next stand to consist of planted rp/natural jp/oak/red maple/white pine, aspen.</p> <p><u>Regen:</u></p> <p><u>Other</u> --Patrick Ruppen : 05/25/2010 comments: Require chipping to reduce slash load. Expect next stand to consist of planted rp/natural</p> <p><u>Comment:</u> jp/oak/red maple/white pine. Horse Trail in stand possibly. Buffer if it is. Old next step comments: --Patrick Ruppen : 05/25/2010 comments: trench and plant red pine . Weave into openings after harvest treat with stand 25 to south. Trying to get jp out before there is a lot of mortality and trouble with slash.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 6 /3 /2014</p>											



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
22 61052022.45_ Cut	4.0	4130 - Aspen	Sawtimber Well	53	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest to regenerate stand. Retain some scattered, well formed oak and pine. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable Regen:</u> aspen oak, white pine, red pine, jack pine <u>Other Comment:</u> Treatment added in 2016 through CH 7 process. <u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2011</p>										
25 61052025.52_ Cut	36.6	42220 - Natural Jack Pine	Poletimber Well	76	51-80	Harvest	Clearcut with Retention	42250 - Pine, Oak	Even-Aged	No
<p><u>Prescription</u> --Patrick Ruppen : 05/25/2010 comments: Green mark some well formed oak and pine (10-40 ba) to retain for mast and seed production. <u>Specs:</u> Harvest remaining stems down to 2" DBH and chip tops to reduce slash load. <u>Next Step</u> SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr) <u>Treatments:</u> <u>Acceptable Regen:</u> Expect new stand to consist of planted red pine/natural jack pine/oak/red maple and aspen. <u>Other Comment:</u> --Patrick Ruppen : 05/25/2010 comments: Scatered rp in stand has much better size and form than jack pine. Red pine planted on adjacent private property is growing well. Require chipping to reduce slash load which would hinder trenching. Expect new stand to consist of planted red pine/natural jack pine/oak/red maple. ORV concerns -getting on to poweline on north end of sale to access hill climbs in other compartment. Look at blocking with trencher. Seems to be some horse trail through stand but not mapped? Old next step comments: --Patrick Ruppen : 05/25/2010 comments: Trench and plant red pine by weaving around residual stems. An exceptional amount of oak regen in south end of stand. Much is heavily broused but some is growing through. <u>Site Condition</u> <u>Proposed Start Date:</u> 6 /3 /2014</p>										
27 61052027.51_ Cut	7.4	42290 - Natural Mixed Pine	Sawtimber Well	93	81-110	Harvest	Clearcut with Retention	42250 - Pine, Oak	Even-Aged	No
<p><u>Prescription</u> --Patrick Ruppen : 05/25/2010 comments: Retain some oak and pine for mast and seed production and harvest remaining stems. Harvest <u>Specs:</u> down to 2"dbh and require chipping to reduce slash load. <u>Next Step</u> <u>Treatments:</u> <u>Acceptable Regen:</u> <u>Other Comment:</u> --Patrick Ruppen : 05/25/2010 comments: Ground lays good. Jack pine is old and declining but still in decent shape. Site looks to have a better site index and red pine looks pretty good. Next stand should consist of planted red pine/natural jack pine/oak/aspens and red maple. Old next step comments: --Patrick Ruppen : 05/25/2010 comments: Changed to natural regen through Chapter 7 <u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2011</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
31 61052031-Cut	22.0	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	96	111-140	Harvest	Group Selection	4319 - Mixed Upland Forest	Uneven-Aged	No
<p><u>Prescription</u> Harvest jack pine, aspen, and most red maple. Mark remaining stand/stems for crop tree release. Focus on removing most of the larger red and white pine but retain some for seed production and diversity. Release well formed oak as found in stand.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Pine, maple, oak, aspen</p> <p><u>Other Comment:</u> Focus on harvest should be to remove the declining jack pine and aspen. This stand has a multi-aged structure which will be maintained with this harvest. Remove most of the larger pine to release younger age classes.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
48 61052048.35_Cut	23.6	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	76	81-110	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Harvest to 1"dbh and plant red pine after harvest. Chip tops to reduce slash. Area retention in depressions.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Pesticide, Skidder - Site Prep; SitePrep, Trenching; Planting, Initial Plant</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> planted red pine.</p> <p><u>Other Comment:</u> Leave a half chain retention strip along road. Trespass with wood and stumps piled on state land. New pile back on powerline on state land.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
53 61052053.50_NF	2.0	3104 - Degraded	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		No
<p><u>Prescription</u> Was seeded to annual rye for several years but was allowed to go fallow due to spending restrictions. Disk , plant to annual rye for several years and then convert to a pasture mix (i.e. clover/alfalfa) or appropriate native species.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u> Old next step comments: Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
58 61052058.49_ NF	6.1	3104 - Degraded	Nonstocked			NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		No
<p><u>Prescription</u> Was seeded to annual rye for several years but was allowed to go fallow due to spending restrictions. Disk , plant to annual rye for several years and then convert to a pasture mix (i.e. clover/alfalfa) or appropriate native species.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u></p> <p><u>Regen:</u></p> <p><u>Other</u> Old next step comments: Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
62 61052062.21_ Cut	27.1	4126 - White, Black, N. Pin Oak	Sawtimber Well	96	81-110	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Cut to 2" dbh and plant red pine after harvest. Stand 68 to east is to be harvested with this stand and is driving this treatment as it will allow access to this stand (68).</p> <p><u>Specs:</u></p> <p><u>Next Step</u> SitePrep, Trenching; Pesticide, Skidder - Site Prep; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> planted red pine</p> <p><u>Regen:</u></p> <p><u>Other</u> Stand does not have enough quality or developed understory to manage for oak at this time. Consider motorcycle trail through stand.</p> <p><u>Comment:</u> Retain trees along trail.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 3 /26/2020</p>										
63 61052063.48_ NF	3.6	3104 - Degraded	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		No
<p><u>Prescription</u> Was seeded to annual rye for several years but was allowed to go fallow due to spending restrictions. Disk , plant to annual rye for several years and then convert to a pasture mix (i.e. clover/alfalfa) or appropriate native species.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u></p> <p><u>Regen:</u></p> <p><u>Other</u> Old next step comments: Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
68 61052068.26_ Cut	10.6	4310 - Pine, Oak Mix	Sawtimber Well	76	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	No
<p><u>Prescription</u> Harvest to 1" dbh. Retain well formed oak and pine along motorcycle trail . Chip tops to prepare for planting.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> SitePrep, Trenching; Pesticide, Skidder - Site Prep; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> planted red pine</p> <p><u>Regen:</u></p> <p><u>Other</u> Declining jp in this stand is reason for treatment at this time. Treating with art of stand 62 to west to allow access and enough volume to justify treatment.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
71 61052071.29_ Cut	21.2	4310 - Pine, Oak Mix	Sawtimber Well	69	81-110	Harvest	Group Selection	4319 - Mixed Upland Forest	Two-Aged	No
<p><u>Prescription</u> Remove most jack pine, aspen, and poorly formed oak/red maple. Attempt to protect and release well formed oak poles. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> jack pine, oak, maple, white pine, red pine. <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2021</p>										
73 61052073.34_ Cut	41.2	42220 - Natural Jack Pine	Poletimber Medium	54	81-110	Harvest	Clearcut with Retention	330 - Low-Density Trees		No
<p><u>Prescription</u> harvest but retain scattered well formed oak, cherry and pine or pockets of pine. <u>Specs:</u> <u>Next Step</u> Burn, Opening <u>Treatments:</u> <u>Acceptable</u> warm season grasses and forbs and oak <u>Regen:</u> <u>Other</u> maintain with periodic fire <u>Comment:</u> WLD 4/28/2020: about 1/3 + of this stand has been burned at least twice for barrens management. Some is an MNFI identified High Quality oak pine barrens. Also please retain mature black cherry and fruiting shrubs such as service berry and hawthorn. Please avoid rutting and disturbance of ground cover. <u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2021</p>										
82 61052082-NF	2.9	31022 - Warm Season Grass	Nonstocked		Unspec ified	NonForestMgt	Herbaceous/Crop /Grass Planting	31022 - Warm Season Grass		No
<p><u>Prescription</u> Remove woody encroachment when/if it becomes necessary. Seed in native barrens grasses and forbs. Get as close to local genotype as possible. <u>Specs:</u> <u>Next Step</u> Burn, Opening <u>Treatments:</u> <u>Acceptable</u> <u>Regen:</u> <u>Other</u> This stand in the future could act as a seed source using predominately west wind to disperse seeds to the east. At some point stand 85 to the east should be thinned to barrens equivalent. <u>Comment:</u> <u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2021</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
86 61052086-NF	4.5	42220 - Natural Jack Pine	Poletimber Poor	56	51-80	NonForestMgt	Brush Cutting	3303 - Mixed Low Density Trees		No
<p><u>Prescription</u> This is has been identified as part of a remnant oak pine barrens.</p> <p><u>Specs:</u> Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Try to get as close to local genotype as possible. Mulch plantings and protect with wire cages or tubex.</p> <p><u>Next Step</u> Burn, Opening</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u> Consider seeding in local genotype native grasses/forbs, as well.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
100 61052100.39_ Burn	66.0	31022 - Warm Season Grass	Nonstocked		Immature	Burn	Opening	31022 - Warm Season Grass		No
<p><u>Prescription</u> Jack Pine Rd Oak Pine Barrens. Continue rotational burns as needed. Divide into several burn units to stagger burns over several years.</p> <p><u>Specs:</u> Treat for exotics as needed, particulary spotted knapweed along two tracks.</p> <p><u>Next Step</u> Burn, Opening</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u> Burn on a rotational basis. The goal of prescribed burning is to restore and/or maintain a grassland/barrens ecosystem. The timing and frequency of the burns will be based on currents needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, planting native mast bearing shrubs or trees, burning, or removal of woody encroachment. Old next step comments: Possible seeding of native grasses and forbs. Try to use plants with locale genotype or as close as possible. Could consult MNFI on what species.</p> <p><u>Site Condition</u> Conservation Values</p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>										
100 61052100- Burn	93.7	31022 - Warm Season Grass	Nonstocked		Immature	Burn	Opening	31022 - Warm Season Grass		No
<p><u>Prescription</u> Burn on a rotational basis. The goal of prescribed burning is to restore and/or maintain a grassland/barrens ecosystem. The timing and frequency of the burns will be based on currents needs of restoration such as reducing woody encroachment or promoting grasses versus forbs. Remove exotics as needed by herbiciding or other methods. Maintain as needed with mowing, seeding of native grasses and forbs, planting native mast bearing shrubs or trees, burning, or removal of woody encroachment.</p> <p><u>Next Step</u> Burn, Opening</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Keep open through regular burning</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u> Conservation Values</p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
117 61052117-NF	9.9	330 - Low-Density Trees	Nonstocked			NonForestMgt	Brush Cutting	3303 - Mixed Low Density Trees		No
<p><u>Prescription</u> Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Try to get as close to local genotype as possible. Mulch plantings and protect with wire cages or tubex.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u></p> <p><u>Regen:</u></p> <p><u>Other</u> Consider seeding in local genotype native grasses/forbs, as well.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
122 61052122.36_Cut	56.0	42220 - Natural Jack Pine	Poletimber Well	76	51-80	Harvest	Clearcut with Retention	4222 - Natural Jack Pine	Even-Aged	No
<p><u>Prescription</u> Harvest merchantable trees. Require short-wood operation to retain tops for seed production. Retain scattered (1 tree/acre) well formed oak and pine. Retention areas along orv trail as mapped.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Pesticide, Aerial - Site Prep; SitePrep, Trenching; Planting, Initial Plant</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> jack pine, red pine, white pine, oak, maple, aspen,</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
123 61052123.47_NF	2.3	3104 - Degraded	Nonstocked			Unspec ified NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		No
<p><u>Prescription</u> Was seeded to annual rye for several years but was allowed to go fallow due to spending restrictions. Disk , plant to annual rye for several years and then convert to a pasture mix (i.e. clover/alfalfa) or appropriate native species.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u></p> <p><u>Regen:</u></p> <p><u>Other</u> Old next step comments: Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
125 61052125.46_ NF	1.7	3104 - Degraded	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	3105 - Mixed Upland Herbaceous		No
<p><u>Prescription</u> Was seeded to annual rye for several years but was allowed to go fallow due to spending restrictions. Disk , plant to annual rye for several years and then convert to a pasture mix (i.e. clover/alfalfa) or appropriate native species.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u></p> <p><u>Regen:</u></p> <p><u>Other</u> Old next step comments: Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 12/30/1899</p>										
126 61052126.24_ Cut	31.8	42210 - Natural Red Pine	Sawtimber Well	71	51-80	Harvest	Overstory Removal	4319 - Mixed Upland Forest	Two-Aged	No
<p><u>Prescription</u> remove most overstory to release advanced regeneration formed in understory after last harvest. Attempt to protect existing understory during harvest. Retain well formed oak and pine (10-20 ba) for seed and mast production. Consider proposed treatment to stand 122. May need to keep a portion of stand 122 at this time.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> oak,maple pine,aspen</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
131 61052131.42_ Monitor	84.0	330 - Low-Density Trees	Nonstocked	0		Monitoring	Artificial Regen(3yr)	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Check survival. Surveyed 10/2018 after re-plant and herbicide. 35% mortality at that time.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> planted red pine</p> <p><u>Regen:</u></p> <p><u>Other</u> Percent to Treat = 100%</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2020</p>										
137 61052137.30_ Cut	26.0	42290 - Natural Mixed Pine	Sawtimber Well	71	111-140	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> harvest to 1'dbh and chip tops to prep site for planting. Plant red pine after harvest.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Pesticide, Skidder - Site Prep; SitePrep, Trenching; Planting, Initial Plant</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> planted red pine</p> <p><u>Regen:</u></p> <p><u>Other</u> Consider retention strip along south edge. Treat with stand to east.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
145 61052145.33_ Cut	63.2	42290 - Natural Mixed Pine	Sawtimber Well	71	81-110	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Cut to 1" dbh and chip tops to prepare site for planting red pine after harvest.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Pesticide, Aerial - Site Prep; Planting, Initial Plant</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> planted red pine</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
146 61052146.25_ Cut	35.8	42290 - Natural Mixed Pine	Sawtimber Well	88	51-80	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Harvest to 1'dbh. Chip tops to prepare site for planting. Plant red pine after harvest and site prep. Consider retention strip along north edge</p> <p><u>Specs:</u> or look for possible retention pockets on edges. Treat with stand 145.</p> <p><u>Next Step</u> Pesticide, Aerial - Site Prep; SitePrep, Trenching; Planting, Initial Plant</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> planted red pine</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>										
150 61052150.40_ Spray	20.4	42141 - Planted Mixed Pine, Mixed Deciduous	Sapling Poor	6	Immature	Pesticide	ERROR	42111 - Planted Red Pine, Mixed Deciduous	Even-Aged	No
<p><u>Prescription</u> good pine survival but significant cherry competition</p> <p><u>Specs:</u></p> <p><u>Next Step</u> ; Monitoring, Direct Seeding</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> planted red pine, white pine, jack pine, aspen, red maple, oak</p> <p><u>Regen:</u></p> <p><u>Other</u> Percent to Treat = 100%</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2018</p>										



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
153 61052153.41_ Spray	79.1	42111 - Planted Red Pine, Mixed Deciduous	Sapling Poor	7	Immature	Pesticide	ERROR	4122 - Oak, Pine	Even-Aged	No
<p><u>Prescription</u> Regen survey 2018. Pine growing well but significant competition from cherry.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> ; Monitoring, Herbicide Use</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> red pine, jack pine, white pine, oak, red maple, aspen.</p> <p><u>Regen:</u></p> <p><u>Other</u> Percent to Treat = 100%</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 2 /28/2020</p>										

Total Treatment 826.1
Acreage Proposed:

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Pat Ruppen : Examiner

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Year of Entry: 2022

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions											
		With Condition	Not Available		2B	4A	5B	5C	1C	2F	2G	2H	3A	3D	3J	5E
150	134	16	0	Aspen				16		0			0	0		
11	10	0	1	Bare/Sparsely Vegetated						1						
23	0	0	23	Cedar							23					
193	30	0	163	Herbaceous Openland					6		0		157	0		
324	277	36	11	Jack Pine		0	0	36					1			10
103	103	0	0	Low-Density Trees												0
38	0	0	38	Lowland Aspen/Balsam Poplar							9			29		
61	0	0	60	Lowland Conifers							20	0				41
34	0	0	34	Lowland Mixed Forest			0				29					5
44	0	0	44	Lowland Shrub						1	42					1
261	56	170	35	Mixed Upland Deciduous		42	57	70		0	0	31	0	0	4	
477	292	119	67	Natural Mixed Pines			61	58		44	2	0	0	0	18	3
11	2	0	9	Northern Hardwood								9				
355	50	202	103	Oak	5		94	103		39	0	52				11
84	84	0	0	Planted Mixed Pines				0					0		0	
433	306	127	0	Red Pine		0	100	27						0		
15	6	0	9	Upland Conifers							0	9				0
361	140	167	54	Upland Mixed Forest	25	3	133	6		23	1	0		13	17	
3	3	0	0	Upland Shrub												
22	22	0	0	Urban			0									
5	5	0	0	Water								0		0		
29	10	18	1	White Pine			7	11								1
3,039	1,531	855	653	Total Forested Acres	31	45	452	327	6	107	126	101	158	42	98	14
	50%	28%	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	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	30	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	97	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Consider including this stand in treatment to west. Similar cover with oak overstory and white pine growing in. Stand has been marked in past but sale not completed-large scattered oak and pine marked.							
3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Part of barrens management area ERA. Retain at this time as the area will be expanded on the SE corner this entry.							
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Keep this stand as visual break along supply road as adjacent stands are managed.							
5	Unavailable	5E: Long-Term Retention	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2F: Too steep	22	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	2F: Too steep	18	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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8	Unavailable	2F: Too steep	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Available	5B: Maintain for regeneration purposes	57	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Understory planted with red pine. Let new age develop further before trying to reduce canopy density.							
10	Available	5B: Maintain for regeneration purposes	146	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Let new age class develop before reducing overstory.							
11	Unavailable	2F: Too steep	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	19	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	3A: Conservation Values incompatible with harvest at this time	158	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Oak-Pine barrens EO ID 12308Carpenter Creek North and South							

Report 4 – Site Conditions

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14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Adjacent stand to east recently harvested.							
15	Unavailable	1C: Other dept or div proc/practices	6	3D: Recreational / Scenic values	Unspecified	Unspecified	Unspecified
Comments: Shooting Range							
16	Available	5B: Maintain for regeneration purposes	50	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
17	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	23	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
18	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Available	5B: Maintain for regeneration purposes	52	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Let advanced understory develop before attempting to reduce canopy density. excessive damage to younger age class would occur at this time if overstory removed.							

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20	Unavailable	2F: Too steep	4	3A: Conservation Values incompatible with harvest at this time	Unspecified	Unspecified	Unspecified
Comments: A portion of this area is located inside the following ERAOak-Pine barrens EO ID 12308Carpenter Creek North and South							
21	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	30	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
23	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
24	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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25	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
26	Available	5B: Maintain for regeneration purposes	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
27	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	21	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Retain at this time for diversity and habitat. Wildlife passage area along drainage. Adjacent areas recently harvested and planted.							
28	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
29	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	50	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
30	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	26	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Allow newly planted stand on east side to develop before harvesting and planting this stand.							

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31	Unavailable	3D: Recreational / Scenic values	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
32	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
33	Available	5B: Maintain for regeneration purposes	22	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Allow advanced understory to develop before trying to reduce canopy density.							
34	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	4A: No Markets Available for these Forest Products	Unspecified	Unspecified	Unspecified
Comments: Adjacent areas recently harvest and small acreage that would not have sufficient volume for stand alone harvest. May harvest in future with another stand after adjacent stands have grown in.							
35	Available	4A: No Markets Available for these Forest Products	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Low volume an acreage. Not merchantable as stand alone treatment. May be able to treat in future with adjacent stand.							
36	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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37	Available	5B: Maintain for regeneration purposes	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
38	Available	2B: Unknown if access through adjacent landowner(s) is possible	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Blocked by Creek and private ownership.							
39	Available	5B: Maintain for regeneration purposes	26	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Allow younger red maple and pine component to grow into merchantable size before harvesting							
40	Available	5B: Maintain for regeneration purposes	32	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Most rm is poles/sapling and much is not merchantable at this time. Let younger age put on growth before harvesting.							
41	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stocking is fine at this time and trees have room to grow. Let stand grow additional volume and let understory develop.							
42	Available	4A: No Markets Available for these Forest Products	43	Unspecified	Unspecified	Unspecified	Unspecified
Comments: low volume of merchantable product. Barrens area							

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43	Unavailable	2F: Too steep	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Blocked by Creek and private ownership.							
44	Unavailable	3D: Recreational / Scenic values	13	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Low volume for merchantable trees and trails through stand. Let stand develop and put on more volume							
45	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
46	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	30	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
47	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	45	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
48	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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49	Available	5B: Maintain for regeneration purposes	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Let oak understory develop before harvest. Small stand that would be better harvested with stand 85 to north when it is ready.							
50	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	19	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
51	Unavailable	2F: Too steep	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
52	Unavailable	2F: Too steep	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
53	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
54	Unavailable	2F: Too steep	16	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
55	Unavailable	2F: Too steep	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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56	Available	2B: Unknown if access through adjacent landowner(s) is possible	21	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
57	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
58	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
59	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
60	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	31	Unspecified	Unspecified	Unspecified	Unspecified
Comments: retained for visual break along supply road and for age class diversity/habitat adjacent to recently planted sites.							
61	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Larger than average natural looking pine along river corridor. Retain for now and let understory develop.							

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62	Available	5B: Maintain for regeneration purposes	31	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Mixed ages due to two harvests on this stand. Younger age classes need to grow in before this stand is harvested.							
63	Available	5B: Maintain for regeneration purposes	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments: small acreage available due to steep areas. Best to retain this for bedding cover along drain and to let understory to grow through as jack pine declines. May be able to harvest parts of this stand if adjacent stand is harvested in future.							
64	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	3	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments:							
65	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	11	2F: Too steep	3D: Recreational / Scenic values	Unspecified	Unspecified
Comments: Steep ground along river with trail influence. Access is also limited.							
66	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: With current water levels this stand would be too wet to harvest.							
67	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Larger than average natural looking pine along river corridor. Retain for now and let understory develop.							

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 Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																													
1	4131 - Aspen, Oak	Poletimber Well	6.8	32	51-80	N/A	2020: Oak/pine overstory with aspen poles/saps growing through. Looks like all or most oak was left in last harvest so oak is mixed sizes. Aspen regen in gaps. Let stand grow in. 2010FMD: 21 yr old aspen cut with oak pine reserves. Part of old o1 stand seperated that was the lower ground. This stand classified as upland.																																																													
		<table border="1"> <thead> <tr> <th>Canopy Species</th> <th>% Cover</th> <th>Size Class</th> <th>DBH</th> <th>Age</th> </tr> </thead> <tbody> <tr> <td>Red Oak</td> <td>5</td> <td>Log</td> <td>12</td> <td>111</td> </tr> <tr> <td>White Oak</td> <td>15</td> <td>Log/Pole</td> <td>12</td> <td>111</td> </tr> <tr> <td>Quaking Aspen</td> <td>20</td> <td>Sapling/Pole</td> <td>4</td> <td></td> </tr> <tr> <td>Bigtooth Aspen</td> <td>50</td> <td>Pole/Sapling</td> <td>5</td> <td>32</td> </tr> <tr> <td>White Pine</td> <td>5</td> <td>Pole</td> <td>8</td> <td></td> </tr> <tr> <td>Red Maple</td> <td>5</td> <td>Sapling/Pole</td> <td>4</td> <td></td> </tr> </tbody> </table>	Canopy Species	% Cover	Size Class	DBH	Age	Red Oak	5	Log	12	111	White Oak	15	Log/Pole	12	111	Quaking Aspen	20	Sapling/Pole	4		Bigtooth Aspen	50	Pole/Sapling	5	32	White Pine	5	Pole	8		Red Maple	5	Sapling/Pole	4				<table border="1"> <thead> <tr> <th>Sub-Canopy Species</th> <th>Density</th> <th>Avg. Height</th> <th>Size</th> </tr> </thead> <tbody> <tr> <td>White Pine</td> <td>Low</td> <td>5 - 10 feet</td> <td>Sapling</td> </tr> <tr> <td>Black Cherry</td> <td>Low</td> <td>5 - 10 feet</td> <td>Sapling</td> </tr> </tbody> </table>	Sub-Canopy Species	Density	Avg. Height	Size	White Pine	Low	5 - 10 feet	Sapling	Black Cherry	Low	5 - 10 feet	Sapling																
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Black Cherry	Low	5 - 10 feet	Sapling																																																																	
2	6112 - Lowland Aspen	Sawtimber Well	8.8	62	1-50	N/A	2020: Aspen is starting to drop out of stand. Balsam polplar saplings coming in under. This stand is pretty wet under current water levels. Would be hesitant to harvest but the stand is ready for that. Stand looks to be older that last estimate. Likely around 60. 2010 FMD: Low aspen - hummocky ground and rutted from last harvest. Aspen/wo/red oak wp/rp/bf. Looks like age around 30-35?																																																													
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3	4130 - Aspen	Poletimber Well	5.0	46	51-80	N/A	2020: Well stocked aspen poles with oak and pine. Let stand grow in volume. 2010: Similar to pre-inv stand 2 but upland and less pine /oak in mix.																																																													
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4	4129 - Mixed Oak	Sawtimber Well	10.7	120	81-110	N/A	2020: Stand looks alright. 2000FMD Too steep. O8 2010FMD; Steep slope along road. Oak with wp poles growing through.																																																													
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments	
5	4310 - Pine, Oak Mix	Sawtimber Well	13.4	86	111-140	N/A	2020: Could mark this stand to remove lower quality stems, get the aspen and jp out and crown release the better quality oak. Concerns over visual impact next to campground and snowmobile trail. Would not be much volume. Would have to go with nearby treatment. Not high priority. 2000FMD W5. 2010.FDD: includes O/I stand 98 (aged 60) and part of 70 which has age 47 . Mix of wp/rp/oak/aspens/rm-mixed ages between 55-85. Some jp 85. Older oak scattered about.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Maple		10	Pole/Log	9		Red Maple		
Red Oak		5	Log/Pole	13		Low		
White Oak		15	Log/Pole	13	111	5 - 10 feet		
Quaking Aspen		5	Log/Pole	10		Sapling		
Bigtooth Aspen		10	Log	12	86	White Pine		
White Pine		47	Log/Pole	11	86	Low		
Red Pine		3	Log/Pole	10	76	10 - 20 feet		
Jack Pine		5	Log/Pole	10	66	Sapling		
						< 5 feet		
						Sapling		
6	42110 - Planted Red Pine	Poletimber Well	10.3	48	201+	N/A	2020: This stand should be row thinned. Rows are not clear and will need to be marked. Cut out other species as possible. Average ba is 215. Trees may become stagnant and are losing growth. 2000FMD scattered open grown jp oak, bc2010FMD: Red pine is overstocked and risks becoming stagnant. 1-3 sticks right now and tight spacing in rows. Spacing between rows looks alright. Scattered oak .jp and aspen. Pine in campground to west is same age but much better diameter and height due to lower stocking. Looks like it could be a chip job and rows would need marked. Could treat with stand to north if that is done.	
Canopy Species		% Cover	Size Class	DBH	Age			
White Oak		3	Log/Pole	12	111			
Bigtooth Aspen		3	Log/Pole	10				
Red Pine		88	Pole	7	48			
Jack Pine		2	Log/Pole	10				
Black Cherry		2	Pole	8				
White Pine		2	Log	13				
7	42110 - Planted Red Pine	Poletimber Medium	4.7	48	51-80	N/A	2000FMD: Schecks state forest campground. W7 2010FMD: Scattered large wp and oak with planted rp. A little spruce along river.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Oak		10	Log	16	111	Red Maple		
White Pine		15	Log	12	111	Low		
Red Pine		70	Pole/Log	9	48	5 - 10 feet		
Norway Spruce		5	Log	14		Sapling		
						White Pine		
						Low		
						5 - 10 feet		
						Sapling		
8	4126 - White, Black, N. Pin Oak	Poletimber Well	17.7	120	51-80	N/A	2020: Mix of oak logs and poles. More in pole size but logs mixed in. Stocking is on the low end. Poor regeneration success after last harvest. Heavy browsing. Cherry has advanced. Could just let this stand grow in or consider harvesting south of the gasoline road along with stand 11 and planting red pine. The snowmobile trail passes through stand north of there and there is also a trail on the east edge (horse trail). FMD 2000: J5O7O4W4A4 leave oak and pine residual for visual management. Prescribed to cut jp. 2010 FMD: Looks like same treatment as stand to south but more oak and pine residual. Some log size oak and poles retained. Light aspen regen under this stand.	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		
Red Oak		20	Pole/Log	9		Red Maple		
White Oak		45	Log/Pole	10	120	Low		
White Pine		20	Pole	8		5 - 10 feet		
Red Pine		5	Log/Pole	12	96	Sapling		
Red Maple		10	Pole/Log	8		Black Cherry		
						Medium		
						5 - 10 feet		
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						Sapling		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments			
9	4130 - Aspen	Sapling Medium	7.0	17	Immature	N/A	2019: Mixed aspen clones. A little BAM. Some scatter retention from last harvest. Good stocking but patchy. Good growth. TS# 035-02. TCR 2005. 2010: Stand swapped from Non-Forested to Forested. 2010FMD 2010FMD: Stand harvested with a little residual wp/rm. Aspen regen is good in spots-a bit patchy.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Maple		10	Sapling	3	17	White Pine		Low	5 - 10 feet	Sapling
Quaking Aspen		65	Sapling	3	17					
Bigtooth Aspen		20	Sapling	3	17					
Balsam Poplar		5	Sapling	2	17					
10	310 - Herbaceous Openland	Nonstocked	3.1		Unspecified	No				
11	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	7.9	71	1-50	N/A	2020: Patchy aspen regen after last harvest. Lilely cut around 2015. Low stocked stand and regeneration is being browsed heavily especially oak and maple. Cherry has advanced and some aspen patches. Consider CC and plant red pine with part of stand 8 to north. FMD 2000: J5O7O4W4A4 leave oak and pine residual for visual management. Prescribed to cut jp. 2010: Cut aspen/rm and jp in last treatment. Left oak and wp poles. Pretty good aspen regen but a little patchy.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
White Oak		45	Log/Pole	11	71	Red Maple		Low	5 - 10 feet	Sapling
White Pine		35	Log/Pole	11		Bigtooth Aspen		Low	>20 feet	Sapling
Black Cherry		10	Pole	8		Black Cherry		Low	5 - 10 feet	Sapling
12	6112 - Lowland Aspen	Sawtimber Well	29.1	73	51-80	N/A	2020: Aspen is declining. Stand is wet in places but it may be possible to harvest dry areas and most if frozen or dry. Mix of upland and lowland with all the edges. Clumps of planted spruce and red pine should be left if harvested. Some red pine planted on higher ground edges. Aspen on piece south of river is land-locked and the aspen is falling out. Piece north of trail camp is red pine/ aspen mix and is on drier ground. 2000FMD Potential or designated old growth. P5 Old O/I stand 95 was 47 yr old rp west of campground. May be part of this stand. 2010FMD: Lower areas along river. a few pockets of norway spruce planted.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Paper Birch		5	Log/Pole	10		Black Cherry		Low	5 - 10 feet	Sapling
Quaking Aspen		38	Log/Pole	11	73	Tag Alder		Medium	10 - 20 feet	Tall Shrub
Bigtooth Aspen		10	Log/Pole	11	73					
White Pine		5	Log/Pole	12						
Black Cherry		10	Pole	8						
Norway Spruce		2	Log	12						
Red Maple		5	Log/Pole	10						
Balsam Poplar		7	Log	12						
White Oak		5	Log	12						
Red Oak		1	Log	12						
Red Pine		10	Log	11						
Jack Pine		2	Log/Pole	10						
13	4129 - Mixed Oak	Sawtimber Well	11.4	122	81-110	N/A		2020: Lower quality oak of mixed sizes with wp/rp. Wp saplings under growing through. Factor limit stand due to river, recreation use, terrain, access. 2000FMD: From O/I stand 75 O7O4 Recreational site influence. From O/I stand 73 A4A7O7O4M4. Stand borders wild and scenic river. Stands 18,pars of 14 and 17 were hooked in O/I. Aspen is likely aged species. 2010FMD: Oak poles and logs from sprouts with aspen /wp and rm grown in .		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple		15	Pole	8		Red Maple	Low		10 - 20 feet	Sapling
Red Oak		30	Log	12	122	White Pine	Medium		>20 feet	Sapling
White Oak		30	Log	12	122					
Bigtooth Aspen		8	Log	14	96					
White Pine		15	Log/Pole	11	76					
Red Pine		2	Log	11						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																
14	500 - Water	Nonstocked	5.5		Unspecified	No	Drainage																																																
15	330 - Low-Density Trees	Nonstocked	8.9			No	Schecks Trail Camp.																																																
16	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	16.1	100	81-110	N/A	2019: Stand looks fine. Factor limit due to slopes and river. 2000FMD: From O/I stand 74 M5W7O7R7 CONVERTING TO RM. Recreational site influence. Comments from O/I stand 73 A4A7O7O4M4. Stand borders wild and scenic river. Stands 18,pars of 14 and 17 were hooked in O/I. Aspen is likely aged species. 2010FMD: Steep slope along river. Mix of pine oak aspen.																																																
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17	4199 - Other Mixed Upland Deciduous	Sawtimber Well	6.2	101	111-140	N/A	2019: Stand access is blocked by Boardman River and Carpenter Creek. Remote Call. 2000FMD: Recreational site influence. A4A7O7O4M4. Stand borders wild and scenic river. Stands 18,pars of 14 and 17 were hooked in O/I. Aspen is likely aged species.																																																
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18	4126 - White, Black, N. Pin Oak	Sawtimber Well	29.6	122	81-110	N/A	2020: Considerable white pine understory growing through older low quality oak. Access blocked by river and private land. Consider reducing oak canopy if access is possible. 2000FMD Potential or designated old growth, O7O4. 2010 FMD: Combination of O/I stands 80 and 105. 2010FMD: Older oak logs and poles with some older pine scattered about but also some rp and wp age 70. Jp age 85. White pine growing in under and some rp poles. Wp regen is thick in places.																																																
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19	790 - Other Bare/Sparsely Vegetated	Nonstocked	4.9		Unspecified	No	Utility Easement																																																



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																	
20	4126 - White, Black, N. Pin Oak	Sawtimber Well	13.5	122	51-80	N/A	2020: Lower quality oak with some JP and larger wp in pockets. WP poles growing through. Issues with hill climbing may still be persisting. Horse trail crosses stand. Mix of oak poles and small logs with older wolfy trees. Slopes limit management on most of this stand. Let stand develop and wp poles grow in. 2010:merge between O/I stand 76 and 105. South part was 42 yr old aspen and north was 111 yr old oak. Stand is on steep slope 2010FMD: Low density poor quality pole/log sized oak sprouts with wp poles. Some better stocking and lower on west side but steeper slope. East side is more gentle slope.																																																	
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21	42290 - Natural Mixed Pine	Poletimber Well	17.8	106	51-80	N/A	2020: TS sold . CC with retention. plant rp after harvest. 2000FMD Area has scattered pockets of upland brush and very small openings. 2010FMD: Older jp-low stocking in general. Some oak,wp,bc and jp poles grown in. Some scattered oak and white pine logs.																																																	
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22	4130 - Aspen	Sawtimber Well	3.2	53	81-110	N/A	2010: Sold TS. CC with retention. Aspen dropping out, 2000FMD A4 2010FMD: Aspen looks prime to cut and regenerate. Would expand a bit. Big scattered wp/rp and oak with the 42 yr old aspen clone grown in.																																																	
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23	310 - Herbaceous Openland	Nonstocked	1.3		Unspecified	No																																																		
24	42220 - Natural Jack Pine	Poletimber Well	7.4	59	51-80	N/A	2000FMD Area has scattered pockets of upland brush and very small openings. 2010FMD: Younger jp (48) with some older white oak and white pine.																																																	
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments			
25	42220 - Natural Jack Pine	Poletimber Well	32.7	76	51-80	N/A	2019 stand has been sold. jp is declining. TS# 040-16. Clearcut with retention and plant red pine. . 2000FMD J6 2010FMD: Jack pine is in decent condition and form. Scattered rp in stand has much better size and form. Checked rp age 62 - 14" dia. Jp avg diameter is 8-10. An exceptional amount of oak regen in south end of stand. Much is badly broused but some is growing through.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
White Oak		5	Log	12	122	White Pine		Low	5 - 10 feet	Sapling
Red Pine		2	Log	12	76	Black Cherry		Low	5 - 10 feet	Sapling
Jack Pine		90	Pole/Log	9	76	Northern Pin Oak		Medium	5 - 10 feet	Sapling
White Pine		2	Log	12	76	White Oak		Medium	5 - 10 feet	Sapling
Black Cherry		1	Pole	8						
26	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	6.1	82	51-80	N/A	2020 Balsam with RM and BS. Wet areas with Tag Alder. 2000FMD E4A7E7. Heavy rm reproduction. Potential or designated old growth. 2010FMD: Creek drain along west side. Spruce /fir mix/deciduous. Wet spots with tag alder			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Maple		20	Pole/Log	8	82	Red Maple		Medium	5 - 10 feet	Sapling
Quaking Aspen		10	Log	11	82	Balsam Fir		Medium	5 - 10 feet	Sapling
Bigtooth Aspen		5	Log	12		Black Spruce		Medium	5 - 10 feet	Sapling
Balsam Fir		35	Pole	7	82	Tag Alder		Low	5 - 10 feet	Tall Shrub
Black Spruce		15	Pole/Log	8						
Northern White Cedar		10	Log	13						
27	42290 - Natural Mixed Pine	Sawtimber Well	9.3	93	81-110	N/A	2020: Stand was marked for a small sale harvest (seed tree) but no bids. Access is difficult and possibly /not practical for so little acreage. Snowmobile trail is on private property quickly so a landing would have to be punched in off the county road. JP and aspen are falling out of stand. Little understory development. 2000FMD J4R4A4 Potential or designated old growth. 2010FMD: Mix of jp/rp/aspen. State Land posted along road. Ground lays good. Jack pine is old and declining but still in good shape. Site looks to have a better site index and red pine looks pretty good.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Maple		5	Pole/Sapling	6		Red Maple		Low	10 - 20 feet	Sapling
White Oak		2	Log/Pole	14	111	Balsam Fir		Low	10 - 20 feet	Sapling
Quaking Aspen		5	Pole/Sapling	8		White Pine		Low	10 - 20 feet	Sapling
Bigtooth Aspen		15	Log/Pole	10	93	Red Pine		Low	10 - 20 feet	Sapling
Red Pine		30	Log/Pole	10	93					
Jack Pine		43	Pole/Log	8	93					
28	4122 - Oak, Pine	Sawtimber Well	12.1	110	81-110	N/A	2020: Oak logs with JP/WP poles/logs. Most is White Oak. Some old pine mixed with oak canopy. More wp saps and poles in N end and ground becomes less flat. South end of stand is flat and would be easy to plant and manage as plantation...but not a large area. May be best to just let this be a oak /pine flat adjacent to these low areas. Oak will remain in stand and wp will grow in as jp fall out. 2000FMD Potential or designated old growth. O4O7J4 jp site index better represents site. 2010FMD: older oak/wp/rp/jp with wp poles growing in. Ridge and slope above creek and lowland types.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Oak		10	Log	14		Red Maple		Low	10 - 20 feet	Sapling
White Oak		50	Log/XLog	16	110	Balsam Fir		Low	10 - 20 feet	Sapling
White Pine		15	Log	14		White Pine		Low	Variable	Sapling
Red Pine		8	Log	12	110	Red Pine		Low	10 - 20 feet	Sapling
Jack Pine		15	Log/Pole	11	101					
Red Maple		2	Pole/Sapling	5						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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29 6124 - Lowland Spruce-Fir Poletimber Well 8.5 83 111-140 N/A 2020: Mixed lowland. Site is generally wet with several flows through and a larger creek. 2000FMD S5F4 POTENTIAL OR DESIGNATED OLD GROWTH. 2010FMD: Nice spruce in places and good spruce/fir regen especially in pockets.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	20	Pole/Sapling	8		Red Maple	Low	5 - 10 feet	Sapling
Paper Birch	5	Pole/Sapling	9		Balsam Fir	Medium	5 - 10 feet	Sapling
Bigtooth Aspen	5	Log/Pole	10	83	Black Spruce	Medium	5 - 10 feet	Sapling
Balsam Fir	20	Pole/Sapling	8	83	Tag Alder	Low	5 - 10 feet	Tall Shrub
Black Spruce	30	Pole/Log	9	83				
Northern White Cedar	20	Log	13	112				

30 6130 - Fir, Aspen, Maple Sawtimber Well 10.0 90 51-80 N/A 2020: Stand is wet and not manageable. Some large WP scattered around. WP,BF, BS filling in gaps slowly. 2000FMD potential or designated old growth. F4C7M4 SOME POLE AND SAPLING SIZED FIR DYING. 2010FMD: More of lowland hardwood mix that surrounding stands.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	20	Log/Pole	11	90	Balsam Fir	Low	5 - 10 feet	Sapling
Paper Birch	5	Log/Pole	10		Black Spruce	Low	5 - 10 feet	Sapling
Quaking Aspen	10	Pole/Sapling	9	90	Tag Alder	Low	5 - 10 feet	Tall Shrub
Bigtooth Aspen	15	Log	12	90	White Pine	Low	10 - 20 feet	Sapling
Balsam Fir	20	Pole	8					
Black Spruce	5	Pole/Sapling	8					
Northern White Cedar	10	Log	13	112				
Tamarack	5	Log/Pole	12					
White Pine	10	Log/XLog	16					

31 42260 - Natural Pine, Mixed Deciduous Sawtimber Well 22.0 96 111-140 N/A 2020: This stand has a multiaged structure. May want to continue to manage as mixed age stand. Mixed sizes of pine and oak. Some XL WP with logs/poles/saps. Jp in stand is good quality but declining and should be harvested. Aspen is also declining but not a large component. Consider marking this stand to reduce the overall diameter and create a new age class. Focus on keeping pole sized and some XL for for seed. May be a good place to try to do some scarification to generate more natural reproduction. Some areas are heavier to wp poles. May want to thin these. 2010 Different ages of pine /oak/aspen but there is a fair amount od 80-90 yr old aspen jp and red pine that should be harvested. Jack pine and aspen/rm and some rp? should be taken out. Stand will fill in with pine regen-mostly white but some red pine is growing in to openings in this area. Pockets of youger ages scattered about (35-45 yr). A couple acres in the sw corner. Strip of mature pine seems to be left on west line? Check for corners and see what is wrong. Trespass with state land posted along west boundary.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	8	Pole/Sapling	6		Red Maple	Low	10 - 20 feet	Sapling
Red Oak	5	Log	12	101	Balsam Fir	Low	5 - 10 feet	Sapling
White Oak	10	Log	14	101	White Pine	Medium	5 - 10 feet	Sapling
Bigtooth Aspen	10	Log	13	91	Red Oak	Low	10 - 20 feet	Sapling
Balsam Fir	2	Pole/Sapling	6		White Oak	Low	10 - 20 feet	Sapling
White Pine	25	Pole/Log	8	54				
Red Pine	25	Log	14	96				
Jack Pine	15	Log/Pole	11	96				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																													
32	6120 - Lowland Cedar	Sawtimber Well	5.3	121	81-110	N/A	2020: Areas with heavy storm damage. 2000FMD potential or designated old growth. C9C5WB7WB4M4 2010FMD: Lowland mix. Areas of windthrow.																																																													
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33	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	6.3	89	111-140	N/A	2020: Stand looks fine. 2000FMD: potential or designated old growth. A5A7R7O7W4 Very steep slope. 2010FMD: Not manageable. Steep slope along road. Mix of rp wp aspen oak jp.																																																													
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34	42380 - Non Pine Upland Conifer, Mixed Deciduous	Sawtimber Well	9.1	121	51-80	N/A	2020: Good bit of blowdown on wetter edges. Nice cedar which is a heavier component in wetter areas. Some big wp scattered around. Little understory formed at this time. 2000FMD C9C5F4E7E4 Though low SI -cedar growing well. 2010 Pre-inv 30 and 41 were hooked in O/I 2010FMD: Small stand with mix of upland and lowland species. Generally follows stream bottom. XL White pine on higher spots with some rm/basswood/black cherry ash red pine along with cedar/spruce/fir.																																																													
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35	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	40.8	121	111-140	N/A	2020: Difficult access with higher water in recent years. Some blowdown areas. Rich conifer swamp with drainages flowing through. 2000FMD C9C5F4E7E4 Though low SI -cedar growing well. 2010 Pre-inv 30 and 41 were hooked in O/I 2010fmd: Looks like headwaters for creek. A number of small drainages flowing through. Rich lowland mix. A good bit of dead spruce. Blowdown area in noth end of stand with birch growing in.																																																													
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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36 4191 - Mixed Upland Deciduous with Conifer Sawtimber Well 9.0 101 81-110 N/A

2020 Split this stand off from Stand 39 which is a N Hardwood pocket. 2000FMD potential or designated old growth. 2010FMD: Hardwood stand on slightly higher ground and up along creek drain. Some big scattered white pine.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	20	Log/Pole	12		Balsam Fir	Low	10 - 20 feet	Sapling
Red Oak	5	Log/Pole	12	101	Black Spruce	Low	10 - 20 feet	Sapling
Paper Birch	5	Log/Pole	12		White Pine	Low	5 - 10 feet	Sapling
Bigtooth Aspen	20	Log	12	71	Red Maple	Low	10 - 20 feet	Sapling
Balsam Fir	5	Pole/Sapling	8					
White Pine	25	Log	12	101				

37 4310 - Pine, Oak Mix Poletimber Well 7.8 46 81-110 N/A

2020: 70-80 Basal area residual oak and pine with wp/rm/aspem grown in through gaps. All in canopy. Little understory. Let stand grow in. May want to thin next entry. 2000FMD J4W7A4 Potential or designated old growth. 2010FMD: Looks like jp/rm/aspem cut out in this stand and maybe some older pine and oak. Now scattered older oak and pine 85-100 yr with 30-40 yr pine/maple/aspem and oak grown in. Most is wp but rp generally present. Both ages counted in canopy layer.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	5	Pole	7		Balsam Fir	Low	5 - 10 feet	Sapling
Red Oak	20	Log	15	111	White Pine	Low	5 - 10 feet	Sapling
White Oak	20	Log	15	111	Red Pine	Low	5 - 10 feet	Sapling
Bigtooth Aspen	5	Pole	7	46				
White Pine	30	Pole	7	46				
Red Pine	15	Log	14	91				
Jack Pine	5	Log/Pole	10					

38 790 - Other Bare/Sparsely Vegetated Nonstocked 5.9 No

39 4119 - Mixed Northern Hardwoods Sawtimber Well 11.0 101 81-110 N/A

2020: Older low quality hardwood mix in creek bottom. Transition between upland and lowland. Unique for area. Keep for diversity. 2000FMD potential or designated old growth. 2010FMD: Hardwood stand on slightly higher ground and up along creek drain. Some big scattered white pine.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	25	XLog/Log	18	101	Balsam Fir	Low	10 - 20 feet	Sapling
Red Maple	15	Log/Pole	11	101	Black Spruce	Low	10 - 20 feet	Sapling
Basswood	15	Log	14	101	White Pine	Low	5 - 10 feet	Sapling
Red Oak	10	Log/XLog	16					
White Oak	2	Log	14					
Bigtooth Aspen	3	Log	14					
Balsam Fir	5	Pole/Sapling	8					
Northern White Cedar	5	Log/Pole	12					
White Pine	10	XLog	24	127				
Black Cherry	5	Log	13					
Ironwood	5	Pole	6					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																							
40	4130 - Aspen	Poletimber Well	17.5	27	51-80	N/A	2020: Patchy wp and aspen in places but most has good aspen stocking. Let stand grow in. 2000FMD: Harvested 1993. Cut to 2". potential of designated old growth. A3. 2010FMD: Good aspen regen with some wp and rm.																																																							
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41	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	22.2	110	51-80	N/A	2020: Oak/pine mix on slope and base of slope. East facing slope with lower stocked oak/pine and light wp regen under. Bigger WP scattered around in stand. Mature oak-some poles but most is XL/L. Mixed WP sizes. May want to harvest parts of this stand that are not too steep if/when Stand 45 is harvested. 2000FMD Potential or designated old growth. J4A4R7 Sampled JP 70 yr old. almost stopped growing at 40 yr. SI probably higher than shown. Red to thin on slopes. 2010FMD: Older pine and oak on slope with wp/rm growing in under. Access is questionable-blocked by private land and lowland. Basal area is not high at this time.																																																							
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42	4310 - Pine, Oak Mix	Sawtimber Well	22.1	106	201+	N/A	2020: Nice RP/WP. Most of stand is behind creek and on steeper ground. May be best to just let his be. Old road comes back from north and ends at creek. May be possible bridge site but not that much behind creek is on workable ground due to slope. 2010FMD: Nice pine/oak/aspen wit wp/rm/bf understory mix along bottomland and low part of slope. Blocked by terrain and private ownership.																																																							
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43	320 - Upland Shrub	Nonstocked	3.1		Unspecified	No	Stand was old well pad and planted to autumn olive.																																																							
44	310 - Herbaceous Openland	Nonstocked	2.5		Unspecified	No																																																								
45	4129 - Mixed Oak	Sawtimber Well	22.8	108	81-110	N/A	2020: Mature oak. Good log volume. Mixed wp sizes. Some oak poles but most is XL/L. Desirable to harvest if possible but not good access and may want to let adjacent area in sC53 develop. Would likely have to skid back to C53 stand 35-old well pad which is a long skid but good volume in stand may make it possible. 2000FMD O8A4O4W4 sampled red oak 87 yr old. slowed at 65 age. Potential or designated old growth. 2010FMD: Ridge and flat above drainage with oak @ 100 years -a little pine and wp growing in under.																																																							
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White Pine	Medium	10 - 20 feet	Sapling																																																											



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
46	42250 - Pine, Oak	Sawtimber Poor	20.2	84	1-50	N/A	2020: Little new understory development since harvest. Some red maple has escaped browse level but most aspen and oak has been browsed out of stand. Consider removing most of the overstory-leaving smaller diameter pine and some larger trees for seed. This stand had heavier pine component before harvest compared to surrounding stand. TS# 042-12. Harvested 11/14-2/15. Cut merchantable but no rp,wp or green marked retention. 2000FMD07R7O4M4A4 Potential or designated old growth. 2000FMD J5 with some rp logs, scattered aspen and oak poles. 2010 FMD: Pine in drain and slopes. Jack pine still looks alright. Could cut back to red and white pine but I think the jp will be good till next entry. Old burnt pine stumps around and a few scattered pine stumps.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Oak	15	Log	14	111	Red Maple	Low		5 - 10 feet	Sapling
White Oak	15	Log	14		White Pine	Low		>20 feet	Sapling
White Pine	35	Log/Pole	11		Red Pine	Low		>20 feet	Sapling
Red Pine	35	Log/Pole	11	84	White Oak	Low		< 5 feet	Sapling
47	4310 - Pine, Oak Mix	Sawtimber Poor	126.6	91	1-50	N/A	2020: Some rm sprouts getting past deer browse. Little oak or aspen sprouts have survived deer impact. Not much new wp seeding in since harvest. Pockets of wp saplings and seedlings left from last harvest. May have not been a good idea to leave so much pine canopy with last entry. May have been better to leave pine under 6" dbh and some larger seed trees scattered around. Consider doing that this entry. TS# 042-12. Harvested 11/14-2/15. Cut merchantable but no rp,wp or green marked retention. 2000FMD07R7O4M4A4 Potential or designated old growth. 80 yr old oak mature. Considering low SI. Sampled oak 81 yr old slowed growth at 60 yr. Small JP stand (O/I 103) age 62 in nw corner. 2010FMD: 80-100 ytr old pine and oak with lots of pine underneath. Some slopes would not be workable. Aspen heavier on slopes. Old burnt pine stumps throughout. Redpine saplings and poles are scattered about. White pine in various sizes in understory throughout.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	2	Pole/Log	8		Red Maple	Low		5 - 10 feet	Sapling
Red Oak	23	Log/Pole	12	101	White Pine	Medium		10 - 20 feet	Sapling
White Oak	25	Log/Pole	12	101	Red Pine	Low		10 - 20 feet	Sapling
White Pine	35	Log/Pole	12	91	Bigtooth Aspen	Low		5 - 10 feet	Sapling
Red Pine	15	Log	11		White Oak	Low		< 5 feet	Sapling
					Red Oak	Low	< 5 feet	Sapling	
48	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	46.6	76	81-110	N/A	2020: Mixed ages and sizes of pine. Red pine may be all same age but mixed wp ages. Consider getting larger diameter pine and oak out and letting this stand develop as multi-aged pine. The east side had more advanced understory-patchy wp. Also, there may be potential to get part of this cc and re-planted to pine. This is really nice pine ground and the red pine looks quite good. The part of stand nw of JP road might work. The understory is not as heavy there. small depressions could be retention of steeper areas. 2000FMD POTENTIAL OR DESIGNATED OLD GROWTH, Do not agree with old growth set aside for this stand. with the stand make up and condition, the stand (eastern portion) should remain in in management. Stand harvested in 1996 and regen is showing up in canopy openings. Cut aspen, jp and orange marked. Stands 57 50 and 64 were hooked in this o/i stand. 2010FMD: Parts or all of this stand cut with stand to east where they took out the aspen/jp/rm/larger oak. Thick wp regen in places. Snow is knocking down white pine regen. Age of most of stand is 105 from prev. inv. but som 60 -80 yr old rp/wp/oak. Good growth on red pine that is in canopy. Small rp (6") is 80 yr old. Trees have no diameter growth for a while but still good height growth. Maybe not all this stand was thinned in last sale . West side looks different. Generally stocking throughout stand is not heavy. Red pine is getting oversized for current markets.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	5	Pole	8		Red Maple	Low		10 - 20 feet	Sapling
Red Oak	15	Log	14		White Pine	High		10 - 20 feet	Sapling
White Oak	13	Log	14	116	Bigtooth Aspen	Low		10 - 20 feet	Sapling
Bigtooth Aspen	2	Log	12	76					
White Pine	35	Log	13	76					
Red Pine	30	Log	13	76					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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49	4310 - Pine, Oak Mix	Sawtimber Well	22.2	76	81-110	N/A	2020: Stand looks alright. 2010FMD: Mixed species on steep slope. Similar to mix up on flat but more wp.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Pole	8	
Red Oak	20	Log	16	111
White Oak	15	Log	14	111
Bigtooth Aspen	15	Log	12	
White Pine	25	Log	12	76
Red Pine	10	Log	12	76
Jack Pine	10	Log	11	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	5 - 10 feet	Sapling
White Pine	Medium	5 - 10 feet	Sapling

50	4124 - Red with White Oak	Sawtimber Well	5.1	116	81-110	N/A	2020: Lower quality oak-mainly red oak with large pine mixed through. Heavy wp understory but it has a lot of snow damage. Consider taking most of the oak overstory off to try to get stump sprouts or at least to release existing understory. Deer browsing has limited success from stump sprouts in this area with recent harvests. 2010: More oak than pine compared to surrounding stands. Not harvested in last entry. Jack pine and aspen still in stand. Thick wp regen and a little rp.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	3	Pole/Sapling	7	
Red Oak	45	Log	14	116
White Oak	20	Log	14	116
Bigtooth Aspen	5	Log	12	91
White Pine	15	Log	13	91
Red Pine	10	Log	12	
Jack Pine	2	Pole/Log	9	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	10 - 20 feet	Sapling
White Pine	High	10 - 20 feet	Sapling

51	6120 - Lowland Cedar	Sawtimber Well	5.5	127	201+	N/A	2020: Nice cedar stand. Some storm damage. Large wp scattered around. Little understory 2000FMD R8W7J4R4 some wp also. Sampled rp 87 yr old. slowed at age 60. potential or designated old growth. 2010FMD: Some bigger pine scattered about but most is cedar. Scattered big pine along south of creek.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Log/Pole	10	
Yellow Birch	5	Log	12	
Bigtooth Aspen	5	Log	14	96
Northern White Cedar	67	Log/Pole	12	127
White Pine	10	XLog/Log	20	127
Red Pine	3	Log	14	
Hemlock	5	Log	14	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	>20 feet	Sapling
Red Oak	Low	>20 feet	Sapling
White Oak	Low	>20 feet	Sapling

52	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	18.0	96	81-110	N/A	2020: Mixed ages of pine. Mixed sizes of older tall red and wp. WP and oak seedlings and saplings in gaps and under canopy but not well stocked in many areas. May continue to fill in slowly if more canopy is removed. This could encourage the development of more oak in the sub-canopy. Little red pine in sub-canopy. Not clear how to move this to a new well stocked stand. 2000FMD POTENTIAL OR DESIGNATED OLD GROWTH, Do not agree with old growth set aside for this stand. with the stand make up and condition, the stand (eastern portion) should remain in management. Stand harvested in 1996 and regen is showing up in canopy openings. Cut all aspen, jp and orange marked. Stands 57 50 and 64 were hooked in this o/i stand. 2010FMD: Some older fire scarred pine and larger oak but most is age 85. Maybe older trees taken out in last harvest. Lots of wp regen in places. Looks like strips were cut out for regen purposes.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Pole/Sapling	6	
Red Oak	10	Log	16	111
White Oak	10	Log	16	111
White Pine	30	Log/Pole	11	96
Red Pine	40	Log	14	96

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	10 - 20 feet	Sapling
Bigtooth Aspen	Low	10 - 20 feet	Sapling
White Pine	Medium	10 - 20 feet	Sapling
Red Pine	Low	10 - 20 feet	Sapling
Jack Pine	Low	5 - 10 feet	Sapling



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
53	3104 - Degraded	Nonstocked	2.0		Unspecified	Managed Opening	

54	6120 - Lowland Cedar	Sawtimber Well	12.6	127	201+	N/A	2020: Nice lowland conifer mix. 2000FMD C9C5H4F4WB4 Cedar maintaining good ring growth. 2010FMD; SPRUCE/FIR GROWING IN OPENINGS. WELL STOCKED CEDAR WITH SOME HEMLOCK/BS/BF.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	10	Log/Pole	12		Balsam Fir	Low	10 - 20 feet	Sapling
Paper Birch	5	Log	12		Black Spruce	Low	10 - 20 feet	Sapling
Balsam Fir	10	Pole/Log	9					
Black Spruce	15	Log/Pole	12					
Northern White Cedar	50	Log	12	127				
Hemlock	10	Log	14					

55	4126 - White, Black, N. Pin Oak	Sawtimber Well	6.5	111	111-140	N/A	2020: Lower quality oak and rm with pine. Low stocked wp understory. Log and pole mix. West line has been marked in past but did not find corners. Not accessible due to creek and private land. Stand is being treated as private land by adjacent landowner that controls access. 2010FMD; OAK/PINE FLAT ABOVE CREEK. TRESPASS WITH LAND POSTED ALONG BREAK PF RIDGE. WHITE PINE GROWING IN UNDER.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	13	Pole	8		Red Maple	Low	>20 feet	Sapling
Red Oak	30	Log	14	111	White Pine	Medium	>20 feet	Sapling
White Oak	40	Log	14	111	Red Pine	Low	>20 feet	Sapling
White Pine	10	Log	12					
Red Pine	5	Log	13	91				
Jack Pine	2	Log/Pole	10	91				

56	4310 - Pine, Oak Mix	Sawtimber Well	7.8	91	81-110	N/A	2020: Similar age to stand to south but more pine in this stand due to NW aspect. Not accessible without private access. There is an old road through stand from private property. Stand has permanant looking box blinds and tree stand likely from private land to south. 2000FMD potential or designated old growth. J4O7 some areas may convert to oak. 2010FMD PINE AND OAK MIX ON SLOPE ABOVE CREEK. MIX OR WO/RO/RP/WP/RM.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	10	Pole/Log	9		Red Maple	Low	>20 feet	Sapling
Red Oak	20	Log	15		Balsam Fir	Low	>20 feet	Sapling
White Oak	20	Log	15	111	White Pine	Medium	Variable	Sapling
White Pine	30	Log/Pole	11	91	Red Pine	Low	>20 feet	Sapling
Red Pine	10	Log	13	91				
Jack Pine	10	Log/Pole	10	91				

57	429 - Mixed Upland Conifers	Poletimber Well	6.2	86	81-110	N/A	2020: Small transitional stand fro lower ground to upland. Mixed species as a result. Some JP declining but not much volume. Let stand grow in. Mixed wp sizes XXL/L/P/S 2000FMD A4J4W7 2010FMD: Some pine appears to be older but most is 60-75 age. Aspen will fall out of stand but there is not much.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	20	Pole	8	86	Red Maple	Low	10 - 20 feet	Sapling
Red Oak	5	Log	12		Balsam Fir	Low	10 - 20 feet	Sapling
White Oak	5	Log	12		Black Spruce	Low	10 - 20 feet	Sapling
Bigtooth Aspen	5	Log	14	86	White Pine	Low	10 - 20 feet	Sapling
Balsam Fir	5	Pole	8					
Black Spruce	5	Pole	8					
White Pine	35	Log/Pole	11	86				
Red Pine	5	Log	14					
Jack Pine	15	Log/Pole	10	86				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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58	3104 - Degraded	Nonstocked	6.1			Managed Opening	
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59	4126 - White, Black, N. Pin Oak	Sawtimber Well	97.7	96	51-80	N/A	2020: Low density (30-60 BA) Oak and pine logs with rm,wp and some oak poles and saplings. Mixed oak sizes Xlog-pole. Part of the stand has oak and pine marked that was not harvested. East part of stand has lower stocking and would be a possibility for a red pine planting area. The west part of stand has thicker under story with wp and deciduous mix of poles and saplings. Could take off some off the older canopy but it is not clear that this would be a good move. May need to let stand develop. This looks like what was tried with the unfinished Tsale. It would be difficult to find the marked trees due to the amount of understory. 2000FMD O7O4A4R7W7 TS# 036-2002. TCR 2006. Cut all aspen ,jp and marked. Partial cut prescribed Aspen and some oak cut. 2010. Some of this sale may not have been completed. Stands 67,73,83,64,and part of 52 were all hooked in o/i. 2010FMD: This stand is for the most part marked but not cut. Large oak orange marked. Very large old oak scattered around with 80 yr class grown in of pine and oak/red maple poles. Very thick wp regen in places. Going to white pine without fire. Looks like part of old oak savannah grown in. Oak does not look like good quality for the most part. Old burnt pine stumps scattered about.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Pole/Sapling	7	
Red Oak	20	Log	16	
White Oak	50	Log	15	96
White Pine	10	Pole/Log	9	
Red Pine	7	Log	12	
Jack Pine	3	Pole/Log	9	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	10 - 20 feet	Sapling
White Pine	Medium	10 - 20 feet	Sapling
Red Pine	Low	10 - 20 feet	Sapling
White Oak	Low	5 - 10 feet	Sapling
Red Oak	Low	5 - 10 feet	Sapling

60	4191 - Mixed Upland Deciduous with Conifer	Sapling Poor	13.0	28	1-50	N/A	2020: Poor regeneration success after small clearcut-shelterwood harvest. Some oak and pine retention from last harvest-logs and poles. Patches of jp and aspen have better stocking but the stand is generally not well stocked. The oak seedlings and saplings are still getting browsed heavily and kept in stunted condition. 2000FMD A2 2010FMD: Harvested 1996. CC with retention. Clearcut pocket wit some oak and pine retained from last harvest. Regen mix growing in. Some oak getting through but most is browsed heavily and stunted.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	25	Sapling	3	28
Red Oak	5	Sapling	2	28
White Oak	10	Sapling	2	28
Bigtooth Aspen	10	Sapling	3	
White Pine	10	Sapling	4	
Jack Pine	25	Sapling	4	28
Black Cherry	5	Sapling	3	

61	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	8.7	116	141-170	N/A	2019: Mixed sized of pine but more XL/L than adjacent stand to east. This stand also has a larger RP component. Pockets of WP regen in gaps but not a lot of understory in general after last harvest. Basal Area is high in many areas. May want to bring the stocking down to try to encourage understory development. Little red pine recruitment. A good bit of merchantable red maple. Some wp logs cut out in 85 for internal use. 2000FMD selection harvest in 1993. wp seedlings present. 2010FMD: Large WP and RP-heavier to red. with ro/rm/wp/pb poles grown in
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	20	Pole	8	61
Red Oak	5	Log	11	61
White Oak	2	Log	11	
Paper Birch	3	Log	11	
White Pine	40	XLog/Log	18	116
Red Pine	30	Log/XLog	15	116

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	10 - 20 feet	Sapling
Balsam Fir	Low	>20 feet	Sapling
White Pine	Medium	5 - 10 feet	Sapling



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments				
62	4126 - White, Black, N. Pin Oak	Sawtimber Well	69.8	96	81-110	N/A	2020: Mixed sized of oak and pine canopy with developing understory. Oak understory is good in places with some patches getting past browse level but other areas are still getting browsed heavily and are suppressed. Most oak understory is WO. Wp understory is variable in stocking and height. More pine in understory in SW part of stand while central part of stand has more oak understory. Oak canopy is average/low quality but here are some nice oak stems mixed in. Red maple is merchantable but could benefit from time to let it put on more volume. Let this stand grow in to put on more volume and develop understory. May consider cutting back to shelterwood next entry if understory is developed. . 2000FMD O7O4A4R7W7 Partial cut prescribed Aspen and some oak cut. 2010. Some of this sale may not have been completed. Stands 67,73,83,64,and part of 52 were all hooked in o/i. 2010FMD: Some older larger pine scattered around but that size seems to have been targeted in last sale as well as aspen and jack pine. Most oak and pine is 80-85 yr class in cluding small rp poles that look to be age 35. White pine of various ages as it has been growing through. Jack pine and aspen is most all cut. Old oak 10-14" left (most is white) with wp/rm/rp poles grown in. Old burnt pine stumps scattered around.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Red Maple		15	Pole/Sapling	7		Red Maple		Medium	>20 feet	Pole	
Red Oak		20	Log	14	96	White Pine		Medium	Variable	Sapling	
White Oak		48	Log	13	96	Red Pine		Low	>20 feet	Sapling	
White Pine		15	Pole/Log	9		White Oak		Medium	5 - 10 feet	Sapling	
Red Pine		2	Log/Pole	12		Red Oak		Low	5 - 10 feet	Sapling	
						Bigtooth Aspen		Low	10 - 20 feet	Sapling	
63	3104 - Degraded	Nonstocked	3.6		Unspecified	Managed Opening		Well plugged 11/2000. Unknown if reclamation is needed or attempted. See comments below.			
64	42200 - Natural White Pine	Sawtimber Well	8.3	121	111-140	N/A		2020: Large old WP XL/L, with poles, saplings and seedlings under. Stocking is variable. JP is large and going out. Much of it is on ground already. May be interesting to get the remaining JP out and create some gaps to try to start new ages in this stand. Possible trespass concerns. Re-visit in spring. It looks like their stuff may be parked on state land as buildings may be right at line. 2002 FMD-P2. Part of stand 69. 2010FMD. W8 Parts of this stand and stand 76 were hooked in o/i stand 40 2010 FMD: Large old WP and RP. Most is white. with oak/rm/wp/jp poles grown in. Jp is 85 age and oak 50-50.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height	Size
Red Maple		15	Log/Pole	11		Balsam Fir			Low	>20 feet	Sapling
Red Oak		5	Log	12	56	White Pine			Medium	5 - 10 feet	Sapling
White Oak		2	Pole/Sapling	6		Red Maple			Low	10 - 20 feet	Sapling
Bigtooth Aspen		3	Log	12	91						
White Pine		60	Log	16	121						
Red Pine		5	Log	16	121						
Jack Pine		10	Log/Pole	13	96						
65	42290 - Natural Mixed Pine	Poletimber Well	3.8	73	51-80	N/A	2020: agree with last assesment. 2000FMD: J5 2010FMD: JP and aspen in drain between aspen regen. JP looks alright for now. Access is difficult to this and it seems to be a good thermal; pocket for deer.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Quaking Aspen		20	Pole	7		White Pine		Low	5 - 10 feet	Sapling	
Bigtooth Aspen		5	Pole	8		Black Cherry		Low	5 - 10 feet	Sapling	
White Pine		20	Pole	9							
Red Pine		5	Log/Pole	12	73						
Jack Pine		50	Pole	8	73						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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66	4130 - Aspen	Sapling Well	16.0	27	Immature	N/A	2020: Pockets of jp/ most is Bigtooth aspen. . Good growth on aspen. WO seedling/saps in gapes. 2000FMD A3 2010FMD:Harvested 1996. CC with retention. Pretty good aspen regeration with oaks, rm, jp wp bc mixed in. Some residual wp left from last sale.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Sapling	3	27
Red Oak	5	Sapling	2	
White Oak	5	Sapling	2	
Quaking Aspen	10	Sapling	3	27
Bigtooth Aspen	55	Sapling	4	27
Jack Pine	5	Sapling	4	
Black Cherry	5	Sapling	3	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	5 - 10 feet	Sapling
Black Cherry	Low	5 - 10 feet	Sapling
White Oak	Low	< 5 feet	Sapling

67	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	15.6	67	1-50	N/A	2020: Mix of oak and pine along drain. Factor Limit for riparian concerns and slopes. 2000FMD F4C4C7A4 Water quality/bmp/deer yard concerns. 2010FMD: Side hill with lower stocking pole sized jp/aspen/oak/rm. Better stocked to west part of stand but steeper slope.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Pole	8	
White Oak	20	Log	14	117
Bigtooth Aspen	8	Log/Pole	11	
White Pine	25	Log/Pole	11	67
Jack Pine	35	Pole/Log	9	67
Red Oak	2	Log	14	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	< 5 feet	Sapling
Jack Pine	Low	< 5 feet	Sapling
White Oak	Low	< 5 feet	Sapling

68	4310 - Pine, Oak Mix	Sawtimber Well	11.4	76	81-110	N/A	2020: Mixed pine /deciduous. Jp is dropping out of stand but some areas with good stocking. RM is of merchantable size. Some pockets of oak seedling/saplings. This stand could be re-started. CC with retention. Retain some well formed oak and pine. 2000FMD Delayed treatment for age size diversity 2010FMD; Residual oak/pine savannah with with younger age of jp,wp,rp,aspen 65 yr age. JP looks like a good bit could be younger 40-50.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	20	Pole	8	
Red Oak	5	Log	14	
White Oak	20	Log	14	100
Bigtooth Aspen	5	Log	11	76
White Pine	15	Log/Pole	11	76
Red Pine	5	Log	11	
Jack Pine	30	Pole/Log	9	76

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	5 - 10 feet	Sapling
White Pine	Low	5 - 10 feet	Sapling
White Oak	Low	5 - 10 feet	Sapling

69	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	30.3	108	51-80	N/A	2020: Mixed species and ages. Stocking is not high in most areas. Ground lays good. Consider harvesting with stand 68 and planting red pine after harvest. 2000FMD O7O4A4R7W7 Partial cut prescribed Aspen and some oak cut. 2010. Some of this sale may not have been completed. Stands 67,73,83,64,and part of 52 were all hooked in o/i. 2010FMD: Part of this stand was in past sale as well as the stand to the south. Some areas in this stand(south and east) have good 50 yr old rp and aspen grown in. Some younger oak. A good density of old burnt wp stumps. A good bit of rm poles from sprouts. Stand is basically old oak and pine with 50-60 yr class grown in...but a good bit of pine was cut out at some point-maybe more of a selective cut as the stumps were not real big?
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Pole/Log	8	
Red Oak	10	Log	12	
White Oak	35	Log	12	108
Bigtooth Aspen	5	Log	13	76
White Pine	10	Pole/Log	9	76
Red Pine	10	Log	13	76

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	10 - 20 feet	Sapling
White Pine	Low	Variable	Sapling
White Oak	Low	< 5 feet	Sapling



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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70	42290 - Natural Mixed Pine	Poletimber Well	12.7	56	81-110	N/A	2020: Unique stand with some of the largest wp in area. A vert large old rp also. Best to let this stand go through its natural processes. WP of all sizes and ages. 2010FMD: Part to east is more jp and wp along drain and slopes. The rest has large old white pine with the 45 age grown in under-mix of wp/jp/rm and a little oak under. Neat area. Large white pine is very large likely 120-160 yr old.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	17	Pole	8		Red Maple	Medium		10 - 20 feet	Sapling
Red Oak	3	Log	13	91	White Pine	Medium		5 - 10 feet	Sapling
White Oak	2	Log	13		Balsam Fir	Low		10 - 20 feet	Sapling
Yellow Birch	2	Log	12						
White Pine	45	Pole	8	56					
Jack Pine	15	Log	12	91					
White Pine	10	XLog	26	137					
Black Cherry	3	Log/Pole	10						
Red Pine	3	XLog/Log	22	137					

71	4310 - Pine, Oak Mix	Sawtimber Well	31.6	69	81-110	N/A	2020: Oak poles growing through older jp. Jp starting to fall out of stand. Consider harvesting the jp along with lower quality oak and rm. Attempt to retain the good quality oak poles. I believe the jp, rm, aspen would fill in. May want to stay west of road. 2000FMD J4O7 some areas may convert to oak. Retention of stand for regeneration purposes. i.e. shelterwood. 2010FMD: Jp ages checked 65 and 85. Most is likely 85. Oak poles and saps growing in. Stocking of canopy layer is variable. Some older aspen is scattered about. Older jp is going out. Scattered old oak.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	10	Log/Pole	11		Red Maple	Low		>20 feet	Sapling
Red Oak	5	Log	12		White Pine	Medium		10 - 20 feet	Sapling
White Oak	23	Pole	8	69	Jack Pine	Low		5 - 10 feet	Sapling
White Pine	10	Pole	8	56	Northern Pin Oak	Low		10 - 20 feet	Sapling
Red Pine	2	Log/Pole	12	96	White Oak	Low		10 - 20 feet	Sapling
Jack Pine	45	Log/Pole	10	69					
Bigtooth Aspen	3	Log	12						
Black Cherry	2	Sapling/Pole	4						

72	42290 - Natural Mixed Pine	Sawtimber Well	5.1	76	51-80	N/A	2020: This could be seed tree harvested if working in the area. Not high priority. Jack pine is declining. 2000FMD: J5 2010FMD; Pine and aspen in ice block depression.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Quaking Aspen	15	Log/Pole	11		White Pine	Low		< 5 feet	Sapling
White Pine	20	Log/Pole	11	76	Jack Pine	Low		< 5 feet	Sapling
Jack Pine	55	Log/Pole	11	76					
Red Pine	5	Log	12						
White Oak	2	Log/Pole	12						
Black Cherry	3	Pole	8						

73	42220 - Natural Jack Pine	Poletimber Medium	30.2	54	81-110	N/A	2020: Patchy jp with some oak, aspen and wp. Jp should be harvested if this area will be added to managed barrens area and maintained with burning. There is a merchantable amount of timber and fire would not carry very well through the current stocking.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Jack Pine	77	Pole/Log	8	54	Black Cherry	Low		5 - 10 feet	Sapling
White Pine	5	Log	13		White Pine	Low		< 5 feet	Sapling
Quaking Aspen	5	Pole	7	54	Red Maple	Low		5 - 10 feet	Sapling
White Oak	5	Log	16						
Black Cherry	5	Pole	6						
Red Maple	3	Pole/Sapling	6						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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74	42290 - Natural Mixed Pine	Sawtimber Medium	12.9	54	81-110	N/A	2020: Patchy white pine -mixed sizes. Could keep as retention area in barrens management. Network of game trails passing through. Could harvest and and to area managed with fire. Stand could also be thinned a bit if harvesting nearby.
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Canopy Species	% Cover	Size Class	DBH	Age
White Pine	58	Log/Pole	13	54
Red Pine	3	Log	12	
Jack Pine	20	Pole/Log	8	54
White Oak	5	Log	14	
Bigtooth Aspen	5	Pole	8	
Quaking Aspen	5	Pole	6	
Red Oak	2	Log	14	
Black Cherry	2	Pole	7	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	5 - 10 feet	Sapling
Black Cherry	Low	5 - 10 feet	Sapling

75	4126 - White, Black, N. Pin Oak	Sawtimber Well	32.4	108	81-110	N/A	2020: Older oak canopy with pine/aspens/rm in second age. Most rm is poles/sapling and much is not merchantable at this time. Some pockets of older aspen but also a younger age class. Let this stand grow in. May want to return to barrens look in future entry. 2000FMD O7A4 2010FMD: Most canopy is old oak and wp is coming in. Part of old oak/pine savannah but more oak canopy.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	16	Pole/Sapling	6	
Red Oak	20	Log/XLog	16	
White Oak	50	Log/XLog	16	108
Bigtooth Aspen	5	Log	13	76
White Pine	5	Pole/Log	9	76
Red Pine	2	Log	13	76
Jack Pine	2	Log/Pole	10	76

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	>20 feet	Sapling
White Pine	Low	10 - 20 feet	Sapling
Red Pine	Low	10 - 20 feet	Sapling
White Oak	Low	< 5 feet	Sapling

76	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	15.6	101	81-110	N/A	2020: If most of canopy removed it seems likely that this stand would eventually return to wp and rm with some oak. Split off stand to north (155) which has a heavier ro component. Average oak with wp under. Old burnt pine stumps. Mixed pine sizes. 2017: clumped 3 stands and remotely updated canopy call. Field check. 2000FMD O7R7O4M4A4 Potential or designated old growth. 80 yr old oak mature. Considering low SI. Sampled oak 81 yr old slowed growth at 60 yr. Small JP stand (O/ 103) age 62 in nw corner. 2010FMD: 80-100 ytr old pine and oak with lots of pine underneath. Some slopes would not be workable. Aspen heavier on slopes. Old burnt pine stumps throughout. Redpine saplings and poles are scattered about. White pine in various sizes in understory throughout.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Pole	7	
Red Oak	30	Log	13	101
White Oak	20	Log	13	101
Bigtooth Aspen	3	Log	12	
White Pine	20	Log	13	91
Red Pine	15	Log/Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	>20 feet	Sapling
White Pine	Medium	10 - 20 feet	Sapling
Red Pine	Low	10 - 20 feet	Sapling

77	4311 - Pine, Aspen Mix	Poletimber Medium	13.0	61	1-50	N/A	2020: Mixed pine/QA. Aspen is poor quality and dropping out. Better stocking on west side. 2010 FMD: Small ice block depression /frost pocket with aspen and jp-low density poles. WLD 1/21/20: Consider treating east part of this stand to promote Oak Pine Barrens vegetation and restoration. The NE end of this stand is part of MNFI' delineated Carpenter Creek North Oak Pine Barrens ERA.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Pole/Sapling	6	
Quaking Aspen	35	Pole	8	61
Jack Pine	35	Pole	8	61
Black Cherry	10	Pole	8	
White Pine	15	Pole	9	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	5 - 10 feet	Sapling
Jack Pine	Low	5 - 10 feet	Sapling
Black Cherry	Medium	5 - 10 feet	Sapling



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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78	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	38.5	111	51-80	N/A	2019: cut in mid 1960's. Cut aspen, birch, rm. Part of stand cut in 2005. Cut aspen, jp, orange marked. Two ages of aspen. Pockets of oak seedling getting browsed heavily. Let stand grow in. 2000FMD Some open grown rm and large oaks. Juneberry and bc. Scattered pockets of jp. WLD MNFI identified as part of old pine-oak barrens. 2010 Likely a second older age class. Hooked with stands 110,79,82 in O/I.2000FMD O7O4A4R7W7 Partial cut prescribed Aspen and some oak cut. 2010. Some of this sale may not have been completed. Stands 67,73,83,64,and part of 52 were all hooked in o/i. The sale may not have been in this part of stand. 2010 FMD. Timber sale covered most of this stand. Looks like some bigger oak, jp and clones of bigger aspen were cut out. Left is oak, wp/rp/rm/and 3-6" aspen. Complex mix of oak /pine logs and pine/rm/oak and aspen poles. White pine saps are getting knocked down by the snow but a good many will grow through. Let grow in until aspen matures.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	25	Pole/Sapling	6	53	Red Maple	Low	10 - 20 feet	Sapling
Red Oak	5	Log	14	111	Bigtooth Aspen	Low	10 - 20 feet	Sapling
White Oak	25	Log/Pole	12	111	White Pine	Low	10 - 20 feet	Sapling
Bigtooth Aspen	20	Pole/Sapling	6	53	Black Cherry	Low	10 - 20 feet	Sapling
White Pine	20	Pole/Log	8	53	White Oak	Medium	< 5 feet	Sapling
Red Pine	5	Log/Pole	12		Red Oak	Low	< 5 feet	Sapling
					Jack Pine	Low	5 - 10 feet	Sapling

79	4310 - Pine, Oak Mix	Sawtimber Well	12.2	69	81-110	N/A	2020: This stand has large older WO/RO XL trees with jp,wp,rm,oaks in younger age class. Lower quality. May want to retain some better oak and pine poles and clearcut. Wp poles are decent in some areas and some good wo poles also in places. Could harvest with stand to west. 2000FMD Delayed for age class diversity. J5 2010FMD; Strip op jp and oak left between two other treatments. Oak is more common in central part of the stand. Jack pine is starting to fall apart. Shoud harvest this strip if possible. Retain decent oak poles. Oak regen in adjacent stand is browsed badly. could weave some rp in if it could be cut cleanly. This could be done with such a treatment in stand 78 (pre-inv). It has some good lying ground. Natural rp did not come in in harvest to the east.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	10	Pole	8		Red Maple	Low	10 - 20 feet	Sapling
Red Oak	10	Log	12	111	White Pine	Low	5 - 10 feet	Sapling
White Oak	28	Log	12	111	White Oak	Low	5 - 10 feet	Sapling
Bigtooth Aspen	5	Log	12		Red Oak	Low	5 - 10 feet	Sapling
Red Pine	2	Log	12	89				
Jack Pine	32	Log/Pole	10	69				
White Pine	13	Pole	7					

80	4311 - Pine, Aspen Mix	Poletimber Well	20.8	54	81-110	N/A	2020: Nice pine ground. Red pine looks good. Mixed aspen sizes. This stand could likely regenerate to aspen/rm/jp if harvested. Could also be managed as red pine plantation with deciduous control. Ground seems best suited for pine. This stand could grow in more volume if left until next entry but could be harvested at this time. 2000FMD Some open grown rm and large oaks. Juneberry and bc. Scattered pockets of jp. WLD MNFI identified as part of old pine-oak barrens. 2010 Likely a second older age class. Is this barrens with a 40-50 yr class grown in? This stand has more pine than surrounding stands? Hooked with stands 110,79,83 in O/I. Mix of older pine and oak with most red pine at age 75. White pine is mixed ages. Most aspen and rm is pole sized -43 age from previous inv. Stand is part of old oak pine barrens. Let stand grow in for now. could be added to managed barrens area in future. Good pulpwood volume growing in with nice species mix.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	10	Pole/Sapling	7	54	Red Maple	Medium	10 - 20 feet	Sapling
Red Oak	5	Log	16	101	White Pine	Medium	10 - 20 feet	Sapling
White Oak	15	Log	15	101	Black Cherry	Low	10 - 20 feet	Sapling
Bigtooth Aspen	25	Pole	8	54	Red Oak	Low	< 5 feet	Sapling
White Pine	15	Log	13	86	White Oak	Low	< 5 feet	Sapling
Red Pine	20	Log	13	86				
Jack Pine	10	Pole/Log	9	86				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																												
81	42220 - Natural Jack Pine	Poletimber Well	9.9	56	51-80	N/A	2020: Oak and rm understroy. 2010: some scattered oak but most is bushy jp aged 35-45. Good little thermal cover patch for wildlife.																																																												
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82	31022 - Warm Season Grass	Nonstocked	2.9		Unspecified	Managed Opening	Consider treating this stand to promote Oak Pine Barrens vegetation and restoration. This stand is part of MNFI' delineated Carpenter Creek North Oak Pine Barrens ERA.																																																												
83	4310 - Pine, Oak Mix	Sawtimber Well	7.1	98	81-110	N/A	2020: Mixed stand. Could be CC with retention to restart stand. Aspen is old and conky. Good bit of oak seedlings. 2010: Mix of older oak and pine with 65 yr class of pine/aspen oak and maple. White pine coming in underneath.																																																												
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84	4310 - Pine, Oak Mix	Poletimber Well	31.1	27	1-50	N/A	2020: Jp poles that have filled in after last harvest with rm, wp and oak poles. More oak to north part of stand. Scattered older oak and pine left as retention in last harvest. Let stand develop. 2000FMD J5O7 O3 is composed of seedlings less than 1 ft tall. Sampled jp. 63 year old. Growth slosed after 40 yr. Harvested in 1994?? M4O4J1M1W2. 2010FMD. was hooked with ifmaps stands 96 and 103. Oak regeeration is browsed badly. Little rp regen.																																																												
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85	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	20.4	56	1-50	N/A	2020: This could be cut back to nice barrens look with well formed oak and pine retained. Could let it grow back in with aspen, jp,rm, wp expected to come in under. Could also add this to the managed barrens area and burn to maintain. This stand could wait until next entry to allow the aspen and rm especially to put on more volume. 2010 FMD: Stand surrounds natural frost pocket (NF Stand 86) Older oak (most white oak) with 45 year old jp/rp/aspen/wp /rm grown in. Let stand grow in for now.																																																												
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86	42220 - Natural Jack Pine	Poletimber Poor	4.5	56	51-80	N/A	2020: converted from non forested . Patchy jp with mixed deciduous. Frost pocket.WLD: Consider treating this stand to promote Oak Pine Barrens vegetation and restoration. This stand is part of MNFI' delineated Carpenter Creek North Oak Pine Barrens ERA.																																																													
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87	4310 - Pine, Oak Mix	Sawtimber Well	15.1	91	81-110	N/A	2020: WO seedlings under older oak and pine canopy. . Mixed sizes of oak and pine. Keep as riparian strip along creek. 2010FMD: Riparian zone along creek. Sidehill and a little bottom. Some large wp/rp and oak with younger wp. and jp . RM and oak poles.																																																													
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88	310 - Herbaceous Openland	Nonstocked	6.4	0	Unspecified		Shooting Range																																																													
90	622 - Lowland Shrub	Nonstocked	34.8		Unspecified	No																																																														
94	4126 - White, Black, N. Pin Oak	Sawtimber Medium	9.7	127	1-50	N/A	2020: Heavy wo saplings under oak pine canopy. Also pockets of jp/wp in sub-canopy. Let stand grow in. Keep canopy call on older trees. Consider getting most of the overstory off if possible. 2000FMD J507 O3 is composed of seedlings less than 1 ft tall. Sampled jp. 63 year old. Growth slowed after 40 yr. Harvested in 1994? M4O4J1M1W2. 2010FMD. was hooked ith ifmaps stands 86 and 103. 2010FMD; Looks like this was cut with stand to west 86 (pre-inv) but there was more oak and jp residual. Heavier oak regenreation and less jp than the other stand but still a good bit of jp. Lots of small oak that is heavily browsed. Oak logs and poles and jp/wp poles with jp and wp regen.																																																													
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95	4133 - Aspen, Mixed Pine	Sapling Well	11.5	24	1-50	N/A	2020: Let stand grow in. Mix of aspen and wp. Various ages on wp. Beaver activity. 2010: 13-16 yr old aspen regen. Some smaller white pine and jp saps and poles were left at last harvest so now this is a component of aspen stand. Also some scattered oak/wp and rp left from last sale.																																																													
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96	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	5.5	127	51-80	N/A	2000FMD A4E4T4W7C4. Deer yards WLD: Beaver has flooded most of stand. Some regen is occurring with low water levels. 2010FMD: Low stand along creek. Spruce in east part killed by high water- beaver activity. 2010 FMD: Low area along creek. West end has some killed timber from high water-beaver.																																																												
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97	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	9.7	81	81-110	N/A	2010FMD: Side slope on Creek trib. Mix of big pine and oak with younger ages grown in.																																																												
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98	42220 - Natural Jack Pine	Sapling Medium	2.6	27	Immature	N/A	2020: Most is well stocked jp poles. Still some open area on north. 2010: opening that has filled in with jp 5-10' tall. The north end is still partly open. Stand is under 4.4 acres but jp sapling stand next to oak/pine log/pole stand																																																												
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99	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	19.7	71	111-140	N/A	2020: Mixed pine with oak along drain. Mixed ages in pine. JP is starting to go out but not too bad at this time. May be best to keep this for thermal cover along drain and let other species grow as jp fall out. 2000FMD Retention of stand for regeneration purposes i.e. shelterwood Delayed treatment for age/size class diversity 2010FMD: Stand is on varied topography from creek drainage up on to flat above creek. Mix of natural pine and white oak. Jack pine is decent looking. rp age 60 and wp 75 on aged trees. Bigger jp is 75-this may be all jp? Lower stocking on north end of stand. Basically this is more oak savannahwith 65-75 ages grown in.																																																												
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100	31022 - Warm Season Grass	Nonstocked	159.8		Immature	Managed Opening	2019: FMD Managed barrens area expanded with additional harvest of adjacent forested stands. TS#043-12. Harvested 2014. Continue rotational burns to develop and maintain barrens habitat. Rough blazing star, harebell, little bluestem, Hill's thistle, yarrow,																																																												



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103	42210 - Natural Red Pine	Sawtimber Well	30.3	71	81-110	N/A	2020: TS# 048-12. Harvested 2014. Cut all aspen, jp,rm, bc and orange marked. Stand looks good. Stocking is lower in areas that were heavier to jp last harvest. Continue to manage as visual break along road at this time.																																																										
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104	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	5.2	101	81-110	N/A	2020: Oak and pine logs with rm,wp,rp poles/small logs. Some wp seed/saps growing in gaps and old skid roads. Large older oak scattered around stand. The XL oak log trees are a concern due to size and age but the rest of the stand just needs to grow in at this time. May be good to thin stand next entry and remove some of the larger oak. Harvested 1996. Cut all aspen, jp and orange marked. 2000FMD07R7O4M4A4 Potential or designated old growth. 80 yr old oak mature; considering low SI. Sampled oak 81 yr old slowed growth at 60 yr. Small JP stand (O/I 103) age 62 in nw corner. 2010FMD: 80-100 yr old pine and oak with lots of pine underneath. Some slopes would not be workable. Aspen heavier on slopes. Old burnt pine stumps throughout. Red pine saplings and poles are scattered about. White pine in various sizes in understory throughout.																																																										
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105	42290 - Natural Mixed Pine	Sawtimber Medium	39.2	51	81-110	N/A	2020: Medium density pine with Aspen, Jp, Oak Wp, RM. filling gaps. All of the stands on this peninsula were harvested at the same time but the amount of residual overstory has determined that three stands now exist. This stand has the medium amount of canopy left. Stand 107 has the most and stand 114 the least. harvested 2002. Cut all rm,aspen,jp and rp over 18"dbh. 2010: Stand 25 (o/i) made up part of this stand and part of stand 108. 2000FMD: O7W7J4A4. Sampled rp-64 yr ol, slowed at 40. After harvest, area may convert to aspen/wp. WLD: manage long term towards late successional habitat. O/I stand 29 made up the west part of this stand. Second age from this stand data. Looks like both stands 29 nad 25 were prescribed for a delayed harvest -shelterwood type cut with aspen ,jp,mixed hwd and some oak cut. 2010FMD: Some older pine and oak scattered around. Most rp is 55 age with med stocking of wp poles 30-55 age that were released by last harvest(2002) aspen/rm/jp regen good in spots. This stand was cut with pre-inv stands 116 and 108.																																																										
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106	622 - Lowland Shrub	Nonstocked	7.3		Unspecified	No																																																											



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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107 42290 - Natural Mixed Pine Sawtimber Well 17.1 81 111-140 N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Oak	5	Log	16	
White Oak	20	Log/XLog	14	111
White Pine	35	Log/Pole	12	81
Red Pine	40	Log/Pole	12	81

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	10 - 20 feet	Sapling
Bigtooth Aspen	Low	10 - 20 feet	Sapling
White Pine	Medium	Variable	Sapling
White Oak	Low	5 - 10 feet	Sapling
Red Oak	Low	5 - 10 feet	Sapling

2020: Mix of pines and oak. Mixed pine sizes. Looks natural. Pockets of wp and aspen regen. Let stand grow in. Stocking is fine.
2010:Harvested 2002. Cut all rm,aspen,jp and rp over 18"dbh. Stand 25 (o/i) made up part of this stand and part of stand 108. 2000FMD: O7W7J4A4. Sampled rp-64 yr ol, slowed at 40. After harvest, area may convert to aspen/wp. WLD: manage long term towards late successional habitat. O/I stand 29 made up the west part of this stand. Second age from this stand data. Looks like both stands 29 nad 25 were prescribed for a delayed harvest -shelterwood type cut with aspen ,jp,mixed hwd and some oak cut. 2010FMD: Big wo/rp/wp scattered around (100 yr) with rp at 70 yr. Aspen/wp/rm/jp regen after last harvest (2002) but not as thick as in pre-inv stands 116 and 106. Let stand develop. Getting big pine look. This stand was cut with other stands on penninsula. This stand is mainly in drains and slope along creek and has higher residual ba of pine and oak.

108 4131 - Aspen, Oak Poletimber Well 16.2 54 51-80 N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Pole/Sapling	6	
Red Oak	5	XLog/Log	18	111
White Oak	30	Log	14	111
Quaking Aspen	10	Pole	8	54
Bigtooth Aspen	30	Pole	8	54
White Pine	5	Log/Pole	12	
Jack Pine	8	Pole	8	54
Black Cherry	5	Pole/Sapling	6	
Red Pine	2	Log/Pole	12	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	5 - 10 feet	Sapling
Bigtooth Aspen	Medium	5 - 10 feet	Sapling
White Pine	Low	5 - 10 feet	Sapling
Jack Pine	Low	5 - 10 feet	Sapling
Black Cherry	Medium	5 - 10 feet	Sapling

2019: Cut in mid 1960's. Cut aspen, birch, RM. Barrens look with oak scattered through and aspen grown in gaps. Good bit of wo seedlings/saplings in places. Could open up to barrens look. Would want to treat stand to east if done. Would also be fine to hold this stand until next entry. Aspen and red maple could put on some volume with some time. 2000FMD Some open grown rm and large oaks. Juneberry and bc. Scattered pockets of jp. WLD MNFI identified as part of old pine-oak barrens. Hooked with stands 79,83,82 in O/I. Is this all barrens with a 40-50 yr class grown in. 2010FMD: This is part of area identified by MNFI as high quality oak/pine barrens. Part of this stand and openings that are adjacent have been in prescribed burn area done by unit in recent years. If possible get this chipped and add to burn area. Aspen is scattered and pole sized but there may be enough wood to get someone to purchase.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																						
110	42141 - Planted Mixed Pine, Mixed Deciduous	Sapling Poor	64.0	6	1-50	N/A	2021: dropped herbicide release treatment. Pre-commercial release treatment may be future option. 2019: Planted red pine looks alright. JP, RM, BC are species of most concern for red pine freeness to grow. Some oak and aspen in north end but not generally through stand. Release spray did not happen in 2019 due to equipment issues. Re-surveyed in 10/2019. 80% Survival and 34% FTG in north part of stand. 83% survival and 41% FTG in south portion. Most competition is JP and BC with some aspen, oak and rm. Without intervention this stand will likely become rp/jp with a deciduous component. RP should outgrow the jp. Most of the stands in this area had a red pine component that was much better size and form than the jp in the stands. Some cherry and rm stump sprouts are over 6' tall but it may be good to try to reduce the amount of deciduous competition so I will keep the spraying treatment on this stand. If this does not get a release spray it would be acceptable as well. 2018: Regen survey 600-650 TPA remaining. Release needed. Cherry, Red Maple, Beech, Jack Pine and Oak Competition. Schedule release spray 2019. 2015: TS# 044-12. Cut to 2: dbh and chipped tops. Do not cut green marked retention-pine and oak or any tree within 20' of orv trail. Harvested and trenched 2014. Merged this stand with stand 115 after treatment. Planted 2015. Re-planted 2017. 2005: Should get aspen, remaining jp and red maple out. More aspen in north along creek drain. Leave most rp and any oak if found. 2000FMD Delayed harvest for age/size class diversity. J6R4 WLD. MNFI identified as part of a remnant oak-pine barrens. 2010FMD: JP is falling out. Heavy slash load could be problem for control issues during prescribed fires in adjacent stands.																																																						
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111	622 - Lowland Shrub	Nonstocked	2.2		Unspecified	No	2000FMD A4E4T4W7C4. Deer yards WLD: Beaver has flooded most of stand. Some regen ios occuring with low water levels. Stand swapped from Forested to Non-Forested.																																																						
112	6130 - Fir, Aspen, Maple	Poletimber Well	5.1	93	81-110	N/A	Slope going down in to creek and bottomland along creek. Mix of aspen/wp rm/bf/oak																																																						
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments			
113	4310 - Pine, Oak Mix	Sawtimber Well	5.5	71	81-110	N/A	2020: A good bit of oak saps and seedling in understory. Could reduce canopy and release oak under. Would be ideal if this could be burned after harvest to re-sprout oak. This stand has small acreage. Would be best to do with stand to west when that is harvested. May be able to burn after harvest if times with barrens area rotational burn. 2000FMD: TP1 Delayed treatment for age/size diversity. J5M4A4O7. WLD J6 w/scattered pole and sapling aspen, black cherry, white pine, red pine, red maple. Was hooked with 117 and 137 2010 FMD: Mix of jp, rp,oak rm and aspen in canopy. Oak in regen layer. A lot of r red maple sprouts that made it to canopy. Must've been cut out a one point.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Maple	20	Pole/Sapling	7			Red Maple	Medium	5 - 10 feet	Sapling	
Red Oak	2	Log	14			White Pine	Medium	5 - 10 feet	Sapling	
White Oak	18	Log	14	92		Black Cherry	Low	5 - 10 feet	Sapling	
Bigtooth Aspen	5	Log	11	71		Red Oak	Low	< 5 feet	Sapling	
Red Pine	35	Log	13	71		White Oak	Medium	< 5 feet	Sapling	
Jack Pine	20	Log/Pole	10	71						
114	4133 - Aspen, Mixed Pine	Sapling Medium	24.6	19	1-50	N/A	2020: final harvested in 2002 yoe. Cut all aspen,jp,rm Leave RP,WP. Low density pine and oak left from last harvest with pockets filling in with aspen, wp, rm, bc, oak. Put aspen,rm,jp in canopy this inventory. Let stand develop. Good wildlife habitat. 2000FMD: J4A4O4. Cut aspen/jp/some oak. 2010FMD: Left some larger oak and pine +sap/pole sized oak/wp and balsam in last harvest. Now mix of log/pole overstory with aspen/oak/wp/jp/maple understory. Good regen in places. Patchy but filling in. Let stand develop. PI stands 106 and 108 seem to have been part of same treatment in 2002.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Oak	3	Log	14			White Pine	Low	5 - 10 feet	Sapling	
White Oak	5	Log	14	109		Red Oak	Low	5 - 10 feet	Sapling	
Balsam Fir	5	Pole	8			Black Cherry	Low	5 - 10 feet	Sapling	
White Pine	15	Log/Pole	10	75		White Oak	Low	< 5 feet	Sapling	
Red Pine	2	Log/Pole	12	75						
Bigtooth Aspen	30	Sapling/Pole	3	19						
Quaking Aspen	20	Sapling/Pole	3	19						
Jack Pine	15	Sapling/Pole	4							
Red Maple	5	Sapling/Pole	3	19						
116	42220 - Natural Jack Pine	Sapling Well	86.8	27	Immature	N/A	2020: Little RP survival. Good jp stocking. Some red pine will likely end up in canopy as stand matures. 2000FMD: Harvested 1993. JP salvaged with heavy budworm infest, FTP# C-61-355 R2 2010FMD: Red pine trenched and planted. While some red pine has survived, it is not keeping up with jp and cherry. Most of the canopy is now jack pine. Red pine and some jack pine that is more open grown looks pretty unhealthy. Some red pine may survive to reach canopy in developed stand. Stand was replanted after the first attempt failed. Bad J rooting in first planting effort. Cross trenched it and replanted second time.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Red Maple	2	Sapling	3							
Red Pine	5	Sapling	3	27						
Jack Pine	87	Sapling/Pole	4	27						
Black Cherry	5	Sapling	3							
White Pine	1	Sapling/Pole	4							
117	330 - Low-Density Trees	Nonstocked	9.9			No	2020: Low density trees. Oak/jp/wp. Jp filling in. Could use some maintenance.			
118	42220 - Natural Jack Pine	Sawtimber Well	5.2	76	111-140	N/A	2020: Mature jp. Could cut if nearby or leave for bedding cover. White pine is coming in under. Small stand and volume. 2010: Big scattered WO/WP/RP with 65 yr old jp grown in. Stand across road to south is set for harvest (Boardman Road Pine). Save this stand for Un-cut pocket.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
White Oak	15	XLog/Log	18	109		Red Maple	Low	< 5 feet	Sapling	
Bigtooth Aspen	3	Log/Pole	11	76		White Pine	Low	< 5 feet	Sapling	
White Pine	8	XLog/Log	18	109		Red Oak	Low	< 5 feet	Sapling	
Red Pine	5	Log/Pole	12	109		White Oak	Low	< 5 feet	Sapling	
Jack Pine	65	Log/Pole	11	76						
Black Cherry	2	Pole/Log	9							
Red Maple	2	Pole	8							



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																															
119	4191 - Mixed Upland Deciduous with Conifer	Poletimber Medium	39.4	58	1-50	N/A	2020: Barrens look. Would be good to clean this up and re-sprout the aspen/rm but not much volume per acre. Some large oak scattered around. May be able to sell when stand to south is harvested. 2000FMD: Quaking and big tooth aspen. WLD aspen3-5 dbh, low-med density 20ft tall with pole size mixed pine, bc, rm oak. 2010FMD: Aspen is poor quality and low stocking. Might not be a commercial harvest. Would be good to ge this cut and restore barrens look.																																																															
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120	4130 - Aspen	Sapling Poor	42.2	8	Immature	N/A	2020: Clearcut 2013 with oak and pine retention. Some areas with good big tooth aspen regen. West part of stand had more poor quality quaking aspen that is not regenerating as well. QA and rm getting browsed heavily. Chery,wp and rm filling in gaps. Canopy called on new stand. Accept lower stocking on west part of stand. This will create good habitat for some species.																																																															
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121	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	32.8	41	81-110	N/A	2020: Mix of large log- oak, pine, aspen with poles. Oak seedlings under. Could leave this be or could get aspen out with some of the oak. The wp is mainly pole sixed. Would end up with a difficult two aged stand but this stand does seem to be an extension of the barrens type stand to the north. This stand has a large component of old large oak. Most red maple is sub-merchantable at this time. May be best to let this stand grow in before trying to treat. In the future may want to keep his stand in the barrens look. 2000FMD: O8A4 Retention of stand for retention purpose i.e. shelterwood. "Leave aspen mature and harvest leaving some residual oak. Will convert to aspen. FMD Manage long term towards ate sucessional habitat(white pine). 2010 FMD: White pine is filling in understory with thick regen in spots. Older age of pine/oak/aspen with areas of younger wp and aspen. Could try to get aspen out in places where wp regen is not so thick. Red maple sprouts throughout stand that made canopy level. Looks like maple was cut out 15-20 yr ago. West side seems more possible for an aspen harvest.																																																															
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122	42220 - Natural Jack Pine	Poletimber Well	66.6	76	51-80	N/A	2020: East part of this stand harvested and planted last entry. (st131) RP much better than jp in stand. Jp is declining and falling out of stand. This should be harvested and planted to rp. A few large oak scattered in stand. Green-up concerns but jp may fall out before next entry. It would be good to wait if we can to let adjacent stand grow in. . Motorcycle and snowmobile trails. 2010: Large area of jack and red pine. Variable stocking mix of both species. RP age 65 and some jp in that age but a lot of the jp is 35 yrs old. Stocking is varialble but low BA in most areas. East of the snowmobile trail or ORV trail the stocking is better and more of the 65 yr old jp is still standing. A few scattered oak, cherry and maple and pockets of poor quality aspen. Aspen is declining as is the older jp.																																																															
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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123	3104 - Degraded	Nonstocked	2.3		Unspecified	Managed Opening	
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124	6132 - Mixed Lowland Forest with Cedar	Sawtimber Well	19.0	126	51-80	N/A	2020: Lowland mix along drain. Good bedding, escape and travel for wildlife. 2000FMD: E5C4F4C7 Fir in medium to poor condition. Stand converting to lowland hardwoods. Deer yard. second age data from o/i stand 15 aspen. Q type along intermittent stream aspen dominated in that stand. 2010 Fmd: Low strip along drain. Winter deer bedding area along and in drain.
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Canopy Species					% Cover	Size Class	DBH	Age	Sub-Canopy Species				Density	Avg. Height	Size
Red Maple					20	Log/Pole	10		Red Maple			Medium	10 - 20 feet	Sapling	
Red Oak					2	Log	14		Balsam Fir			Medium	10 - 20 feet	Sapling	
Paper Birch					8	Log/Pole	12		White Pine			Low	10 - 20 feet	Sapling	
Bigtooth Aspen					15	Log/Pole	12	83							
Balsam Fir					20	Pole	8								
Northern White Cedar					25	Log/Pole	12	126							

125	3104 - Degraded	Nonstocked	1.7		Unspecified	Managed Opening	
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126	42210 - Natural Red Pine	Sawtimber Well	31.8	71	51-80	N/A	2020: Red pine over story remaining after last harvest. A few oak and wp also left. Stocking is variable. Red pine is getting large. Parts of stand have been underplanted with red pine but not all. Patchy aspen regen understory . Oak saplings and seedlings under pine and in gaps. 2000fmd: R7A2R1A1 Stand harvested in 1994 and understory planted to rp. aspen and rm regen also present. red pine overstory can remain until next harvest-probably 30 yr. WLD black cherry and maple saps also present. 2010. Saw some underplanted rp on the west side of stand in the more open areas. Stand was harvested with rp retained-variable stocking. Oak,rm,jp,bc,aspen understory has developed. a good bit of oak and some has grown past browsing . Much of the oak is heavily browsed.
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Canopy Species					% Cover	Size Class	DBH	Age	Sub-Canopy Species				Density	Avg. Height	Size
Red Pine					100	Log	15	71	Red Maple			Low	10 - 20 feet	Sapling	
									White Pine			Low	5 - 10 feet	Sapling	
									Red Pine			Low	10 - 20 feet	Sapling	
									Jack Pine			Medium	>20 feet	Sapling	
									Quaking Aspen			Medium	10 - 20 feet	Sapling	
									White Oak			Low	5 - 10 feet	Sapling	
									Bigtooth Aspen			Low	10 - 20 feet	Sapling	

127	42290 - Natural Mixed Pine	Sawtimber Well	9.0	93	81-110	N/A	2020: Stocking variable. Aspen and jp dropping out of stand. Stand is not well invested at this time. Could harvest and plant rp. Would have to control aspen. 2000YOE Retention of stand for regeneration purposes i.e. shelterwood. Hold stand until jp matures-10-15 yrs. 2019FMD: Jp looks better in this stand. Aspen and jp look like they are 72 age from pfev. inv. Older rp and wp-82 yr. with a good bit of wp (4-6") dbh in younger age. Aspen is still in pretty good shape. Could let this stand till next entry. Looks like things are well and growing.
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Canopy Species					% Cover	Size Class	DBH	Age	Sub-Canopy Species				Density	Avg. Height	Size
Red Maple					3	Pole	8		Red Maple			Low	10 - 20 feet	Sapling	
White Oak					5	Log	14		White Pine			Low	10 - 20 feet	Sapling	
Bigtooth Aspen					15	Log	14	83	Black Cherry			Low	< 5 feet	Sapling	
White Pine					35	Log/Pole	12	93							
Red Pine					30	Log/Pole	13	93							
Jack Pine					10	Log/Pole	11	83							
Black Cherry					2	Pole	9								



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																											
130	42290 - Natural Mixed Pine	Sawtimber Well	30.7	83	111-140	N/A	2020: Good pine site. Mixed pine sizes. Species mix varies through stand as well as stocking. Fair amount of aspen saplings in understory 10-20'. Areas with a good bit of wp understory 5-20'. Some areas with oak and rm seedlings. Some bigger older wp/rp/oak mixed in. This stand was last treated with stand 133 but had less aspen. Could thin heavily and hope that gaps fill in or wait for understory to become merchantable. Oak seems to be coming in along road edges where the light is more ideal for mid tolerant species. Would be best to harvest and eliminate advanced regeneration before re-planting. 2000FMD prescribed to harvest jp and aspen. TS# 025-02. TCR 2005. Cut aspen, jp,rm and orange marked. 2010FMD: Aspen regen under pine 5-10 ft tall not going anywhere fast due to canopy closure. Pine stocking is fine. Let this stand grow in. BA 70-170. Avg 124.																																											
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131	330 - Low-Density Trees	Nonstocked	84.1	0		42111 - Planted Red Pine, Mixed Deciduous	2018: Fall regen check. 35% mortality-73% FTG. Trenches are filled in. Re-plant had poor survival. Part of first planting was killed by herbicide along with most of the jp. Stand will need to be grown as is or re-trenched and started over. Trenches are too filled in to re-plant without re-trenching. 2015: TS# 046-12. Harvested winter 2014-15. Trench in summer 2015 and plant red pine summer 2016. Survival was not good due to dry spring. Regen check 8/2017. 663 tpa rp. 733 tpa non target-cherry, rm, aspen. Sprayed 2017 to control maple and cherry competition. Re-plant 5/2018 621 TPA 2000FMD: TP1 Delayed treatment for age/size diversity. J5M4A4O7. WLD J6 w/scattered pole and sapling aspen, black cherry, white pine, red pine, red maple. 2010FMD: Seems like red pine was planted with a lot of jack pine grown in. Jack pine has been falling out of this stand and red maple has been growing in understory. Towards south end near creek there is more oak and balsam in understory. Stand 133 to west has the jp cut out and a good bit of oak in understory.																																											
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132	310 - Herbaceous Openland	Nonstocked	1.0		Unspecified	No	old well pad																																											
133	42210 - Natural Red Pine	Sawtimber Well	21.2	83	111-140	N/A	2020: Same as stand 130 but this stand has heavier understory developed; mainly aspen. Good pine ground but lost to aspen understory. Substantial aspen under story. Patchy; so if red pine overstory was removed, many areas wood be poorly stocked. Some oak growing in along road where light is better. Could open canopy more and try to get new age developed. 2010FMD: TS# 024-02. TCR 2005. Cut all aspen,rm, jp and orange marked. last entry cut all but rp and a little wp. Good aspen regen in understory with good stocking 5-10 ft tall.																																											
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134	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	20.4	56	81-110	N/A	2019: Last harvest around 1965? Cut aspen, balsam, jp. Cut no wp,rp, hemlock. Adjusted stand age. Most of stand is various ages of wp with rm. Some pockets of aspen with scattered rp and oak. Stand has been created along drain as remnant of surrounding harvests. Good travel and bedding corridor. Some wet area along drainage. May want to cut rm and aspen in future to creat habitat and browse along drain. Deer may browse it completely out. White pine will likely to continue to fill this in. 2000FMD:residual stand. cut residual aspen -will change mgt obj. stand may eventually be total harvested and convert to aspen. WLD: rm,bc and asp saps. Occasional rp/wp saps. Thick pole rm aspen, bf, white cedar and wp to north along drainage. Was hooked with stand 140 in last inv. 2010FMD: Med-low quality aspen/pine/fir/maple. Stocking med-low. Wood make good habitat cut but let stand grow in more before that. Estimated aspen age 50-60. Various aged wp-much in the 50-60 yr class.																																																													
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135	42210 - Natural Red Pine	Sawtimber Well	22.2	76	51-80	N/A	2010: Mid stocked rp with considerable understory formed after last thinning and harvest. Pockets of wp saplings and poles and a good amount of rm,jp with some aspen clones. Not much hope for getting this stand back to red pine at this point. Could cut back to seed trees and hope that the rest would fill in. May end up with a poor stocked stand. May want to let the understory grow in until it is merchantable. This would take a while. 2000fmd Stand Harvested in 1994 R7R4A2 Cut all merchantable except oak and red pine. WLD: red maple,bc, aspen saps with occasional wp and rp saps. 2010FMD: Red pine overstory with scattered wp and oak after jp,rm aspen and bc cut out. Aspen regen with jp and wp (10-20 ft). A little rp regen.																																																													
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136	42210 - Natural Red Pine	Sawtimber Well	25.3	76	111-140	N/A	2020: This could be cut and planted to rp but might want to wait for adjacent stand to grow in that was recently planted. If aspen falls out of stand that would be fine. If thinned and aspen take out, aspen sprouts would make it unmanageable for pine in future. 2010 FMD Was hooked with stand 141 in last inv. Similar to pre-inv stand 142 to south but this one has not had jp or aspen or rm removed.																																																													
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137	42290 - Natural Mixed Pine	Sawtimber Well	15.8	71	111-140	N/A	2020: Good pine site. Filling in with wp in understory. Mixed sizes. Small fire in east side in 2017. Could try to harvest stand and re-plant to rp. May be difficult to eliminate existing wp understory. Could seed tree and let this go to wp. May not end up with much wp understory after harvest. Not a lot of rm/aspen in sub-canopy at this point but there are pockets. Some of this pine is getting on the large size. 2000FMD: Harvested 1993. Cut aspen and orange marked. Retention of overstory for regen purpose.i.e.shelterwood. WLD: several large rp and wp. occasional oak. 2010 FMD: Some older scattered red and white pine - must be the 113 age from last inventory. Most pine is 55-60. Make this first age. Some younger ages growing in. Has been thinned before. Going to white pine and mixed age stand. Aspen saplings indicate that aspen had been removed in last sale.																																																													
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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138 42220 - Natural Jack Pine Sawtimber Well 31.0 76 111-140 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	8	Pole	8		Red Maple	Medium	5 - 10 feet	Sapling
Red Oak	3	Log	14	93	White Pine	Low	5 - 10 feet	Sapling
White Oak	2	Pole	9		Jack Pine	Low	5 - 10 feet	Sapling
White Pine	5	Pole/Sapling	8		Black Cherry	Low	5 - 10 feet	Sapling
Red Pine	20	Log	12	76				
Jack Pine	60	Log/Pole	10	76				
Black Cherry	2	Pole/Sapling	8					

2020: Visual buffer strip left along roads when interior was harvested and planted. 200FMD; delayed harvest for age/size class diversity. WLD:W scatterd rp/scrubby multi stemmed rm.occasional oak. 2010FMD: Nice mix of rp/jp. Mix swings from almost pure rp to most jp. Scattered oak aspen and rm throughout. Nice stand of pulp/small logs with good volume. Visual concerns on roads.

139 122 - Road/Parking Lot Nonstocked 22.2 Unspecified No

140 42210 - Natural Red Pine Sawtimber Poor 67.0 76 51-80 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	5	Pole	8		Bigtooth Aspen	Low	< 5 feet	Sapling
Red Pine	85	Log/Pole	12	76	White Pine	Low	Variable	Sapling
Jack Pine	5	Log/Pole	10		Jack Pine	Medium	< 5 feet	Sapling
Black Cherry	5	Pole	8		Black Cherry	Low	< 5 feet	Sapling

2020: Thickets of jp in gaps(10-15' tall) but not much regen under areas with heavier rp canopy. Could take out most or the remaining canopy but would have a patchy jp stand left. RP stocking is variable. Could let it all develop until jp is harvestable. 2000FMD Final harvest prescribed. Use some visual management along supply road. WLD leave all oak and snags. 2010FMD; last harvest 2003 cut all jp aspen and some rm. Some jp and rp saplings were left. Looks like all red pine was left and it is thick in spots-more-so on the east side. Left some of all bc last time. Moderate jp regen 2-4 feet tall. Little or no red pine regen. Made canopy call on redidual rp so jp regeneration is second age class,

141 4311 - Pine, Aspen Mix Sawtimber Well 13.6 46 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	5	Pole	8		Red Maple	Low	5 - 10 feet	Sapling
Red Oak	2	Log	14	109	Bigtooth Aspen	Low	5 - 10 feet	Sapling
White Oak	15	Log/Pole	13	109	White Pine	Low	5 - 10 feet	Sapling
Quaking Aspen	10	Pole/Log	8	76	Black Cherry	Low	5 - 10 feet	Sapling
Bigtooth Aspen	25	Log	14	76				
White Pine	36	Pole/Log	8	46				
Red Pine	5	Log/Pole	12	76				
Black Cherry	2	Pole	9					

2020: Most wp is pole sized. Could take aspen/rm and poor quality and thin wp. Some nice white oak poles scattered. The aspen is overmature. This would create two aged stand but the wp would likely hold through an aspen rotation. Would create good habitat for wildlife. 2000FMD A4W4J4O7. Delayed treatment for age/size class diversity. 2010FMD: Big scattered wo. Could cc part of stand. Would make good chip job. White pine poles grown in and thick in places. Two ages of aspen with some older and much in the 30-40 ? age. Some large pine and oak along creek drain. Keep sale boundary back from creek levee a bit. Deer using creek and edge for bedding cover in winter.

142 42220 - Natural Jack Pine Sapling Well 29.3 27 Immature N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Sapling	2	
White Pine	5	Sapling	4	
Red Pine	10	Sapling/Pole	3	27
Jack Pine	75	Sapling/Pole	4	27
Black Cherry	5	Sapling	2	

2020: This stand was planted but poor red pine survival with heavy natural jp. Some rp found in canopy in areas but generally not present. 2000FMD area was harvested and replanted in 1994. WLD oak and bc saps.2010FMD: Jp is doing alright but rp looks poor. Maybe problems from the start with j-rooting or planting stock. Some red pine may survive and remain in the canopy.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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143	42290 - Natural Mixed Pine	Sawtimber Well	10.3	83	111-140	N/A	2020: Mixed sizes of white pine. Stocking is variable. This stand could likely be cut and planted. Not too much understorey formed at this time. 2002FMD: W5R5O7W7m4a4.2010 FMD Mix of WP/RP/JP 62-82 year old. Some older scattered pine. I little heavier to wp than stand to west. Looks like aspen was cut out in last entry. Aspen and wp regen 10-20 ft tall. Getting a big pine look.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	3	Pole/Log	8	
Bigtooth Aspen	5	Pole	8	
White Pine	50	Log/Pole	12	83
Red Pine	35	Log/Pole	12	83
Jack Pine	5	Pole/Log	9	
Black Cherry	2	Pole/Sapling	6	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	10 - 20 feet	Sapling
Bigtooth Aspen	Low	10 - 20 feet	Sapling
White Pine	Medium	10 - 20 feet	Sapling

145	42290 - Natural Mixed Pine	Sawtimber Well	63.2	71	81-110	N/A	2020: Consider harvesting this and planting red pine. Red pine looks good in stand. Jp is falling out. Ground lays good for managing. Stocking is variable as is species mix between jp/rp. JP would have to be controlled if this is planted as would cherry.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	40	Log	13	71
White Pine	2	Log/Pole	10	56
Jack Pine	42	Log/Pole	11	71
Red Oak	1	Log/Pole	12	
Red Maple	10	Pole	9	
Bigtooth Aspen	5	Log	11	71

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	10 - 20 feet	Sapling
Black Cherry	Low	10 - 20 feet	Sapling

146	42290 - Natural Mixed Pine	Sawtimber Well	35.8	88	51-80	N/A	2020: JP/RP stand. Stocking and species mix is variable. JP is falling out of stand. RP looks average. A few white oak scattered around in stand. Consider cutting and planting red pine. FMD-1992 low site index for jp and rp. delayed treatment for age/class diversity. 2002 old stand 1 - J4R4 2010 FMD; Some larger pine but most is pole sized and stunted looking. Poor looking site for jp and red pine. Let stand develop as the trees have room to grow.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Pole/Sapling	6	
Red Pine	35	Log	12	88
Jack Pine	55	Log/Pole	11	88
Black Cherry	5	Pole	8	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	< 5 feet	Sapling
Black Cherry	Low	< 5 feet	Sapling

147	42210 - Natural Red Pine	Sawtimber Well	37.8	71	81-110	N/A	2020: Healthy looking stand. Nice rp. Stocking is variable 50-130BA. More wp in canopy in se part of stand and heavier wp seedling in this area. Most everything else but wp/rp and some oak cut out in last harvest so new age forming under with aspen, oak, pine. 2002FMD: R4R7A4J4W7W4. Prescribed to remove jp aspen and some wp and leave rp 2010 FMD: Pretty pure red pine stand after jp and aspen removed. Aspen growing in under. Red pine looks like it might be stagnant.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Oak	1	Log	14	
White Oak	2	Log	12	
Red Pine	94	Log	13	71
White Pine	3	Log	14	71

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Low	10 - 20 feet	Sapling
Bigtooth Aspen	Low	10 - 20 feet	Sapling
White Pine	Low	< 5 feet	Sapling
Jack Pine	Low	10 - 20 feet	Sapling
Black Cherry	Low	10 - 20 feet	Sapling
Red Oak	Low	10 - 20 feet	Sapling
White Oak	Low	10 - 20 feet	Sapling



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																												
148	42210 - Natural Red Pine	Sawtimber Poor	57.0	93	1-50	N/A	Mixed density red pine residual. Some areas nearly full stocking but average around 50. Some of the understory red pine is growing pretty well along with natural jp. Not much growth under the higher stocked red pine canopy. Recommend letting this stand grow in. Seems like getting the canopy off at this time would cause excessive damage to planted pine. fmd 2002: area thinned in 1998 and understory planted spring of 1999 and 2000. Survival looked good as of oct 2000. 2010. FMD: Planted rp surviving in the areas with less canopy. Growth is not good for planted pine. May be starting to grow well but snow is hard on it. Jp is out growing rp but jp stocking is not very high. Let second age develop.																																												
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149	42220 - Natural Jack Pine	Sapling Medium	18.1	29	Immature	N/A	2020: Some surviving red pine in canopy but most is ove-topped by jack pine Good stocking considering both species. 2000FMD: Cut to 2". planted in spring of 1992 R2. 2010 FMD; Jp stand that was cut and planted to rp. Most rp iw not keeping up with jp but some may survive till stand matures, Jp stocking is good to fair,																																												
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150	42141 - Planted Mixed Pine, Mixed Deciduous	Sapling Poor	20.4	6	Immature	N/A	2020: Cherry competition to planted red pine. Pine survival looks pretty good but there are some stretches of missing trees. Consider herbicide to control cherry. Check to see if this has been sprayed. 2018: regen survey indicated good pine survival but significant cherry competition. Recommend herbicide release treatment Stand swapped from Non-Forested to Forested. Stand used to be burned to maintain as fire break but cherry has grown in in recent years. Stand should be chopped or burned or sprayed to reduce competition and then planted to rp or jp. TMS should evaluate. 2016: stand chopped and trenched 2014 and red pine planted 2015. 1 year regen survey completed in 2016.																																												
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Black Cherry	30	Sapling	1	7																																															
Red Maple	10	Sapling	1	7																																															
151	42290 - Natural Mixed Pine	Sawtimber Well	11.7	71	111-140	N/A	2020: Stand looks fine. Good stocking. Aspen sprouts under pine. Continue to manage for visual break along road at this time.																																												
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments					
152	42111 - Planted Red Pine, Mixed Deciduous	Sapling Poor	45.6	6	Immature	N/A	2020: switched stand to forested. Good growth on most red pine. Some competition from cherry, male, aspen, oak. Scattered log sized pine and oak retention 2018: regen survey. Pine healthy and FTG. Recent herbicide treatment very successful. 2015: TS# 078-12. Harvested and trenched summer 2014. Retention of scattered red pine and oak. Plant in spring or 2015. Sprayed 2017 to control aspen and red maple. 2010FMD: Nice mix of rp/jp. Mix swings from almost pure rp to most jp. Scattered oak aspen and rm throughout. Nice stand of pulp/small logs with good volume. Visual concerns on roads. 2016: Stand harvested with some oak and pine retention. Trenched 2014 and planted 2015. 1 year regen survey completed in 2016. Sprayed herbicide 2017 to control cherry and aspen competition and release pine.					
Canopy Species		% Cover	Size Class	DBH	Age							
Red Pine		60	Sapling	1	6							
Bigtooth Aspen		5	Sapling	1	6							
Black Cherry		10	Sapling	1	6							
White Oak		5	Sapling	1	6							
Red Oak		5	Sapling	1	6							
Red Maple		5	Sapling	1	6							
Red Pine		5	Log	13	86							
White Oak		3	Log	14	101							
153	42111 - Planted Red Pine, Mixed Deciduous	Sapling Poor	79.8	7	Immature	N/A	2020: Oak,rm an bc sprouts outpacing planted pine. A good bit of natural jp in places. Residual rp and oak log trees scattered through stand less than 10ba. Most of the planted rp looks alright. A little mortality. RM/BC competition is more considerable on the north part. Would be a good place for mechanical release if that is available. 2018 regen survey good pine growth but significant competition from cherry. Recommend release herbicide 2019. Red pine planted 2015 1 year regen survey completed in 2016.					
Canopy Species		% Cover	Size Class	DBH	Age							
Red Pine		65	Sapling	1	7							
Jack Pine		10	Sapling	1	7							
Red Maple		15	Sapling	1	7							
Black Cherry		5	Sapling	1	7							
154	42200 - Natural White Pine	Sawtimber Medium	20.2	76	51-80	N/A	2020: A little bit of wp filling in gaps but not a lot since the stand was salvaged. Patch of wp saplings were preserved during last harvest. Some red pine seedlings on skid trails. Could cut most of the pine out of this stand or thin it for crop tree release and to reduce the overall size. This stand will likely have mixed ages for a while. Removing most of the canopy at his time would reduce the spread in the age classes but it may be best to just manage for mixed age classes. 2012. Oak wilt treatment area created stand. Cut all red oak within trench line. Kept all pine in stand and green marked some wo and rm to retain. harvested all other stems and all red oak.					
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size		
Red Maple		5	Pole/Sapling	7		Red Maple		Low	10 - 20 feet	Sapling		
White Oak		5	Log	12	116	White Pine		High	10 - 20 feet	Sapling		
White Pine		60	Log/Pole	10	76	Quaking Aspen		Low	5 - 10 feet	Sapling		
Red Pine		30	Log/Pole	10	76	Red Pine		Low	< 5 feet	Sapling		
155	4123 - Red Oak	Sawtimber Well	16.1	101	81-110	N/A		2020: Split this stand off north of road as it has a heavier red oak component. Average RO with wp understory. Many old burnt pine stumps. Some of this stand is too steep to manage. Mixed pine sizes. May be able to regenerate oak with pine if this stand was cut heavily. 2017: clumped 3 stands and remotely updated canopy call. Field check. 2000FMDO7R7O4M4A4 Potential or designated old growth. 80 yr old oak mature. Considering low SI. Sampled oak 81 yr old slowed growth at 60 yr. Small JP stand (O/I 103) age 62 in nw corner. 2010FMD: 80-100 ytr old pine and oak with lots of pine underneath. Some slopes would not be workable. Aspen heavier onslopes. Old burnt pine stumps throughout. Redpine saplings and poles are scattered about. White pine in various sizes in understory throughout.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species			Density	Avg. Height	Size	
Red Maple		5	Pole/Sapling	7		Red Maple			Medium	>20 feet	Sapling	
Red Oak		55	Log/Pole	12	101	White Pine			Low	10 - 20 feet	Sapling	
White Oak		10	Log/Pole	12	101	Red Pine			Low	10 - 20 feet	Sapling	
Bigtooth Aspen		3	Pole	8								
White Pine		10	Log/Pole	12	91							
Red Pine		15	Log/Pole	11								
Jack Pine		2	Pole	9								