# Roscommon Forest Management Unit
# Compartment Review Presentation
# Compartment #107 Entry Year: 2014
# Compartment Acreage: 1177 County: Roscommon

**Revision Date:** 7/31/2012

**Stand Examiner:** Doug Bates

**Legal Description:** T22N R03W Section 17, 18, 19, 20, & 21

**Identified Planning Goals:** Upper Muskegon Eco-Regional Management Area

**Management Goals:** Provide for sustainable ecosystem based management. Maintain healthy and diverse forested stands for wildlife, recreation and the production of forest products.

**Soil and Topography:** The terrain is generally level with just a few isolated small rolling hills being largely dry. Soils are Rubicon sands and Ottawa loamy sands.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** Contiguous blocks of state land with no private land in holdings. Heavy residential areas in Sections 17, 18, and portion of 20 could lead to potential trespasses in the future via encroachments. Denton Township was deeded state land in 1991 for its waste water treatment plant. No further land has been requested.

**Unique, Natural Features:** Noted woodland species on MNFI in two sections.

**Archeological, Historical, and Cultural Features**: Two sections have historical features with one being an old farmstead foundation.

**Special Management Designations or Considerations:** Consideration for Type 1 old growth for two stands. One a White Pine stand and the other a Red Pine which was identified in an MNFI abstract as one of concern.

**Watershed and Fisheries Considerations:** None present.

**Wildlife Habitat Considerations:** Maintain ecosystem diversity in the compartment to benefit both game species such as deer, grouse, rabbits, turkeys, as well as other non-game species. Several grass openings are present in existing timber types but none being actively maintained.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift are the Pennsylvanian Saginaw Formation and the Mississippian Bayport Limestone and Michigan Formation. The Michigan is quarried for gypsum, the Bayport for limestone and the Saginaw for brick making clay elsewhere in the State. Gravel pits are located to the east and west and potential appears to be good. Nellsville Field is located four miles to the northwest. The field has produced over 75,000 BO from the Devonian Dundee and Richfield Formations. Most of the State minerals in the compartment are currently leased.

**Vehicle Access:** Numerous public roads traverse the compartment allowing for good access. Pre-existing two-tracks are network through the compartment allowing for good interior travel and eliminates the need to further road development for harvest activities.

**Survey Needs:** No survey work currently needed.

**Recreational Facilities and Opportunities:** The area is used for hunting of all game species and there is a designated snowmobile trail head and system in Sections 20 and 21.

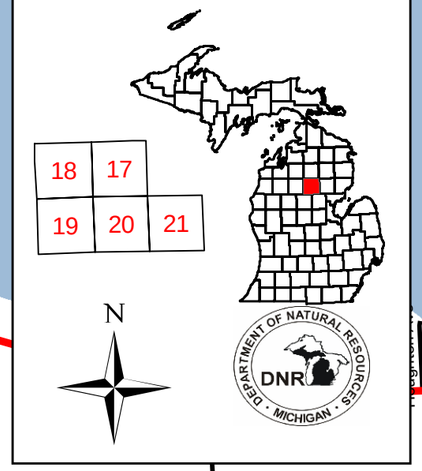
**Fire Protection:** Fire potential in this compartment is moderate with the aspen and oak timber types. There have been a few suspicious wildfires in the compartment in the past ten years largely in Section 18 and 19. Numerous forest roads allow for quicker access and close proximity to the Houghton Lake Field Office keeps the potential for large scale fires at a minimum.

**Additional Compartment Information:** Illegal ORV traffic has increased in the area over the past few years and is leading to more resources damages. With the heavy residential presence surrounding the compartment and the ease at which these vehicles can get to state land due to the county roads now being open to ORV traffic, their presence has increased substantially.

- **The following reports from the Inventory are attached:**
  - **Total Acres by Cover Type and Age Class**
  - **Proposed Treatment Summary**
  - **Proposed Treatments – No Limiting Factors**
  - **Proposed Treatments – With Limiting Factors**
  - **Stand Details (Forested and Nonforested)**
  - **Dedicated and Proposed Special Conservation Areas**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - **Base feature information, stand boundaries, cover types, and numbers**
  - **Proposed treatments**
  - **Details on the road access system**

# Cover Type & Treatment Map




Stand # 23

Stocking Density

(412)0) - A7

Level 3 Level 4 OI Code

Cover Type Code

## Legend

- Miris Corners
- Highway
- Paved Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Snowmobile Trails
- Snowmobile Trail
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Planting (tree species)

Forest Stands

Level 3

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

Non-Forest Stands

Level 3

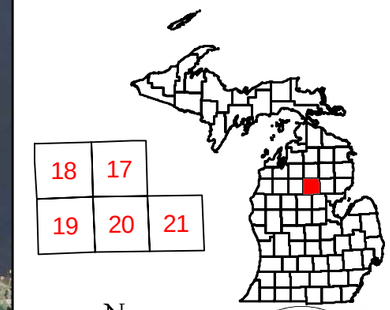
- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland
- 710 - Sand, Soil

Compartment: 107
T22N R03W
15 16 17 18 19 20 21 22
County: Roscommon
Unit: Roscommon
YOE: 2014
Acres: 1,179 GIS Calculated
Examiner: Douglas Bates
Map Revised: 08/07/2012
Map Phase: Pre-Review

1 0.5 0 1 Miles

84°44'0"W 84°43'0"W 84°42'0"W 84°41'0"W 84°40'0"W 44°18'0"N 44°17'0"N

# Stand Boundary Map

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## Legend

- Miris Corners
- Highway
- Paved Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Snowmobile Trails
- Snowmobile Trails
- Stream
- Intermittent Stream
- Stand Boundaries

**Forest Stands**

Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
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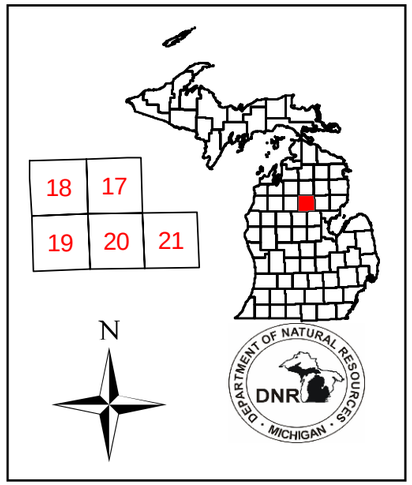
44°17'0"N

# Dedicated & Proposed Special Conservation Area Map




Stand # 23 — Stocking Density

(412)0) - A7

Level 3 / Level 4 — OI Code

Cover Type Code

## Legend

- Miris Corners
- Stand Boundaries

Forest Stands

Level 3

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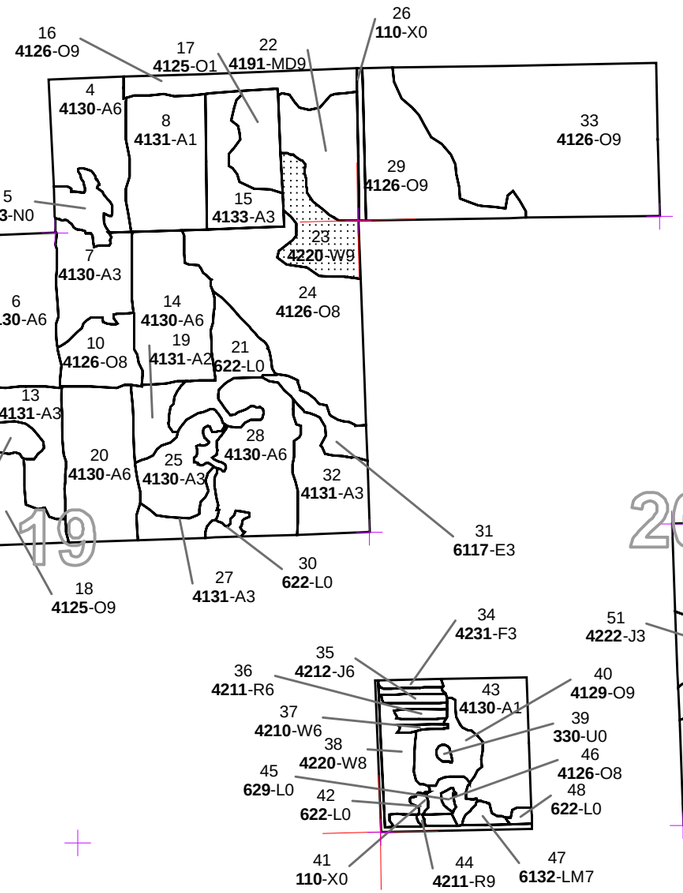


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84°44'0"W 84°43'0"W 84°42'0"W 84°41'0"W 84°40'0"W

44°18'0"N 44°17'0"N

# Table 1 – Total Acres by Cover Type and Age Class

**Roscommon Mgt. Unit** **Compartment 107 Year of Entry 2014**

**Douglas Bates : Examiner**

**Age Class**

| | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-99 | 100-109 | 110-119 | 120 + | Uneven Age | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Aspen** | 14 | 54 | 254 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | **390** |
| **Herbaceous Openland** | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **16** |
| **Jack Pine** | 0 | 21 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **26** |
| **Low-Density Trees** | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **47** |
| **Lowland Conifers** | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **17** |
| **Lowland Deciduous** | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | **12** |
| **Lowland Mixed Forest** | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** |
| **Lowland Shrub** | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **25** |
| **Marsh** | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **4** |
| **Mixed Upland Deciduous** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 47 | 13 | 0 | 0 | 0 | 16 | **84** |
| **Natural Mixed Pines** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | **26** |
| **Northern Hardwood** | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | **16** |
| **Oak** | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 195 | 223 | 0 | 20 | 0 | 11 | **456** |
| **Red Pine** | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | **10** |
| **Sand, Soil** | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** |
| **Upland Mixed Forest** | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **12** |
| **Upland Shrub** | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **4** |
| **Upland Spruce/Fir** | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** |
| **Urban** | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **13** |
| **White Pine** | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | **18** |
| **Total** | **125** | **88** | **258** | **12** | **29** | **0** | **1** | **30** | **242** | **236** | **0** | **46** | **18** | **94** | **1179** |

# Table 2 – Proposed Treatment Summaries

**Roscommon Mgt. Unit**
**Year of Entry 2014**

**Compartment 107**
**Total Compartment Acres: 1179**

## Acres by Treatment Type

| | | | | |
|---|---|---|---|---|
| Commercial Harvest - 248 | Site Prep - 0 | Tree Planting - 57 | Prescribed Burn - 0 | Other - 0 |
| Habitat Cut - 0 | Opening Maintenance - 0 | Tree Seeding - 0 | Pesticide - 0 | |

## Cover Type by Harvest Method

| | Clearcut | Selection | Seed Tree | Shelterwood | Thinning | Other - Specify | Total Acres |
|---|---|---|---|---|---|---|---|
| **Mixed Upland Deciduous** | 20 | 0 | 0 | 0 | 0 | 0 | **20** |
| **Natural Mixed Pines** | 0 | 0 | 26 | 0 | 0 | 0 | **26** |
| **Oak** | 179 | 0 | 0 | 0 | 0 | 0 | **179** |
| **Red Pine** | 1 | 0 | 0 | 0 | 1 | 0 | **2** |
| **Upland Mixed Forest** | 12 | 0 | 0 | 0 | 0 | 0 | **12** |
| **Upland Spruce/Fir** | 1 | 0 | 0 | 0 | 0 | 0 | **1** |
| **White Pine** | 8 | 0 | 0 | 0 | 0 | 0 | **8** |
| **Total** | **222** | **0** | **26** | **0** | **1** | **0** | **248** |

| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 71107016-Cut | 9.3 | 4126 - White, Black, N. Pin Oak | High Density Log | 95 | 81-110 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Harvest all species to a 2 inch d.b.h.. Mark to leave on average 10 basal area of oak, preferably white oak, for mast and visual evenly over the stand. Need to reestablish the state land boundary against private.
Long term MO=> A mixture of oak, aspen, and white pine
Retention: Stand is a long thin buffer strip left from previous harvests. Recommend no additional retention be left in addition to the 10 basal area of oak.

Other Comments: Private landowners to the north are encroaching with varying levels of trespasses onto state land.

Next Steps: Natural regeneration mixture of mixed decidous and pine at proper stocking levels will be acceptable.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 71107018-Cut | 9.8 | 4125 - Black, N. Pin Oak | High Density Log | 85 | 81-110 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Cut all species to a 4 inch d.b.h. An access road will need to be built along the boundary of stands 11, 12, & 14; being kept as narrow as possible.
Long term MO=> Mixed oak with an aspen component.
Retention=> Pick best clump of oaks for mast and make a retention island out of them to 3%.

Other Comments: Stand was treated in 1996 when all the aspen and red maple over 4 inches was removed.

Next Steps: A mixture of varying oak species of natural regeneration with an aspen component is acceptable for stocking. Interplant with red pine in barren areas should stocking levels fail survey.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 22 | 71107022-Cut | 5.1 | 4191 - Mixed Upland Deciduous with Conifer | High Density Log | 93 | 81-110 | Harvest | Clearcut with Reserves | 42250 - Pine, Oak | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Treat only the portion of the stand north of the forest road that runs east/west. Harvest all tree species to a 2 inch dbh. There is less white pine regeneration so tree length can be tried. Higher damages to pine regeneration is acceptable (40%). Adminstrator will need to work with producer to cut trails for transporting cut trees too minimize this though. Will need to cut any damaged pine tree for visual and regeneration concerns.
Long term MO=> A white pine stand with oak and aspen component.
Retention=> Leave a retention strip along Reserve Road of 3%.

Other Comments: Northern 1/3 of stand had a wildfire which killed most of white pine regeneration, allowing oak saplings to take off. Large aspen clone within harvest area.

Next Steps: A natural white pine stand with an oak component is acceptable. A prescribed burn to try and eliminate the white pine would be to hazardous due to smoke concerns in the heavily populated area.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 | 71107033-Cut | 58.0 | 4126 - White, Black, N. Pin Oak | High Density Log | 94 | 81-110 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Cut all species to a 2 inch d.b.h.. Mark to leave 10 basal area on average evenly over stand when possible as retention. Side towards white oak for mast and large white pines for visual.
Long term MO=> A mixture of oak species with an aspen component.
Retention=> The 10 basal area of individual leaves trees to be left post harvest evenly distributed over stand. No retention along private lines due to trespass encroaching.

Other Comments: In 1996 removed all the aspen from the stand.

Next Steps: Naturally regenerated mix of varying oak species with aspen is acceptable. Interplant with red pine to bring stocking levels to required standards if natural regeneration fails.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 | 71107034-Cut | 0.9 | 42310 - Planted Spruce | High Density Sapling | 43 | | Harvest | Clearcut | 42110 - Planted Red Pine | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Cut all species to a 2 inch d.b.h..
Longterm MO=> Planted red pine
Retention=> Narrow strip of small acreage being converted to a different cover type recommed NO retention.

Other Comments: Very poor quality experiemental white spruce plantation planted in 1969.

Next Steps: Machine trench and replant to red pine.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 36 | 71107036-Cut | 0.9 | 42110 - Planted Red Pine | High Density Pole | 43 | 171-200 | Harvest | Systematic Thinning | 42110 - Planted Red Pine | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove every third row of red pine. Leave outside row
Long term MO=> Red pine plantation
Retention=> None

Other Comments: Experimental red pine plantation planted in 1969.

Next Steps:

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 38 | 71107038-Cut | 7.7 | 42200 - Natural White Pine | Medium Density Log | 40 | 1-50 | Harvest | Clearcut | 42110 - Planted Red Pine | Cmpt. Review Proposal |

Prescription Specs: Treatment: Harvest all species to a two inch diameter. Delineate wet areas out of sale not suitable for trenching.
Longterm MO: Planted red pine
Retention: Due to stands smaller size and irregular shape with trenching to be done no retention is recommended.

Other Comments:

Next Steps: Trench the site and replant to red pine. May need to herbicide site due to invasive autumn olive in stand.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 44 | 71107044-Cut | 1.2 | 42110 - Planted Red Pine | High Density Log | 43 | 171-200 | Harvest | Clearcut | 42110 - Planted Red Pine | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove all tree species to a 2 inch d.b.h.
Long term MO=> planted red pine
Retention=> None due to small size

Other Comments: Experimental red pine plantation established in 1969. Over half of stand's trees have top deformities, i.e. crooks or multi-stemmed. Unsure if from porcupine or other environmental factor damaging top leaders.

Next Steps: Machine trench and replant to red pine with stand to west.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 52 | 71107052-Cut | 4.8 | 4121 - Oak, Aspen | Medium Density Log | 82 | 111-140 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove all trees to a 2 inch d.b.h.. Mark to leave 10 basal area of oak, preferably white, evenly over stand.
Long term MO=> Mixed oak with an aspen component
Retention=> Leave retention along the snowmobile trail on the east line and along the south side of the snowmobile trail parking lot with a total of 3% including the leave white oaks. Do not leave too much of the declining aspen though.

Other Comments: Dependent on time of year may need to sign snowmobile trail warning of logging activity and access into stand will be via Nestel Road to prevent conflict with snowmobiles.

Next Steps: Natural oak regeneration with a component of aspen and white pine. Interplant void areas with red pine to bring stand to full stocking levels should natural regeneration fail.

Proposed Start Date: 10/01/2013

| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 59 | 71107059-Cut | 2.5 | 4121 - Oak, Aspen | Medium Density Log | 82 | 81-110 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove all species to a 2 inch d.b.h.. Mark to leave about 10 basal area of white oak for mast.
Long term MO=> A mix of oak with an aspen and/or pine component
Retention=> None due to small narrow stand layout

Other Comments: No oak regeneration present. Dependent on time of year may need to sign snowmobile trail warning of logging activity and access into stand will be via Owens Drive to prevent conflict with snowmobiles.

Next Steps: Natural oak regeneration with a component of aspen and white pine. Interplant void areas with red pine to bring stand to full stocking levels should natural regeneration fail.

Proposed Start Date: 10/01/2013

| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 61 | 71107061-Cut | 5.5 | 4126 - White, Black, N. Pin Oak | Medium Density Log | 86 | 81-110 | Harvest | Clearcut with Reserves | 4122 - Oak, Pine | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove all species to a 2 inch d.b.h.. Mark to leave about 10 basal area total of either oak for mast or red pine for visual.
Long term MO=> a mixed oak stand with a white pine component
Retention=> Exclude a portion of the stand in the western third that contains hemlock, will qualify for retention.

Other Comments:

Next Steps: Naturally regenerated oak with white pine. Is acceptable if the white pine is more of a component than the oak.

Proposed Start Date: 10/01/2013

| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 65 | 71107065-Cut | 13.4 | 4126 - White, Black, N. Pin Oak | Medium Density Log | 86 | 81-110 | Harvest | Clearcut with Reserves | 4126 - White, Black, N. Pin Oak | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove all trees to a 2 inch d.b.h.. Leave all white oaks over 16 inches for mast. Will be about 10 basal area
Long term MO=> A mixed oak stand with pine
Retention=> Place around sloped depressions within stand that will be difficult to operate in.

Other Comments: Has old trenches in stand from a prior reforestation project but was not planted.

Next Steps: Natural regeneration of mixed oak species with white pine and red maple as components is acceptable.

Proposed Start Date: 10/01/2013

| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 67 | 71107067-Cut | 12.2 | 4311 - Pine, Aspen Mix | Low Density Pole | 35 | | Harvest | Clearcut with Reserves | 42121 - Planted Jack Pine, Mixed Deciduous | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove all trees to two inch d.b.h except for red pine. Do not cut any red pine.
Long term MO=> Plant jack pine in wet areas and allow aspen and white pine to establish in rest
Retention=> Place around wet swales for protection

Other Comments: Site is receiving heavy abuse by large off road vehicles. Need to block area off and revegetate the damaged areas. Possibly use logging debris to block trails off leading into site and put into large wet mud holes.

Next Steps: Hand plant jack pine in the exposed soils/damaged areas that are largely wetter soils to give site a mix of jack and white pine with clones of aspen.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 72 | 71107072-Cut | 40.5 | 4126 - White, Black, N. Pin Oak | High Density Log | 87 | 111-140 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Cut all tree species to a 2 inch d.b.h.. Mark to leave 20 basal area of oak for seed source and mast evenly over stand. Side towards white oak and mark a few additional large red pine/white pine for diversity and retention.
Long term MO=> Mixed oak with pockets of aspen
Retention=> Will be obtained by the residual individual leave trees.

Other Comments: Only natural regeneration present is white pine. Dependent on time of year may need to sign snowmobile trail warning of logging activity and access into stand will need to be via Owens Drive and not down the trail to prevent conflict with snowmobiles. Have producer cut trees immediately adjacent to trail flush with ground.

Next Steps: A mix of naturally regenerated oak, aspen, and pine is acceptable.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 76 | 71107076-Cut | 32.5 | 4122 - Oak, Pine | High Density Log | 89 | 111-140 | Harvest | Clearcut with Reserves | 4122 - Oak, Pine | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove all trees to a 2 inch d.b.h.. Mark to leave an average of 20 basal area of oak, preferably white when possible, evenly over the stand for mast and a seed source.
Do not cut any red pine trees over 18 inches in d.b.h. and mark a few trees of other species for diversity and retention.
Long term MO=> A mix oak species stand with a white pine component and some aspen.
Retention=> Met by the inividually designated leave trees

Other Comments: Dependent on time of year may need to sign snowmobile trail warning of logging activity and access into stand will need to be via Emery Road and not down the trail to prevent conflict with snowmobiles. Have producer cut trees immediately adjacent to trail flush with ground.

Next Steps: A mix of naturally regenerated oak, aspen, and pine is acceptable.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 84 | 71107084-Cut | 8.4 | 4191 - Mixed Upland Deciduous with Conifer | High Density Pole | 73 | | Harvest | Clearcut with Reserves | 4136 - Aspen, Mixed Conifer | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove all trees to a 2 inch d.b.h.. Mark to leave approximately 10 basal area of supercanopy pines for diversity and seed source. Favor red pine when possible.
Longterm MO=> Aspen clones intermixed with pine and maple.
Retention=> Due to small size recommend none. Supercanopy pines left post-harvest will add diversity.

Other Comments: Supercanopy pines will not shade out regeneration.

Next Steps: Natural regenerated aspen clones intermixed with pine and red maple is acceptable.

Proposed Start Date: 10/01/2013

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| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 87 | 71107087-Cut | 3.2 | 4124 - Red with White Oak | Medium Density Log | 81 | 81-110 | Harvest | Clearcut with Reserves | 4124 - Red with White Oak | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove all trees to a 2 inch d.b.h. Mark to leave about 10 basal area of large white oak for mast.
Long term MO=> A mixed oak stand
Retention=> None due to the small narrow size of stand

Other Comments: Was a buffer strip left for adjacent timber sale.

Next Steps: Mixed oak stand with white pine component is acceptable

Proposed Start Date: 10/01/2013

| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 89 | 71107089-Cut | 6.8 | 4191 - Mixed Upland Deciduous with Conifer | Medium Density Log | 80 | 81-110 | Harvest | Clearcut with Reserves | 4122 - Oak, Pine | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Remove all trees to a 2 inch d.b.h.. Mark to leave 10-20 basal area of oaks evenly over stand for mast, seed source, and retention.
Long term MO=> A mixed decidous and pine stand
Retention=> Due to small size recommend none. Residual oaks will factor in a small percentage.

Other Comments:

Next Steps: A mixed decidous and pine stand is acceptable.

Proposed Start Date: 10/01/2013

| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 91 | 71107091-Cut | 25.8 | 42290 - Natural Mixed Pine | High Density Log | 115 | 111-140 | Harvest | Seed Tree with Reserves | 42210 - Natural Red Pine | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Leave all white pines over 16 inches in d.b.h. and red pines over 12 inches for seed source and visual. Will average out to be about 70 basal area. Cut all remaining tree species to a 2 inch d.b.h..
Long term MO=> A diverse two aged stand with supercanopy pines
Retention=> None

Other Comments:

Next Steps: Leave overstory pines when understory revegetates. Move stand towards old growth in future.

Proposed Start Date: 10/01/2013

| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 68 | NF_71107068-Plant | 10.8 | 3102 - Grass | | | | Tree Planting | Hand Plant | 42110 - Planted Red Pine | Cmpt. Review Proposal |

Prescription Specs: Treatment: Plant site to red pine leaving the existing white pine there. May be able to use existing trenches if not place new ones.
Longterm MO: red pine
Retention: N/A

Other Comments: Site may require herbicide due to autumn olive being present.

Next Steps:

Proposed Start Date: Unspecified

| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| 90 | NF_71107090-Plant | 46.6 | 3301 - Low Density Deciduous Trees | | | | Tree Planting | Hand Plant | 4122 - Oak, Pine | Cmpt. Review Proposal |

Prescription Specs: Treatment=> Machine trench and interplant red pine seedlings in the areas not being revegetated by either oaks or aspen .

Other Comments: Did not meet natural revegation survey.

Next Steps:

Proposed Start Date: Unspecified

**Total Treatment Acreage Proposed: 305.8**

# Table 4 -- Treatments Prescribed with a Limiting Factor



| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | #Error | | | | | | | |

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Error

Limiting Factor and No Treatment Reason

**Total Treatment Acreage Proposed:** **0**

# Out of YOE -- Treatments
# Prescribed with No Limiting Factor

Year of Entry: 2014

| Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|---|---|---|---|---|---|---|---|---|

Prescription Specs:

Other Comments:

Next Steps:

Proposed Start Date: #Error

**Total Treatment Acreage Proposed:** **0**

| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|---|---|---|---|---|---|---|
| 1 | 4130 - Aspen | High Density Pole | 21.9 | 22 | | Good aspen stand with scattered red maple. Was clearcut back in 1990. |
| 2 | 4199 - Other Mixed Upland Deciduous | High Density Log | 15.6 | Uneven Age | | The stand was harvested in 1996 by taking all the trees but about 30 basal area average of sawlog red oaks. The regeneration of mainly red maple is so thick that trails need to be cut to get at the overstory oak. There is aspen mixed in with the red maple. Right now to much damage would result from trying to get the oaks out. Wait 30 years for when the regeneration thins out or just clearcut everything when the aspen reaches maturity. Stand 3 had no overstory left and there is more asepn regeneration than red maple. |
| 3 | 4130 - Aspen | High Density Sapling | 4.4 | 16 | | Stand was clearcut in 1996 with no overstory being left so had better aspen regeneration with less red maple. |
| 4 | 4130 - Aspen | High Density Pole | 15.7 | 22 | | The stand was clearcut in 1990 with good thick aspen regeneration There was a wildfire at the north end which thinned out the aspen but it is still present and appears to be filling back in. The fire area looks to be about two acres. |
| 6 | 4130 - Aspen | High Density Pole | 20.2 | 22 | | Was clearcut in 1990 with good dense aspen regeneration. Some red maple mixed in with it. Trace amounts of white ash and oak in the sub-canopy |
| 7 | 4130 - Aspen | High Density Sapling | 12.1 | 16 | | Stand was harvested by clearcut in 1996. Quite alot of red maple sprouting from stumps. Aspen is keeping ahead of it in heigth though. Will still be a good aspen stand. |
| 8 | 4131 - Aspen, Oak | Low Density Sapling | 18.5 | 16 | | Stand was clearcut in 1996 and has revegetated sparsely with a higher aspen regeneration component than that of oak. It is filling in but just very slowly. There is a good mix of species and the open grass areas are good for wildlife. |
| 9 | 4123 - Red Oak | Medium Density Log | 59.1 | 93 | 81-110 | The stand was treated in 1996 by removing just the aspen and red maple. Some areas of heavy red maple understory, but overall it is moderately stocked. Lots of red oak poles 6-8 inches. Good stand that will let go another ten years and then check the red maple understory. If it is not out of hand thin the stand to an average of 70 basal area. Best oak seen in the compartment. Where overstory thinnest most regeneration which is about an even mix of red maple and aspen. |
| 10 | 4126 - White, Black, N. Pin Oak | Medium Density Log | 8.5 | 95 | 81-110 | The stand was thinned in 1996. Good looking healthy trees with straight boles. Not much oak regeneration in understory. Let trees go one more rotation to put on growth and look at either thinning or removing completely dependent upon if any oak regeneration establishes itself in the understory. |
| 11 | 4130 - Aspen | High Density Pole | 17.8 | 22 | | Was clearcut in 1990 and came back with good aspen regeneration. |
| 12 | 4130 - Aspen | High Density Sapling | 3.2 | 16 | | Stand clearcut in 1996 with good aspen regeneration. No oak overstory was left. |

| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|---|---|---|---|---|---|---|
| 13 | 4131 - Aspen, Oak | High Density Sapling | 10.1 | Uneven Age | 1-50 | Stand was treated in 1996 and all species of trees were removed but for an average of 40 basal area of overstory oak. Almost no oak regeneration has come back. Regeneration is largely aspen with mix of red maple. Should have taken whole overstory off. May have gotten more oak sprouts. Can't remove the overstory because regen. is to thick. Possibly in 30 years may be able to get in once the stand thins to salvage the oak but may be best to wait to when the aspen is ready to go and take what ever oak is still left then. |
| 14 | 4130 - Aspen | High Density Pole | 18.8 | 22 | | A clearcut was done in 1990 with good aspen regeneration coming back. Little more red maple in sub-canopy but the aspen is keeping ahead of it. |
| 15 | 4133 - Aspen, Mixed Pine | High Density Sapling | 10.3 | 22 | | A final harvest was done in 1990 with decent aspen regeneration just coming into pole status. Very heavily mixed with white pine. |
| 16 | 4126 - White, Black, N. Pin Oak | High Density Log | 9.3 | 95 | 81-110 | Oak at maturity. East half of stand has no understory regeneration at all. The west side is mainly white pine or red maple. Need a harvest to get both the aspen and oak back into the race. The stand was a buffer for cuts to the south, but the residences are slowly encroaching across the north line on to state land with varying activities/structures. |
| 17 | 4125 - Black, N. Pin Oak | Low Density Sapling | 7.6 | 12 | | This was originally part of Stand 15 cut in 1990. A forest fire occured around 1998 and killed back all the regeneration resulting in this new stand. |
| 18 | 4125 - Black, N. Pin Oak | High Density Log | 9.8 | 85 | 81-110 | This stand was treated in 1996 by removing all the aspen and red maple to 4 inches. Just into sawlog sized timber but the trees are poor quality, crooked leaners. Would not get any value from leaving and may lose out on getting regeneration back if wait to long. Currently the only regeneration within the past ten years is red maple and aspen. Need to harvest and try to stimulate the oak. An acre and a half buffer strip was left on the south end of Stand 11 that is overmature aspen. It was combined with this stand to be treated. |
| 19 | 4131 - Aspen, Oak | Medium Density | 4.8 | Uneven Age | 1-50 | The stand was treated in 1996 when all aspen and red maple was cut to a 4 inch d.b.h. and marked oak. There are multiple ridges with wetter soils at the bottom of them. A higher basal area of oak was left on the ridges with an overall average of 40 basal area of oak overstory being left. There is a higher component of red maple regeneration in this stand due to wet soils. The aspen though is holding its own. Could possibly salvage a good portion of the oak overstory but an access road would need to be put through at leat 5 chains of thick aspen regeneration, Best to let it stay and when the aspen reaches maturity remove all species including what oak overstory remains. |
| 20 | 4130 - Aspen | High Density Pole | 19.3 | 22 | | Was clearcut in 1990. There is good aspen regeneration. |

| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|---|---|---|---|---|---|---|
| 22 | 4191 - Mixed Upland Deciduous with Conifer | High Density Log | 13.0 | 93 | 81-110 | There was a wildfire at the north end that killed almost all the with pine sub-canopy. Where the fire didn't occur the white pine regeneration is like a wall. This is the predominat regeneration and for almost 80 percent of the stand the only regeneration. The oak is overmature and very poor quality. Very few pole sized trees but rather large wolfy, multi-stemmed oaks. Need to harvest and try to establish some oak before the white pine takes completely over. Only oak in the sub-canopy found was that in the burnt area and it is light. |
| 23 | 42200 - Natural White Pine | High Density Log | 9.8 | 158 | 81-110 | Large pre-establishment white pine, 32 inches 158 years old |
| 24 | 4126 - White, Black, N. Pin Oak | Medium Density Log | 33.2 | 95 | 111-140 | In 1990 removed just aspen from a portion of the west end. Where aspen was heavy there is regeneration coming back, otherwise it is a sea of white pine mixed with some oak. There is a higher volume of oak poles. Let go for another ten years to get some more volume and check to see how regeneration is coming in. If the white pine is still thick may want to harvest to stimulate the oaks. |
| 25 | 4130 - Aspen | High Density Sapling | 9.3 | 16 | | Stand was clearcut in 1996. There is more poorly drained soils on this site and has led to a higher red maple regenerating component. The aspen is still keeping ahead of it though. |
| 27 | 4131 - Aspen, Oak | High Density Sapling | 4.0 | Uneven Age | 1-50 | Was treated in 1996 by removing all aspen and leaving an average of 30 basal area of red oak saw timber. This overstory so far has not shaded the aspen out in this stand which is coming in very well. There is no visible trace of oak regeneration though and probably could have taken more of the red oak overstory and still had the same end results. The oaks will have to wait till the aspen gets to maturity to try and get to avoid high damages. There is a one acre island of overstory oaks/pines at northwest corner that could get. This is only spot where found oak regenerating. Decided to leave for diversity though. |
| 28 | 4130 - Aspen | High Density Pole | 18.8 | 22 | | Stand was clearcut in 1990. The aspen regrowth is doing good with a mix of red maple in the overstory. Pretty heavy amount of red maple in the sub-canopy, but won't affect the aspen before it's time to harvest again. |
| 29 | 4126 - White, Black, N. Pin Oak | High Density Log | 20.2 | 111 | 81-110 | Poor quality oaks, mainly pin oak species. A wildfire reduced greatly the white pine regeneration in at least a third of the stand otherwise the stand is thick to white pine regeneration. The oak regeneration is only found where the fire was and removed the white pine competition. Will leave the stand for one more rotation to stagger the oak age classes and give a visual break for the adjacent proposed harvest with a higher priority. |
| 31 | 6117 - Lowland Deciduous, Mixed Coniferous | High Density Sapling | 4.3 | 10 | | All the mature ash has been exposed to the ash bore. A few poles seem to be alive but mainly saplings. Estimate them to be about ten years old. There is some merchantable sized timber but a vast majority is all saplings and the area is too wet to operate in. Best to leave stand as is for its diversity. |

| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|---|---|---|---|---|---|---|
| 32 | 4131 - Aspen, Oak | High Density Sapling | 11.8 | Uneven Age | 1-50 | Stand was treated in 1996 by removing all the aspen, red maple, and marked oaks. Heavy aspen regeneration in both canopy layers with some red maple mixed in. The maple is not much though and is not crowding out the aspen. Have about a 30 basal area average of overstory red oak saw sized timber left. Only found a handful of oak regeneration. This did not provide much seed source yet has provided some mast. It could have lowered the basal area more and gotten same results. To heavy of regeneration to try and salvage the overstory oaks. Wait till the aspen reaches rotational age and remove all at the same time. |
| 33 | 4126 - White, Black, N. Pin Oak | High Density Log | 58.0 | 94 | 81-110 | Good quality stand but the majority of the oaks are getting overmature and putting little growth on. There is oak regeneration in the understory with an aspen component. In 1996 had all the aspen removed but none of the oak or maple. Had left a buffer on the north and south lines and this is where the overmature sawtimber aspen is located. Where the aspen was removed it is coming back in nicely. Recommend a harvest leaving some oaks but removing all remaining trees. Need to get the oak regeneration stimulated to compete with the red maple which is currently the heaviest. |
| 34 | 42310 - Planted Spruce | High Density Sapling | 0.9 | 43 | | An experimental planting of white spruce done in 1969. Spruce failed and became stunted with hardly any growth. The oak and white pine taking over and shading it out. The adjacent red pine planted at the same time has flourished. |
| 35 | 42120 - Planted Jack Pine | High Density Pole | 1.0 | 43 | | The basal area is high but the diameter and heigth is half of the adjacent red pine planted at the same time. This was an experimental jack pine plantation planted in 1969. |
| 36 | 42110 - Planted Red Pine | High Density Pole | 0.9 | 43 | 171-200 | Was an experimental red pine plantation planted in 1969. The site was perfect for the pine and it has done very well. It needs a third row thinning because even though the rows are wide the crowns are very crowded. |
| 37 | 42100 - Planted White Pine | High Density Pole | 0.5 | 43 | 171-200 | This is an experimental white pine plantation planted in 1969. Just coming into pole sized timber. Not as good of growth as the adjacent red pine. |
| 38 | 42200 - Natural White Pine | Medium Density Log | 7.7 | 40 | 1-50 | White pine stand with some scattered pin oaks. Appears to have been an old farm field that is filling in with white pine. Still some open areas with the pines being limby balls from the bottom up even in the saw sized trees. Found some apple trees and autumn olive planted in open areas. |
| 40 | 4129 - Mixed Oak | High Density Log | 6.0 | 92 | 141-170 | The aspen is at maturity with some decline. Site would do good by thinning and allowing the oaks to put diameter on. |
| 43 | 4130 - Aspen | Low Density Sapling | 14.3 | 5 | | Clearcut in the spring 2007. Can see where the aspen clones were, its regenerating. Where the oaks were concentrated there is no regeneration still. The site is forested and no need to try and interplant opening, not large enough. Let the site fill is naturally. |

| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|---|---|---|---|---|---|---|
| 44 | 42110 - Planted Red Pine | High Density Log | 1.2 | 43 | 171-200 | This was an experimental red pine plantation done in 1969. The trees are saw sized but over half of the trees have top deformities, i.e. multistemmed, crooks, or dead. Not sure if from porcupine or road salt damage to the top leader led to this. Suggest cutting the stand and restarting it with new red pine. Very heavy autumn olive undergrowth. Stand split in two halves by a marsh but both front on Emery Road and are accessible. |
| 46 | 4126 - White, Black, N. Pin Oak | Medium Density Log | 2.3 | 95 | 81-110 | Poorer quality oaks at rotational age with less basal area than the stand to the north. No oak regenerating. |
| 47 | 6132 - Mixed Lowland Forest with Cedar | Low Density Log | 1.2 | 62 | | Pockets of standing water. Site sits between the raised county road and a ridge so the water has no where to drain to. It is not operable. |
| 49 | 42120 - Planted Jack Pine | High Density Sapling | 18.9 | 13 | | Stand was clearcut in 1997 leaving all white oak. It was trenched and planted to jack pine in 1999. The jack pine is doing well with no apparent impact from the overstory oak. Some oak regeneration in the open pockets where no pine is growing. |
| 50 | 4122 - Oak, Pine | Low Density Log | 11.2 | 82 | 51-80 | In the spring 2007 all the aspen, jack pine, red maple, and some marked oak trees were removed. Thick white pine regeneration mixed with some red maple. The oak is mainly stump sprouting and moderate at best. Check in ten years and may need to remove the remaining overstory if oak regeneration is still lacking. Several illegal ORV trails leading from several residences along the west line. |
| 51 | 42220 - Natural Jack Pine | High Density Sapling | 1.9 | 13 | | Stand was clearcut in 1997 and replanted to jack pine in 1999 just like Stand 48 but is separated from this stand by a sliver of Stand 59. It also has no overstory oak and thicker stocking levels than Stand 48 though. |
| 52 | 4121 - Oak, Aspen | Medium Density Log | 4.8 | 82 | 111-140 | Stand is at maturity. Aspen is dying and only regeneration noticable is white pine. Need to harvest to keep aspen component. |
| 53 | 4126 - White, Black, N. Pin Oak | Medium Density Log | 11.1 | Uneven Age | 51-80 | In the spring 2007 removed all species but white oak. However, the white oak basal area is high, averaging over 50. The oak regenerating is only from the stumps. White pine is coming in amongst the white oak. Aspen is regenerating good but only staying to where the initial clone was. Has not moved in amongst the oak. Check in ten years for regeneration status and decide if need to remove more of the oak overstory especially if the oak is still light in the sub-canopy. |
| 54 | 4126 - White, Black, N. Pin Oak | Medium Density Log | 10.4 | 88 | 81-110 | Harvest in 2007 removing only aspen and red maple to a 4 inch diameter. Good aspen regeneration and getting some oak sprouts in the open area. Check the regeneration amount in ten years, if doing good remove the overstory. |

| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|---|---|---|---|---|---|---|
| 55 | 42210 - Natural Red Pine | High Density Log | 8.4 | 162 | 81-110 | Supercanopy red pine stand with no regeneration of it in sub-canopy. Regeneration is mostly red pine, Falls under criteria to qualify for Type 1 old growth. Possibly burn site or mechanical means such as bobcat to remove understory competition to the red pine. May set up sale to remove other merchantable timber from under pines. |
| 57 | 4130 - Aspen | High Density Pole | 23.4 | 25 | | In 1987 the site was clearcut. Good aspen regeneration just entering pole size class. |
| 58 | 4199 - Other Mixed Upland Deciduous | Medium Density Log | 31.9 | 86 | | Majority of aspen is still pole sized with the remainder being saw. The oak is past rotational age but is still healthy and can last another ten years. Check aspen condition in ten and maybe cut then or if still good hold one more rotation. This will help stagger age classes of both aspen and oak in the area. There are surrounding stands with a higher need for treatment. Some large super-canopy red pines. |
| 59 | 4121 - Oak, Aspen | Medium Density Log | 2.5 | 82 | 81-110 | Aspen dying out with the oak reaching maturity and no regeneration of it in the sub-canopy. Only regeneration is white pine, site needs to be harvested to try and get oak regenerating. |
| 60 | 4126 - White, Black, N. Pin Oak | Medium Density Log | 26.5 | 90 | 51-80 | In the spring 2007 removed all the aspen, jack pine, red maple, and some marked oaks. Very heavy aspen regeneration in the open areas where the original clone existed but not much for oak. Wait ten years and check regeneration status and believe will need to remove the remaining overstory to get the oak stimulated and try to compete with the red maple regeneration already present. |
| 61 | 4126 - White, Black, N. Pin Oak | Medium Density Log | 5.5 | 86 | 81-110 | Was left as a buffer for Stands 53 and 55. Probably an aspen type then, but the aspen is overmature and dying. Harvest to keep the aspen component and release the struggling oak regeneration. |
| 62 | 4191 - Mixed Upland Deciduous with Conifer | Medium Density Log | 8.5 | 87 | 111-140 | A buffer strip left with the oak overstory at maturity and not getting any of it regenerating in understory. Only thing regenerating is the white pine. Leave for one more rotation to provide visual to adjacent stands being treated with a higher priority. |
| 63 | 4122 - Oak, Pine | Medium Density Log | 19.7 | 90 | 51-80 | Treated in 2007 by removing all the aspen, jack pine, red maple and thinning the oaks. Stand is still healthy so leave for another ten years to stagger the age classes. At this time remove the full overstory and leave all red pines over 18 inches as diversity. |
| 64 | 4133 - Aspen, Mixed Pine | Medium Density Pole | 19.5 | 24 | | Was a clearcut done in 1988. Lots of open area with grass. Aspen clones not filling them in but rather white pine is. Canopy closure is at the very low end, but no need to plant opening as they will benefit wildlife. |
| 65 | 4126 - White, Black, N. Pin Oak | Medium Density Log | 13.4 | 86 | 81-110 | Large wolfy oaks with thick red maple regeneration. The oak is not competing well with the red maple. Trenched a portion of the stand years ago but no evidence of what was planted in it if anything, Need to harvest to try and keep the oak by stimulating it. Hope to get both stump sprouts and acorn growth. |

| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|---|---|---|---|---|---|---|
| 67 | 4311 - Pine, Aspen Mix | Low Density Pole | 12.2 | 35 | | The stand is a mix of varying species of different age classes. The aspen present is overmature along with the oak. Some large open areas that are depressed and hold water at certain times of the year. These areas are being degraded by illegal mudder trucks creating an RDR issue. Harvest the stand as a whole to keep the aspen component and stimulate oak. In the degraded areas plant jack pine to stabilize it. Will have to block vehicular traffic into this area to protect the vegetation until it gets established. Several deep valley/ridges on west side but still can be harvested. A large open pit 30x50 at the northeast tip. |
| 69 | 4126 - White, Black, N. Pin Oak | High Density Log | 24.2 | 89 | 111-140 | Very heavy white pine regeneration with nothing else. There is a little more aspen at the south end of the stand. The oak is at rotational age but can hold for another ten years. The age classes need to be staggered in the area and the stand to the north has a higher need for a treatment. |
| 70 | 4119 - Mixed Northern Hardwoods | Low Density Sapling | 1.1 | 15 | | Stand was clearcut in 1997 and has regenerated poorly, only about half. The rest is covered with raspberry. Small size to try and interplant. Best to let go and fill in on its own and it will help area wildlife. |
| 72 | 4126 - White, Black, N. Pin Oak | High Density Log | 40.5 | 87 | 111-140 | Both the oak and aspen are overmature and showing signs of decline. There is no regeneration except for white pine. Need to harvest to take advantage of the aspen's presence to get it back. Hope to get stump sprouting of oak and others from seed from soil disturbance post harvest. |
| 73 | 4130 - Aspen | Medium Density Pole | 21.9 | 23 | | Was harvested in the winter 1988-1989 as a clearcut for oak regeneration. The oak failed to come back leaving still large open areas. Let these open areas fill in naturally (4+acres), the fragementation will be good for wildlife. Aspen is the regeneration species. |
| 75 | 4126 - White, Black, N. Pin Oak | High Density Log | 36.6 | 87 | 81-110 | Heavy white pine regeneration with some oak mixed in there. Some overmature oaks but the majority are just getting into the sawlog size class. Hold for another ten years at least and check the health before potentially harvesting. This will stagger the age classes and allow for more growth on the oaks. |
| 76 | 4122 - Oak, Pine | High Density Log | 32.5 | 89 | 111-140 | The oak is at maturity with oak in the understory so need to remove the overstory to give it space to grow and get additional stump sprouting. |
| 77 | 4131 - Aspen, Oak | Medium Density | 36.3 | Uneven Age | 1-50 | Stand was treated in the spring 2007 removing all trees to a 2 inch diameter leaving all the white oak. The aspen is coming back good where the original clones were but there is little oak regeneration. Where the oak overstory left is heavy there is very little regeneration of any species. Besides the aspen, white pine is the next heaviest regenerating species followed by oak sprouting off stumps. Should have reduced the white oak basal area, 40 average, and gotten same result or possibly more oak regrowth. Best to leave for wildlife, potential future seed source, not to mention the damage it would cause to what is regrowing trying to remove. |

| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|---|---|---|---|---|---|---|
| 78 | 4119 - Mixed Northern Hardwoods | Medium Density Log | 14.6 | 77 | 111-140 | As the site got wetter heading south from the road, the balsam fir regeneration got heavier with a predominate red maple overstory. Would not classify it as a lowland site though. It is operable, with the maple still healthy. Wait another ten years for the trees to get more size and then possibly harvest. |
| 80 | 4130 - Aspen | High Density Pole | 29.1 | 24 | | Site was clearcut in 1988. Very nice stand with good aspen coverage. Not nearly as much open areas as similiar stands in the area. |
| 81 | 6128 - Lowland Coniferous, Mixed Deciduous | Low Density Pole | 16.6 | 46 | | Standing water everywhere. Dense balsam fir regeneration. Anything with heigth has blown over due to shallow rooting system. Too wet to operate in, so let it manage itself. The ash has been hit by the ash bore and will probably only be saplings left alive. |
| 82 | 42220 - Natural Jack Pine | Medium Density Pole | 4.0 | 20 | | Can't see any evidence of trenching or trees in rows. Has a few years to go before can manage. |
| 84 | 4191 - Mixed Upland Deciduous with Conifer | High Density Pole | 8.4 | 73 | | There are large saw sized pines and aspen, but the majority is pole sized aspen and red maple. The aspen is being overtaken by the maple. Harvest to keep the aspen component. |
| 85 | 4130 - Aspen | High Density Pole | 17.7 | 25 | | Was clearcut in 1987 with thick aspen regeneration. Where there is open area the white pine is filling it in. |
| 86 | 4130 - Aspen | Low Density Sapling | 6.7 | 15 | | The stand was final harvested in 1997, but close to half the stand is either open grass or filling in with white pine and pin cherry. There is a 2 acre island at the north end open along with a 2 chain wide strip along the whole south line. Possilby could interplant pine, but will leave for now to see if will start to fill in more naturally. The open fragmentation will be good for wildlife. |
| 87 | 4124 - Red with White Oak | Medium Density Log | 3.2 | 81 | 81-110 | This was a buffer strip left along the road of mature oak on the decline with very sparse regeneration of it. Mostly white pine, red maple, and some balsam fir. Need to harvest to give regenerating oak a chance. |
| 89 | 4191 - Mixed Upland Deciduous with Conifer | Medium Density Log | 6.8 | 80 | 81-110 | A mixed stand siding towards the oak side. There is not much oak regeneration. Largely white pine and red maple. Harvest the site to stimulate the oaks. Should regenerate into a good oak/pine mix. |
| 91 | 42290 - Natural Mixed Pine | High Density Log | 25.8 | 115 | 111-140 | Pine stand with an understory heavy to red maple. There is some white pine but not much. Harvest to remove the overstory to stimulate the pines and allow them to keep with the red maple. |
| 92 | 6118 - Lowland Deciduous with Cedar | Medium Density Pole | 7.4 | 78 | | Poorly drained soils with a mix of lowland species. The size and volume of harvestable species would not justify the potential rutting issues trying to get. |

| Stand | Cover Type | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|---|---|---|---|---|---|
| 5 | 6239 - Mixed Emergent Wetland | 4.5 | No | Unspecified | Open water with clumps of cattails. The perimeter consists of tag alder. |
| 21 | 6220 - Alder/willow | 11.2 | No | Unspecified | Open water with clumps of grass and tag alder. A perimeter of pine and hemlock exists on the transition zone. The perimeter is to wet to cut as evident by skidder ruts left from a past harvest that bordered this stand. |
| 26 | 11 - Low Intensity Urban | 1.5 | No | Unspecified | South Reserve Road north of West Nestel Road |
| 30 | 6220 - Alder/willow | 1.2 | No | Unspecified | Tag alder depression with a ring of white pine and red maple in the transition zone between the lowland and the high ground. |
| 39 | 3301 - Low Density Deciduous Tree | 0.4 | No | Unspecified | Deep bowel depression with steep edges. Holds water and is not harvestable nor operable enough for the volume of trees present. |
| 41 | 11 - Low Intensity Urban | 2.1 | No | Unspecified | South Reserve Road and West Emery Road |
| 42 | 6229 - Mixed lowland shrub | 0.6 | No | Unspecified | |
| 45 | 629 - Mixed non-forested wetland | 0.4 | No | Unspecified | lowland grass marsh with a tag alder perimeter |
| 48 | 6220 - Alder/willow | 0.6 | No | Unspecified | Tag alder marsh stuck between a ridge to the north and elevated road bed to the south allowing no water to drain off. |
| 56 | 710 - Sand, Soil | 1.2 | No | Unspecified | Snowmobile Trail Parking Lot |
| 66 | 11 - Low Intensity Urban | 5.1 | No | Unspecified | Owens Drive |
| 68 | 3102 - Grass | 10.8 | Yes | High (NonForested) | Appears to have been an old farm field that in the past had become a problem area for illegal user activity. It was trenched but no trees were planted. Some white pine has populated the site but is still mostly open with illegal use. The site is not able to be maintained by mowing to stimulate good grasses for wildlife due to all the old trenches. Plant the site to red pine possibly using the old trenches and help alleviate future illegal use. |
| 71 | 6220 - Alder/willow | 4.6 | No | Unspecified | Tag alder mixed with reed canary grass. |
| 74 | 11 - Low Intensity Urban | 4.3 | No | Unspecified | West Emery Road |

| Stand | Cover Type | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|---|---|---|---|---|---|
| **79** | 3102 - Grass | 5.4 | No | Unspecified | Grass opening with some scattered puff ball shaped white pine naturally filling in. |
| **83** | 3201 - Sweet Fern | 3.5 | No | Unspecified | Some scattered white pine and aspen filling in here and there but mainly is vegetated by sweet fern with a grass mix. The race track to the east has in past years trespassed with their land clearing debrised pushed up onto state land. |
| **88** | 6220 - Alder/willow | 6.9 | No | Unspecified | Tag alder with reed canary grass. A perimeter of white pine encompasses the transition from lowland to upland. |
| **90** | 3301 - Low Density Deciduous Tree | 46.6 | Yes | High (NonForested) | Was clearcut in 2007 to a two inch diameter leaving all the white oak, which in some locations is over 100 basal area. Some scattered oak regeneration mainly off the stump sprouts. The Aspen regeneration is scattered and only present in the immediate area of the previous clones. Need to interplant to get stocking levels up because it is not revegetating at a good enough rate. Recommend red pine based on the soils and the good vigor of the red pine in the stand to the immediate east. |

## 7 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

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

| Stand | SCA Type | SCA Name | Acres | Comments |
|---|---|---|---|---|
| **23** | **Unique Site - SCA** | 71107023 | 9.8 | Classify as a Type 1 Old Growth area. |
| **55** | **Unique Site - SCA** | 71107055 | 8.4 | |

## 8 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

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

| Conservation Area | Type | Description |
|---|---|---|