



Compartment Review Presentation

Escanaba Forest Management Unit

Compartment: 8

Entry Year: 2015

Acreage: 620

County: Menominee

Management Area: Menominee End Moraine

Revision Date: 06/05/2013

Stand Examiner: Joe Durbin

Legal Description:

T37N, R28W Sections 14 and 15

Identified Planning Goals:

This compartment is part of the Menominee End Moraine Management Area and is located about 9 miles west of Carney, Michigan near the Michigan-Wisconsin border. It is a mixture of upland and lowland types. Upland types are about 75% of the compartment and include mostly aspen, white pine and upland red maple and oak types. Lowland types are about 25% of the compartment and include mostly mixed lowland conifers and cedar timber types with some lowland non-forested types.

In several areas cedar regeneration was observed in the compartment. Deer populations maybe in a low part of their population cycle allowing cedar and hardwood to regenerate and grow above the deer browse. This entry may be another opportunity to treat some lowland conifer stands that will result in regeneration success.

Spruce budworm has infested the compartment for many years. For some of the trees this may be the final opportunity for salvage. Larch case-bearer and eastern larch beetle were observed on tamarack in the compartment. Oak wilt was found in several stands. These stands will be recommended for treatment.

Approximately 161 acres comprising 7 stands are proposed for treatment. All of the proposed treatments are either clearcut with reserves or seed-tree harvest with reserves. The aspen stands located west of the Pemene Creek are on Rubicon sands and in poor shape. These aspen trees have many conks and show low vigor and should be managed on a shorter than customary rotation. Over time, conversion to pine dominated types should be encouraged.

Soil and topography:

The major soil series include Pemene, Rubicon and complexes of Mancelona-Nadeau and Pemene-Rousseau for the uplands and Lupton-Tawas for the lowlands. Topography is gently rolling to level in most of the upland areas.

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

The compartment is mostly part of a contiguous block of state ownership to the north and south with private holdings east and west. Most private ownership is recreational for seasonal hunting, recreation and farming. There are several year-round permanent residents adjacent to and near the compartment.

Unique Natural Features:

The Pemene Creek flows north to south through section 15 and the DeHaas Creek flows east to west through section 14. The two creeks merge south of the compartment.

Archeological, Historical, and Cultural Features:

There are known concerns within the compartment. All proposed management activities have taken these concerns into consideration.

Special Management Designations or Considerations:

None.

Watershed and Fisheries Considerations:

The Pemene and DeHaas Creeks flow through the compartment and merge just south of the compartment. The Pemene is a trout stream. No lakes exist in the compartment.

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of a medium-textured glacial till and an end moraine of medium-textured till. The glacial drift thickness varies between 10 and 50 feet. Beneath the glacial drift are the Cambrian Trempealeau and Munising Formations. The Trempealeau could be used for stone and both formations overlap Precambrian aged rocks, which may have metallic and nonmetallic mineral potential. State land was not previously leased in the area for metallic exploration. Two gravel pits are located in Section 14 east of County Road 577. One pit appears active before 1939. No economic oil and gas production has been found in the UP.

Vehicle Access:

Access is very good for this compartment with Houte's Spur Road and two-track roads through the majority of the area. County Road 577 passes through the east portion of the compartment. Also, abandoned county roads DeHaas Lane and T-1 Road access the compartment east of CR-577. For the proposed treatments, a temporary bridge, probably a forty footer, will be needed on the old abandoned Wisconsin-Michigan Lumber Company Railroad grade to access the area south of the Pemene.

Survey Needs:

For the proposed treatments, potentially three survey corners maybe needed.

Recreational Facilities and Opportunities:

No developed facilities currently exist. Recreational opportunities include hunting, fishing, trapping and horseback riding.

Fire Protection:

The timber types in the compartment are generally low risk for fire hazard. however oak and pine are scattered through the area. Access is very good along CR-577, Houte's Spur Road, several abandoned dirt county roads and two-track roads. There is good access to water near the Pemene Creek. Holmes Township Fire Department will assist with structure protection.

Additional Compartment Information:

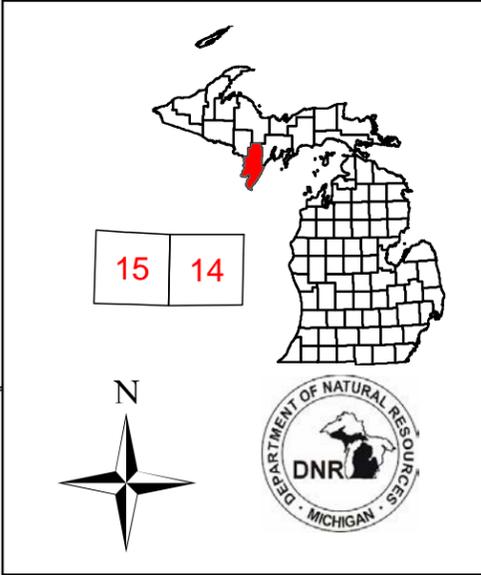
The following reports from the Inventory are attached:

- 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**

Compartment: 008
 T37N R28W
 14 15
 County: Menominee
 Unit: Escanaba
 YOE: 2015
 Acres: 620 GIS Calculated
 Examiner: Joe Durbin
 Map Revised: 06/24/2013
 Map Phase: Pre-Review



Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

Cover Type & Treatment Map

Legend

- Miris Corners
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Berms
- Abandoned Railroad Grade
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments w/ Site Condition

- Treatments w/ Site Condition

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Other Treatment - See Comments

Forest Stands

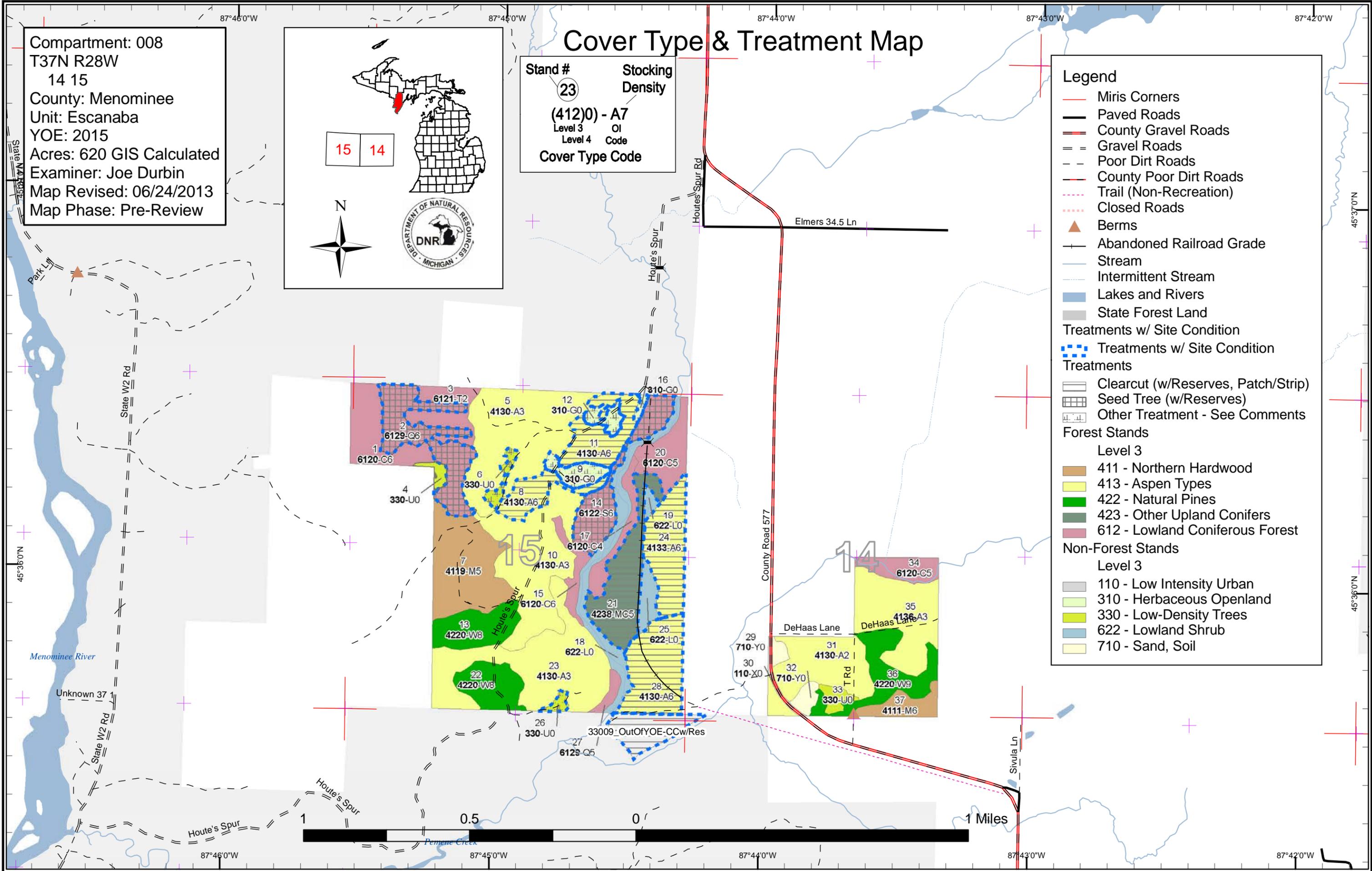
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 612 - Lowland Coniferous Forest

Non-Forest Stands

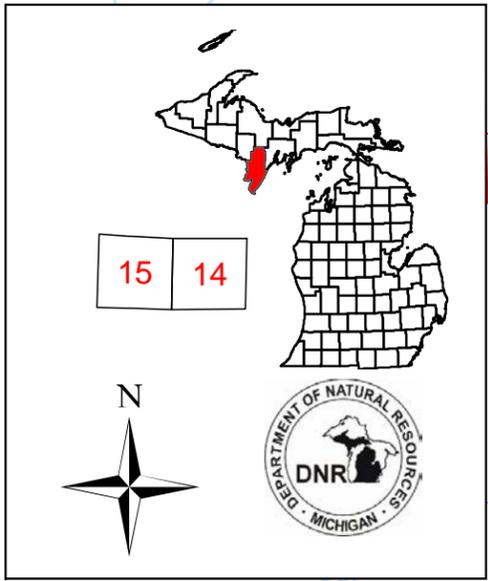
Level 3

- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 710 - Sand, Soil



Special Conservation Areas & Site Conditions Map

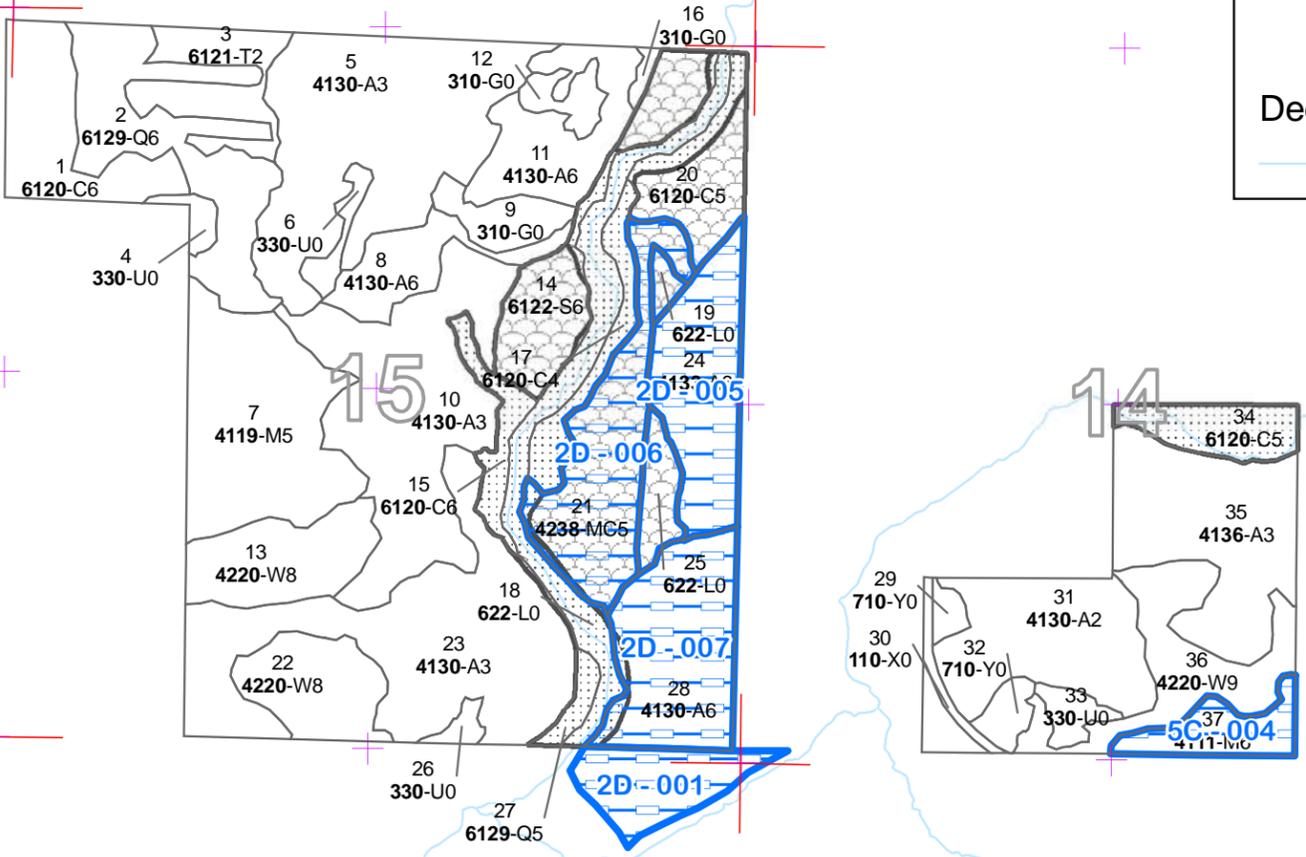
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Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

Legend

- Miris Corners
- Stand Boundaries
- Reviewable SCAs**
- ▨ Proposed SCA
- ▩ SCA Removal
- ▭ Available w/ Constraints (Factor - Number)
- Site Condition Type**
- Available Factors W/ Constraints
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2D: Portable Bridge Needed (Dept. bridge will be adequate)
- Dedicated Special Conservation Areas**
- Cold Water Streams



Report 1 – Total Acres by Cover Type and Age Class



| | Age Class | | | | | | | | | | | | | | Total |
|---------------------|------------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|----------|----------|-----------|------------|------------|
| | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-99 | 100-109 | 110-119 | 120 + | Uneven Age | |
| Aspen | 49 | 85 | 92 | 18 | 11 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 308 |
| Cedar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 8 | 0 | 0 | 6 | 34 | 0 | 59 |
| Herbaceous Openland | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| Low-Density Trees | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Lowland Conifers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 30 | 0 | 0 | 0 | 0 | 33 |
| Lowland Shrub | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| Lowland Spruce/Fir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 20 |
| Northern Hardwood | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| Sand, Soil | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Tamarack | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Upland Conifers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 28 |
| Urban | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| White Pine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 32 | 0 | 0 | 0 | 0 | 0 | 53 |
| Total | 107 | 99 | 92 | 18 | 11 | 53 | 9 | 71 | 69 | 50 | 0 | 6 | 34 | 0 | 620 |



Report 2 – Proposed Treatment Summaries

Escanaba Mgt. Unit
Year of Entry: 2015

Compartment: 008
Total Compartment Acres: 620

Acres by Treatment Type

Commercial Harvest - 161 Tree Planting - 18 Other - 0
 Habitat Cut - 0 Opening Maintenance - 17

Cover Type by Harvest Method

| | Clearcut | Selection | Seed Tree | Shelterwood | Thinning | Other - Specify | Total Acres |
|----------------------------------|------------|-----------|-----------|-------------|----------|-----------------|-------------|
| Aspen Types | 83 | 0 | 0 | 0 | 0 | 0 | 83 |
| Lowland Coniferous Forest | 0 | 0 | 50 | 0 | 0 | 0 | 50 |
| Other Upland Conifers | 28 | 0 | 0 | 0 | 0 | 0 | 28 |
| Total | 111 | 0 | 50 | 0 | 0 | 0 | 161 |



| S t a n d | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|----------------------|-------|--|-------------------------|--------------|-------------|-------------------|----------------------------|--|--------------------------|
| 2 | 33008002- STw/Res | 30.1 | 6129 - Mixed Coniferous Lowland Forest | High Density Pole | 90 | 141-170 | Harvest | Seed Tree with Reserves | 6129 - Mixed Coniferous Lowland Forest | Cmpt. Review Proposal |
| <u>Prescription</u> Seed-tree harvest with reserves--cut all trees except hemlock and pine, if present, and leave seed tree pockets. This treatment is to remove <u>Specs:</u> uncut strips from treatment last entry and treat areas of mixed lowland conifer type. Red line out pockets heavier to cedar with mixed species as retention, cover and seed source. <u>Other</u> Cut strips from last treatment regenerated well to tamarack, black spruce and even some cedar. <u>Comments:</u> <u>Next</u> Check next entry for regeration success. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2014 | | | | | | | | | | |
| 8 | 33008008- CCw/Res | 11.4 | 4130 - Aspen | High Density Pole | 46 | 81-110 | Harvest | Clearcut with Reserves | 4130 - Aspen | Cmpt. Review Proposal |
| <u>Prescription</u> Final harvest with reserves--cut all trees except oak, pine and hemlock, if present. <u>Specs:</u> <u>Other</u> Treat oak wilt if found. Spray and then plant red pine around opening. Use road as the boundary. <u>Comments:</u> <u>Next</u> Check next entry for regeneration success. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2014 | | | | | | | | | | |
| 11 | 33008011-CC | 18.1 | 4130 - Aspen | High Density Pole | 39 | 51-80 | Harvest | Clearcut | 4211 - Planted Red Pine | Cmpt. Review Proposal |
| <u>Prescription</u> Final harvest--cut all trees. <u>Specs:</u> <u>Other</u> Aspen trees are not vigorous looking. Conks on tree bolles present. Manage for red pine. Treat oak wilt if found. <u>Comments:</u> <u>Next</u> Site prep and plant to red pine. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2014 | | | | | | | | | | |
| 14 | 33008014- STw/res | 20.1 | 6122 - Black Spruce | High Density Pole | 97 | 111-140 | Harvest | Seed Tree with Reserves | 6129 - Mixed Coniferous Lowland Forest | Cmpt. Review Proposal |
| <u>Prescription</u> Seed-tree harvest with reserves--cut all trees except pine, and, if present, hemlock and oak. Retain pockets of cedar and mixed species for seed <u>Specs:</u> source. Also, leave appropriate buffer along creek. <u>Other</u> <u>Comments:</u> <u>Next</u> Check next entry for regeneration success. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2014 | | | | | | | | | | |



| S t a n d | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|--|------------------------|-------|---------------------------------------|--------------|-----------|----------|--------------------------|------------------|------------------------------|--------------------------|
| 6 | NF_33008006- NonFor | 3.1 | 3301 - Low Density Deciduous Trees | | | | Non-Forest Management | Other - Specify | 310 - Herbaceous Openland | Cmpt. Review Proposal |
| <p><u>Prescription</u> <u>Specs:</u> Enhance and perpetuate opening. Cut brush and trees, mow, till, plant, and/or fertilize. Burn and/or herbicide if need and funding present. Hard or soft mast plants, shrubs, and trees may be planted if available. Herbaceous plantings will be to provide forage, brood rearing, and recreational opportunities.</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u></p> <p><u>Proposed</u> <u>Start Date:</u> Unspecified</p> | | | | | | | | | | |
| 9 | NF_33008009- NonFor | 6.7 | 3102 - Grass | | | | Non-Forest Management | Other - Specify | 310 - Herbaceous Openland | Cmpt. Review Proposal |
| <p><u>Prescription</u> <u>Specs:</u> Enhance and perpetuate opening. Cut brush and trees, mow, till, plant, and/or fertilize. Burn and/or herbicide if need and funding present. Hard or soft mast plants, shrubs, and trees may be planted if available. Herbaceous plantings will be to provide forage, brood rearing, and recreational opportunities.</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u></p> <p><u>Proposed</u> <u>Start Date:</u> Unspecified</p> | | | | | | | | | | |
| 12 | NF_33008012- NonFor | 4.2 | 3102 - Grass | | | | Non-Forest Management | Other - Specify | 310 - Herbaceous Openland | Cmpt. Review Proposal |
| <p><u>Prescription</u> <u>Specs:</u> Enhance and perpetuate opening. Cut brush and trees, mow, till, plant, and/or fertilize. Burn and/or herbicide if need and funding present. Hard or soft mast plants, shrubs, and trees may be planted if available. Herbaceous plantings will be to provide forage, brood rearing, and recreational opportunities.</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u></p> <p><u>Proposed</u> <u>Start Date:</u> Unspecified</p> | | | | | | | | | | |
| 16 | NF_33008016- NonFor | 1.1 | 3102 - Grass | | | | Non-Forest Management | Other - Specify | 310 - Herbaceous Openland | Cmpt. Review Proposal |
| <p><u>Prescription</u> <u>Specs:</u> Enhance and perpetuate opening. Cut brush and trees, mow, till, plant, and/or fertilize. Burn and/or herbicide if need and funding present. Hard or soft mast plants, shrubs, and trees may be planted if available. Herbaceous plantings will be to provide forage, brood rearing, and recreational opportunities.</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u></p> <p><u>Proposed</u> <u>Start Date:</u> Unspecified</p> | | | | | | | | | | |



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| Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|-----------------------|-------|------------------------------------|--------------|-----------|----------|-----------------------|------------------|---------------------------|-----------------------|
| 26 NF_33008026-NonFor | 1.7 | 3301 - Low Density Deciduous Trees | | | | Non-Forest Management | Other - Specify | 310 - Herbaceous Openland | Cmpt. Review Proposal |

Prescription: Enhance and perpetuate opening. Cut brush and trees, mow, till, plant, and/or fertilize. Burn and/or herbicide if need and funding present. Hard or soft mast plants, shrubs, and trees may be planted if available. Herbaceous plantings will be to provide forage, brood rearing, and recreational opportunities.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

Total Treatment Acreage Proposed: 96.6



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| Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---------------------|-------|--|---------------------|-----------|----------|----------------|------------------------|-----------------------------|-----------------------|
| 21 33008021-CCw/res | 28.1 | 42380 - Non Pine Upland Conifer, Mixed Deciduous | Medium Density Pole | 86 | | Harvest | Clearcut with Reserves | 6139 - Mixed Lowland Forest | Cmpt. Review Proposal |

Prescription Specs: Final harvest with reserves--cut all trees except pine and, if present hemlock and oak. Also, leave pockets of mixed species for cover and seed source. In the southern portion of stand, leave area which is mostly submerchantable spruce/fir/cedar and an appropriate buffer along the creek.

Other Comment: A crane may be required to set a forty foot temporary bridge on the old railroad grade over the Pemene Creek. Treat oak wilt if found.

Next Steps: Check next entry for regeneration success.

Proposed Start Date: 10/01/2014

Limiting Factor 2D: Portable Bridge Needed (Dept. bridge will be adequate)

| | | | | | | | | | |
|---------------------|------|--------------------------|-------------------|----|---------|---------|------------------------|-----------------------------|-----------------------|
| 24 33008024-CCw/res | 24.2 | 4133 - Aspen, Mixed Pine | High Density Pole | 56 | 111-140 | Harvest | Clearcut with Reserves | 4136 - Aspen, Mixed Conifer | Cmpt. Review Proposal |
|---------------------|------|--------------------------|-------------------|----|---------|---------|------------------------|-----------------------------|-----------------------|

Prescription Specs: Final harvest with reserves--cut all trees except mark some of the pine and oak to leave. Also, retain, if possible, a small pocket of oak in the northern portion of the stand. Buffer stand 25--wet lowland adjacent to the southwestern border of this treatment.

Other Comment: A crane may be required to set a forty foot temporary bridge on the old railroad grade over the Pemene Creek. Treat oak wilt. Leave some healthy oak, if possible.

Next Steps: Check next entry for regeneration success.

Proposed Start Date: 10/01/2014

Limiting Factor 2D: Portable Bridge Needed (Dept. bridge will be adequate)

| | | | | | | | | | |
|---------------------|------|--------------|-------------------|----|--------|---------|------------------------|-----------------------------|-----------------------|
| 28 33008028-CCw/res | 29.0 | 4130 - Aspen | High Density Pole | 59 | 81-110 | Harvest | Clearcut with Reserves | 4136 - Aspen, Mixed Conifer | Cmpt. Review Proposal |
|---------------------|------|--------------|-------------------|----|--------|---------|------------------------|-----------------------------|-----------------------|

Prescription Specs: Final harvest with reserves--cut all trees except red and white pine, and, if present, hemlock and oak. Leave appropriate buffer along creek.

Other Comment: A crane may be required to set a forty foot temporary bridge on the old railroad grade over the Pemene Creek. Treat oak wilt if found.

Next Steps: Check next entry for regeneration success.

Proposed Start Date: 10/01/2014

Limiting Factor 2D: Portable Bridge Needed (Dept. bridge will be adequate)

| | | | | | | | | | |
|-------------------------|------|--|--|--|--|---------|------------------------|-----------------------------|-----------------------|
| 33009_OutOfY OE-CCw/Res | 13.5 | | | | | Harvest | Clearcut with Reserves | 4136 - Aspen, Mixed Conifer | Cmpt. Review Proposal |
|-------------------------|------|--|--|--|--|---------|------------------------|-----------------------------|-----------------------|

Prescription Specs: Final Harvest with reserves--Cut all trees except pine and, if present, oak and hemlock. SBW is known to infest this area and the treatment line should be adjusted to include affected trees in adjacent stands. Leave appropriate buffer along both creeks.

Other Comment: This stand should be treated with the adjacent compartment to the north due to access that is restricted from the south and west due to Pemene and DeHaas Creeks and private ownership to the east. Comments the previous OI sheets recommended treatment this entry. A crane may be required to set a forty foot temporary bridge on the old railroad grade over the Pemene Creek. Treat oak wilt if found.

Next Steps: Check next entry for regeneration success.

Proposed Start Date: 10/01/2014

Limiting Factor 2D: Portable Bridge Needed (Dept. bridge will be adequate)

Total Treatment Acreage Proposed: 94.9



Availability for Management

| Total Acres | Acres | | Dominant Site Conditions | No | 5C | 2D |
|----------------|-----------|---------------|--------------------------|-----|----|----|
| | Available | Not Available | | | | |
| 308 | 308 | | Aspen | 255 | | 53 |
| 59 | 59 | | Cedar | 59 | | |
| 33 | 33 | | Lowland Conifers | 33 | | |
| 20 | 20 | | Lowland Spruce/Fir | 20 | | |
| 47 | 47 | | Northern Hardwood | 38 | 9 | |
| 13 | 13 | | Tamarack | 13 | | |
| 28 | 28 | | Upland Conifers | | | 28 |
| 53 | 53 | | White Pine | 53 | | |
| 561 | 561 | | Total Forested Acres | 471 | 9 | 81 |
| | 100% | | 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 |
|------------------|---------------------------------|--|-------|----------------------|----------------------|----------------------|----------------------|
| 004 | Available | 5C: Delay treatment for age/size class diversity or exceptional site quality | 9 | | | | |
| Comments: | | | | | | | |
| 005 | Available | 2D: Portable Bridge Needed (Dept. bridge will be adequate) | 24 | | | | |
| Comments: | | | | | | | |
| 006 | Available | 2D: Portable Bridge Needed (Dept. bridge will be adequate) | 28 | | | | |
| Comments: | | | | | | | |

Escanaba Mgt. Unit
Joe Durbin : Examiner

Report 5 – Site Conditions

Compartment: 008
Year of Entry: 2015



| | | | |
|-----|-----------|--|----|
| 007 | Available | 2D: Portable Bridge Needed (Dept. bridge will be adequate) | 29 |
|-----|-----------|--|----|

Comments:



Report 6 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

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

| SCA Name | SCA Category | Detail Type | Recommendation | Acres |
|--|------------------------------|---------------|--------------------|-------|
| DeHaas Creek Riparian Corridor | Spring-Seeps, Riparian Areas | Riparian Area | SCA | 9.7 |
| Comments | | | | |
| SCA--DeHaas Creek riparian corridor. Mature forest conditions will be maintained to promote large diameter trees, cavities, snags and dead woody debris for wildlife habitat. Some high ground and some low areas--flood plain. | | | | |
| Pemene Creek Riparian Corridor | Spring-Seeps, Riparian Areas | Riparian Area | SCA | 46.5 |
| Comments | | | | |
| SCA--Pemene Creek riparian corridor. Mature forest conditions will be maintained to promote large diameter trees, cavities, snags and dead woody debris for wildlife habitat. Mostly low ground but some areas are slightly higher--flood plain. | | | | |
| Comp 008--SCA Removal 2 | Potential Old Growth | | SCA Removal | 6.5 |
| Comments | | | | |
| This area does not contain any unique cover-types or values that need to be enhanced. Balsam and spruce were hit very hard by Spruce Budworm in the past. Portions of the stand were harvested several decades ago. | | | | |
| Comp 008--SCA Removal 3 | Potential Old Growth | | SCA Removal | 11.6 |
| Comments | | | | |
| This area does not contain any unique cover-types or values that need to be enhanced. Balsam and spruce were hit very hard by Spruce Budworm in the past. Portions of the stand were harvested several decades ago. | | | | |
| Comp 008--SCA Removal 1 | Potential Old Growth | | SCA Removal | 46.0 |
| Comments | | | | |
| This area is not unique cover-types. Balsam and spruce hit very hard by Spruce Budworm in the past. | | | | |



Report 7 – 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 |
|-------------------|---------------------|---|
| SCA | Archaeological Site | An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available. |
| 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. |



| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|-------|--|----------------------|-------|-----------|----------|---|
| 1 | 6120 - Lowland Cedar | High Density Pole | 19.8 | 130 | | Northwestern portion of stand was cut in 1960's to feed deer. Found cedar seedlings 6-18 inches high in several places in that area. Fir is hit hard by SBW. Found tamarack dying from Larch beetle in several places. Found cedar seedlings 2-3 inches high in forest floor. |
| 2 | 6129 - Mixed Coniferous Lowland Forest | High Density Pole | 30.1 | 90 | 141-170 | Quaking aspen, balsam dying out. Balsam fir heavy damage from SBW and tamarack shows signs of Larch beetle damage. Cedar good quality. Found cedar seedlings 2-3" tall in several parts of stand. Other species observed: quaking aspen, paper birch, balsam poplar, black ash, balsam fir. |
| 3 | 6121 - Tamarack | Medium Density | 13.2 | 14 | | Stand last treated in 1998 as lowland conifer strip cuts on contract 040-95. Excellent regeneration 8-10 feet tall. Found cedar seedlings ranging from 2-6 inches tall to 18 inches tall growing from under the tamarack and spruce. |
| 5 | 4130 - Aspen | High Density Sapling | 54.5 | 14 | | Occasional low ground with some low ponding areas (vernal pools?). Pockets of r and w pine logs. Some areas are heavier to big-toothed aspen. Scattered red oak log trees. |
| 7 | 4119 - Mixed Northern Hardwoods | Medium Density Pole | 37.6 | 70 | 81-110 | Generally poor quality red maple with some fair quality red oak. Where white pine seed trees are present there are many white pine seedlings less than 1 foot tall. Other species observed: quaking aspen. |
| 8 | 4130 - Aspen | High Density Pole | 11.4 | 46 | 81-110 | Some QA in rough shape with conks on some stems--most is sound and solid inside. White pine seedlings as ground cover in many places. Other species observed: white spruce, red pine, red maple, red oak. |
| 10 | 4130 - Aspen | High Density Sapling | 48.7 | 5 | | Nice regeneration 10-15 feet tall with scattered residual trees and some white pine in understory. Mostly high ground but some low areas which were probably conifer and now have Fb and Fs regeneration. Other species observed: red oak and red maple. |
| 11 | 4130 - Aspen | High Density Pole | 18.1 | 39 | 51-80 | Poor aspen site--manage on shorter rotation. Stand not vigorous looking with conks and some rot. Many white pine and red pine seedlings in understory less than 3 feet tall. Other species observed: red pine logs. |
| 13 | 42200 - Natural White Pine | Medium Density Log | 17.2 | 84 | 1-50 | Some white pine seedlings less than 3 feet tall. Aspen and red maple (2-3" dbh) in pockets where last treatment was more open. |
| 14 | 6122 - Black Spruce | High Density Pole | 20.1 | 97 | 111-140 | Mostly black spruce but more cedar near creek. Mostly lowland but southern portion is higher ground with overmature aspen type. Other species observed: balsam fir, white pine, paper birch. SCA removal--it is not a unique stand. It is similar to most mixed Q-type stands. Due to SBW most of the mature balsam fir has died and is either standing snags or down. However, a riparian corridor along the creek should be retained. |



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|--|-------------------------|-------|--------------|-------------|---|
| 15 | 6120 - Lowland Cedar | High Density Pole | 6.4 | 111 | 141-170 | Mostly cedar with mixed deciduous and conifer. Mostly lowland but some higher ground, too. Other species observed: tamarack. SCA removal--it is not a unique stand. It is similar to most cedar and lowland conifer stands. Due to SBW most of the mature balsam fir has died and is either standing snags or down. If treated a buffer along the creek should be retained. |
| 17 | 6120 - Lowland Cedar | Low Density Pole | 8.3 | 86 | | Stand density varies from more open to fully stocked. Other observed species: tamarack, balm, quaking aspen. SCA -- Pemene Creek Riparian corridor. |
| 20 | 6120 - Lowland Cedar | Medium Density Pole | 14.4 | 126 | | Stand is mix of leave strips and cut strips from harvest in 1967. Most of the stand is the leave strips and buffer along creek to the west side of the stand. Leave strips are mostly cedar with some black spruce, tamarack and paper birch. Balsam fir and white spruce have died out from age and spruce budworm infestation. Cut strips are balsam fir, white and black spruce, paper birch and balm. The balsam fir and spruce are hit hard from SBW and are dying out. Cedar seedlings were found in the more open areas of the cut strips. SCA removal--it is not a unique stand. It is similar to most mixed cedar and lowland conifer stands. Due to SBW most of the mature balsam fir has died and is either standing snags or down. However, a riparian corridor along the creek should be retained. |
| 21 | 42380 - Non Pine Upland Conifer, Mixed Deciduous | Medium Density Pole | 28.1 | 86 | | Stand varies from upland with gradual sloping toward creek to lowland. Higher ground is aspen with dead and down balsam fir from SBW and white spruce and lower ground is Q or black spruce types. Southern portion is mostly small diameter Q type poles. Other observed species: white pine. Also, SCA removal--it is not a unique stand. It is similar to most mixed lowland conifer stands. Due to SBW most of the mature balsam fir has died and is either standing snags or down. However, a riparian corridor along the creek should be retained. |
| 22 | 42200 - Natural White Pine | Medium Density Log | 15.0 | 84 | 81-110 | High ground with many scattered exposed boulders and some exposed outcroppings. Mostly low quality white pine logs. Scattered pockets of aspen and pin cherry saplings and white spruce seedlings in more open areas from last treatment. |
| 23 | 4130 - Aspen | High Density Sapling | 56.8 | 23 | | Mostly high ground but some lower ground included. Fair quality aspen due to poor site quality. Some tag alder on lower ground. Mostly well stocked aspen but areas are lightly stocked and more open. Other observed species: Pin oak, balsam fir, pin cherry, red maple, white spruce. |
| 24 | 4133 - Aspen, Mixed Pine | High Density Pole | 24.2 | 56 | 111-140 | Stand is mostly aspen type but portions are more pine and/or red/pin oak. Lots of white spruce dead and down due to SBW. Red maple is occurs in small pockets. Aspen is overmature with conks and dead snags common. Found many deer and coyote tracks in light snow. Old rail grade would be good road but over grown with spruce seedlings/saplings and needs temporary bridge over Pemene Creek to access. Stream crossing would be easy with temp bridge. Other observed species: white spruce, red pine, big-toothed aspen. |
| 27 | 6129 - Mixed Coniferous Lowland Forest | Medium Density Pole | 2.7 | 75 | | Damage from SBW on spruce and fir. Other observed species: balm. SCA --Pemene Creek Riparian corridor. |



| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|-------|---------------------------------------|----------------------|-------|-----------|----------|--|
| 28 | 4130 - Aspen | High Density Pole | 29.0 | 59 | 81-110 | Stand is overmature and declining with stems rough looking and having conks and dying tops--dead snags common. Site appears to be a poorer site for aspen. White and red pine sawlog-sized trees are scattered throughout the stand with some in pockets. Stand is mostly well stocked with scattered more open areas. White spruce and balsam are hit hard by SBW. Old grade into stand is overgrown with spruce and fir saplings/seedlings. Other observed species: red pine, white spruce, red maple, black cherry. Observed many deer and coyote tracks in light snow. A riparian corridor along the creek should be retained. |
| 31 | 4130 - Aspen | Medium Density | 30.8 | 12 | | Density varies from well stocked to more open. Mostly high ground but some low wet pockets with cattails that might be vernal pools in wet years. Portions of stand were cultivated fields in the 1939 photos with a homestead in the eastern portion along the N-S road in the eastern portion of the stand which was a county road at one time. Discussion with neighbor recalled his uncle remembering old residents sitting on porches and a pond near the house. Other observed species: red oak. |
| 34 | 6120 - Lowland Cedar | Medium Density Pole | 9.7 | 70 | | Spruce and fir hit hard by SBW. Stand is mostly low ground with some higher ground along northern and eastern borders. Mostly cedar type along creek. DeHaas Creek runs east to west through stand. Other observed species: quaking aspen, white pine, balsam fir, black ash. SCA proposal. Due to SBW most of the mature balsam fir has died and is either standing snags or down. |
| 35 | 4136 - Aspen, Mixed Conifer | High Density Sapling | 34.8 | 21 | | Nicely regenerated aspen stand with spruce/fir/wpine understory. Some SBW damage on spruce/fir. Occasional pockets of residual white and red pine log trees. Also, scattered trees of residual w/r pine and white spruce. Mostly well stocked regen with some areas more open. Other observed species: red pine, cedar. |
| 36 | 42200 - Natural White Pine | High Density Log | 21.1 | 76 | 81-110 | Stand density varies. Some areas could be lightly thinned but others are not yet ready. Some areas have heavy understory of balsam fir and white spruce. Other observed species: white spruce poles, quaking aspen poles. |
| 37 | 4111 - S.Maple, Hard Mast Association | High Density Pole | 8.9 | 65 | 111-140 | Generally fair to poor quality poles due to past management though the soil type indicates good productivity for northern hardwoods AVO. Stand density is variable ranging from lightly stocked to well stocked. Other observed species: balm, balsam fir, white ash. |



| Stand | Cover Type | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|-------|-----------------------------------|-------|---------------|---------------------------------|---|
| 4 | 3303 - Mixed Low Density Trees | 2.2 | Natural Regen | Upland Mixed Forest | Mostly a low hill with northern and eastern edges are low ground with some tag alder, balsam fir and black spruce edging in. Slowing regenerating to F stand. Was probably cut in the 1970's in winter to feed deer. |
| 6 | 3301 - Low Density Deciduous Tree | 3.1 | No | Low (NonForested) | grassy opening and prescribe burned in 1998. |
| 9 | 3102 - Grass | 6.7 | No | Low (NonForested) | grassy opening and was prescribe burned in 1998. |
| 12 | 3102 - Grass | 4.2 | No | Low (NonForested) | grassy opening and prescribe burned in 1998. |
| 16 | 3102 - Grass | 1.1 | No | Low (NonForested) | grassy opening and prescribe burned in 1998. |
| 18 | 6220 - Alder/willow | 20.8 | No | Low (NonForested) | Tag alder and wetland grasses are common along the perimeter. Pemene Creek flows north to south through the stand. SCA proposal. |
| 19 | 6220 - Alder/willow | 1.8 | No | Low (NonForested) | wet area east of old n-s abandoned grade. SCA removal--the stand is not unique but pretty typical to most areas resulting from impeded water flow--the old RR grade. It will not be treated but if surrounding stands are treated a buffer could be retained. |
| 25 | 6220 - Alder/willow | 5.9 | No | Low (NonForested) | wet area east of old n-s abandoned grade. SCA removal--the stand is not unique but pretty typical to most areas resulting from impeded water flow--the old RR grade. It will not be treated but if surrounding stands are treated a buffer could be retained. |
| 26 | 3301 - Low Density Deciduous Tree | 1.7 | No | Low (NonForested) | mostly open with aspen in pockets and perimeter and prescribe burned in 1998. |
| 29 | 710 - Sand, Soil | 1.9 | No | Low (NonForested) | gravel pit and grassy opening with trees encroaching from the edges. |
| 30 | 11 - Low Intensity Urban | 2.2 | No | Low (NonForested) | County Road 577 and ROW. |
| 32 | 710 - Sand, Soil | 3.5 | No | Low (NonForested) | gravel pit and grassy opening with trees encroaching from the edges. |
| 33 | 3303 - Mixed Low Density Trees | 3.5 | No | Unspecified | mostly old abandoned field with encroaching trees. Has a small pond in the north end. |