

Revision Date: 02/21/2014

Stand Examiner: Rick James-Hill

Legal Description:

T46N R16W Sections 34 and 35

Identified Planning Goals:

Vegetative management in the Seney Manistique Swamp management area will provide timber products; maintain or enhance wildlife habitat; protect areas of unique character including rich conifer swamp, patterned fen and dry-mesic northern forest ecological reference areas and deer wintering special conservation areas; and provide for forest based recreational uses. Timber management objectives for this 10-year planning period include: improving the age-class distribution of jack pine, aspen and red pine; and continued selective harvesting of northern hardwoods to achieve an all-age class structure. Wildlife management objectives include increasing the structural complexity of northern hardwood communities for interior forest species; perpetuating early-successional communities to promote wildlife populations adapted to young forests; and providing for hunting and other wildlife related recreation. Management activities may be constrained due to poor access in this swampy area. Expected issues for this 10-year planning period include the need to regenerate natural stands of red pine and introduced insect and disease concerns (especially emerald ash borer and beech bark disease).

Soil and topography:

The topography in this compartment is mainly flat. Soil classifications include: Newton Sand, Saugatuck Sand and some Houghton Muck.

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

There are two private parcels along the north border of the compartment. The east side of the compartment borders the Seney National Wildlife Refuge; and the rest of the surrounding land is state owned. This compartment lies within the Seney Sand Lake Plain Sub-subsection (VIII.2.1).

Unique Natural Features:

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

Fair. This section of the Creighton River below M-28 is not designated as trout water. However, trout do frequent this stretch until water temperatures rise during the mid summer. Protecting the Creighton River to increased sand bedload is a high priority.

Wildlife Habitat Considerations:

This compartment is bounded on the north by M-28 and contains the Creighton River. In 1850, the upland forest in this compartment was a mix of hemlock, yellow birch, white birch, white pine, and red maple. Lowland areas were dominated by tamarack and black spruce.

Today, jack pine dominates the western ½ of the compartment while aspen is somewhat more prevalent in the eastern ½.

Wildlife habitat objectives include protecting the Creighton River corridor, maintain travel corridors, promote age, structural, and species diversity within both the deciduous and coniferous systems.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine (lake) sand and gravel. There is insufficient data to determine the glacial drift thickness. The Ordovician Prairie du Chien Group subcrops below the glacial drift. The PdC could be used for stone. Gravel pits are not located in the area and potential appears to be limited. There is no commercial oil and gas production in the UP.

Vehicle Access:

M-28 borders the compartment along the north, and the Creighton Truck Trail is on the east. There are a few two-track roads into the compartment; access to the center of the compartment is through private property.

Survey Needs:

Recreational Facilities and Opportunities:

There are no DNR recreational facilities within the compartment. Hunting is the main form of recreation use in this compartment.

Fire Protection:

Fire operations may be difficult due to the numerous drainages.

Additional Compartment Information:

The following reports from the Inventory are attached:

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

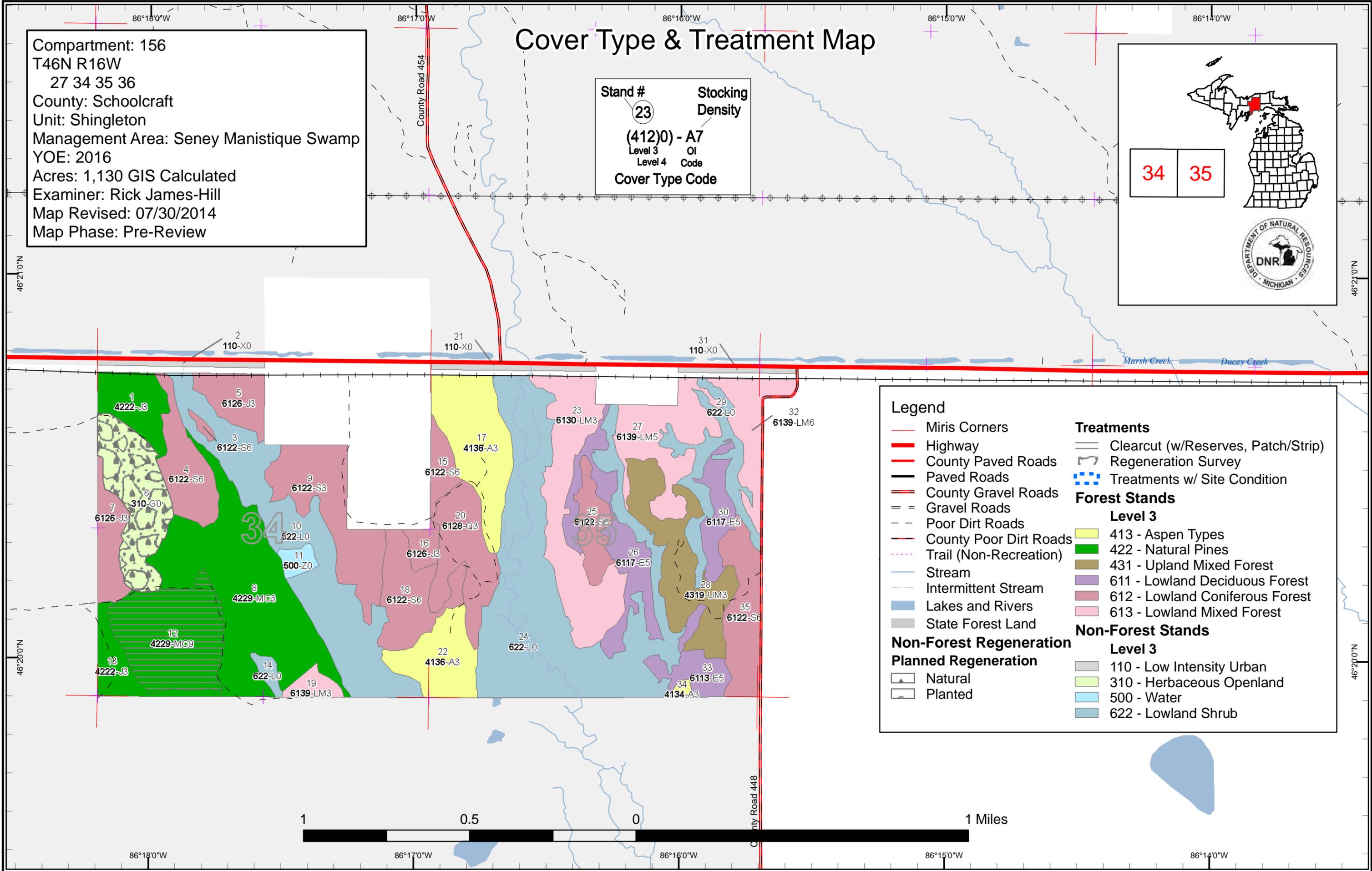
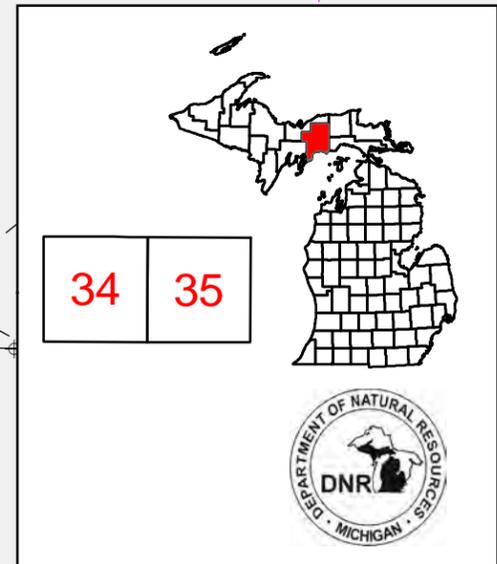
The following information is displayed, where pertinent, on the attached compartment maps:

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

Cover Type & Treatment Map

Compartment: 156
 T46N R16W
 27 34 35 36
 County: Schoolcraft
 Unit: Shingleton
 Management Area: Seney Manistique Swamp
 YOE: 2016
 Acres: 1,130 GIS Calculated
 Examiner: Rick James-Hill
 Map Revised: 07/30/2014
 Map Phase: Pre-Review

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



Legend

- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Regeneration Survey
- Treatments w/ Site Condition

Forest Stands

Level 3

- 413 - Aspen Types
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

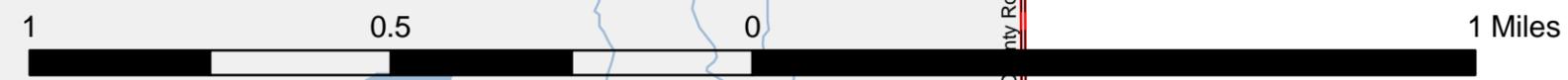
Level 3

- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub

Non-Forest Regeneration

Planned Regeneration

- Natural
- Planted



86°18'0"W 86°17'0"W 86°16'0"W 86°15'0"W 86°14'0"W

46°21'0"N
46°20'0"N

46°21'0"N
46°20'0"N

Stand Boundary Map

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Forest Stands

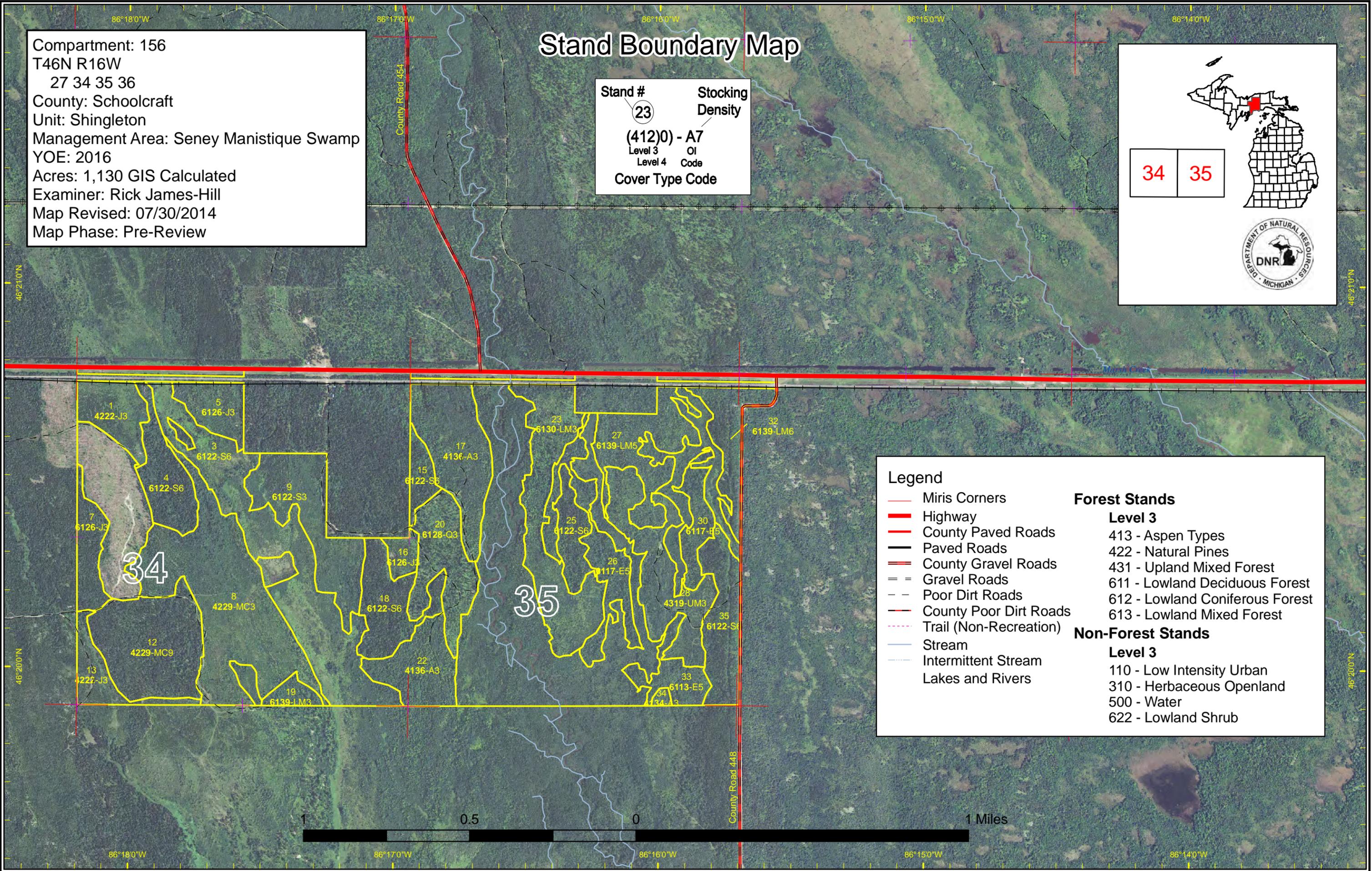
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Non-Forest Stands

Level 3

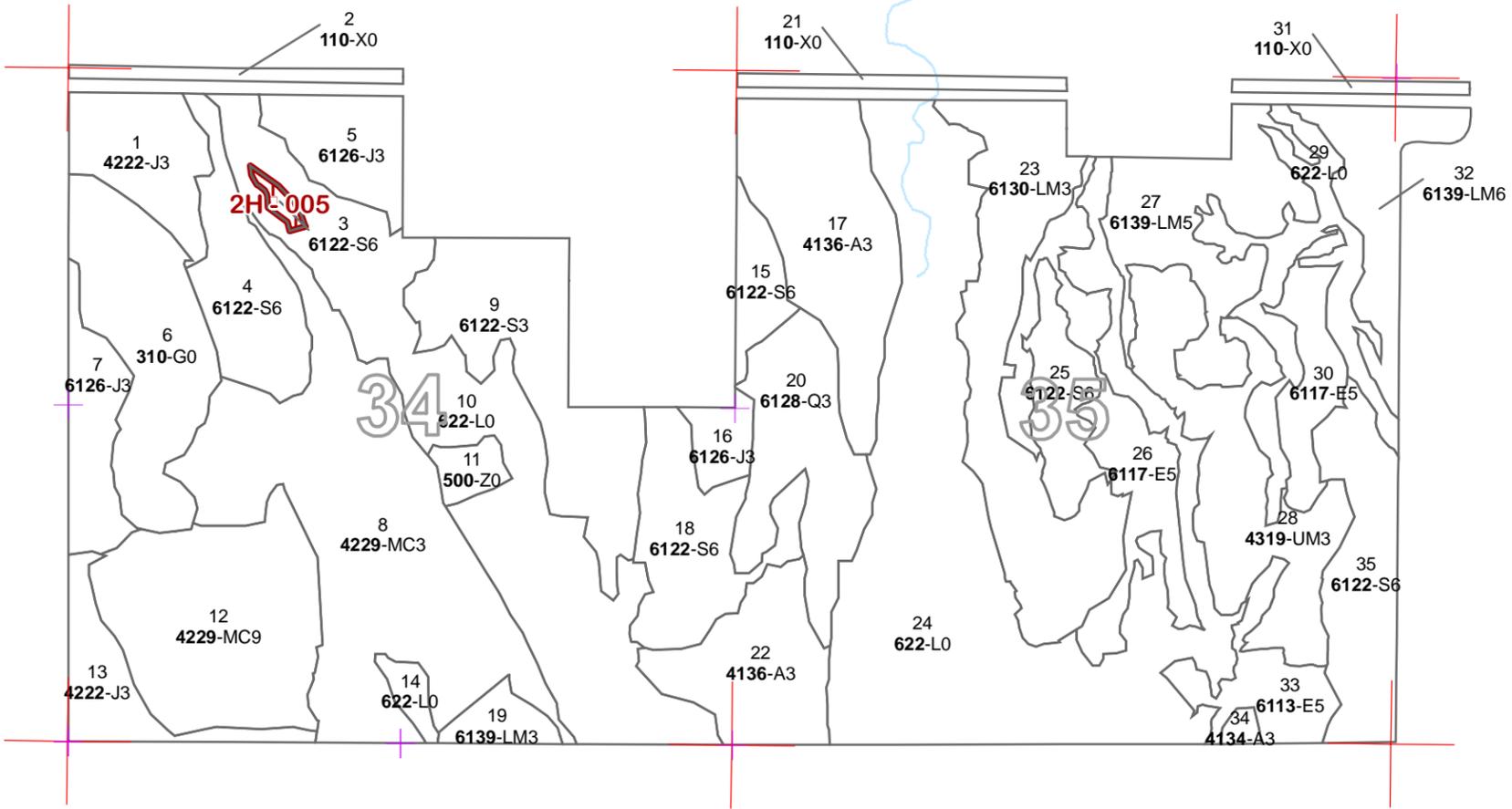
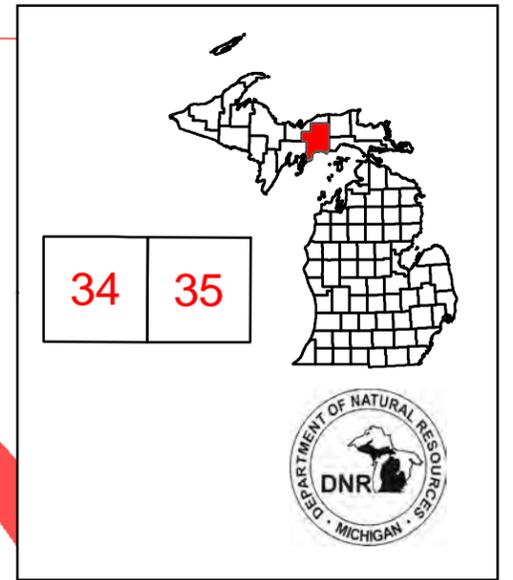
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Special Conservation Areas & Site Conditions Map

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 T46N R16W
 27 34 35 36
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 Map Phase: Pre-Review

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



Legend

- Miris Corners
- Stand Boundaries
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)

Unavailable Factors

2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)

Reviewable SCAs

Proposed SCA's

- Proposed SCA
- SCA Removal

Dedicated Special Conservation Areas

- Cold Water Streams
- Ecological Reference Areas



46°21'0"N

46°21'0"N

46°20'0"N

46°20'0"N

86°18'0"W

86°17'0"W

86°16'0"W

86°15'0"W

86°14'0"W

Report 1 – Total Acres by Cover Type and Age Class



| | Age Class | | | | | | | | | | | | | | Total |
|----------------------|------------|------------|-----------|----------|----------|------------|------------|-----------|----------|----------|----------|----------|----------|------------|-------------|
| | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-99 | 100-109 | 110-119 | 120 + | Uneven Age | |
| Aspen | 0 | 49 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 |
| Herbaceous Openland | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| Jack Pine | 0 | 64 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 82 |
| Lowland Conifers | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| Lowland Deciduous | 0 | 0 | 0 | 0 | 17 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 |
| Lowland Mixed Forest | 0 | 67 | 0 | 0 | 25 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 132 |
| Lowland Shrub | 288 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 288 |
| Lowland Spruce/Fir | 0 | 48 | 0 | 0 | 27 | 41 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 166 |
| Natural Mixed Pines | 0 | 107 | 0 | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 165 |
| Upland Mixed Forest | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| Urban | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| Water | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Total | 391 | 384 | 48 | 0 | 0 | 127 | 131 | 48 | 0 | 0 | 0 | 0 | 0 | 2 | 1130 |



Report 2 – Proposed Treatment Summaries

Shingleton Mgt. Unit
Year of Entry 2016

Compartment 156
Total Compartment Acres: 1,130

Acres by Treatment Type

| | | |
|-------------------------|-------------------------|-----------|
| Commercial Harvest - 59 | Tree Planting - 0 | Other - 0 |
| Habitat Cut - 0 | Opening Maintenance - 0 | |

Cover Type by Harvest Method

| | Clear cut | Selection | Seed Tree | Shelterwood | Thinning | Other - Specify | Total Acres |
|----------------------|-----------|-----------|-----------|-------------|----------|-----------------|-------------|
| Natural Pines | 59 | 0 | 0 | 0 | 0 | 0 | 59 |
| Total | 59 | 0 | 0 | 0 | 0 | 0 | 59 |



| Stand | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|-------|----------------|-------|----------------------------|------------------|-----------|----------|----------------|------------------------|--------------------------|-----------------------|
| 12 | 41156012-Cut | 58.7 | 42290 - Natural Mixed Pine | High Density Log | 55 | | Harvest | Clearcut with Reserves | 4222 - Natural Jack Pine | Cmpt. Review Proposal |

Prescription Clearcut this stand cut red and white pine to seed tree levels. Depending on density white and red pine can be marked to leave or marked to cut. Use a stump height spec to allow for post harvest treatment. This stand needs to be restricted to winter only harvest to protect a sensitive plant community as well as prevent soil damage in the area. Focus retention on the north side of the stand to mitigate any green up issues with the stand to the north cut in 2012.

Other
Comments:

Next Scarify post harvest if regeneration fails plant jack pine. Fall planting may be needed to allow for access. Regeneration counts should be cared out per work instructions. Use any other treatments that TMS feels is necessary to regenerate jack pine. Acceptable regeneration includes jack pine, red pine, white pine and black spruce.

Proposed
Start Date: 10/01/2015

| | | | | | | | | | | |
|---|--------------------|------|--------------------------------|--|--|--|---------------------|-------------------------------------|--------------------------|-----------------------|
| 6 | NF_41156006-Survey | 44.5 | 3105 - Mixed Upland Herbaceous | | | | Regeneration Survey | Intermediate Survey (natural regen) | 4222 - Natural Jack Pine | Cmpt. Review Proposal |
|---|--------------------|------|--------------------------------|--|--|--|---------------------|-------------------------------------|--------------------------|-----------------------|

Prescription This stand was cut in the winter of 2011-2012 under Sale # 41-024-10-01, Blackjack. Area was scarified by Holli FP in the summer of 2012 under FTP c41-1455. Regeneration check is scheduled for the summer of 2015.

Other Stand 108 in compartment 158 is also part of this stand and should be included in the counts and any further treatments.
Comments:

Next If regeneration fails Look at fall planting of jack pine. Fall is the preferred season as spring water levels would complicate the access to this site.
Steps:

Proposed
Start Date: 10/01/2014

Total Treatment
Acreage Proposed: 103.2



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

#Type! #Type!

Prescription

Specs:

Other

Comment:

Next

Steps:

Proposed

Start Date: #Type!

Limiting Factor

**Total Treatment
Acreage Proposed: 0.0**

Report 5 – Site Conditions

Shingleton Mgt. Unit

Compartment 156

Rick James-Hill : Examiner

Year of Entry 2016

Availability for Management

| Total Acres | Acres | | Dominant Site Conditions | Dominant Site Conditions | |
|----------------|-----------|---------------|-----------------------------|--------------------------|----|
| | Available | Not Available | | No | 2H |
| 79 | 79 | | Aspen | 79 | |
| 82 | 82 | | Jack Pine | 82 | |
| 36 | 36 | | Lowland Conifers | 36 | |
| 67 | 67 | | Lowland Deciduous | 67 | |
| 132 | 132 | | Lowland Mixed Forest | 132 | |
| 166 | 164 | 2 | Lowland Spruce/Fir | 164 | 2 |
| 165 | 165 | | Natural Mixed Pines | 165 | |
| 49 | 49 | | Upland Mixed Forest | 49 | |
| 775 | 773 | 2 | Total Forested Acres | 773 | 2 |
| | 100% | 0% | 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 |
|------------------|---------------------------------|---|-------|--|----------------------|----------------------|----------------------|
| 005 | Not Available | 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area) | 2 | 2D: Portable Bridge Needed (Dept. bridge will be adequate) | | | |
| 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 |
|----------|--------------|-------------|----------------|-------|
| Comments | | | | |



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

| Conservation Area | Type | Description |
|-------------------|-------------------|---|
| SCA | Cold Water 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. |

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Shingleton Mgt. Unit

Report 8 – Forested Stands

Compartment: 156
Year of Entry: 2016

| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|--|-------------------------|-------|--------------|-------------|--|
| 1 | 42220 - Natural Jack Pine | High Density Sapling | 22.2 | 15 | | |
| 3 | 6122 - Black Spruce | High Density Pole | 1.7 | Uneven Age | | Stand is a small island in a marsh and is factor limited as it is blocked by a physical obstacle. |
| 4 | 6122 - Black Spruce | High Density Pole | 26.6 | 55 | | Cut in 20 to 30 years stand looks good. The tamarack is healthy currently. |
| 5 | 6126 - Lowland Jack Pine | High Density Sapling | 18.1 | 15 | | |
| 7 | 6126 - Lowland Jack Pine | High Density Sapling | 17.5 | 28 | | |
| 8 | 42290 - Natural Mixed Pine | High Density Sapling | 106.6 | 15 | | |
| 9 | 6122 - Black Spruce | High Density Sapling | 48.1 | 15 | | |
| 12 | 42290 - Natural Mixed Pine | High Density Log | 58.7 | 55 | | There are traces of paper birch and aspen in this stand. This stand is mature and will most likely start to decline in the next ten years. |
| 13 | 42220 - Natural Jack Pine | High Density Sapling | 17.0 | 18 | | This stand crosses over into C158 stand 106. |
| 15 | 6122 - Black Spruce | High Density Pole | 9.6 | 66 | | Spruce stand with some pine ridges mixed in. |
| 16 | 6126 - Lowland Jack Pine | High Density Sapling | 7.0 | 15 | | |
| 17 | 4136 - Aspen, Mixed Conifer | High Density Sapling | 47.1 | 15 | | Stand was Cut 1998 looks good. |
| 18 | 6122 - Black Spruce | High Density Pole | 31.3 | 61 | | Spruce stand with some pine ridges mixed in. |
| 19 | 6139 - Mixed Lowland Forest | High Density Sapling | 6.7 | 19 | | |
| 20 | 6128 - Lowland Coniferous, Mixed Deciduous | High Density Sapling | 36.2 | 4 | | Stand was cut in 2009 in sale #41-016-06-01 S Creighton 35. Residual BA is 13 Sq. Ft of white pine, 7 Sq. ft. of red pine. Regeneration thus far looks adequate with mainly Aspen, Maple and Spruce making up the stand going forward. |
| 22 | 4136 - Aspen, Mixed Conifer | High Density Sapling | 30.1 | 21 | | |

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Shingleton Mgt. Unit

Report 8 – Forested Stands

Compartment: 156
Year of Entry: 2016

| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|--|-------------------------|-------|--------------|-------------|--|
| 23 | 6130 - Fir, Aspen, Maple | High Density Sapling | 60.3 | 10 | | This stand was cut in March of 2004. The retention from this harvest was left along the rail road tracks to help with aesthetics from the highway. |
| 25 | 6122 - Black Spruce | High Density Pole | 16.3 | 71 | | Leave this stand for 20-30 years may never be harvestable due to access but, that decision will be made closer to the harvest date. |
| 26 | 6117 - Lowland Deciduous, Mixed Coniferous | Medium Density Pole | 34.2 | 60 | | Leave this stand for 20-30 years may never be harvestable due to access but that decision will be made closer to the harvest date. |
| 27 | 6139 - Mixed Lowland Forest | Medium Density Pole | 39.8 | 64 | | This area is quite wet it may never be merchantable. |
| 28 | 4319 - Mixed Upland Forest | High Density Sapling | 49.0 | 14 | | This stand was cut in the winter of 2004 regeneration is coming in well with a mix of aspen and fir being the dominant species. There are some areas of mature lowland hardwood present in the stand that are retention for the stand. |
| 30 | 6117 - Lowland Deciduous, Mixed Coniferous | Medium Density Pole | 15.8 | 61 | | Edges of this stand will be managed with the spruce to the east the rest of the stand has little volume and is wet. |
| 32 | 6139 - Mixed Lowland Forest | High Density Pole | 24.7 | 55 | | This stand is a mix of aspen and spruce with a tag alder mixed in. |
| 33 | 6113 - Lowland Maple | Medium Density Pole | 16.9 | 58 | | |
| 34 | 4134 - Aspen, Spruce/Fir | High Density Sapling | 1.7 | 10 | | This stand is part of stand 52 of compartment 11 to the south. It was cut in the summer of 2003 TSI was performed in 2003 as well. A regeneration check was performed with inventory regeneration is satisfactory and is mainly aspen. |
| 35 | 6122 - Black Spruce | High Density Pole | 32.1 | 71 | | |



| Stand | Cover Type | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|-------|--------------------------------|-------|---------------|---------------------------------|-------------------|
| 2 | 11 - Low Intensity Urban | 6.3 | Unspecified | Unspecified | |
| 6 | 3105 - Mixed Upland Herbaceous | 44.5 | Natural Regen | Jack Pine | |
| 10 | 622 - Lowland Shrub | 94.5 | Unspecified | Unspecified | |
| 11 | 50 - Water | 5.2 | Unspecified | Unspecified | |
| 14 | 622 - Lowland Shrub | 3.7 | Unspecified | Unspecified | |
| 21 | 11 - Low Intensity Urban | 6.5 | Unspecified | Unspecified | |
| 24 | 622 - Lowland Shrub | 161.0 | Unspecified | Unspecified | |
| 29 | 622 - Lowland Shrub | 28.8 | Unspecified | Unspecified | |
| 31 | 11 - Low Intensity Urban | 4.4 | Unspecified | Unspecified | |