Report 1 – Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 46
Entry Year 2015
Acreage: 3,135
County Grand Traverse
Management Area: Boardman Plains

Revision Date: 05/09/2013

Stand Examiner: Pat Ruppen

Legal Description:

Sections 1, 2, 11 & 12 T26N-R9W, and Sections 25, 35 & 36, T27N-R9W, Grand Traverse County

Identified Planning Goals:

This compartment fall within Land Type Association 5111 in Sub-section VII 2.2. This is described as broad, flat, excessively drained outwash plain with few kettle lakes. This sub-section has relatively high elevation and extreme temperature variations. Pre-settlement vegetation was primarily conifer forests and pine barrens on the most fire prone sites. Mixes of white pine, oak, and other conifers occupied the less fire prone sites while beach/sugar maple association forests were found on the least fire prone sites. Wildfires were common and large and areas of wind throw were also reported. Due to wildfire suppression and conversion to xeric pine plantations, the extent of pine barrens has been greatly diminished. Some poorly drained outwash supporting conifer swamps with uplands inclusion were found and are present in this compartment. Current vegetation shows a shift from lowland conifers to lowland hardwoods and a large increase in aspen/birch forests which have replaced coniferous forests as compared to pre-settlement levels. There are many rare and threatened species associated with the Land Type association and the majority of them are commonly found in pine or oak/pine barrens. Several management focuses are recommended as a result of field inventory and analysis. Several stands were noted with a heavy jack pine component in the 70-80 age class. These stands should be harvested and reforested. Natural jack pine regeneration has resulted in poorly stocked stands in this compartment so trenching and planting of red pine is recommended. Red pine growth and form has been superior to jack pine and white pine in this compartment. Other stands of mixed pine with an aspen and oak component were noted in the same age class. (70-80 yr.) Some of these stands are recommended for final harvest and replanting while others are prescribed to be crown thinned. Several stands were noted with low stocked jack pine and red maple regeneration formed after prior harvests. These stands should be harvested and planted as possible. An area in the north half of Section 12 is under current management as a Barrens Restoration project. It is recommended that this area be expanded to the north through vegetative management and maintained with prescribed fire. An area of aged declining oak was noted in in Section 35. It is recommended that part of this area be harvested with well- formed oak and pine retained in the canopy. Red pine should then be inter-planted in a weave pattern.

Soil and topography:

Rubicon. Rwa most common. C in low areas. Some Cra in south part of Section 1. Terrain is level to rolling with steep banks in some areas along river floodplain.

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

Complete State of Michigan ownership in east ½ of compartment. Mixed ownership in west ½.

Unique, Natural Features:

North and South Branch of Boardman River along with associated tributaries. Element Occurrence of Hill's Thistle in Section 35 along Broomhead Road.

Archeological, Historical, and Cultural Features:

none known but high potential for historical sites along bluffs of Boardman River.

Special Management Designations or Considerations:

The North and South Branches of the Boardman River are Designated Natural Rivers. An Area in the north ½ of Section 12 will be managed as A Special Conservation Area- Oak/Pine Barrens.

Watershed and Fisheries Considerations:

Both the North and South Branches of the Boardman River can be found within this compartment. Both of these streams are top quality, naturally reproducing trout streams. Though none of the proposed treatments appear as though they will have any impact on the riparian zones of these streams, the appropriate BMP's and Natural Rivers buffers should be adhered to.

Wildlife Habitat Considerations:

This compartment falls entirely within a broad, flat outwash plain with few wetlands and excessively drained sandy soil. Consequently, this is a fire-driven landscape, so a range of habitat conditions from open barrens to some late-successional forests, in various fire protected locations, is appropriate. Thus management should continue to promote various age classes and species mixes of oak-aspen-pine forest through burning and timber harvest. Final harvests should retain as many snags and downed logs as possible as well as a variety of residual live trees, especially oak and mast bearing shrubs like Juneberry and hawthorn. Sale operations should leave as many tops as possible un-chipped which can be left in brush piles for small animal cover.

Oak Pine Barrens restoration work has taken place in section 12. Approximately 160 acres have been burned twice to date and will continue as needed. FRD is planning to treat several forested stands adjacent and within this restoration area in order to further restore this rare, fire dependent community. Both rare and common wildlife species utilize the unique blend of habitat components provided by barrens. Several abandoned oil well sites within the restoration area will need work to eliminate invasive species. Species benefiting from this habitat would include white-tailed deer, fox squirrel, badger, red fox, Eastern box turtle, ruffed grouse, prairie warbler, Eastern bluebird, as well as a host of common and rare invertebrates and plants.

The compartment is split in several locations by the North and South Branches of the Boardman River. These riparian areas should be primarily managed for lowland mixed forest, including cedar and hemlock. These riparian corridors provide valuable travel corridors for wildlife and deer use them for winter cover. Natural disturbances included beaver activity and small blow-down patches, which can be mimicked with occasional patch cuts if necessary. Species utilizing this habitat include bear, bobcat, raccoon, silver-haired bat, snowshoe hare, and white-breasted nuthatch.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Coldwater Shale. There is no current economic use for the Coldwater. The nearest gravel pit is one mile to the southeast and there could be potential. This area is located along the south edge of the prolific Guelph (Niagaran) reef trend. Most of the Compartment is leased and held by old leases. Additional reefs may be found in this compartment. The Antrim Shale has not been developed in this area and may be too deep. Most of the Compartment has been leased for underground gas storage of the older producing fields.

Vehicle Access:

Access is relatively good with routes on County Roads and forest roads.

Survey Needs:

None known at this time.

Recreational Facilities and Opportunities:

Snowmobile Trail #55 (Boardman Valley Snowmobile Trail) runs East/West along the southern portion of the compartment. The Grand Traverse motorcycle trail is located in the SW corner of this compartment. The Shore to Shore & North Country Trail riding and hiking trail goes through the NW corner of this compartment. The Grand Traverse motorcycle trail is designated by the Directors Order to remain a “2 wheeled vehicle only use trail”-therefore this trail should be kept tight, narrow, and curvy. Un-merchantable vegetation & understory trees adjacent to this special cycle trail should be protected, and remain next to the tread to promote narrow use. Merchantable trees removed directly adjacent to the cycle trail should be flush cut to insure stumps aren’t hidden by ferns, resulting in an unsafe condition. The appropriate trail protection specifications used for each of these 3 types of trails would reduce impacts on users, increase safety, and educate the recreational user on the benefits of using sound silvics to manage our multi-use forest resource. Non-winter harvests near the snowmobile trail, flush cut stumps adjacent to the motorcycle trail, and leaving a debris free tread on the horse/hiking trail are all suggested considerations. Hunting and fishing are popular in this compartment. (TMN 3/13)

Fire Protection:

Fire protection for this area is covered from the Traverse City Field Office with back up support from Kalkaska DNR and local township fire departments. Manton DNR can also respond if require to assist. Road access into the compartment is relatively good with a combination blacktop and dirt roads running through the compartment. Travel time for fire suppression is reasonable.

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: 046
T26N R09W
Sections 1, 2, 11, 12
T27N R09W
Sections 25, 35, 36
County: Grand Traverse
Unit: Traverse City
YOE: 2015
Acres: 3,135 GIS Calculated
Examiner: Pat Ruppen
Map Revised: 05/30/2013
Map Phase: Web Post

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

25 | 35 | 36 | 2 | 1 | 11 | 12

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85°23'0"W 85°22'0"W 85°21'0"W 85°20'0"W 85°19'0"W
44°43'0"N 44°42'0"N 44°41'0"N 44°40'0"N 44°39'0"N

Sand Lakes
Darby Lake
Guernsey Lake
Little Guernsey Lakes
Mud Lake

N Broomhead Rd
Diagonal Rd
Dead Horse Rd
Guernsey Lake Rd
N River Rd SW
North Branch Rd
Section 6 Rd SW
County Line Rd
South Branch Rd
Boardman Riv Rd SW
S Broomhead Rd
Old Supply Rd
Martuch Rd
Fife Lake Rd
River Rd
Supply Rd
Jackpine Rd
Grand Kal Rd
N Shippy Rd SW
Pineview Ct SW
Unknown 25-1
Unknown 14-1

25 35 36 2 1 11 12

1 330-U0 | 2 4126-O9 | 3 790-X0 | 4 330-U0 | 5 110-X0 | 6 4191-MD9 | 7 4124-O9 | 8 4229-MC6 | 9 4226-MC6 | 10 4229-MC9 | 11 4129-O9 | 12 500-Z0 | 13 330-U0 | 14 4229-MC9 | 15 4319-UM9 | 16 4226-MC9 | 17 500-Z0 | 18 6112-P9 | 19 310-G0 | 20 4191-MD7 | 21 4199-MD9 | 22 4226-MC9 | 23 4130-A3 | 24 310-G0 | 25 4220-W9 | 26 4221-R8 | 27 4311-UM9 | 28 4311-UM9 | 29 4111-M9 | 30 4129-O9 | 31 4311-UM9 | 32 4226-MC9 | 33 4221-R8 | 34 4119-M6 | 35 710-Y0 | 36 4311-UM9 | 37 4311-UM6 | 38 310-G0 | 39 500-Z0 | 40 330-U0 | 41 623-N0 | 42 4130-A1 | 43 4226-MC9 | 44 310-G0 | 45 6112-P8 | 46 4311-UM7 | 47 110-X0 | 48 4311-UM6 | 49 4311-UM6 | 50 623-N0 | 51 310-G0 | 52 4191-MD6 | 53 4221-R9 | 54 4220-W6 | 55 6117-E4 | 56 4221-R9 | 57 4310-UM9 | 58 4229-MC6 | 59 4130-A6 | 60 110-X0 | 61 4130-A2 | 62 4221-R9 | 63 4229-MC9 | 64 330-U0 | 65 4226-MC9 | 66 622-L0 | 67 4229-MC9 | 68 4229-MC6 | 69 4221-R9 | 70 4221-R5 | 71 4311-UM9 | 72 622-L0 | 73 4199-MD1 | 74 4226-MC9 | 75 6120-C6 | 76 6112-P4 | 77 790-X0 | 78 4226-MC9 | 79 110-X0 | 80 4229-MC3 | 81 4221-R9 | 82 310-G0 | 83 4319-UM9 | 84 4226-MC3 | 85 4130-A2 | 86 310-G0 | 87 4226-MC9 | 88 4229-MC9 | 89 320-U0 | 90 4229-MC6 | 91 4229-MC9 | 92 310-G0 | 93 310-G0 | 94 4229-MC5 | 95 4229-MC9 | 96 4226-MC9 | 97 310-G0 | 98 4229-MC9 | 99 4139-A1 | 100 4221-R9 | 101 4310-UM4 | 102 4191-MD9 | 103 4310-UM3 | 104 4130-A2 | 105 310-G0 | 106 4133-A3 | 107 4226-MC9 | 108 4133-A2 | 109 6112-P9 | 110 320-U0 | 111 4229-MC9 | 112 4130-A2 | 113 4130-A3 | 114 4226-MC6 | 115 6115-E5 | 116 4319-UM5 | 117 622-L0 | 118 4226-MC3 | 119 4310-UM9 | 120 4123-O9 | 121 4310-UM2 | 122 310-G0 | 123 4199-MD6 | 124 6117-E6 | 125 4199-MD7 | 126 4226-MC5 | 127 110-X0 | 128 4225-MC9 | 129 110-X0 | 130 4199-MD6 | 131 4214-MC3 | 132 4211-R3 | 133 310-G0 | 134 4124-O9 | 135 330-U0 | 136 330-U0 | 137 4319-UM5 | 138 110-X0 | 139 4113-M4 | 140 4229-MC6 | 141 4222-J2 | 142 4113-M4 | 143 330-U0 | 144 330-U0 | 145 4214-MC3 | 146 4229-MC6 | 147 790-X0 | 148 330-U0 | 149 4229-MC2 | 150 4221-R4 | 151 4211-R2 | 152 790-X0 | 153 330-U0 | 154 4211-R3 | 155 4214-MC3 | 156 4221-R4

Legend

- Miris Corners
- Remonumented Section Corners
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- MCCCT Trail
- Snowmobile Trail
- Motorcycle (DNR Sticker)
- Ski Trail
- Hiking Trail
- Bike Trail
- Horse Trail
- Bike Trails
- Motorcycle Trails (DNR License)
- Hiking Trails
- Horse Trails
- MCCCT Trails
- Snowmobile Trails
- Pipeline
- Powerline
- Culverts
- Stream
- Intermittent Stream

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Prescribed Burn
- Site Preparation

Forest Stands

Level 3

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

Non-Forest Stands

Level 3

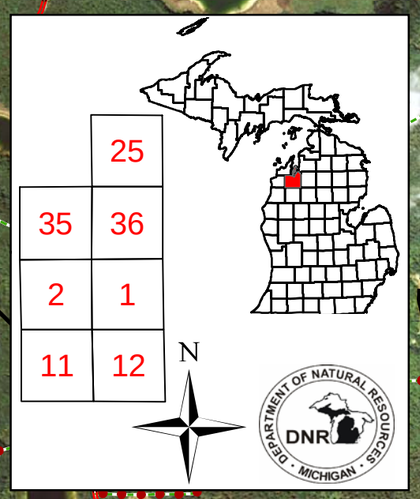
- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 710 - Sand, Soil
- 790 - Other Bare/Sparsely Vegetated
- Lakes and Rivers
- State Forest Land

1 0.5 0 1 Miles

Stand Boundary Map

Compartment: 046
T26N R09W
Sections 1, 2, 11, 12
T27N R09W
Sections 25, 35, 36
County: Grand Traverse
Unit: Traverse City
YOE: 2015
Acres: 3,135 GIS Calculated
Examiner: Pat Ruppen
Map Revised: 05/30/2013
Map Phase: Web Post

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



Legend

- Miris Corners
- Remonumented Section Corners
- Paved Roads
- County Gravel Roads
- Gravel Roads
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- County Poor Dirt Roads
- MCCCT Trail
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- Stream
- Intermittent Stream
- Stand Boundaries

1 0 0.5 0 1 Miles

Special Conservation Areas & Site Conditions Map

Compartment: 046
T26N R09W
Sections 1, 2, 11, 12
T27N R09W
Sections 25, 35, 36
County: Grand Traverse
Unit: Traverse City
YOE: 2015
Acres: 3,135 GIS Calculated
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Stand # 23 — Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code

25 | 35 | 36 | 2 | 1 | 11 | 12

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Legend
- Miris Corners
- Remonumented Section Corners
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)

Reviewable SCAs

Proposed SCA's
- Proposed SCA
- SCA Removal

Dedicated Special Conservation Areas
- Ecological Reference Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Dedicated Management Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Stand Boundaries

1 0.5 0 1 Miles

85°23'0"W 85°22'0"W 85°21'0"W 85°20'0"W 85°19'0"W
44°43'0"N 44°42'0"N 44°41'0"N 44°40'0"N 44°39'0"N

Report 2 – Total Acres by Cover Type and Age Class

Traverse City Mgt. Unit **Compartment 046 Year of Entry 2015**

Patrick Ruppen : 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	208	54	148	0	0	0	0	0	0	0	0	0	0	0	**410**
Bare/Sparsely Vegetated	21	0	0	0	0	0	0	0	0	0	0	0	0	0	**21**
Cedar	0	0	0	0	0	0	0	21	0	0	0	0	0	0	**21**
Herbaceous Openland	72	0	0	0	0	0	0	0	0	0	0	0	0	0	**72**
Jack Pine	0	0	19	0	0	0	0	0	0	0	0	0	0	0	**19**
Low-Density Trees	68	0	0	0	0	0	0	0	0	0	0	0	0	0	**68**
Lowland Aspen/Balsam Poplar	0	0	4	0	0	0	51	0	11	0	0	0	0	0	**66**
Lowland Deciduous	0	0	0	0	0	0	13	43	0	0	0	0	0	0	**56**
Lowland Shrub	73	0	0	0	0	0	0	0	0	0	0	0	0	0	**73**
Marsh	19	0	0	0	0	0	0	0	0	0	0	0	0	0	**19**
Mixed Upland Deciduous	16	0	0	0	0	0	15	65	44	0	0	77	0	0	**217**
Natural Mixed Pines	0	36	212	49	0	9	66	457	62	11	30	0	0	76	**1008**
Northern Hardwood	0	0	0	0	0	0	39	8	0	0	5	0	0	0	**52**
Oak	0	0	0	0	0	0	0	0	32	119	0	0	0	0	**152**
Planted Mixed Pines	0	0	134	0	0	0	0	0	0	0	0	0	0	0	**134**
Red Pine	0	0	90	0	0	69	24	139	0	0	0	0	0	0	**321**
Sand, Soil	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Upland Mixed Forest	0	0	111	56	0	5	48	82	18	20	0	0	0	8	**349**
Upland Shrub	11	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
Urban	37	0	0	0	0	0	0	0	0	0	0	0	0	0	**37**
Water	12	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
White Pine	0	0	0	0	0	0	16	0	0	0	0	0	0	0	**16**
Total	**539**	**91**	**718**	**105**	**0**	**83**	**272**	**813**	**168**	**150**	**36**	**77**	**0**	**84**	**3135**

Report 3 – Proposed Treatment Summaries

Traverse City Mgt. Unit
Year of Entry 2015

Compartment 046
Total Compartment Acres: 3135

Acres by Treatment Type

Commercial Harvest - 591	Tree Planting - 189	Other - 206
Habitat Cut - 0	Opening Maintenance - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Mixed Upland Deciduous	37	22	0	0	0	0	**59**
Natural Pines	144	229	0	0	0	0	**373**
Oak Types	0	0	0	0	112	0	**112**
Upland Mixed Forest	36	10	0	0	0	0	**46**
Total	**217**	**262**	**0**	**0**	**112**	**0**	**591**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
6	61046006-Cut	37.1	4191 - Mixed Upland Deciduous with Conifer	High Density Log	82	81-110	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Not enough good oak to manage for oak. Mark some good retention of oak and pine. Cut to 2" dbh, trench and replant to red pine. Some large older oak scattered throughout stand. A good bit of oak seedlings in places.

Other Comments: Chip tops to prep for trenching. Avoid steeper slopes when laying out treatment boundaries. Select retention from the 75 year class but also retain legacy trees as found.

Next Steps: Trench and replant to red pine in a weave pattern. Expect regeneration of oak, aspen, red maple, jack pine, white pine and planted red pine

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
8	61046008-Cut	16.2	42290 - Natural Mixed Pine	High Density Pole	72	81-110	Harvest	Group Selection	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Remove jack pine and aspen. Mark remaining trees as needed to manage stand for large old red and white pine along river. Jack pine is starting to fall out and some areas had heavy damage from 2012 snow.

Other Comments: North country trail and shore to shore trail in stand. Consider trails in treatment design. Follow second levee for sale boundary. Treatment shape buffers river by mandatory setbacks for wild and scenic river. Possible legacy red and white pine in stand.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
16	61046016-Cut	14.5	42260 - Natural Pine, Mixed Deciduous	High Density Log	72	111-140	Harvest	Single Tree Selection	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Harvest all aspen red maple and jack pine. Mark remaining stems for crop tree release. Focus on lower quality for removal.

Other Comments: Expect new age to form under canopy of aspen, maple, oak, and pine.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
36	61046036-Cut	10.3	4311 - Pine, Aspen Mix	High Density Log	71	111-140	Harvest	Group Selection	42201 - Natural White Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Remove all aspen, red maple, jack pine and poorly white pine.

Other Comments: Expect second age of aspen, red maple, and pine to form under remaining canopy.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
53	61046053-Cut	14.6	42210 - Natural Red Pine	High Density Log	74	111-140	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Retain some well formed pine and oak and final harvest stand down to 2" dbh. Chip tops to prep for Trenching.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
62	61046062-Cut	10.7	42210 - Natural Red Pine	High Density Log	71	111-140	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Retain some well fromed oak and pine and harvest remaining stems down to 2" dbh. Require chipping of tops to reduce slash load.

Other Comments: Red maple and aspen sprouting may impeed red pine seedlings. Monitor stand conditions and treat if necessary to release red pine.

Next Steps: Trench and plant red pine in a weave pattern around residual trees.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
65	61046065_small-Cut	27.6	42260 - Natural Pine, Mixed Deciduous	High Density Log	71	141-170	Harvest	Single Tree Selection	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Remove aspen and jack pine and mark to release crop trees where needed. Target basal area should be 110-130. Manage these slopes for natural pine mix. Expect second age to form with aspen, oak, red maple, white pine, jack pine. The central part of this stand on the flat laying ground wil be harvested and replanted to red pine.

Other Comments: This is good pine ground.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
65	61046065-Cut	43.0	42260 - Natural Pine, Mixed Deciduous	High Density Log	71	141-170	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Retain some well formed oak and pine and harverst site down to 2" dbh to prep for trenching and planting of red pine. Chip tops to reduce slash load. Place treatment on well laying ground. Steeper ground will be managed for older pine.

Other Comments:

Next Steps: trench and plant red pine in a weave pattern around residual trees.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
68	**61046068-Cut**	24.5	42290 - Natural Mixed Pine	High Density Pole	78	81-110	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Final harvest stand. Cut to 2 "dbh or smaller and chip tops to prep site for trenching. Retain some well formed oak and pine.

Other Comments: Expect regeneration of aspen, oak, rm, jp, wp, and planted red pine.

Next Steps: Trench and plant red pine in weave pattern. Very good red pine site.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
68	**61046068-Cut1**	0.9	42290 - Natural Mixed Pine	High Density Pole	78	81-110	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Retain some well formed oak and pine and final harvest remaining stems. Require chipping to reduce slash load.

Other Comments: Expect regeneration of jack pine, white pine, oak, aspen, red maple, and planted red pine.

Next Steps: Trench and plant red pine in a weave pattern around residual stems.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
87	**61046087-Cut**	11.2	42260 - Natural Pine, Mixed Deciduous	High Density Log	67	81-110	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Retain some well formed oak and pine and harvest remaining stems down to 2" dbh. Chip tops to reduce slash load to allow for trenching.

Other Comments: Stand has an aspen component that is mature/declining. This appears to be good pine ground. Aspen regeneration may be stiff competition for planted pine. Expect regeneration of aspen, rm, pine and oak along with the planted red pine.

Next Steps: Trench and plant red pine in a weave pattern.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
88	**61046088-Cut**	58.8	42290 - Natural Mixed Pine	High Density Log	72	141-170	Harvest	Single Tree Selection	42290 - Natural Mixed Pine	Cmpt. Review Proposal

Prescription Specs: Cut all aspen and jack pine. Red Maple may be marked or specified fo removal. Evaluate quality and mark if sufficient quality exists. Mark pine and oak for crop tree release. Retain large older pine and oak as found.

Other Comments: Some pockets of jack pine in stand will creat canopy gaps. Expect new age to form of aspen, red maple, oak, jack pine white pine and red pine. West edge of stand has a good bit of aspen. May be better to add this to final harvest treatment of stand 87. Evaluate during sale prep.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
90	**61046090-Cut**	53.7	42290 - Natural Mixed Pine	High Density Pole	71	141-170	Harvest	Single Tree Selection	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Harvest all red maple, aspen, jack pine and orange marked trees Mark for crop tree release. Remove some of the larger red pine (14"+).

Other Comments: Most removed volume will be white oine, jack pine and aspen. Some canopy gaps will form due to the jack pine pockets currently in stand. Some older age class pine and oak in stand should be retained and small rp 4"-6" is stunted 72 yr age.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
91	**61046091-Cut**	37.1	42290 - Natural Mixed Pine	High Density Log	74	141-170	Harvest	Single Tree Selection	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: remove aspen and jack pine and mark remaining stems for crop tree release. Reduce basal area to 110-130. Retain some older large pine and oak as found in stand.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
95	**61046095-Cut**	11.2	42290 - Natural Mixed Pine	High Density Log	71	81-110	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Retain some well formed oak and pine and harvest remaining stems down to 2"dbh. Chip tops to reduce slash load to allow for trenching.

Other Comments: Jack pine is aging and damaged from heavy snows in 3/12.

Next Steps: Trench and plant red pine in a weave pattern around residual trees.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
116	**61046116-Cut**	35.9	4319 - Mixed Upland Forest	Medium Density Pole	63	1-50	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: chip harvest this poorly stocked/poor quality stand. Retain some well formed oak pine or red maple. Cut down to 2" dbh.

Other Comments: May not be attractive commercially. Put price incentives in prospectus.

Next Steps: Trench and plant red pine.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
120	**61046120-Cut**	76.0	4123 - Red Oak	High Density Log	93	81-110	Harvest	Crown Thinning	3303 - Mixed Low Density Trees	Cmpt. Review Proposal

Prescription Specs: Retain well formed oak and pine in various age classed 10-40BA to restore historical barrens area. Site will be maintained by periodic burning. Require chipping to reduce slash load.

Other Comments: retain den trees and some snags.

Next Steps: periodic burning to maintain openness.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
128	**61046128-Cut**	28.2	42250 - Pine, Oak	High Density Log	76	111-140	Harvest	Clearcut with Reserves	42211 - Natural Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Retain some widely spaced well formed oak and pine and final harvest remaining stems to 2"dbh.

Other Comments: Require tops to be chipped to reduce slash load. Buffer ORV trail and protect groundwater monitoring wells.

Next Steps: Trench and plant red pine in a weave pattern.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
134	**61046134-Cut**	36.5	4124 - Red with White Oak	High Density Log	93	81-110	Harvest	Crown Thinning	3303 - Mixed Low Density Trees	Cmpt. Review Proposal

Prescription Specs: Retain well formed oak and pine in various age classed 10-40BA to restore historical barrens area. Site will be maintained by periodic burning. Require chipping to reduce slash load.

Other Comments: Retain den trees and some snags as found.

Next Steps: Burn periodically to maintain openness.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
73	**61046073-Prep**	17.3	4199 - Other Mixed Upland Deciduous	Low Density Sapling	3	1-50	Site Prep	Trenching	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Stand is failed regeneration that was mixed pine and aspen. Trench and plant to red pine in a weave pattern around residual trees.

Other Comments: Move start date up to 2013.

Next Steps: Plant red pine in season after trenching.

Proposed Start Date: 07/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
150	61046150-Prep	17.1	42210 - Natural Red Pine	Low Density Pole	55	1-50	Site Prep	Trenching	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: evaluate stocking in spring. It is desired to trench and plant red pine but if adequate jack pine seedlings are present then cancel this trenching action

Other Comments:

Next Steps:

Proposed Start Date: 06/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
156	61046156-Prep	51.6	42210 - Natural Red Pine	Low Density Pole	55	1-50	Site Prep	Trenching	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: evaluate stocking in spring. It is desired to trench and plant red pine but if adequate jack pine seedlings are present then cancel this trenching action

Other Comments:

Next Steps:

Proposed Start Date: 05/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
125	61046125-Burn	77.2	4199 - Other Mixed Upland Deciduous	Low Density Log	114	1-50	Prescribed Burn	Unspecified	3303 - Mixed Low Density Trees	Cmpt. Review Proposal

Prescription Specs: periodically (5-15 yrs) burn stand to promote/maintain barrens characteristics. Burn at moderate temperate to control shrub layer but not hot enough to damage trees.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
135	NF_61046135-Burn	15.6	3301 - Low Density Deciduous Trees				Prescribed Burn	Unspecified	3303 - Mixed Low Density Trees	Cmpt. Review Proposal

Prescription Specs: Periodically burn stand with low-moderate intensity fire to controll brush and promote barrens community. Do not kill mature trees.

Other Comments: Drained that has been burned through as part of barrens restoration project. Scattered cherry poles and stump sprouts.

Next Steps: Monitor sucess. Burn periodially (3-13) yr intervals

Proposed Start Date: Unspecified

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
143	NF_61046143-Burn	26.8	3303 - Mixed Low Density Trees				Prescribed Burn	Unspecified	3303 - Mixed Low Density Trees	Cmpt. Review Proposal

Prescription Specs: Periodically burn stand with low-moderate intensity fire to controll brush and promote barrens community. Do not kill mature trees.

Other Comments: Part of Barrens restoration area. Scattered oak log trees with cherry sprouts, oak seedlings and scattered conifer.

Next Steps: Monitor sucess and continue to burn periodially 3-13 yr intervals.

Proposed Start Date: Unspecified

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

Total Treatment Acreage Proposed: 753.6

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
74	61046074-Cut	21.1	42260 - Natural Pine, Mixed Deciduous	High Density Log	103	111-140	Harvest	Group Selection	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Remove all aspen and jack pine and merchantable red maple by specification. Mark remaining stand for cropt tree release on pine and oak.

Other Comment: Manage stand towards older large pine and osk as previous managers had recommended.

Next Steps:

Proposed Start Date: 10/01/2014

Limiting Factor: 2F: Too steep

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
102	61046102-Cut1	22.3	4191 - Mixed Upland Deciduous with Conifer	High Density Log	78	111-140	Harvest	Group Selection	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Remove apen, red maple and mark some poorly formed oak and pine. Create canopy opening of approximately 35%.

Other Comment: Expect new age to form of aspen, pine, red maple and oak. This should grow through remaining canopy of pine and oak. Deciduous regen may get broused badly along river corridor but white pine will then lilely form in new age group.

Next Steps:

Proposed Start Date: 10/01/2014

Limiting Factor: 5C: Delay treatment for age/size class diversity or exceptional site quality

Total Treatment Acreage Proposed: 43.4

Report 6 – Out of YOE – Treatments Prescribed with No Limiting Factor

Year of Entry: 2015

Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
28218	5.9	Unspecified				Harvest	Other - Specify in Comments	Unspecified	Cmpt. Review Proposal

Prescription Specs:

Other Comments:

Next Steps:

Proposed Start Date:

28219	7.2	Unspecified				Harvest	Other - Specify in Comments	Unspecified	Cmpt. Review Proposal - Incomplete

Prescription Specs:

Other Comments:

Next Steps:

Proposed Start Date:

61043_OutOfYOE-Cut	2.1					Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal - Incomplete

Prescription Specs: retain some pine and osk for mast and seed production, Folllow WLD guidance for CWD creation. Harvest all stems that are not retained.

Other Comments: New stand should have mix of oak, pine, aspen and maple.

Next Steps:

Proposed Start Date: 09/01/2009

Total Treatment Acreage Proposed: 15.3

Report 7 – Site Conditions

Traverse City Mgt. Unit

Pat Ruppen : Examiner

Compartment 046

Year of Entry 2015

Availability for Management

Total Acres	Acres Available	Acres Not Available		Dominant Site Conditions No	5C	3J	3D	2H	2G	2F
410	409	1	**Aspen**	409		1				
21		21	**Cedar**			21				
19	19		**Jack Pine**	19						
66	22	44	**Lowland Aspen/Balsam Poplar**	4	18	39				5
56		56	**Lowland Deciduous**			19			27	9
216	190	27	**Mixed Upland Deciduous**	188	2	1		26		
1007	927	80	**Natural Mixed Pines**	927		9	12			59
52	52		**Northern Hardwood**	44	8					
152	145	7	**Oak**	145			7			
134	134		**Planted Mixed Pines**	134						
321	318	3	**Red Pine**	301	17	1				2
349	286	63	**Upland Mixed Forest**	267	19	16				47
16	16		**White Pine**	16						
2,818	2,519	300	Total Forested Acres	2,456	63	105	19	26	27	123
	89%	11%	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
003		**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	16				
	Comments:							
004		**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	16	2F: Too steep			
	Comments: Steep slope and floodplain along N. branch Boardman River							

Report 7 – Site Conditions

Traverse City Mgt. Unit

Pat Ruppen : Examiner

Compartment 046

Year of Entry 2015

005	**Not Available**	**2F: Too steep**	48		

Comments:
Natural rivers Setback

006	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	14	1A: Federal/State/Local Law	

Comments:
Natural rivers Setback

008	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	21		

Comments:
Headwaters area for tributary of Boardman River

009	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	27	3J: Water quality / BMPs (stream, river, or lake)	

Comments:

010	**Not Available**	**2F: Too steep**	20	3J: Water quality / BMPs (stream, river, or lake)	

Comments:
Steep slope along river floodplain. Not operable

011	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	15		

Comments:
Riparian zone along river floodplain.

012	**Not Available**	**2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)**	12	

Comments:
upland stand blocked by lowland and river

013	**Not Available**	**2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)**	15	2B: Unknown if access through adjacent landowner(s) is possible

Comments:
Stand access is blocked by river ande tributary on State ownership. Unknown if access can be attained from private land

014	**Not Available**	**2F: Too steep**	8

Comments:

017	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	17

Comments:
PRESCRIBING STANDS ON BOTH NORTH AND SOUTH FOR FINAL HARVEST

018	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	44	1A: Federal/State/Local Law

Comments:
Riparian setbacks on Boardman River Natural River

019	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	11

Comments:
Stand is about half aspen and red maple that is still pole sized. Let grow in before harvesting.

020	**Not Available**	**2F: Too steep**	10	3J: Water quality / BMPs (stream, river, or lake)	

Comments:
Steep slope along flood plain of river tributary

021	**Not Available**	**2F: Too steep**	9	3J: Water quality / BMPs (stream, river, or lake)	

Comments:
steep slope along river floodplain

022	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	8		

Comments:

024	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	19	2G: Too wet (sensitive soils, does not include access issues)	

Comments:
Ground may also be too wet too work. Ground is hummocky and has some dead black ash and other lowland species. Need to evaluate when snow goes off. Looked at with snow off and parts of this could be harvested but the stand to the northwest is prescr

025	**Not Available**	**3D: Recreational / Scenic values**	7		

Comments:
Past management has been towards large old pine in this strip between Guernsey Lake Road an Boardman River

026	**Not Available**	**3D: Recreational / Scenic values**	12		

Comments:
Past management dirrection has been for large old pine in this stand between Guernsey Lake Road and the Boardman River. Continue this action

027	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	8

Comments:

029	**Not Available**	**2F: Too steep**	50

Comments:
Natural rivers Setback and steep slope above floodplain.

030	**Not Available**	**2F: Too steep**	16

Comments:
Natural rivers Setback and steep slope above floodplain.

031	**Not Available**	**2F: Too steep**	12

Comments:
Natural rivers Setback

032	**Not Available**	**2F: Too steep**	2

Comments:
Natural rivers Setback and steep slope above floodplain.

033	**Not Available**	**2F: Too steep**	1

Comments:
Natural rivers Setback and steep slope above floodplain.

034	**Not Available**	**2F: Too steep**	0

Comments:
Natural rivers Setback and steep slope above floodplain.

035	**Not Available**	**2F: Too steep**	0

Comments:
Natural rivers Setback and steep slope above floodplain.

036	**Not Available**	**2F: Too steep**	5

Comments:
Natural rivers Setback

037	**Not Available**	**2F: Too steep**	2

Comments:
Natural rivers Setback

038	**Not Available**	**2F: Too steep**	0

Comments:
Natural rivers Setback

Report 8 – 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
South Branch Barrens	Habitat Areas or Corridors	Other Habitat Area	**SCA**	252.9
Comments				
proposed old growth				
Unspecified	Potential Old Growth		**SCA Removal**	111.5
Comments				
Does not meet criteria for old growth.				

Report 9 – 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 Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
HCVA	Dedicated Management Areas	Such areas are dedicated by the DNR Director for specific management uses through the promulgation of rules, as governed by Part 5, Department of Natural Resources, of the NREPA (MCL 324.502(2) and 324.504). Section 38 of the Administrative Procedures Act (MCL 24.238) provides for public requests for the promulgation of rules. This is an active program, with one proposed site currently under review by the DNR.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4126 - White, Black, N. Pin Oak	High Density Log	5.8	84	81-110	2003FMD O8 M2 2013FMD:Looks like good oak ground but not much good oak. Good little oak stand in a good place -let grow in for now for mast production
6	4191 - Mixed Upland Deciduous with Conifer	High Density Log	44.1	82	81-110	2003FMD:M5/M1 2013FMD; looks like red pine was planted through oak. Most grew alright but insome areas with heavy canopy it is stunted and small. Large crowned oak and red pine stump sprouts. Could cut back to marked rtetention and plant red pine. Red maple sprouts would likely be a problem. Red pine grew well for 60 years. Good diameter and form. Not much growth in last 26 years.
7	4124 - Red with White Oak	High Density Log	10.0	87	81-110	2003FMD: PI stands 10 and 6 were same O/I stand. O6/M2 2013FMD: Not enough good oak to manage. Could mark some good retention of oak and cut and replant to red pine. Some large older oak scattered throughout stand. A good bit of oak seedlings in places.
8	42290 - Natural Mixed Pine	High Density Pole	21.0	72	81-110	2003FMD: PI stands 7 and 14 were one O/I stand. J5/A1 Stand borders wild and scenic river. 2013FMD; North Country Trail through stand. Some old legacy red and hwite pine. Gaps filled in with white pine jack pine red pine aspen. Jack pine is going out. Not too bad yet but starting to die and some areas damaged by hevy snows in 2012. Fish Div may not wnat aspen cut in this stand but the jack pine should be harvested. Stay north of the second levee along river. Jack pine is pretty heavy in ne part of stand. Some areas are more mixed pine. Could try to amange thisstand along river for old large white and red pine but jp would likely regenerate in the areas with heavy jp stocking.
9	42260 - Natural Pine, Mixed Deciduous	High Density Pole	5.0	75	81-110	2003FMD; J5 /M1 2013 FMD: Large old oak and pine scattered around stand with JP RP RM WP and OAK in 75 yr class. Jp is still alright but it should go before it falls apart. Couls cut back to retention of oak and pine and trench and plant rp or could take out jp and mark rest of stand. Uncertain about access for equiptment. The ground lays good. This stand is a slight depression that may have acted as frost pocket. Red pine in stand looks good. Could be worked with surrounding oak.
10	42290 - Natural Mixed Pine	High Density Log	5.5	100	111-140	2003FMD: R9/R1 Limiting factor water quality BMP stand borders wild and scenic river. Pine with oak and apen on slope along river. Riparian area of river. Let grow in to old pine.
11	4129 - Mixed Oak	High Density Log	16.6	87	81-110	2003FMD: PI Stands 6 and 10 were one stand in O/I. 2013FMD: Not very good oak open grown and bushy. RM and WP and aspen mixed in around larger oak. Could mark some oak and pine for retention and replant to red pine if there is access for equiptment. Stand across powerline to north looks similar and was hooked in O/I. White pine understory 10-20' tall was hit hard by heavy snows in 2012. A good bit of oak seedlings in places.
14	42290 - Natural Mixed Pine	High Density Log	5.7	72	111-140	PI stands 13,15,12 were all one stand in O/I. A6/R1 Limiting Factor: too steep stand borders wild and scenic river. 2013FMD: Slope and floodplain along river. Could let this grow into large pine along river.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
15	4319 - Mixed Upland Forest	High Density Log	15.7	72	81-110	2003FMD: PI stands 7 and 14 were one O/I stand. J5/A1 Stand borders wild and scenic river. 2013FMD: Slopes along N Branch Boardman River along with floodplain. Mixed upland species along with some cedar.
16	42260 - Natural Pine, Mixed Deciduous	High Density Log	25.7	72	111-140	PI stands 13,15,12 were all one stand in O/I. A6/R1 Limiting Factor: too steep stand borders wild and scenic river. 2013FMD: Mix of aspen red pine and white pine with a few scattered oak and cherry. Could get aspen out and thin pine . Manage toward large pine? Stand is mostly on slopes and may be part of floodplain of river. Some of this stand could be harvested tha is away from river. The flat above this slope PI stands 24 and 29 has been thinned.
18	6112 - Lowland Aspen	High Density Log	11.0	82	81-110	2003FMD: A5 limiting factor :water quality BMP stand border wild and scenic river. 2012FMD: PI stands 17 and 27 were in same O/I stand. Split due to mapping rules. 2013FMD:edge along river -barely lowland aspen mix with some higher ground on the edges. Riparian strip along river.
20	4191 - Mixed Upland Deciduous with Conifer	Low Density Log	9.9	65	1-50	2011FMD TS# 047-83. TCR 01/87. Cut all merchantables except no cedar hemlock or oak 2013FMD Low stocked BC WP Oak. There has been a recent fire through here that burned pretty hot. If this stand was cut with PI stand 54 to east it did not regenerate much. There is a little aspen in the 28 yr age along the edge.
21	4199 - Other Mixed Upland Deciduous	High Density Log	4.9	65	51-80	New stand added. 2013FMD TS# 047-83. TCR 01/87. Cut all merchantables except no cedar hemlock or oak. This stand was likesly cut with stands to the east. This stand had more residual pine and oak and has a fair amount of aspen regen age 26. Some older oak aged 82 but most pine. aspen and cherry seems to be age 65.
22	42260 - Natural Pine, Mixed Deciduous	High Density Log	11.0	93	111-140	2003FMD:R8 2012FMD: PI Stands 20 and 26 were in the same O/I stand. Age 93 R8 2013FMD:Not much jp in this stand but it is dying out. Stand looks like natural pine stnad. Could be thinned and managed for large old pine along river. Cut aspen, jp, rm and marked.
23	4130 - Aspen	High Density Sapling	10.2	21		2003FMD: A3 2013FMD: PI stands 21 and 39 were hooked in O/I. Look different now. TS# 01/92. TCR 8/92. Cut all to 2" DBH. Keep stands seperate after field review. This stand has good aspen regeneration mixed with some wp saplings.
25	42200 - Natural White Pine	High Density Log	9.4	69	111-140	2003FMD:A6 Limiting Factor Retention of stand for regen purposes/ Borders wild and Scenic river. PI stand 32 (North part) was also in this O/I stand. 2013FMD: Stand is heavier to WP than stand 32 and larger average diameter. Could get aspen out and jack pine and mark pine. . Manage this stand for pine. May not sell alone but could sell with PI stand 32. Some large old legacy white pine.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
26	42210 - Natural Red Pine	Medium Density Log	48.4	72	51-80	2003FMD: Cut under contract # 61-078-05-01. TCR 09/07 Cut orange marked and all merch, rm aspen an jp. WLD: R9 with mix of aspen/wp/O/bc/rm/sm/ash/juneberry. Leave snags, oak, black cherry, sm, juneberry, ash 2011FMD PI stands 29 and 24 were same in O/I Split because of mapping standard. 2013FMD: Residual stocking in this stand is lower than PI stand 29. This stand must have had a higher component of aspen and red maple. A good bit of aspen and red maple regeneration has formed in sub canopy throughout much of this stand. Areas with heavier residual pine basal area do not have such a robust second age forming. A little bit of oak and cherry scattered around in the overstory. Some wp seedlings on ground. No rp seedling found.
28	4311 - Pine, Aspen Mix	High Density Log	8.5	82	111-140	2003FMD: A5 limiting factor :water quality BMP stand border wild and scenic river. 2013FMD: PI stands 17 and 27 were in same O/I stand. Split due to mapping rules. Slope along river and some.. Red pine (likely planted) with aspen, birch, red oak, red maple. Riparian zone of river.
29	4111 - S.Maple, Hard Mast Association	High Density Log	5.2	103	51-80	2008 FMD W8 Cut under contract 078-05-01 TCR 09/07. Selectively removed a few whitepine sawlog trees. Also TS# 006-92. cut orange marked pine and hardwood and all aspen. 2013FMD. Lower quality northern hardwoods mixed with large white pine. Little to no regeneration. A good bit of ironwood and basswood. Stocking is not bad at this time. This stand is unusual in this area. Let it grow in for now.
30	4129 - Mixed Oak	High Density Log	6.7	93	111-140	2003FMD:R8 2012FMD: PI Stands 20 and 26 were in the same O/I stand. Age 93 R8 2013FMD; Oak logs with WP logs/poles. Some white pine regen in understory. Posiible oak wilt patch on road by entrance to sand trap. Could reduce oak canopy to allow pine to advance. Oak is generally lower quality.
31	4311 - Pine, Aspen Mix	High Density Log	9.8	82	111-140	Steep slope alone drain. Mix of upland conifer and deciduous.
32	42260 - Natural Pine, Mixed Deciduous	High Density Log	33.1	70	111-140	2003FMD:(North part) A6 Limiting Factor Retention of stand for regen purposes/ Borders wild and Scenic river. PI stand 23 was also in this O/I stand. The part south of well pad was in O/I stand 23 which was an A5 age 73 retained for age/size class diversity. There was a small JP stand in the SW corner in O/I J5 age 75. 2013FMD: Good pine ground. Red pine over 14" diameter age 58-60. White pine age is variable 60-70 with some large legacy trees in stand. Could get aspen and jack pine out along with poor formed white pine. Manage stand for pine. A few scattered oak in cherry in stand. More oak in north along river.
33	42210 - Natural Red Pine	Medium Density Log	33.5	76	111-140	2003FMD: Cut under contract # 61-078-05-01. TCR 09/07 Cut orange marked and all merch, rm aspen an jp. WLD: R9 with mix of aspen/wp/O/bc/rm/sm/ash/juneberry. Leave snags, oak, black cherry, sm, juneberry, ash 2011FMD PI stands 29 and 24 were same in O/I Split because of mapping standard. 2013FMD: This stand has heavier residual basal area than PI stand 24. There are areas with good regeneration of aspen and rm but it is not evident for the most part throughout the stand. There is an evident red oak component in canopy in this stand. The stocking in this stand is fine after the last harvest. Let this stnad grow in for now and see how second age develops.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
34	4119 - Mixed Northern Hardwoods	High Density Pole	7.6	72	111-140	2013fmd: Lower quality hardwoods. Stocking is high. Only 5.9 acres so would be hard to get enough volume in a thinning. Would not be bad to let this grow in unless it can be hooked with another sale. Large white pine scattered around.
36	4311 - Pine, Aspen Mix	High Density Log	10.3	71	111-140	2003FMD W6 2011FMD PI stands 64,31,48,55 were all in one O/I stand. W6 2013FMD; wp/aspen mix. Aspen is declining. Ground is rolling and access is unsure. Could harvest stand to regenerate if nearby- not enough to stand alone.
37	4311 - Pine, Aspen Mix	High Density Pole	10.8	74	111-140	2003 FMD: R6 Let aspen and maple mature then final harvest all species. Pi stands 33 and 47 were same stand in O/I. Split because of mapping rules. This stand is different than PI stand 47. More aspen in this stand and most is pole sized. Let aspen grow in and look at harvest when aspen matures economically.
42	4130 - Aspen	Low Density Sapling	12.2	21		2003FMD: A3 2013FMD: PI stands 21 and 39 were hooked in O/I. Look different now. TS# 01/92. TCR 8/92. Cut all to 2" DBH. 2013FMD: Low stocked aspen -patchy- looks like beaver harvested this stand
43	42260 - Natural Pine, Mixed Deciduous	High Density Log	12.1	103	141-170	2003FMD: R9 Limiting Factor Scenic/visual values. 2013FMD:Nice natural look pine, Heavier aspen on lower edge along river. Could thin and manage for big old pine. Some large old pine and oak scattered around.
45	6112 - Lowland Aspen	Medium Density Log	33.4	65	51-80	Stand swapped from Non-Forested to Forested.
46	4311 - Pine, Aspen Mix	Low Density Log	5.4	50	1-50	Low stocked aspen and pine canopy with a low stocking of wp and jp saplings in understory. Good red pine growth on older trees. Should cut and replant at some point but not enough volume or acerage in this stand to go alone.
48	4311 - Pine, Aspen Mix	High Density Pole	16.8	35	81-110	2003FMD: A2A4M4W4 2013FMD; Moderate stocking or oak and pine left from last harvest with robust aspen growing through. Better site -some sm bw ash and iw scattered around as htere was in other stands in area. Let this aspen continue to grow in .
49	4311 - Pine, Aspen Mix	High Density Pole	39.2	32	51-80	2003FMD: A2A4M4W4 TS# 044-83 TCR 8/86. Cut all merchantable but no oak. 2013FMD: Looks like a good bit of sapling sized suppressed white pine and some red pine and jack pine were left at last harvest. This is now around age 60 with logs and poles in wp rp and jp. Most of the canopy gaps are filled with younger aspen jack pine and white pine. A good bit of the quaking aspen is pretty spindly looking butthere are some beter looking clones. Pocket of older aspen on west side looks older. May have been a retention pocket left in last harvest of maybe was young unmerchantable clone at that time. Let this stand develop.
52	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	16.5	72	111-140	2003FMD W6 2011FMD PI stands 64,31,48,55 were all in one O/I stand. W6 2013FMD; Big old white pine and a few older oak. RM SM RO WP poles and small logs grown in and the some scattered RP logs. Stocking is a bit high but this stand would thin better after it developes a bit more. The feature of this stand is the large white pine.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
53	42210 - Natural Red Pine	High Density Log	14.6	74	111-140	2003 FMD: R6 Let aspen and maple mature then final harvest all species. Pi stands 33 and 47 were same stand in O/I. Split because of mapping rules. 2013FMD; Could harvest and re-plant. Some scattered oak logs. Scattered aspen. May be a little trouble for regenerating one in this stand but it is not a very heavy component. Different than PI stand 33. Red pine in stand is good quality and is ready to harvest. Seriously consider regenerating this stand.
54	42200 - Natural White Pine	High Density Pole	6.7	60	111-140	2013FMD: Mixed ages and sizes. Some big old white pine. Aspen is small and poor form. Not too much aspen. Could let this stand self thin and let pine grow in for now or could get aspen out and mark for crop tree release. Red pine growing well on site Age 52 and over 13". Measured 14" wp age 60 and 8" jp age 41.
55	6117 - Lowland Deciduous, Mixed Coniferous	Low Density Pole	13.0	63	1-50	2003FMD: A6 Limiting Factor State Law or policy. Steep? Borders wild and scenic river. 2011 FMD: Part of stand on west and south side was LO in O/I. 2013FMD: low aspen with hawthorn and dogwood and other lowland shrub.
56	42210 - Natural Red Pine	High Density Log	17.4	78	81-110	2003FMD J6 Dealayed treatment for age/size class diversity 2013fmd:PI STANDS 61,57, were all together in O/I. 61 and 57 split due to mapping standards 2013FMD; Split this stand of of PI stand 57. This west side of the drain is heavier to red pine and less jp. Very nice pine. Heavy to red pine which is large diameter and tall. Red pine is superior on this site. A little red and white oak logs and cherry poles.
57	4310 - Pine, Oak Mix	High Density Log	8.4	Uneven Age	81-110	2013FMD; rp wp and oak logs with rp, wp oak and rm poles. Aspen in east part. Heavy wp saps in places. Good bit of snow damage on understory pine. Second age on pole size. Seems like distinct age class.
58	42290 - Natural Mixed Pine	High Density Pole	49.5	32	51-80	2003FMD:J1A1W1M1 Very Patchy TS# 044-83 TCR 8/86. Cut all merchantable but no oak. 2013FMD: Looks like a fair amount of salpings were left at last harvest. Now a two aged stand with 60 yr grown up saplings and new ingrowth @ 32 yrs. This is a mix of jp wp and aspen. A lot of the Q Aspen is stunted and spindly but some has done well. Let stand develop. Call both ages in canopy.
59	4130 - Aspen	High Density Pole	98.8	26	51-80	2003FMD: A3 nearing A6 TS# 047-83. TCR 01/87. Cut all merchantables except no cedar hemlock or oak. 2013FMD. Well stocked aspen mixed with wp rm oak. A little sm and beech . Older oak retention scattered around. New beaver cutting on south slope along flooding.
61	4130 - Aspen	Medium Density	23.8	3	1-50	2003WLD :A6 with mix of wp/bc/jp/rp/rm Oak? Leave scattered mast producing trees (oak,bc) scattered conifer, snags Was age 70. TS# 065-05 TCR 11/10 Cut all trees 2"dbh except no red ine < 9.5" dbh and no oak. Cut rp wp aspen jp rm oak 2013FMD; Good aspen regeneration. Scattered laok and pockets of red pine left as residual. Trees left along steep band due to terrain.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
62	42210 - Natural Red Pine	High Density Log	10.7	71	111-140	2003FMD W6 2011FMD PI stands 64,31,48,55 were all in one O/I stand. W6 2013FMD; This stand is not the same as PI st 48. Red pine is dominant in this stand and getting large for commercial uses. WP component is sgenerally small logs and poles. Should harvest and restart this pine but could also hold and let white pine grow in further. Could cut with PI st 47. A few big red oak scattered around stand.
63	42290 - Natural Mixed Pine	High Density Log	10.8	75	111-140	2003FMD:J6 Stand should convert naturally to red pine. 2013FMD; Most jp has died out. Aspen mixed through stand. WP and RP understory. a good bit of rp saplings in places. Let htis stand grow in for now. Stocking is not too high at this time.
65	42260 - Natural Pine, Mixed Deciduous	High Density Log	70.6	71	141-170	2003FMD W6 2011FMD PI stands 64,31,48,55 were all in one O/I stand. W6 2013FMD:
67	42290 - Natural Mixed Pine	High Density Log	36.8	78	81-110	2003FMD J6 Dealayed treatment for age/size class diversity 2013fmd:PI STANDS 61,57,60 were all together in O/I. 61 and 57 split due to mapping standards St 60 split out as it looks different in imagery. (aspen?) 2013FMD; Very nice pine. Red pine is superior on this site. A little red and white oak logs and cherry poles.
68	42290 - Natural Mixed Pine	High Density Pole	25.4	78	81-110	2003FMD J6 Dealayed treatment for age/size class diversity 2013fmd:PI STANDS 61,57,60 were all together in O/I. 61 and 57 split due to mapping standards 2013FMD: Jack pine mixed with RP WP and oak/aspen/rm/cherry. Jack pine is damaged bu heavy snow 2012 and will likely get worse. Should get it out before this gets bad. Red oine growth is superior in this stand. Should get jack pine out and re-plant this stand to red pine. Could keep residual of oak and some legacy red and white pine.
69	42210 - Natural Red Pine	High Density Log	7.3	74	141-170	Three small pine block- planted but natural look. Keep for species/age diversity. Wintering cover near river corridor.
70	42210 - Natural Red Pine	Medium Density Pole	7.8	65	81-110	2003FMD: A5 Hold harvest until 2001. Good chance of red pine natural seeding. WLD: A5w/mix of wp rp rm bc O whitch hazel. Leave scattered mast producing trees (oak, bc), scattered conifer poles/saps 2011 FMD: Check sale records for new first age. PI stands 67 and 63 were hooked in O/I. Split because more residual pine in stand 63.
71	4311 - Pine, Aspen Mix	High Density Log	7.9	74	51-80	2003FMD R8 TS#047-83. TCR 1/87. Cut all merchantable but no cedar, hemlock oak or red pine
73	4199 - Other Mixed Upland Deciduous	Low Density Sapling	15.8	3	1-50	2003FMD: A5 Hold harvest until 2001. Good chance of red pine natural seeding. WLD: A5w/mix of wp rp rm bc O whitch hazel. Leave scattered mast producing trees (oak, bc), scattered conifer poles/saps 2011 FMD: Check sale records for new first age. PI stands 67 and 63 were hooked in O/I and in this TS.. Split because more residual pine in stand 63. TS# 065-05 TCR 11/10 Cut all trees 2"dbh except no red ine < 9.5" dbh and no oak. Cut rp wp aspen jp rm oak 2013FMD: Scattered residual oak and pine retention from last sale. Poor regeneration of aspen and red maple and little pine seeded in. Considerer trenching and planting red pine.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
74	42260 - Natural Pine, Mixed Deciduous	High Density Log	12.7	103	111-140	2003fmd: Limiting Factor Scenic/visual values. 2013FMD; mix of pine and oak and a good bit of aspen in this stand. May not be enough aspen for harvest. Could treat with PI stand 70. Could harvest aspen, rm jp and mark low quality oak and pine. RP saplings in areas. Stand is trying to stay in pine.
75	6120 - Lowland Cedar	High Density Pole	20.8	75	111-140	Cedar/deciduous mix. Headwaters of trib of S Boardman.
76	6112 - Lowland Aspen	Low Density Pole	3.9	28	1-50	Part of harvested stand in lower drain. Mixed of aspen maple, balsam and tag alder
78	42260 - Natural Pine, Mixed Deciduous	High Density Log	5.7	86	81-110	2003FMD: J6 Stand should convert naturally to red pine. Limiting Factor: Delayed treatment for age/size class diversity. 2013FMD; Mixed pine with some oak, aspen and rm. Could open up canopy to start second age. Could treat wit PI st 68.
80	42290 - Natural Mixed Pine	High Density Sapling	49.9	20	1-50	2003FMD: TS# 012 92. TCR 2/94. Whole tree harvest to 2" but leave all RP. R7A1J1W1 scattered R1 Age 20? Machine Planted (district?)1994 with PI stands 72 and 76 treated together. Did not plant areas of heavy pine and oak residual. Site was very stumpy and steep. Did not plant frost pockets. Planted east half full and scattered patches in westhalf. 2013FMD; Last harvest left a red pine seed tree look and then red pine was woven in around trees by district. Planted red pine has survived and is now starting to get good growth. Looks like it had a bad start. Patchy planting with areas heavy to jp, wp, aspen or just open areas. Has a natural pine look after all. Canopy call is on 20 yr class.
81	42210 - Natural Red Pine	High Density Log	7.0	71	141-170	Stand is heavy to red pine. Stocking is a bit high but it could wait. Stand on bowl and drain.
83	4319 - Mixed Upland Forest	High Density Log	36.8	71	141-170	2013FMD; MIXED PINE WITH ASPEN OAK RM. SOME LARGE OLD OAK AND PINNE SCATTERED AROUND. RED PINE HAS GOOD GROWTH AND FORM. THINNING WOULD LIKELY CAUSE SECOND AGE TO FORM OF ASPEN AND RED MAPLE DUE TO THE AMOUNT IN STAND. DOES NOW SEEM LIKELY THAT A SEED TREE OR SHELTERWOOD HARVEST WOULD RESULT IN PINE REGENERATION. MAY GET WHITE PINE MIXED WITH ASPEN AND RED MAPLE BUT RED PINE SUCCESS IS UNLIKELY. COULD TRY TO REPLANT SOME OF THE BETTER LYING GROUND. THERE IS A GOOD BIT OF ASPEN IN THIS STAND AND IT IS MATURE.
84	42260 - Natural Pine, Mixed Deciduous	High Density Sapling	36.2	19		2003FMD: R3M1W1A1 Machine Planted (district?)1994 with PI stands 72 and 76 treated together. Did not plant areas of heavy pine and oak residual. Site was very stumpy and steep. Did not plant frost pockets. Planted east half full and scattered patches in westhalf. TS# 012 92. TCR 2/94. Whole tree harvest to 2" 2013FMD; PLANTED RP MIXED WITH ASPEN , RM WP JP. HEAVY ASPEN COMPONENT. QA IS PRETTY SPINDLY BUT BA LOOKS PRETTY GOOD. ASPEN HAS OVERGROWN RP IN AREAS BUT RP IS STILL GROWING. RP HAD BAD START BUT GROWING NOW.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
85	4130 - Aspen	Medium Density	68.2	3	1-50	2003FMD: A5 w mix of rp/wp/oak/bc/jp Leave scattered mast producing trees (oak/bc) and scattered conifer poles and saps. 2011FMD Check sale record for new age. TS# 065-05 TCR 11/10 Cut all trees 2"dbh except no oak. Cut rp wp aspen jp rm oak 2013FMD: Residual oak through stand- small logs and poles. mederate jp regen throughout stand but pretty steady. May fill in more in the future. A few scattered wp saps. Let stand develop.
87	42260 - Natural Pine, Mixed Deciduous	High Density Log	11.2	67	81-110	2003 FMD: W6 2011FMD: PI stands 78,81,88,90 were all one O/I stand W6 age 67. Split due to differences in imagery 2013FMD: Considerable aspen component in this stand that is mature and should be harvested. Good pine ground. Cutting and planting nay cause competion issues fro the pine from aspen clones. Taking aspen out first will likely cause a second age to form and delay removal of pine. There is a good bit of aspen and pine/aspen in this immedialte area.
88	42290 - Natural Mixed Pine	High Density Log	58.8	72	141-170	2003 FMD: W6 2011FMD: PI stands 78,81,88,90 were all one O/I stand W6 age 67. Split due to differences in imagery 2013FMD: mixed pine stand -red pine has best growth and form. White pine is a bit limby and weeveled. Some legacy red and white pine in stand. Could manage this pine along or could harvest and re-plant.
90	42290 - Natural Mixed Pine	High Density Pole	68.1	71	141-170	2003FMD: J6 PI stand 82 and 87 were hooked in O/I Split due to mapping rules 2013FMD: Most stocking is white pine poles that could use a thinning. Could take jack pine , aspen and red maple out and thin pine. May be hared to sell due to white pine volume. Split new stand off west side PI 167. Check and see if this is different.
91	42290 - Natural Mixed Pine	High Density Log	39.4	74	141-170	2003FMD: W6 2013FMD: Looks like maybe the sw/south part may bless pine but there are runs of pine through that as well. 2013FMD: Mix of pine oak aspen and rm. Has natural look..no planting record. pruned in 1989. Some large old pine and oak scattered around. Some areas are haevier to rp and aspen seems heavier in south of stand. Corner and witness trees in SE corner.
94	42290 - Natural Mixed Pine	Medium Density Pole	20.8	28	1-50	2003 FMD: A2W7W4O4 Same age for PI stands 95,86 TS# 043-83 TCR 5/86 cut all merchantable but no oak 2013fmd: poorly stocked stand with poor formed trees. Bushy open grown white and jack pine with a little red pine. Looks like the last treatment left a good bit of wp saps and poles as well as scattered oak logs and poles. Consider trying to get this ground cleared and planting red pine. This ground is under-utilized.
95	42290 - Natural Mixed Pine	High Density Log	11.2	71	81-110	2003FMD: J6 PI stand 82 and 87 were hooked in O/I Split due to mapping rules 3013FMD; Stand is mixed pine heavy to jack pine which has talken a good bit of damage from snows in 2012. Som large crowned oak scattered around and oak poles as well. Jack pine should come out. Could mark some oak and pine retention and replant redpine. Red pine seems to have best growth out in this stand.
96	42260 - Natural Pine, Mixed Deciduous	High Density Log	8.2	67	81-110	2003 FMD: W6 2011FMD: PI stands 78,81,88,90 were all one O/I stand W6 age 67. Split due to differences in imagery 2013fmd: Steep slope. Not manageable. JP is dying out of stand

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
98	42290 - Natural Mixed Pine	High Density Log	21.4	67	81-110	2003 FMD: W6 2011FMD: PI stands 78,81,88,90 were all one O/I stand W6 age 67. Split due to differences in imagery 2013FMD: Mix of natural pine with aspen and oak. Most jp has dropped out. This stand could wait until next entry. Stocking is not bad. Some older white and red pine scattered around stand.
99	4139 - Aspen, Mixed Deciduous	Low Density Sapling	8.1	3	1-50	2003FMD A5 WLD A5 with wp oak rm rp. Leave scattered mast producing trees (oak, bc) and scattered conifer poies and saps. 2011FMD TS# 065-05 TCR 11/10 Cut all trees 2"dbh except no oak < 9.5" dbh. Cut rp wp aspen jp rm oak 2013FMD: Part of this had decent aspen regen but the most part is pretty sparse. Red maple and oak stump sprouts have been browsed heavily. Pretty heavy slash and a good bit of residual oak so it may not be possible to trench and plant this if it fails. Evaluate in spring of 2013 and if necessary trench as possible to plant red pine.
100	42210 - Natural Red Pine	High Density Log	16.0	67	81-110	2003FMD: W6. PI stands 160 and 81 were hooked in O/I. stand 160 was treated with TS# 003-05, TCR 10/05. cut only red maple and aspen. 2013FMD: Red nad white pine witha little scattered oak. nice diversity and good stocking to grow at this time.
101	4310 - Pine, Oak Mix	Low Density Pole	11.9	60	1-50	Sale resold as TS# 053-07. Cut all trees to 2" DBH but no oak or red pine< 9.5DBH. TCR 6/08 WLD: J6 with mix of wp/o/aspen/rp. Leave snags and oak. Stand Yof O 2009 2013FMD: Smaller red pine and oak left for retention from the last sale. Regen of oak, aspen jp. regen gettin gbroused badly at this time. let stand develop.
102	4191 - Mixed Upland Deciduous with Conifer	High Density Log	22.1	78	111-140	2011FMD: Stand not inventoried before. Mix of wp aspen rm with a little rp and oak. Mixed ages. Some older rp, wp scattered around. Aspen is declining. Ground is hummocky. Could open this stand up for pine to seed in. Not sure of access. S Branch road is narrow and passes by private cottages.
103	4310 - Pine, Oak Mix	High Density Sapling	50.1	28	1-50	2003FMD; A2 Same age PI stands 95,86 TS# 043-83 TCR 5/86 cut all merchantable but no oak 2013FMD: Some older wp and a fair amount of oak poles and logs left as retention from last treatment. New stand has decent stocking- a little patchy. Most is white pine.
104	4130 - Aspen	Medium Density	107.9	7	1-50	2004 FMD: A0 Cut under contract 003-05 TCR 10/05 Cut all trees to 2" dbh except leave all white oak, cherry, hawthorn and rp < 9.5dbh. WLD: A6 with mix of O/rm/wp/rp/and occasional whitch hazel and hawthorn. Leave scattered mast producing trees and hawthorn, scattered conifer poles and saps and some rm as CWD. 2012FMD: Scattered oak and red pine in canopy left as retention from last sale. New stand formed of aspen, white pine. Oak and red maple sprouts are heavily broused at this time.
106	4133 - Aspen, Mixed Pine	High Density Sapling	26.7	26		2003FMD: A2M4W4W2 TS# 017-87. TCR 05-89. Cut all merchantable but green marked retention. 2013FMD: Aspen regen with white pine. Some older rp/wp/oak left for retention in last harvest. Some oak pockets harvested but regen is still in brouse size.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
107	42260 - Natural Pine, Mixed Deciduous	High Density Log	56.2	83	51-80	Stand was orange marked and thinned leaving oak and pine mix. Removed larger pine and oak. Was in same sale as PI stand 106 which was not cut. Oak seedling growing in in openings. HEAVY IN PLACES. WP SUB CANOPY KNOCKED DOWN BY SNOW. ALL PINE IS SAME AGE (83) EXCEPT WP SAPLINGS. lOOKS LIKE THER MAY BE A YOUNGER AGE BUT NOT SO. Let understory develop. Can not locate sale record.
108	4133 - Aspen, Mixed Pine	Medium Density	12.8	16		2003FMD: A3 TS# 013-92 TCR 1/97 cut to 2". 2013fmd; pi STANDS 100, 101, 107, 105, 103 WERE ALL IN THIS STAND THAT WAS CUT AROUND 1997. DIFFERENT LOOK ON IMAGERY NOW FOR THESE STANDS. 2013FMD: This stand is poorly stocked struggling QA, BC with some wp saplings.
109	6112 - Lowland Aspen	High Density Log	17.7	69	51-80	2003FMD: A5 Delayed treatment for age/size class diversity. West part of this stand was not inventoried in past-private land but looks similar to A5 to east 2013FMD; between upland and lowland. Could attempt to regenerate this stand if access can be made. Stand may be pretty wet in places and regeneration may get broused badly along river.
111	42290 - Natural Mixed Pine	High Density Log	5.0	70	111-140	2003FMD: W6 TS# 013-92 TCR 1/97 cut to 2" but cut no pine. 2013FMD: Nice pocket of pine left in area with young aspen. Mix of pine logs and poles with some scattered legacy white nad red pine. Aspen growing in under pine where it was harvested .
112	4130 - Aspen	Medium Density	10.6	16		2003FMD: A3 TS# 013-92 TCR 1/97 cut to 2". 2013fmd; pi STANDS 100, 101, 107, 105, 103 WERE ALL IN THIS STAND THAT WAS CUT AROUND 1997. DIFFERENT LOOK ON IMAGERY NOW FOR THESE STANDS. 2013FMD: Aspen regen with oak, red maple and black cherry.
113	4130 - Aspen	High Density Sapling	31.0	16		2003FMD: A3 TS# 013-92 TCR 1/97 cut to 2". 2013fmd; pi STANDS 100, 101, 107, 105, 103 WERE ALL IN THIS STAND THAT WAS CUT AROUND 1992. DIFFERENT LOOK ON IMAGERY NOW FOR THESE STANDS. 2013FMD: Good aspen regen a-stocking- but kinda spindly quaking aspen.
114	42260 - Natural Pine, Mixed Deciduous	High Density Pole	75.5	Uneven Age	51-80	2003FMD: W6O7R7W7. WLD: W6 w/ mix of pr/O/aspen/rm. Heavy to wp saps/poles and occasional sawlogs. Leave snags and scattered oak and pine sawlogs as leave trees. 2013FMD PI stands 106 and 97 were hooked in O/I. This stand was not harvested during last sale. Uncut unit? Mixed ages and sizes of pine and oak. Some large old pine and oak scattered around. It may be well to let this stand develop further before thinning. It is pretty complicated at this time with the mixed up ages and all the white pine saps and poles. Large sized pine and oak was marked in last treatment but not harvested. A lot of the white pine understory has been bent down by the snow, South part has lower stocking 90-120 and some jack pine and aspen. A good bit of the jack pine has died. All that was marked in last sale was the large legacy pine and oak. The oak is large wolfy poor formed trees and there seems to be a lot of porkie damage. Let this stand grow in for now.
115	6115 - Lowland Ash	Medium Density Pole	27.3	75	1-50	2013 FMD Black ash. A good bit of mortality from EAB. May convert to lowland brush by next inventory.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
116	4319 - Mixed Upland Forest	Medium Density Pole	35.9	63	1-50	2003FMD: M4W4M1 Scattered pockets of planted R2 1989. 2013FMD: PI stands 108 and 124 were hooked in O/I. Maybe stand 124 was planted and st 108 not? 2013FMD: This stand was not planted except for a strip along the north-south road. Scattered red maple poles/logs and widely spaced red pine logs with a low stocking of grown in jp, wp, bc saplings. Called both ages in canopy. Would be desirable to chip harvest and replant this stand. May not be enough volume to sell but may be able to make it attractive with pricing. May need to follow up with herbicide to supress cherry and red maple. Keep scttered rp and oak for retention. This area is not attractive to manage as barrens. Does not have species make-up. Oak regen in pockets that is getting broused badly.
118	42260 - Natural Pine, Mixed Deciduous	High Density Sapling	34.0	26	1-50	2003FMD: north part A2M4W4W2 age 26. south part M4 age 29 Hard to see stand break on inventory. There does seem to be an aspen clone in the middle. North part TS# 017-87. TCR 05-89. Cut all merchantable but green marked retention. 2013FMD; MIXED UP SPECIES AND AGES. RETAINED SOME RP WP OAK AND RM IN LAST SALE. GAPS FILLING WITH WP AND ASPEN. ALSO SOME PLANTED RP AND SOME OPEN AREAS.
119	4310 - Pine, Oak Mix	High Density Log	20.3	93	111-140	2003FMD: O8 POG WLD O8 w/ understory of O/A/RM/WP poles and saps and juneberry. . 2013 FMD: This stand split off - slopes along drain. Large pine and oak along slope with some birch, aspen and hemlock. Riparian zone and restricted by slopes.
120	4123 - Red Oak	High Density Log	76.0	93	81-110	2003FMD: O8 POG WLD O8 w/ understory of O/A/RM/WP poles and saps and juneberry. Understory burn portion of stand that falls in S1/2N1/2 of sec 12 with stands (PI- 131, 138, 127 and parts of 128, 112) to promote oak/pine barrens. 2013FMD: old oak barrens look with aspen, red maple oak and white pine grown in. The south arm has been burned through for a barrens restoration project. Charred trees but not much killed. Should have been cut before burning. May be able to put up a sale to get this cleaned up.
121	4310 - Pine, Oak Mix	Medium Density	3.3	24	1-50	2003FMD: M4W4J4J1 ORV Trail runs through stand. May have some rp planted 1989. Was in origional FTP to plant. 2013FMD: Stand was harvested with retention of wp oak rm rp. WP JP BC growing in gaps. Used saplings as first age and both ages in canopy call.
123	4199 - Other Mixed Upland Deciduous	High Density Pole	11.5	75	81-110	2003FMD: A6 POG This stand is inaccessable 2013FMD; surrounded by lowland and river. Some bif old wp scattered around. Part of this stand is lower aspen and maple but most is an upland hump.
124	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	15.4	75	81-110	2013FMD: lowland strip along rivers riparian zone. Pretty dry mix of maple, aspen, birch, wp and lowland conifers.
125	4199 - Other Mixed Upland Deciduous	Low Density Log	77.2	114	1-50	2003FMD: A4 WLD A4 w/ scattered wolfy oak, scattered rm/bc/wp/jp. Burn stand to promote oak barrens but do not burn aspen clones. G type had been de-lineated in SW of stand and still has good grass type. 2013FMD: Barrens management area. Large crowned old oak with younger age of rp jp rm aspen.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
126	42260 - Natural Pine, Mixed Deciduous	Medium Density Pole	25.0	63	1-50	2003FMD: M4W4J4J1 with small scattered pockets of planted R2 1989. 2013FMD: PI stands 120,136,158,159,137 were all hooked in O/I. M4 age 63. last reatment kept a good bit of log sized red pine and red pine and white pine saps and poles. A few scattered oaks in stand also. Some pockets of oak seedlings but it is getting broused badly. This is a stand that could grow in to a neat semi open pine barrens look.
128	42250 - Pine, Oak	High Density Log	40.2	76	111-140	2003FMD: R6 2013FMD: Stand is variable but basically mix of rp wp wo and a little ro and rm. Some areas are heavier to rp and others have more wo mixed in. WO is older large crowned trees and there is some older pine scattered around in stand (age 98 estimate) Could harvest a part of this stand and replant rp or would be alright to hold for now. Getting older and growth has slowed.
130	4199 - Other Mixed Upland Deciduous	High Density Pole	14.5	75	81-110	2003FMD: this PI stand was two O/I stands A6 age 75 on west and A5 age 42 on east. Both stands liminting factor POG in accessable. 2013FMD; hump surrounded by lowland and river. no access. Lower ground on south edge towards river.
131	42141 - Planted Mixed Pine, Mixed Deciduous	High Density Sapling	27.6	24	51-80	2003FMD: M4W4M1 Scattered pockets of planted R2 1989. 2013FMD: PI stands 108 and 124 were hooked in O/I. Maybe stand 124 was planted and st 108 not? This stand was planted throughout. Looks like red pine had a bad start but has been putting on height growth the last 7-8 years. Mixed in with rm and oak poles that were left from last harvest and wp/jp saps that have grown in. All counted in canopy.
132	42110 - Planted Red Pine	High Density Sapling	56.1	24		2003FMD: R3 area was clearcut J5 then roller chopped machine planted 1989. Aerial sprayed with round up 1994 for red pine release. 2013FMD: Red pin had a very bad start. Starting to grow in last 7-8 years. About 12" tall now.
134	4124 - Red with White Oak	High Density Log	36.5	93	81-110	2003FMD: O8 POG WLD O8 w/ understory of O/A/RM/WP poles and saps and juneberry. Lots of wp saps in north part of stand. A portion of the stand was burned in a small wildfire and now resembles an oak savannah. Understory burn portion of stand that falls in S1/2N1/2 of sec 12 with stands (PI- 131, 138, 127 and parts of 128, 112) to promote oak/pine barrens. 2013 FMD: This stand split off -slopes along drain. Lower quality oak with red maple and white pine filling in understory. Could open up and plant red pine or add to barrens area after harvest. Retain well formed oak and pine. Lots of deer wintering in this area. unlikely that oak could be regenerated here. Old burnt pine stumps.
137	4319 - Mixed Upland Forest	Medium Density Pole	57.7	27	1-50	2003FMD:M4M2J1W1 Stand was roller chopped and planted in 1989 2013FMD: Some patch planted red pine but most is low stocked open grown jp. A good bit of rm poles grown from stump sprouts. Must have been unmerchantable at last harvest or were left as retention. A few scattered oak and oak seedlings in areas...most is =badly broused.
139	4113 - R.Maple, Conifer	Low Density Pole	13.6	63	1-50	2003FMD: M4W4J4J1 with small scattered pockets of planted R2 1989. 2013FMD: PI stands 120,136,158,159,137 were all hooked in O/I. M4 age 63. Red maple poles with some scattered red pine logs. Low stocked jp and wp filling in gaps. The stand is poor quality and stocking. Mab be able to get chipped and re-planted with red pine.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
140	42290 - Natural Mixed Pine	High Density Pole	73.7	24	51-80	2003FMD: M4W4J4J1 with small scattered pockets of planted R2 1989. 2013FMD: PI stands 120,136,158,159,137 were all hooked in O/I. M4 age 63. Some areas of older jp and rp age 43-54 than areas with age 24 jp and planted red pine. Some scattered rm and oak poles. Red pine had a bad start but is growing in the las 5-8 years. Looks like it may grow through and keep in stand. A fair amount of damage to the pines from the heavy snow storms 2012.
141	42220 - Natural Jack Pine	Medium Density	18.8	24	1-50	2003FMD: M4W4J4J1 with small scattered pockets of planted R2 1989. 2013FMD: PI stands 120,136,158,159,137 were all hooked in O/I. M4 age 63. Retained some RP and RM in last sale. Possible a few scattered oak. Low stocked JP growing in. A little planted RP. Stocking and quality in this stand in not good although this has better stocking than some of the surrounding stands. Consider chip harvesting this stand and planting red pine.
142	4113 - R.Maple, Conifer	Low Density Pole	25.5	63	1-50	2003FMD: M4W4J4J1 with small scattered pockets of planted R2 1989. 2013FMD: PI stands 120,136,158,159,137 were all hooked in O/I. M4 age 63. RM poles and scattered RP log trees left for retention last time. Low stocking of bushy wp and jp growing in and bc sapling 5-10 feet. Looks like wasted ground. Poor formed trees with low stocking. Try to get chipped and replanted with red pine. PI stand 120 and 108 are similar. Maybe a sale can be put together.
145	42140 - Planted Mixed Pine	High Density Sapling	84.4	24		2003FMD: M2M4J1 with small pockets of planted R2 Stand has an FTP for red pine planting. Some rp has already been planted in a small areas. Stand was roller chopped and planted in 1989. 2013FMD: Planted rp with jp bc and rm. Red pine was stunted for a while but has been growing in the last 7-8 years. Jack pine is bushy.
146	42290 - Natural Mixed Pine	High Density Pole	8.9	54	1-50	Strip between jack pine road and gasline
149	42290 - Natural Mixed Pine	Medium Density	33.5	24	1-50	Red pine planted in this stand is starting to grow but had a rough start. Shallow valley through stand has acted as a frost drain an affected red pine in this area.
150	42210 - Natural Red Pine	Low Density Pole	17.1	55	1-50	2011FMD: J1 Retain some red pine for visual. TS 053 07 TCR 6/08. Cut to 2" dbh except leave all rp 9.5" or less dbh. No cutting due to poor jp markets when first sold in 2005 yoe. . Note 2011 data year. Was J5 with dcattered rp/bc 2013FMD: PI stands 146/154 were hooked in O/I Split due to mapping rules.
151	42110 - Planted Red Pine	Medium Density	8.4	24		2003FMD: R2 Roller chopped and Planted spring 1989 2013FMD: PI stands 144 145 147and 153 were same stand in O/I. Split due to mapping rules and image difference for stand 145. 2013FMD: merged stand on the sout edge of this stand that was previously non-forested. It has grown in jp bc and oak. South part is not the planted rp. The rest of stand is planted red pine with jp and bc.
154	42110 - Planted Red Pine	High Density Sapling	25.1	24		2003FMD: R3 stand was roller chopped and planted in 1989. 2013FMD: planted red pine had a slow start but has been growing the las 6-7 years. Mixed with bc and jp.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
155	42140 - Planted Mixed Pine	High Density Sapling	22.4	24		2003FMD: R2 Roller chopped and planted spring 1989 2013FMD: PI stands 144 145 147and 153 were same stand in O/I. Split due to mapping rules and image difference for stand 145 2013FMD: planted rp with jp bc. Some scattered rm and bc poles scattered around.
156	42210 - Natural Red Pine	Low Density Pole	51.6	55	1-50	2011FMD: J1 Retain some red pine for visual. TS 053-07. TCR 6/08. Cut to 2" dbh except leave all rp 9.5" or less dbh. Note 2011 data year. Was J5 with scattered rp/bc 2013FMD: PI stands 146/154 were hooked in O/I Split due to mapping rules. 2013FMD; Residual rp and oak counted as canopy. Residual red pine is thicker in areas. A decent amoung of jack pine seedling and a good bit of cherry brush. No red pine seeding in. Consider looking at this stand with TMS to determine if site could be trenched and planted to jp or rp. May be adequately stocked. Could request a stocking survey.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	3303 - Mixed Low Density Trees	0.9	No	Unspecified	
3	790 - Other Bare/Sparsely Vegetate	2.0	No	Unspecified	
4	3303 - Mixed Low Density Trees	2.9	No	Unspecified	
5	11 - Low Intensity Urban	5.0	No	Unspecified	
12	50 - Water	2.6	No	Unspecified	
13	330 - Low-Density Trees	2.2	N\A	Unspecified	
17	50 - Water	1.7	No	Unspecified	
19	3102 - Grass	3.0	No	Unspecified	
24	3102 - Grass	3.5	No	Unspecified	
27	6229 - Mixed lowland shrub	9.0	No	Unspecified	
35	710 - Sand, Soil	2.1	No	Unspecified	
38	3102 - Grass	1.8	No	Unspecified	
39	50 - Water	7.3	No	Unspecified	
40	3303 - Mixed Low Density Trees	2.0	No	Unspecified	
41	6239 - Mixed Emergent Wetland	4.7	No	Unspecified	
44	3102 - Grass	26.8	No	Unspecified	
47	11 - Low Intensity Urban	2.8	No	Unspecified	
50	6239 - Mixed Emergent Wetland	14.5	No	Unspecified	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
51	3102 - Grass	6.5	No	Unspecified	
60	11 - Low Intensity Urban	9.6	No	Unspecified	
64	3303 - Mixed Low Density Trees	4.8	No	Unspecified	
66	6229 - Mixed lowland shrub	11.8	No	Unspecified	
72	6229 - Mixed lowland shrub	4.2	No	Unspecified	
77	790 - Other Bare/Sparsely Vegetate	2.0	No	Unspecified	
79	11 - Low Intensity Urban	2.9	No	Unspecified	
82	3102 - Grass	1.9	No	Unspecified	
86	3102 - Grass	2.5	No	Unspecified	
89	3202 - Autumn Olive/Honeysuckle	2.6	No	Unspecified	
92	3102 - Grass	16.4	No	Unspecified	
93	3102 - Grass	1.4	No	Unspecified	
97	3102 - Grass	2.8	No	Unspecified	
105	3102 - Grass	1.8	No	Unspecified	
110	3204 - Mast Producing Shrub	8.2	No	Unspecified	poorly regenerated pocket from aspen harvest @1997.
117	6229 - Mixed lowland shrub	48.2	No	Unspecified	
122	3105 - Mixed Upland Herbaceous	2.2	No	Unspecified	
127	11 - Low Intensity Urban	8.8	No	Unspecified	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
129	11 - Low Intensity Urban	4.9	No	Unspecified	
133	3102 - Grass	1.6	No	Unspecified	
135	3301 - Low Density Deciduous Tree	15.6	No	Unspecified	
136	3303 - Mixed Low Density Trees	2.0	No	Unspecified	
138	11 - Low Intensity Urban	3.0	No	Unspecified	
143	3303 - Mixed Low Density Trees	26.8	Yes	High (NonForested)	
144	3302 - Low Density Conifer Trees	1.9	No	Unspecified	
147	790 - Other Bare/Sparsely Vegetate	14.2	No	Unspecified	
148	3303 - Mixed Low Density Trees	6.7	Yes	Natural Mixed Pines	Consider planting red pine or jack pine in this stand.
152	790 - Other Bare/Sparsely Vegetate	3.1	No	Unspecified	
153	3303 - Mixed Low Density Trees	2.3	No	Unspecified	