

# **Compartment Review Presentation**

Shingleton Forest Management Unit

Compartment 41108 Entry Year 2017 Acreage: 1,914

**County Schoolcraft** 

Management Area: Danaher Kingston Outwash

Revision Date: 2015-08-04

Stand Examiner: Joseph Huber

**Legal Description:** 

: T47N R13W Sections 16, 17, 21, 28 and 33

#### **Identified Planning Goals:**

The main goal in this compartment is to conduct multiple resource management for current and future generations.

#### Soil and topography:

The topography in this compartment is mostly flat; the soils are mainly Kalkaska and Rubicon sands, which are low in natural fertility. The entire compartment lies within the Kingston Outwash Land Type Association.

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

Ownership in and around the compartment is mainly State lands. There are some seasonal homes near the compartment boundaries.

#### **Unique Natural Features:**

Currently under review by Michigan Natural Features Inventory (MNFI).

### Archeological, Historical, and Cultural Features:

This area has historic significance. Archeological sites have been found in this area.

#### **Special Management Designations or Considerations:**

The East Branch Fox River is the west boundary to the compartment. This river is part of the Fox River Natural River Plan. Any treatment near the river will follow the recommendations found in the plan. There is also a sand trap that is maintained by Fisheries Division in the southwest part of the compartment.

#### **Watershed and Fisheries Considerations:**

Camp 7 Creek is found in this compartment is cold-water, supporting brook trout. It is also a designated stream in the Fox River Natural River Plan. Thus, a buffer of at least 200' should extend from both sides of the stream to protect this small system from the effects of sedimentation.

#### Wildlife Habitat Considerations:

The East Branch of the Fox River forms the western boundary of this compartment. M-77 traverses north to south across the compartment. The first surveyors recorded white pine, red maple, yellow birch, beech and hemlock as the most prevalent trees in the forest of this compartment. Sugar maple, red pine, and white birch were minor components. Mountain ash was a significant component in the understory. Spruce and fir appear to have been the most prominent species in the low lying areas. Current vegetation is substantially altered from pre-settlement days. Pine plantations and grassy openings now dominate the compartment. This compartment lies within a large opening complex corridor. Featured species in this compartment are Eastern bluebird, Kirtland's warbler, red crossbill, sharp-tailed grouse, spruce grouse, and upland sandpiper. Wildlife habitat objectives include consolidating openings as well as plantations into larger habitat blocks, and protecting the East Branch of the Fox River corridor.

#### Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. There is insufficient data to determine the glacial drift thickness. The Ordovician Collingwood Shale and the Trenton and Black River Groups subcrop below the glacial drift. The Trenton and Black River are quarried for stone/dolomite in the UP. Gravel pits are not found in the general area, but there may be some potential. There is no commercial oil and gas production in the UP.

#### **Vehicle Access:**

Access to the compartment is very good. M-77 runs north and south through the entire compartment. Most of the two-track roads are in good condition.

#### **Survey Needs:**

Yes, the Northwest corner of the compartment where stand 6 is will need corners placed, none were located at time of inventory.

#### **Recreational Facilities and Opportunities:**

The East Branch of Fox River State Forest Campground is found with the SW1/4 of section 16, the campground offers 19 camp sites, canoeing and fishing opportunities, it is handicap accessible and an easy hiking trail follows around the old ponds. The Danaher Plains ORV Trail has portions of its 29 miles through the compartment. Trail #431 for snowmobile opportunities can be found off the Danaher Plains Road just east of section 33.

#### Fire Protection:

Fire response to the area will be fairly rapid. Seney station is just south 5 miles from the bottom of the compartment via M-77. The current road system should be sufficient for fire operations. There is no real urban interface problem within the compartment.

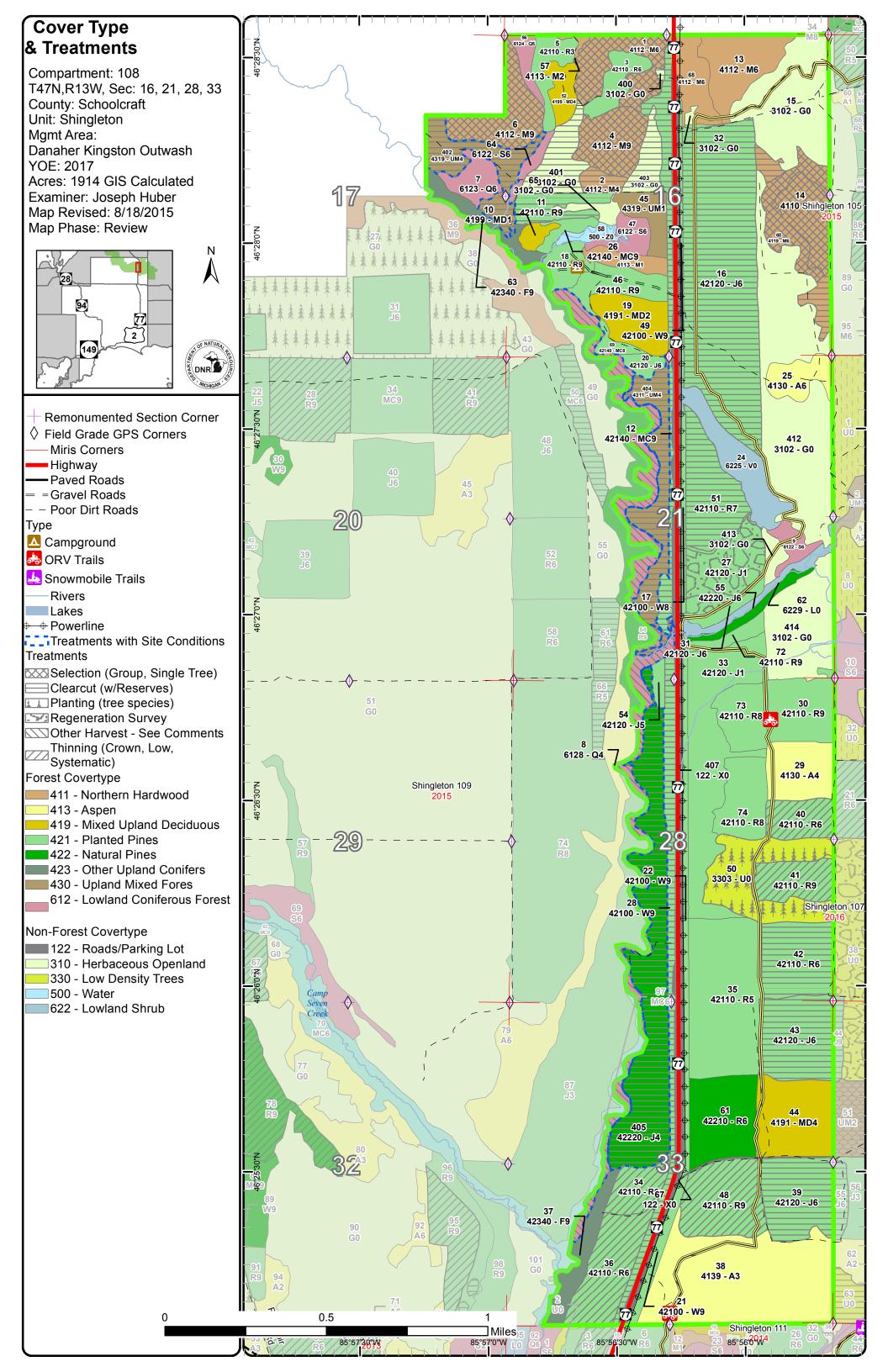
#### **Additional Compartment Information:**

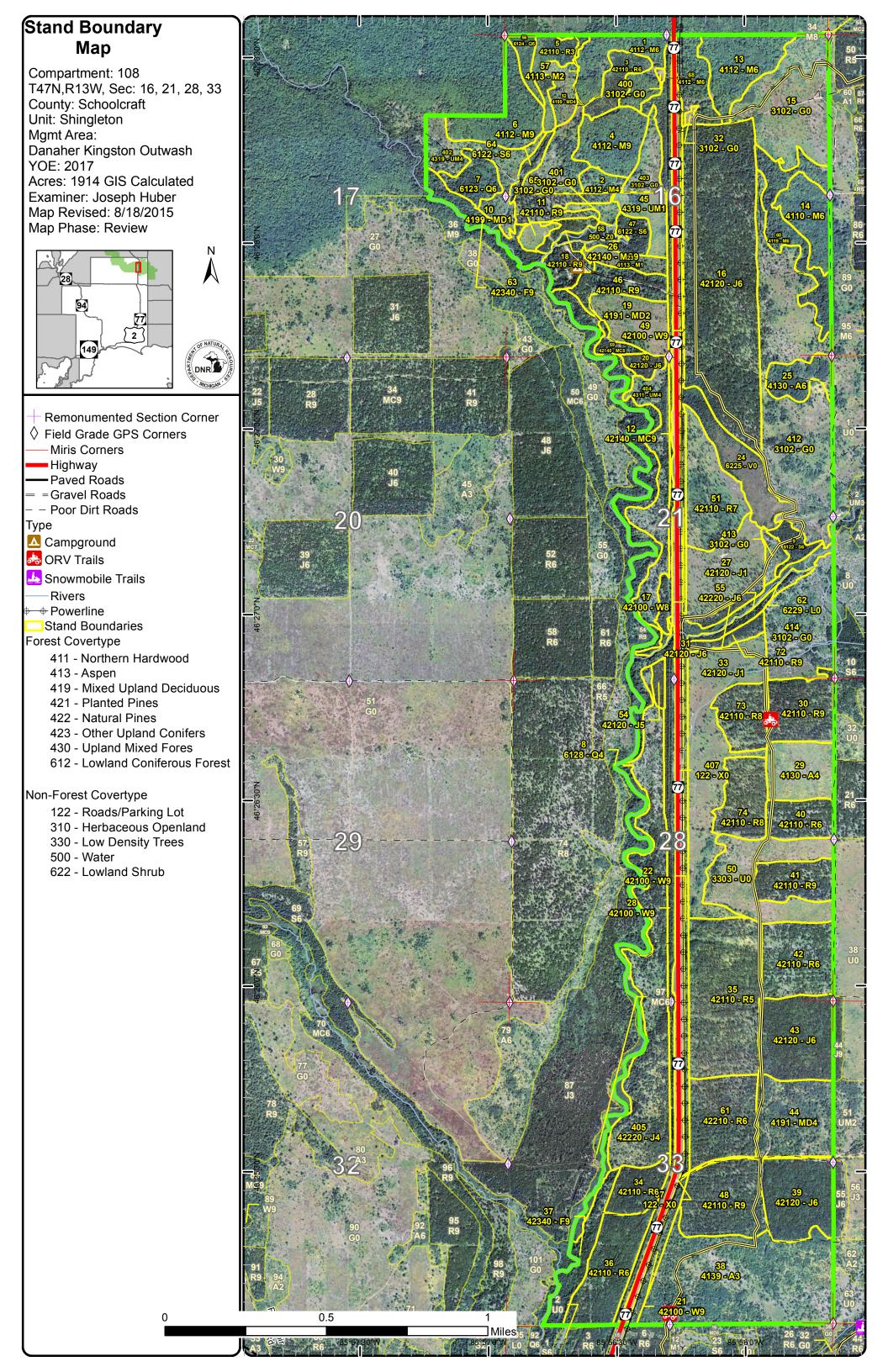
The following reports from the Inventory are attached:

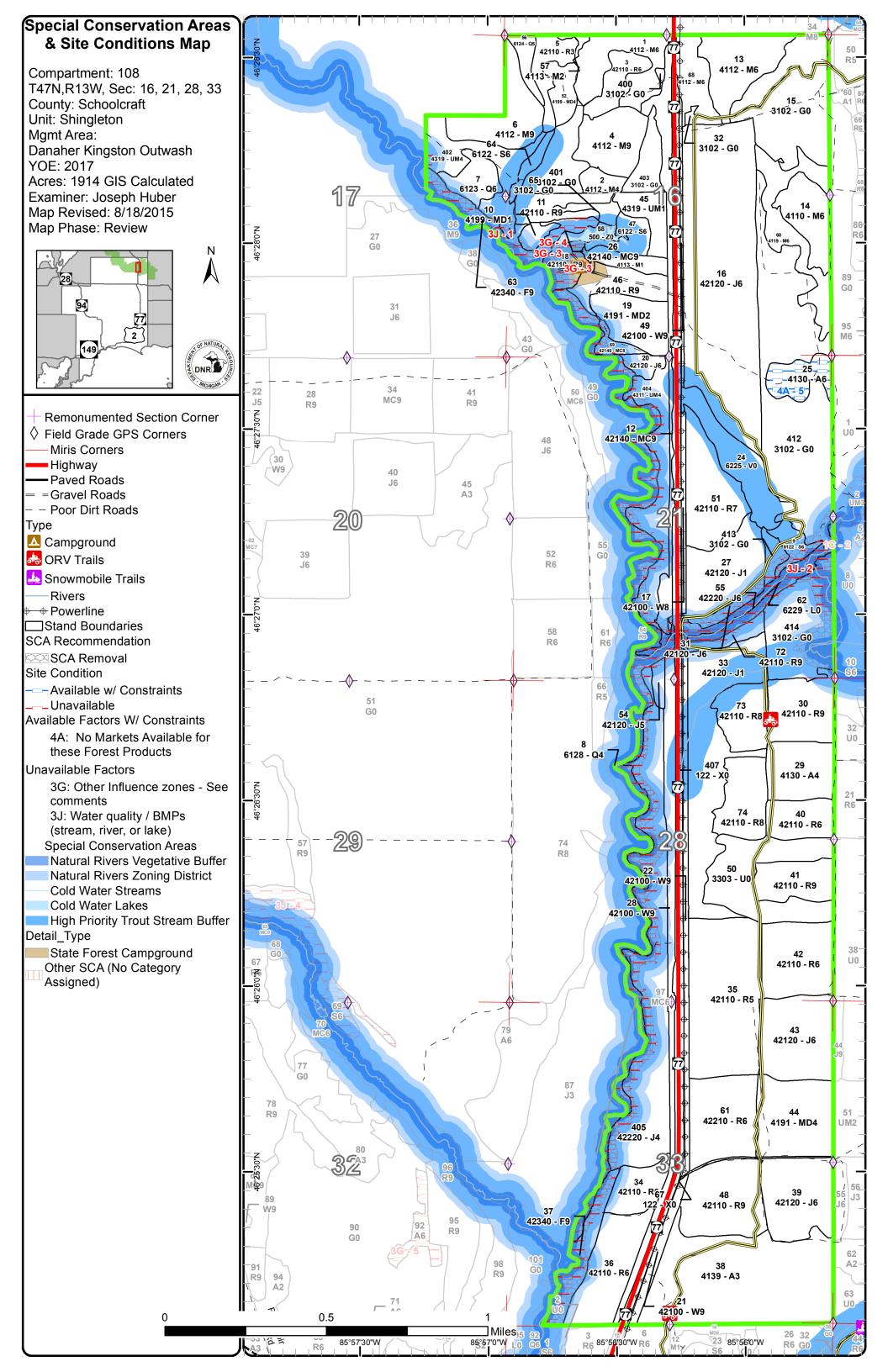
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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







Shingleton Mgt. Unit Joseph Huber : Examiner



#### Age Class

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Aspen	0	0	99	24	0	14	0	0	0	0	0	0	0	0	0	0	0	0	137
Bog	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
Herbaceous Openland	235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235
Jack Pine	0	97	0	0	8	0	0	220	88	0	0	0	0	0	0	0	0	0	413
Low-Density Trees	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Lowland Conifers	0	0	0	6	0	12	0	0	0	0	0	0	0	0	0	0	0	58	76
Lowland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Spruce/Fir	0	0	0	0	0	0	0	9	7	0	0	0	0	0	0	0	0	5	21
Mixed Upland Deciduous	0	4	21	0	0	0	0	46	0	0	0	0	0	0	0	0	0	0	71
Northern Hardwood	0	0	8	1	0	6	16	0	0	0	0	0	0	0	0	0	0	151	182
Planted Mixed Pines	0	0	0	0	0	0	0	25	4	5	0	0	0	0	0	0	0	0	34
Red Pine	0	0	23	0	0	15	128	245	6	10	0	0	0	0	0	0	0	0	427
Upland Mixed Forest	0	12	0	0	0	0	0	33	27	0	0	0	0	0	0	0	0	0	72
Upland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	31
Urban	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65
Water	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
White Pine	0	0	0	0	0	0	0	0	0	68	0	0	0	0	0	0	0	0	68
Total	383	113	151	31	8	47	144	578	132	83	0	0	0	0	0	0	0	245	1915



# **Report 2 – Treatment Summary**

# Shingleton Mgt. Unit Year of Entry: 2017

#### **Acres of Harvest**

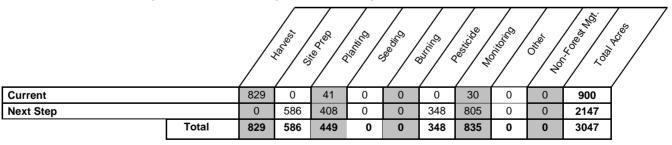
Compartment 108
Total Compartment Acres: 1,914

Commercial Harvest - 623 Harvests with Site Condition - 206 Next Step Harvest - 0 Habitat Cut - 0

#### **Cover Type by Harvest Method**

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		/		10 10 10 10 10 10 10 10 10 10 10 10 10 1	TO TO THE POST OF		OOM SHOW	Original Sport	ke, out of	88.18		Rick /
Herbaceous Openland		30	0	0	0	0	0	0	0	0	30	ĺ
Jack Pine		296	0	0	0	0	0	0	0	0	296	
Lowland Conifers		0	0	0	0	0	0	0	0	58	58	1
Northern Hardwood		16	113	0	0	0	0	0	0	0	129	
Planted Mixed Pines		25	0	0	0	0	0	0	0	0	25	
Red Pine		80	0	0	0	0	119	0	0	0	199	
Upland Mixed Forest		60	0	0	0	0	0	0	0	0	60	
White Pine		32	0	0	0	0	0	0	0	0	32	
	Total	538	113	0	0	0	119	0	0	58	829	

### **Proposed and Next Step Treatments by Method**



Next Step Treatments:

Acceptable Any mix of species on site.

Regen:

WLD comment - This harvest will promote deciduous tree regeneration within a matrix of deciduous and coniferous forests and forest openings, Other

providing various habitat requirements of eastern bluebirds. Old next step comments: Comment:

10/1 /2016 **Proposed Start Date:** 

4211 - Planted 5.5 4112 - Maple, Poletimber 45 1-50 Clearcut Even-Aged Proposal 2 41108002-Cut Harvest

Beech. Cherry Poor

Association

Red Pine

**Habitat Cut: No Site Condition:** 

Prescription Clear-cut stand, follow up with herbicide, trench and plant to red pine.

Specs:

Next Step Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)

**Treatments:** 

Acceptable Red pine.

Regen:

Other Old next step comments:

Comment:

**Proposed Start Date:** 10/1 /2016

41108004-Cut 85 111-411 - Northern 23.3 4112 - Maple, Sawtimber Harvest Single Tree Uneven-Proposal Beech, Cherry Well 140 Selection Hardwood Aged

Association

**Habitat Cut: No Site Condition:** 

Prescription Mark down to 85BA, there is good advanced regeneration so reopen those canopy gaps.

No cut beech unless in heavy concentrations. Specs:

Create larges holes around cherry

Next Step Treatments:

Acceptable Any mix of species on site.

Regen:

Other WLD comment - This harvest will promote deciduous tree regeneration within a matrix of deciduous and coniferous forests and forest openings,

providing various habitat requirements of eastern bluebirds. Old next step comments: Comment:

a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
6	41108006-Cut	26.2	4112 - Maple, Beech, Cherry Association	Sawtimber Well	85	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Proposal

Habitat Cut: No Site Condition:

Prescription Mark down to 80BA, remove all fir. Lots of multi stem red maples, create larger holes around quality cherry.

Specs: Do not cut hemlock.
No corners found

Next Step Treatments:

Acceptable Any mix of species on site.

Regen:

S

Other Stands has red maple clumps and areas with better quality cherry. When possible open up larger (tree length gaps) around cherry.

Comment:

No corners found.

WLD comment - WLD comment - This harvest will promote deciduous tree regeneration within a matrix of deciduous and coniferous forests and forest openings, providing various habitat requirements of eastern bluebirds. Old next step comments:

Proposed Start Date: 10/1 /2016

41108008-Cut 58.2 6128 - Lowland 55 612 - Lowland Poletimber 1-50 Harvest Other - Specify Uneven-Proposal Coniferous, Mixed Coniferous Aged Deciduous Forest

Habitat Cut: No Site Condition: BMPs

Prescription Remove Scotch Pine from the buffer zone.

Specs:

Next Step Treatments:

Acceptable Regen:

Other Need permission from fisheries to harvest within the buffer zone. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

 11
 41108011-Cut
 13.0
 42110 - Planted
 Sawtimber
 66
 81-110
 Harvest
 Clearcut with
 3102 - Grass
 Proposal

 Red Pine
 Well
 Retention

Habitat Cut: No Site Condition:

Prescription Clear cut with retention near Kings pond.

Specs:

Next Step Treatments:

Acceptable Grass opening

Regen:

Other State Game Fund Land.

Comment:

Has fair amount of maple in the understory.

WLD comment - This prescription will create a temporary opening, within a mosaic of opening/plantation habitat, which will benefit sharp-tailed

grouse and other open-land dependent species. Old next step comments:

a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
12	41108012-Cut	25.4	42140 - Planted Mixed Pine	Sawtimber Well	65	81-110	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Proposal

**Habitat Cut: No Site Condition:** 

Prescription Clear cut stand to remove scotch pine from the site. Line work will only include parts of stand that have Jack pine and or Scotch pine. 2 inch

spec to help remove scotch pine Specs:

Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr) Next Step

**Treatments:** 

Acceptable Red pine

Regen:

Other Old next step comments:

Comment:

**Proposed Start Date:** 10/1 /2016

14 41108014-Cut 20.2 4110 - Sugar Maple Poletimber 85 81-110 Harvest Single Tree 411 - Northern Uneven-Proposal Selection Hardwood Aged

Association Well

**Site Condition:** 

Prescription Lighter selection cut 80BA residual, focus on regen gaps and opening up around cherry (tree length).

Specs:

Next Step **Treatments:** 

**Habitat Cut: No** 

Acceptable Any mix of species on site.

Regen:

Old next step comments: Other

Comment:

**Proposed Start Date:** 10/1 /2016

41108016-cut-42120 - Planted Poletimber Draft Field 135.8 66 81-110 Clearcut with 42220 - Natural Even-Aged Harvest Jack Pine Well Retention Jack Pine οi Boundary

**Habitat Cut: No Site Condition:** 

Prescription Clearcut with retention on south end for Fox River SCA. Also reserve all oak.

SitePrep, Scarification; Monitoring, Artificial Regen(1yr)

Trail in stand, minimize crossing of trail, put in specs to cut trail marker trees above blazes. Specs:

OPIC - FMD: Good plantation - planted red pine and jack pine in 1949. Budworm is in the jack pine, there are some trees that are already totally

dead. According to the survey results from 2005 the wood will hold and is still putting on wood.

Next Step Treatments:

Acceptable Jack Pine

Regen:

Other Old next step comments:

Comment:

**Proposed Start Date:** 10/1 /2016

51 41108027-30.0 42110 - Planted Sawtimber 65 1-50 Monitoring Artificial 4212 - Planted Even-Aged Draft Field Red Pine Jack Pine Boundary Poor Regen(3yr) Monitor

**Habitat Cut: Yes Site Condition:** 

Prescription Monitor for Jack pine regeneration.

Specs:

Next Step Treatments:

Acceptable Jack pine

Regen:

Other Old next step comments:

Comment:

Compartment: 108

Year of Entry: 2017

a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
28	41108028-Cut	31.7	42100 - Planted White Pine	Sawtimber Well	82	51-80	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Proposal

**Habitat Cut: No Site Condition:** 

Prescription Clear cut this stand only including portions that have Jack pine and or Scotch pine. Retention will be excluded portions via red line consisting of mainly red and white pine as well and mixed hardwoods. Specs:

Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr) Next Step

**Treatments:** 

Acceptable Red pine.

Regen:

Other Old next step comments:

Comment:

**Proposed Start Date:** 10/1 /2016

Systematic 34 41108034-Cut 15.0 42110 - Planted Poletimber 47 81-110 Harvest 4211 - Planted Even-Aged Proposal Thinning Red Pine Well Red Pine

**Habitat Cut: No** Site Condition:

Prescription First entry, 3rd row thin. Rows are more obvious on west side.

Spec out all Jack pine, White pine and Scotch pine. Specs:

Watch red line on Northwest, it is right on the river buffer zone, also steep slope there so line needs to be adjusted to where machinery can

operate and turn around.

Next Step Treatments:

Acceptable Regen:

Other Old next step comments:

Comment:

**Proposed Start Date:** 10/1 /2016

36 41108036-Cut 42110 - Planted Poletimber 141-4211 - Planted 32.9 Harvest Systematic Even-Aged Proposal Red Pine Well 170 Thinning Red Pine

**Habitat Cut: No Site Condition:** 

Prescription First entry, 3rd row thin. Spec all Jack pine, White pine and Scotch pine.

Steep hill on west side, adjust line to where machinery can operate and turn around. Specs:

Next Step **Treatments:** 

Acceptable

Regen:

Other Has small hardwood inclusions. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

39 41108039-Cut 34.3 42120 - Planted Poletimber 64 81-110 Harvest Clearcut 4222 - Natural Even-Aged Proposal Jack Pine Well Jack Pine

**Habitat Cut:** No **Site Condition:** 

Prescription Clear cut, add stand to the east as well. Reserve all oak. Stand will have areas that regenerate to aspen and oak which is ok.

Specs:

No retention needed for regeneration purposes.

Next Step SitePrep, Scarification; Monitoring, Natural Regen (Intermediate); SitePrep, Trenching; Planting, Interplant; Monitoring, Artificial Regen(1yr)

**Treatments:** 

Acceptable Jack Pine.

Regen:

Other Old next step comments:

Comment:

Shingleton Mgt. Unit Report 4 -- Treatments Compartment: 108 s Year of Entry: 2017 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 40 41108040-Cut 16.3 42110 - Planted Poletimber 81-110 Systematic 4211 - Planted 56 Harvest Even-Aged Proposal Red Pine Well Thinning Red Pine **Site Condition: Habitat Cut: No** Prescription First entry, 3rd row thin. Remove all Jack pine and Red maple. Minimize impacts to ORV trail. Specs: Next Step **Treatments:** Acceptable Regen: Other Old next step comments: Comment: **Proposed Start Date:** 10/1 /2016 56 Systematic 4211 - Planted 41 41108041-Cut 19.0 42110 - Planted Sawtimber 81-110 Harvest Even-Aged Proposal Red Pine Well Thinning Red Pine **Habitat Cut:** No **Site Condition:** Prescription First entry, 3rd row thin. Remove all Jack pine and Red maple. Specs: Rows are difficult to find, mark in straight line. Minimize impact to ORV trail Next Step Treatments: <u>Acceptable</u> Regen: **Other** Old next step comments: Comment: Proposed Start Date: 10/1 /2016 41108042-Cut 32.9 42110 - Planted 4211 - Planted Poletimber 56 51-80 Clearcut Even-Aged Proposal Harvest Red Pine Well Red Pine **Habitat Cut: No Site Condition:** Prescription Clear cut and replant to red pine. 2 inch spec and require chipping. No retention needed for regeneration purposes. Minimize impact to ORV trail. Next Step Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr) Treatments: Acceptable Red pine Other Old next step comments:

Specs:

Regen:

Comment:

**Proposed Start Date:** 10/1 /2016

41108043-Cut 37.8 42120 - Planted Poletimber 64 81-110 Harvest Clearcut 4222 - Natural Even-Aged Proposal Jack Pine Well Jack Pine

**Habitat Cut: No Site Condition:** 

Prescription Clear cut stand and add stand to east from adjacent compartment. Reserve all oak.

Specs:

SitePrep, Scarification; Monitoring, Natural Regen (Intermediate); SitePrep, Trenching; Planting, Interplant; Monitoring, Artificial Regen(1yr) Next Step

**Treatments:** 

Acceptable Jack pine

Regen: Other

Old next step comments:

Comment:

Shingleton Mgt. Unit Report 4 -- Treatments Compartment: 108 s Year of Entry: 2017 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 48 41108048-Cut 36.2 42110 - Planted Sawtimber Low Thinning 4211 - Planted 65 111-Harvest Even-Aged Proposal Red Pine Well 140 Red Pine **Habitat Cut: No Site Condition:** Prescription Thin down to 110BA, do not cut oak unless needed for access. Specs: Minimize impacts to ORV trail. Next Step **Treatments:** Acceptable Regen: Other Old next step comments: Comment: **Proposed Start Date:** 10/1 /2016 41108050-3303 - Mixed Low Unspec Planting 40.9 Nonstocked 0 4222 - Natural Draft Field 50 Replant Even-Aged **Plant Density Trees** ified Jack Pine Boundary **Habitat Cut: Yes** Site Condition: Prescription Replant to Jack pine due to failed red pine regen survey on 3rd year check in 2011. Stand check in summer 2015 needs replant. Specs: Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr); Pesticide, Skidder/Mechanical Next Step Treatments: Acceptable Jack pine Regen: Other Old next step comments: Comment: **Proposed Start Date:** 10/1 /2016 41108051-Cut 33.7 42110 - Planted 65 1-50 4211 - Planted Sawtimber Harvest Clearcut Even-Aged Proposal Red Pine Red Pine Poor **Habitat Cut: No Site Condition:** Prescription Clear cut and replant to red pine. No retention needed because it is already in the parent stand which is now stand 27. Specs: Next Step Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr) Treatments: Acceptable Red Pine Regen:

Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

**60 41108060-32-** 3.6 4119 - Mixed Poletimber 85 81-110 Harvest Clearcut 413 - Aspen Even-Aged Proposal

New Northern Hardwoods Well

Habitat Cut: No Site Condition:

Prescription Clear cut this portion to regenerate aspen, reserve all oak and hemlock if present.

Specs:

Next Step Treatments:

Acceptable Aspen

Regen: Other

This small pocket in stand 60 is producing good quality aspen. Old next step comments:

Comment:

t a										<b>,</b>	DNR DNR
n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
60	41108060-33-	6.8	4119 - Mixed	Poletimber	85	81-110	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal

**Site Condition: Habitat Cut: No** 

Prescription Clear cut to regenerate aspen, reserve all oak and hemlock if present.

Well

Northern Hardwoods

Specs:

s

Small pocket that is producing quality aspen, there is a fair amount of maple in the pocket as well, enough that only cutting out the aspen would

not lead to the desired outcome.

Next Step Treatments:

Acceptable Aspen

New

Regen:

Other Old next step comments:

Comment:

10/1 /2016 Proposed Start Date:

41108060-Cut 17.8 4119 - Mixed Poletimber 81-110 Harvest Single Tree 411 - Northern Uneven-Proposal Selection Northern Hardwoods Well Hardwood Aged

**Site Condition: Habitat Cut: No** 

Prescription Mark down to 90BA remove more white pine in areas that are dense with it.

Specs:

Next Step **Treatments:** 

Acceptable Mix of any species on site.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

400 41108400-Cut 31021 - Cool 0.6 3102 - Grass Nonstocked Unspec Harvest Clearcut Proposal ified

Season Grass

**Habitat Cut: No Site Condition:** 

Prescription Clear cut with 2 inch spec to remove Scotch pine.

Specs:

Pesticide, Skidder/Mechanical; Monitoring, Herbicide Use Next Step

**Treatments:** 

Acceptable Grass opening

Regen:

Other Old next step comments:

Comment:

**Proposed Start Date:** 10/1 /2016

401 41108401-Cut 18.6 3102 - Grass Nonstocked Unspec Harvest Clearcut 4211 - Planted Even-Aged Proposal ified

Red Pine

Site Condition: **Habitat Cut:** No

Prescription Clear cut with 2 inch spec.

Specs: plant to red pine.

Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr) Next Step

**Treatments:** 

Acceptable Red pine.

Regen:

Other Old next step comments:

Comment:

a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
402	41108402-Cut	26.5	4319 - Mixed Upland Forest	Poletimber Poor	r 75	1-50	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No Site Condition: BMPs

Prescription Clear cut stand and convert to red pine.

Specs:

Next Step Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)

Treatments:

Acceptable Red Pine

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

403 41108403-Cut 10.8 3102 - Grass Nonstocked Unspec Harvest Clearcut 4211 - Planted Even-Aged Proposal ified Red Pine

Habitat Cut: No Site Condition:

<u>Prescription</u> Clear cut with a 2 inch spec to help remove Scotch pine and prepare site for planting.

Specs:

Next Step Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)

**Treatments:** 

Acceptable Red pine

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

404 41108404-Cut 33.3 4311 - Pine, Aspen Poletimber 65 1-50 Harvest Clearcut with 4211 - Planted Even-Aged Proposal Retention Red Pine

Habitat Cut: No Site Condition: BMPs

Prescription Clear cut stand with retention being the river buffer, seeking permission to cut the Scotch pine within the buffer zone.

Specs: Plant to red pine.

Next Step Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)

Treatments:

Acceptable Red pine.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

405 41108405-Cut 87.8 42220 - Natural Poletimber 71 1-50 Harvest Clearcut with 42110 - Planted Even-Aged Proposal Retention Red Pine

Habitat Cut: No Site Condition: BMPs

<u>Prescription</u> Clear cut stand with 2 inch spec, this is in order to help remove scotch pine from the site. Follow up with herbicide, trench and plant to red pine.

Specs: Retention will be the river buffer zone, also seeking permission to remove scotch pine from the buffer zone.

Next Step Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)

Treatments:

Acceptable Planted red pine.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

Total Treatment 899.8 Acreage Proposed:

# Report 5 - Site Conditions

Shingleton Mgt. Unit

Joseph Huber : Examiner Year

Compartment: 108
Year of Entry: 2017

#### **Availability for Management** Total Acres Acres Avail Acres **Dominant Site Conditions** Available With Condition Not Available 3G 3J Acres 4A Aspen Bog Herbaceous Openland Jack Pine Low-Density Trees **Lowland Conifers Lowland Shrub** Lowland Spruce/Fir **Mixed Upland Deciduous** Northern Hardwood **Planted Mixed Pines** Red Pine **Upland Mixed Forest** Upland Spruce/Fir Urban Water White Pine 1,914 1,719 Total Forested Acres 90% 9% Relative Percent 1%

\*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 Condition Other Site Condition Other Site Condition
nspecified Unspecified Unspecified
nspecified Unspecified Unspecified
1

# Report 5 – Site Conditions

Shingleton Mgt. Unit Joseph Huber : Examiner Compartment: 108
Year of Entry: 2017

3	Unavailable	3G: Other Influence zones - See comments	7	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Campground						
4	Unavailable	3G: Other Influence zones - See comments	5	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: Area used by camp	oground, has hiking trail and is b	ufferinç	g Kings pond.			
5	Available	4A: No Markets Available for these Forest Products	14	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Majority of stand is	just making merchantable size.					

Shingleton Mgt. Unit

Compartment: 108
Year of Entry: 2017

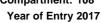


### Report 6 - PROPOSED SPECIAL CONSERVATION AREA\* (SCA) DETAILS

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Unspecified	Other SCA		SCA Removal	174
Comments				
SCA removal, already	covered by Fox River SCA			

Shingleton Mgt. Unit Compartment: 108





# Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

Conservati Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions stocked trout populations and those of other coldwater fish specific conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	ies to persist from year to year. Suitable ey are relatively deep, have substantial the state. Such lakes are established by
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish specified year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	ies (e.g., slimy sculpin) to persist from ese conditions due to substantial
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems ir influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high communities are ecologically and socially significant in their effe as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, diversity of plants and wildlife. Riparian cts on water quality and quantity, as well
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spapproved distance from the river centerlines. The Natural Rivers most Natural Rivers. The Vegetative Buffer ranges from 25 to 10 and Vegetative Buffers for each Natural River see the table local folder.	s Zoning District is a 400 foot buffer for 00 feet. To view specific Zoning Districts

S t	Shingleto	n Mgt. Unit		Report 8	<ul><li>Forested</li></ul>	Stands Compartment: 108 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4112 - Maple, Beech, Cherry Association	Poletimber Well	25.9	85	81-110	OPIC - FMD: Fir was removed with last thinning in 1994. Hardwood is of poor quality where the white pine looks good. Doing an underburn could help promote white pine regeneration and maybe some yellow birch. 17 BA snags. Scattered spruce and fir.
2	4112 - Maple, Beech, Cherry Association	Poletimber Poor	5.5	45	1-50	OPIC - FMD: Stand is from surrounding hardwood encroaching. Some merchantable trees are present. There is scattered aspen, small white pine and fir in the understory. Old grade on north end of the stand. PArVAa, from soil survey. 2007-This stand will be final harvest trenched and planted to red pine.
3	42110 - Planted Red Pine	Poletimber Well	11.8	18	1-50	OPIC - FMD: Stand was cut, burned and then planted. There is cherry brush, aspen and hardwoods 4-5' tall growing well in the stand. The red pine is 1-3' tall. This stand needs to be released. [7/18/07 JB] inmates were used to release red pine. Needs survival check on rp in 2011
4	4112 - Maple, Beech, Cherry Association	Sawtimber Well	23.3	85	111-140	OPIC - FMD: This stand is a bit better in quality than stand 1. There is more hardmaple present and less white pine. Stand thinnned in 1994. 15 BA snags. Occassional white pine log tree.
5	42110 - Planted Red Pine	Sapling Well	11.5	18	1-50	OPIC - FMD: Stand was cut, burned and then planted. There is cherry brush, aspen and hardwoods 4-5' tall growing well in the stand. The red pine is 1-3' tall. This stand needs to be released. [7/18/07 JB] inmates were used to release red pine. Needs survival check in 2011.
						2015: Broken up plantation, densities vary as does the size.
6	4112 - Maple, Beech, Cherry Association	Sawtimber Well	26.2	85	111-140	OPIC - FMD: Poor to fair quality. There is a scattered hemlock. 98= spruce and white pine logs. Thinned in 1994. 5 BA snags. PArVAa from soil survey.
7	6123 - Lowland Fir	Poletimber Well	11.6	45	51-80	
8	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Poor	58.2	55	1-50	OPIC - FMD: HCVA - N- East Branch Fox River. Area is the 200' buffer for the East Brach Fox River. The stand contains lows near the river's edge with some aread exspanding more into the slope along the east side bank. There is also white, scotch and red pine, black spruce, aspen, fir and mixed hardwood. Ground cover is anything from tag alder, to blue berry, bracken firn and moss.
9	6122 - Black Spruce	Poletimber Well	6.9	77	111-140	OPIC - FMD: South part of the stand has, on average, a larger diameter. Stand is healthy. Not much in the understory except tag alder. Blueberry and moss for ground cover. ORV trail is through the stand and over a small drain. This bridge (small) needs some repairs and bank stabilization done. Or a reroute of the trail could be looked at.
						2015: Stand is healthy, part of stand is in the Fox river buffer zone, do not cut until stand is in decline. Do not think stand will regenerate based on surroundings, once cut area will likely dry out and convert to jack or white pine

S t				Report 8	- Forested	d Stands Compartment: 108 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
10	4199 - Other Mixed Upland Deciduous	Sapling Poor	4.2	5	Immature	OPIC - FMD: Do a 200' buffer to protect the water. Make cut in small areas through out the stand and replant. When regenerated continue with the same kind of cut to make a more uneven aged stand that is easier to manage by the ponds. Stand is in a little better condition than the jack pine east of M-77. Budworm is still present in the stand for the 3rd year. Scattered white pine and small aspen. When cut replant with a mix of species because of the campground. Steeb Pathway on the south side of the stand. 15 BA snags. PArVAa from soil survey.
						[5/22/08] Under contract TS# 41-021-07-01 Lunch Can't Wait Pine. See also FTP C41-1344 (jack pine regeneration.) Residual BA: Red pine - 10, white pine - 4; total = 14 sq.ft./acre. [6-7-10] Sale is now closed/completed TCR dtd 6-3-10. [6/6/11 JB] On Don's 2011 planting list. [4-23-11 JB] stand was planted. Check in 2012. Stand passed regeneration count in 2014 at 660 trees per acre, FTP is closed for stand.
11	42110 - Planted Red Pine	Sawtimber Well	13.0	66	81-110	OPIC - FMD: Stand has enough canopy cover that natural regeneration is not occurring. Cut to get light to the ground. Plant a mix of red pine, maybe some white pine for species diversity, move toward an unevenaged stand because of the proximity to the campground. Plant trees in the "holes" so there is sufficient light for survival. 10 BA snags. PArVAa from soil survey. THINNED TCR7/30/99 SALE #73-97-01.[5/22/08] Under contract TS# 41-021-07-01 Lunch Can't Wait Pine. See also FTP C41-1345 (red pine underplanting.) Residual BA: Red pine - 72, white pine - 2; total = 74 sq.ft./acre.
12	42140 - Planted Mixed Pine	Sawtimber Well	25.4	65	81-110	OPIC - FMD: Jack pine and scotch pine were removed in 1992, a couple areas were cut out in 1999, number of rows vary. There is scattered white pine, jack pine, mixed hardwood and some scotch pine. Stands were planted as windbreaks in CCC days. PArVAa from soil survey. Remove any scotch pine using inmates.  [2-19-08] Added faThere is not enough volume for the inmates
						to harvest as part of a commercial timber sale. Any work will be done under a FTP.  [4-7-08] Deleted factor limit per discussion with Donovan.
						[10/03/2011 JB] INMATES WILL BE USED TO REMOVE SCOTCH PINE. See W41-1294
13	4112 - Maple, Beech, Cherry Association	Poletimber Well	27.7	65	81-110	OPIC - FMD: Healthy understory of spruce, white pine, fir and mixed hardwood, with scattered white pine and hemlock in the overstory. ORV trail is in the south part of the stand. Thinned in 1989. There are old foundations in the sw part of the stand maybe and old septic field from the CCC days. 12 BA snags, 99=mix of hard maple pulp and logs.
14	4110 - Sugar Maple Association	Poletimber Well	20.2	85	81-110	OPIC - FMD: Stand is of fair quality. There are patches of more open, poor quality stems. ATFD from soil survey.
16	42120 - Planted Jack Pine	Poletimber Well	136.3	66	81-110	OPIC - FMD: Good plantation - planted red pine and jack pine in 1949. Budworm is in the jack pine, there are some trees that are already totally dead. According to the survey results from 2005 the wood will hold and is still putting on wood, however it could decline before the next year of entry. FL incase the wood becomes poor. When cut leave red pine and oak for aesthetics along M-77, remove all other species. Replant to jack pine. ORV trail goes through the stand. PArVAa from soil survey.

S t	Shingleton Mgt. Unit			Report 8	<ul><li>Forested</li></ul>	Stands Compartment: 108 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	42100 - Planted White Pine	Sawtimber Medium	5.7	82	51-80	OPIC - FMD: Jack pine and scotch pine were removed in 1992, a couple areas were cut out in 1999, number of rows vary. There is scattered white pine, jack pine, mixed hardwood and some scotch pine. Stands were planted as windbreaks in CCC days.  PArVAa from soil survey.  [2-19-08] Added factor limit to get off of the POW. There is not enough volume for the inmates to harvest as part of a commercial timber sale. Any work will be done under a FTP.  [4-7-08] Deleted factor limit per discussion with Donovan.
						[10/03/2011 JB] INMATES WILL BE USED TO REMOVE SCOTCH PINE. See W41-1294
						2015: Stand is a wind break and a visual buffer
18	42110 - Planted Red Pine	Sawtimber Well	10.3	82	81-110	OPIC - FMD: East Branch Campground. Area has had some pine and other species removed for hazard tree precautions in the spring of 2005. BA variable by site. Some black spruce, maple and white pine are present. PArVAa from soil survey.
19	4191 - Mixed Upland Deciduous with Conifer	Sapling Medium	21.3	14	Immature	State Game Fund land so no further action will be done to grow red pine.
						OPIC - FMD: FTP#C41-885. Only 13 acres were treated in 2001, because the entire area had not been trenched. Stand needs more work done to it to make a fully stocked stand. Thick grass mat will make regeneration difficult. PArVAa from soil survey.  [6-08-06] Red pine handplanted in new trenches on 34 acres by Superior Forestry Services - partial completion of FTP C41-885 dtd 4-22-06. Schedule survival check for 2007. [6/3/08] Replanted in SE corner only.  (4/28/09 AP) 2009 regen count: 538 red pine, 8 jack pine, 3 white pine. Recommendation: Fill in existing trenches with red pine (estimate 9,000 trees). Red pine release is a high priority. Release should be done manually with inmates and chainsaws if available. Competition is cherry and maple.  [8-26-09] Helicopter release spray to release rp regen in stand 19 and 7 on about 23 acres. Check regen in 2011 for release effectiveness.  [6-30-10] Received Pesticide Use Eval. Report = cherry 70% controled and aspen 50% controlled. Needs future checks for effectiveness in 2011 (5/8/12) About half cherry killed much of maple is still alive.
20	42120 - Planted Jack Pine	Poletimber Well	4.7	38	81-110	OPIC - FMD: Stand was an old borrow pit planted by inmates. Scattered red and white pine, aspen and black spruce surrounding the stand.
21	42100 - Planted White Pine	Sawtimber Well	8.7	82	51-80	OPIC - FMD: Jack pine and scotch pine were removed in 1992, a couple areas were cut out in 1999, number of rows vary. There is scattered white pine, jack pine, mixed hardwood and some scotch pine. Stands were planted as windbreaks in CCC days. PArVAa from soil survey. Remove any scotch pine using inmates.  [2-19-08] Added factor limit to get off of the POW. There is not enough volume for the inmates to harvest as part of a commercial timber sale. Any work will be done under a FTP. [4-7-08] Deleted factor limit per discussion with Donovan.  [10/03/2011 JB] INMATES WILL BE USED TO REMOVE SCOTCH PINE. See W41-1294

S t	Shingletor	n Mgt. Unit		Report 8	– Forested	d Stands  Compartment: 108  Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	42100 - Planted White Pine	Sawtimber Well	16.8	82	51-80	OPIC - FMD: Jack pine and scotch pine were removed in 1992, a couple areas were cut out in 1999, number of rows vary. There is scattered white pine, jack pine, mixed hardwood and some scotch pine. Stands were planted as windbreaks in CCC days. PArVAa from soil survey. Remove any scotch pine using inmates.  [2-19-08] Added factor limit to get off of the POW. There is not enough volume for the inmates to harvest as part of a commercial timber sale. Any work will be done under a FTP. [4-7-08] Deleted factor limit per discussion with Donovan.
23	4113 - R.Maple, Conifer	Sapling Poor	8.4	16	1-50	OPIC - FMD: Stand was cut but not regenerated with FTP#C41- 885. More work needs to be done to get the pine back. Scattered red pine and oak present. PArVAa from soil survey.(4/28/09 AP) 2009 regen count: 386 red pine, 36 jack pine. Recommendation: Fill in existing trenches with red pine (estimate 6,000 trees). Survival may be low since there is an existing grass mat. Red pine release is a medium priority. Release should be done manually with inmates and chainsaws if available. Competition is cherry and maple. Since adjacent site is high priority to release, I would recommend releasing this site as well.[8-26-09] Helicopter release spray to release rp regen. [6-30-10] Received Pesticide Use Eval. Report = cherry 70% controled and aspen 50% controlled. Needs future checks for effectiveness. Replant in existing trenches as recommended by (4/28/09 AP) comments. (5/8/12) About 1/2 cherry killed much of maple is still alive2015: Site appears to be about 50% stocked with heavy competition from maple.
25	4130 - Aspen	Poletimber Well	13.5	49	1-50	OPIC - FMD: Aspen is fairly healthy for Danaher aspen, though the form isn't the best. White pine is 1-6 feet tall. Suggest leaving the aspen to nurse along the white pine in the understory. Mainly A4 but some areas could be an A5. PArVAa from soil survey.  2015: stand does not appear to have changed much since last inventory. If markets materialize, perhaps next entry stand could be chipped, as of now most of the stand is non merchantable.
26	42140 - Planted Mixed Pine	Sawtimber Well	5.1	82	81-110	OPIC - FMD:Part of East Branch Campground.  2015: stand is being left uncut for ts proximity to the East branch river and for aesthetics/trail use for the campground.
27	42120 - Planted Jack Pine	Sapling Poor	32.0	5	1-50	OPIC - FMD: Red pine and jack pine were planted in alternate rows in the '50's, then red pine was planted again in '58. There is budworm in the stand recommend from the 2005 survery to cut the jack pine now. Because of the ORV trail in the south and M-77 to the west leave red pine. Replant to jack pine for the MO.[5/22/08] Under contract TS# 41-021-07-01 Lunch Can't Wait Pine. See also FTP C41-1344 (jack pine regeneration.) Residual BA: Red pine = 16 sq.ft./acre.[6-7-10] Sale is now closed/completed TCR dtd 6-3-10.[6/6/11 JB] On Don's 2011 planting list.[4-23-11 JB] stand was planted. Check in 2012. North part of this stand scarified by DNR in 2012 at a cost of \$2073. Check regeneration in 2016. (RH3/7/14)

S t	Shingletor	n Mgt. Unit		Report 8	– Forested	Stands Compartment: 108 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
28	42100 - Planted White Pine	Sawtimber Well	31.7	82	51-80	OPIC - FMD: Jack pine and scotch pine were removed in 1992, a couple areas were cut out in 1999, number of rows vary. There is scattered white pine, jack pine, mixed hardwood and some scotch pine. Stands were planted as windbreaks in CCC days. PArVAa from soil survey. Remove any scotch pine using inmates.  [2-19-08] Added factor limit to get off of the POW. There is not enough volume for the inmates to harvest as part of a commercial timber sale. Any work will be done under a FTP. [4-7-08] Deleted factor limit per discussion with Donovan.
						[10/03/2011 JB] INMATES WILL BE USED TO REMOVE SCOTCH PINE. See W41-1294
29	4130 - Aspen	Poletimber Poor	24.0	20	1-50	OPIC - FMD: More open than stand 67 but starting to fill in. More white pine understory than surrounding stands. Mature clone of BT aspen and some jack pine 40-50 years old in the NE corner. The jack pine does have some budworm in it. [2-19-08] Added factor limit to get off of the POW. There is not enough volume for the inmates to harvest as part of a commercial timber sale. Any work will be done under a FTP. [4-7-08] Deleted factor limit per discussion with Donovan.
						[10/03/2011 JB] OPENING MAINTENANCE USING INMATES REMOVE ALL TREES TO OPEN AREA UP. DO NOT CUT JUNEBERRY OI is coded for cleaning and weeding, but opening maintenance is what the intent is. See FTP W41-1293
30	42110 - Planted Red Pine	Sawtimber Well	27.0	54	111-140	OPIC - FMD: Branches are dead and prunning well. A couple of trees in the plots have 1 stick logs in them. Scattered jack pine, aspen and white pine should be removed when stand is cut. Leave any oak. Rows are not always well defined. Some areas are more light in BA than others. The red pine out side of the "40" is on average larger in DBH and not in rows, mark for regeneration.  [5/22/08] Under contract TS# 41-021-07-01 Lunch Can't Wait Pine. Residual BA: Red pine - 85 sq.ft./acre.  [6-7-10] Sale is now closed/completed TCR dtd 6-3-10.
						2015: BA is high enough to thinwas just cut in 2010 so wait for next entry to thin.
31	42120 - Planted Jack Pine	Poletimber Well	5.4	65	51-80	OPIC - FMD: Jack pine and red pine were planted in 1949. HCVA-NR-Clear Creek. Stand is within the 200' buffer for clear creek. Jack pine budworm is in the stand, survery results from 2005, gaining little or no volume with age, heavily impacted if another years of JBW occurs. Remove jack pine and leave all other species care taken to not disturb any soils and to stay of any slopes. Regenate by planting red pine for a longer lived species. ORV trail on north part of stand.

S t	Shingleton	Shingleton Mgt. Unit			<ul><li>Forested</li></ul>	Stands Compartment: 108 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
33	42120 - Planted Jack Pine	Sapling Poor	65.4	7	Immature	OPIC - FMD: Stand was planted with jack and red pine as alternate rows. Budworm is in the stand badly, survey from 2005 says, gaining little or no volume with age, heavily impacted if another years of JBW occurs. When cut leave the red pine and oak for aesthetics on M-77, removing other species. Replant to jack pine. ORV trail follows along the east edge of the stand. PArV from soil survey.[4-29-07] Aspen, hardwood, red pine and oak were all left to meet retention.[11-20-07] Under contract TS# 41-012-07-01 King Adam Jack Pine. See also FTP C41-1328 (JP regeneration.)Residual Basal Area: red pine = 24; mixed hardwood = 2; aspen = 1 total = 27 sq.ft./acre.[8-22-08] Sale is completed TCR dtd 8-19-08.[5-12-10] Received a completion report for jack pine planting on 51 acres for \$175.80 per acre. Needs a regen check in 2011. (7/24/14) Stand passed regeneration count in 2014 at 1018 trees per acre, FTP is closed for stand.
34	42110 - Planted Red Pine	Poletimber Well	15.0	47	81-110	OPIC - FMD: 20 BA is from scotch pine, remove this when cut. There is also scattered red maple, oak and aspen. Trees are smaller than the stand to the south but should be able to be thinned at the same time.
35	42110 - Planted Red Pine	Poletimber Medium	69.4	67	81-110	OPIC - FMD: Stand planted with alternate rows of red and jack pine in 1950. Red pine was replanted in 1956. Some red pine are starting to get 1 stick logs. Budworm is in the jack pine, 2005 survery results indicate that it is marginal for being cut. If the stand gets worse before the next entry peroid cut jack pine and other species, leaving behind the red pine and oak. Replant to jack pine. ORV trail follows the east edge. PArV from soil survey.[4-29-07] JS: removed factor limitation (5E) and prepared for sale with contract 41-012-07-01. This was recommended by the forest health specialist.[4-29-07] Aspen, hardwood, red pine and oak were all left to meet retention.[11-20-07] Under contract TS# 41-012-07-01 King Adam Jack Pine. See also FTP C41-1328 (JP regeneration.) Residual Basal Area: red pine = 38; mixed hardwood = 4; aspen = 6; oak =1; total = 49 sq.ft./acre.[8-22-08] Sale is completed TCR dtd 8-19-08.[5-12-10] Received a completion report for jack pine planting on 51 acres for \$175.80 per acre. Needs a regen check in 2011.
36	42110 - Planted Red Pine	Poletimber Well	32.9	58	141-170	OPIC - FMD: Stand is looking good. Trees are starting to self prune. About 20 BA is from scotch pine, same size as the red pine. There is also scattered red maple, white pine, aspen and pockets of jack pine. Some oak. Old grade runs parallel to M-77.
37	42340 - Upland Spruce/Fir	Sawtimber Well	16.9	50	81-110	OPIC - FMD: HCVA - N- East Branch Fox River. Stand is within the 200' riparian zone of the East Branch Fox River. Stand was cut in 1988 removing all species except white pine. There is black spruce, white pine, jack pine and some red pine coming in with a mix of hardwood. AFPo/PArVAa from soil survey.
38	4139 - Aspen, Mixed Deciduous	Sapling Well	98.7	16	Immature	OPIC - FMD: There is nothing in the data base to say a survey was conducted. There was also nothing in the stand sheets or OI comments to indicate what the count was for. At this time the stand is regenerating. The timbersale removed all species except for oak, red and white pine. The opening that was in the center of the stand is now filling in fair. ORV trail goes through the stand. UPDATED TCR FOR SALE #44-97-01 FINISHED IN 1999; SCHEDULE REGEN SURVEY.

S t	Shingleton Mgt. Unit			Report 8	<ul><li>Forested</li></ul>	Stands Compartment: 108 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
39	42120 - Planted Jack Pine	Poletimber Well	34.3	64	81-110	OPIC - FMD: Stand was planted in 1951. The jack pine has been hit by budworm, badly. Stand should be cut with stand 22 and 46 in compartment 107 that has also been hit badly by budworm. Remove all species except oak.Replant to jack pine as MO. Aspen was cut out in the 80's so not all stems are merchantable. Before replanting extra work will be needed to make sure good jack pine regeneration occurs.  [8/1/07 JB] FL have been added to the stand. Upon further field review and input from the Forest Health Specialist this stand is holding better than most of the Jack Pine stands hit by budworm. Further monitory of the stand will continue to see if cutting will be necessary before the next inventory.
40	42110 - Planted Red Pine	Poletimber Well	16.3	56	81-110	OPIC - FMD: Stand is doing okay. Still pretty open but some areas are starting to prune. Scattered white pine, jack pine and aspen. Treat with stand 62,63 and 13 in compartment 107, when ready. ORV trail is on the west edge.
41	42110 - Planted Red Pine	Sawtimber Well	19.0	56	81-110	OPIC - FMD: Stand is doing okay. Starting to prune in some areas. Scattered jack pine and white pine. Treat with stands 61, 63 and 13 in compartment 107. ORV trail is on the west edge.
42	42110 - Planted Red Pine	Poletimber Well	32.9	56	51-80	OPIC - FMD: Poor quality plantation. There is red maple, jack pine that is dead or dying, white pine and some aspen. Jack pine is from self seeding. There are areas that are fairly open. Treat with stands 61, 62 and 13 in compartment 107. ORV trail on the west edge.
43	42120 - Planted Jack Pine	Poletimber Well	37.8	64	81-110	OPIC - FMD: There is some budworm damage but not enough to cut the stand now, though it should be monitored. There is aspen 2-5" DBH and some hardwood 10-30' tall. When cut remove these species. Stand has scattered white pine. When cut regenerate to jack pine. ORV trail on the west edge.
44	4191 - Mixed Upland Deciduous with Conifer	Poletimber Poor	36.3	65	1-50	OPIC - FMD: There is really good oak regeneration 2-10' tall. Scattered pockets of aspen, jack pine and some white pine and red pine. Treat with stand 26 in compartment 107. ORV trail on the west edge.
						2015: Mixed stand of everything that is naturally coming in.
45	4319 - Mixed Upland Forest	Sapling Poor	11.7	5	Immature	OPIC - FMD: Old comments state that it is one of the oldest plantations from the CCC days north of M-28. Large pine stumps. Scattered large red pine some oak, leave when cut. There is budworm in the stand but it is doing okay. Jack pine is the MO for the stand.  [5/22/08] Under contract TS# 41-021-07-01 Lunch Can't Wait Pine. See also FTP C41-1344 (jack pine regeneration.) Residual BA: Red pine - 2, white pine - 8; total = 10 sq.ft./acre.  [6-7-10] Sale is now closed/completed TCR dtd 6-3-10.  [6/6/11 JB] On Don's 2011 planting list.  [4-23-11 JB] stand was planted. Check in 2012. Stand passed regeneration count in 2014 at 731 trees per acre, FTP is closed for stand.
46	42110 - Planted Red Pine	Sawtimber Well	15.9	66	81-110	OPIC - FMD: Large pine stumps. Some oak, leave when cut. This stand was what was left when the two surrounding jack pine stands were treated. Because of the proximity to the campground this stand would make a good area for "big" tree management.

S t	Shingletor	n Mgt. Unit		Report 8	– Forested	Stands Compartment: 108 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
47	6122 - Black Spruce	Poletimber Well	8.9	66	111-140	OPIC - FMD: Do a 200' buffer to protect the water. Make cut in small areas through out the stand and replant with a mix of white and red pine. When regenerated continue with the same kind of cut to make a more uneven aged stand that is easier to manage by the ponds.Old comments state that it is one of the oldest plantations from the CCC days north of M-28. Large pine stumps. Scattered large red pine some oak and white pine, leave when cut. There is budworm in the stand but it is doing okay.
						2015: This stand is what was left over from 2 harvests surrounding it, small amounts of jack pine are on the edge in the more upland areas. stand boundary against the cut lines is generally the hiking trail. Recommend leaving this stand for aesthetics/recreational use because of the trail and campground.
48	42110 - Planted Red Pine	Sawtimber Well	36.2	65	111-140	OPIC - FMD: Stand was a mix of jack pine and red pine, maybe alternate rows,1950. Replanted with just red pine in '56. In 1999 all species except red, white pine and oak were removed. Some red pine starting to get 1 stick logs in them. Oak, red maple and jack pine are coming in on there own. ORV trail follows the stand on the east side.
49	42100 - Planted White Pine	Sawtimber Well	4.9	82	51-80	OPIC - FMD: Jack pine and scotch pine were removed in 1992, a couple areas were cut out in 1999, number of rows vary. There is scattered white pine, jack pine, mixed hardwood and some scotch pine. Stands were planted as windbreaks in CCC days. PArVAa from soil survey. Remove any scotch pine using inmates.
						[2-19-08] Added factor limit to get off of the POW. There is not enough volume for the inmates to harvest as part of a commercial timber sale. Any work will be done under a FTP. [4-7-08] Deleted factor limit per discussion with Donovan.
						[10/03/2011 JB] INMATES WILL BE USED TO REMOVE SCOTCH PINE. See W41-1294
51	42110 - Planted Red Pine	Sawtimber Poor	33.7	65	1-50	OPIC - FMD: Red pine and jack pine were planted in alternate rows in the '50's, then red pine was planted again in '58. There is budworm in the stand recommend from the 2005 survery to cut the jack pine now. Because of the ORV trail in the south and M-77 to the west leave red pine. Replant to jack pine for the
						MO.  [5/22/08] Under contract TS# 41-021-07-01 Lunch Can't Wait Pine. See also FTP C41-1344 (jack pine regeneration.) Residual BA: Red pine = 16 sq.ft./acre.  [6-7-10] Sale is now closed/completed TCR dtd 6-3-10.  [6/6/11 JB] On Don's 2011 planting list.  [4-23-11 JB] stand was planted. Check in 2012. North part of this stand scarified by DNR in 2012 at a cost of \$2073. Check regeneration in 2016. (RH3/7/14)
52	4199 - Other Mixed Upland Deciduous	Poletimber Poor	9.2	65	1-50	OPIC - FMD: Stand was burned with surrounding stands as opening maintance in 1997. There are snags in the stand. Fir is falling down. Hardwood brush, cherry and juneberry are starting to take over the area. PArVAa from soil survey.  2015: Stand has filled in to the point of no longer being
						considered a G-type, lots of cherry and scattered white pine and maple.

S	Shingleton	Mgt. Unit		Report 8	<ul><li>Forested</li></ul>	Stands Compartment: 108 Year of Entry: 2017
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
54	42120 - Planted Jack Pine	Poletimber Medium	3.4	38	51-80	OPIC - FMD: Stand was an old borrow pit planted by inmates. Scattered red and white pine, aspen and black spruce surrounding the stand.
55	42220 - Natural Jack Pine	Poletimber Well	6.7	65	81-110	OPIC - FMD: HCVA-NR-Clear Creek - Jack pine and red pine were planted in 1949. Stand is within the 200' buffer for clear creek. Jack pine budworm is in the stand, survery results from 2005, gaining little or no volume with age, heavily impacted if another years of JBW occurs. Stand is on a fairly steep slope. There is some large white pine and spruce in the stand especially on the east part of the stand.  [4-29-07] Retention for 41-012-07-01 is located within this stand. It can't be harvested until the stands to the south have matured (stand 33 2007 YOE). 2015: Stand can not be harvested it is entirely in the Fox river buffer zone.
56	6124 - Lowland Spruce- Fir	Poletimber Medium	5.9	21	1-50	OPIC - FMD: Stand was cut in 1994. Stand is coming back with spruce, fir and white pine and some hardwood. Spruce and fir should come back good enough to be a fully stocked stand with a mix.
57	4113 - R.Maple, Conifer	Sapling Medium	1.3	21	Immature	OPIC - FMD: Stand was cut in 1994. Stand is coming back with spruce, fir and white pine and some hardwood. Spruce and fir should come back good enough to be a fully stocked stand with a mix.
60	4119 - Mixed Northern Hardwoods	Poletimber Well	28.2	85	81-110	OPIC - FMD: Edge of hardwood stand/grass stand. There is some trembling aspen, white pine and a couple of red pine. PArVAa from soil survey.
61	42210 - Natural Red Pine	Poletimber Well	34.7	67	81-110	OPIC - FMD: Stand was a mix of jack pine and red pine, maybe alternate rows,1950. Replanted with just red pine in '56. In 1999 all species except red, white pine and oak were removed. Some red pine starting to get 1 stick logs in them. Oak, red maple and jack pine are coming in on there own. ORV trail follows the stand on the east side.
63	42340 - Upland Spruce/Fir	Sawtimber Well	13.9	50	81-110	OPIC - FMD: The stand is within the 200' buffer for East Branch Fox River. HCVA -NR- East Branch Fox River Stand is part of steep bank then flat ground to the river. 10 BA snags.2015: South end of stand is more open with white pine.
64	6122 - Black Spruce	Poletimber Well	4.5	80	51-80	OPIC - FMD: Slight elevation change becomes a seasonal drain for run-off. Trees are healthy. There is a plastic culvert where the two-track cross the stand.
						2015: Stand should be left, drain/creek empties into the east branch of the Fox river.
68	4112 - Maple, Beech, Cherry Association	Poletimber Well	16.0	55	81-110	OPIC - FMD: Healthy understory of spruce, white pine, fir and mixed hardwood, with scattered white pine and hemlock in the overstory. ORV trail is in the south part of the stand. Thinned in 1989. There are old foundations in the sw part of the stand maybe an old septic field from the CCC days. 12 BA snags, 99=mix of hard maple pulp and logs.  2015: Very large archeological site.
						2010. Vory large aroneological site.

S t	Shingleton	Mgt. Unit		Report 8	– Forested	Stands Compartment: 108 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
69	42140 - Planted Mixed Pine	Sawtimber Medium	3.9	74	81-110	This stand is in the river buffer and was originally part of stand 19, this now acts as retention for stand 19.
72	42110 - Planted Red Pine	Sawtimber Well	6.1	75	81-110	OPIC - FMD: Stand was planted with jack and red pine as alternate rows. Budworm is in the stand badly, survey from 2005 says, gaining little or no volume with age, heavily impacted if another years of JBW occurs. When cut leave the red pine and oak for aesthetics on M-77, removing other species. Replant to jack pine. ORV trail follows along the east edge of the stand. PArV from soil survey.
						2015: split from parent stand 33.
73	42110 - Planted Red Pine	Sawtimber Medium	19.3	65	81-110	OPIC - FMD: Stand was planted with jack and red pine as alternate rows. Budworm is in the stand badly, survey from 2005 says, gaining little or no volume with age, heavily impacted if another years of JBW occurs. When cut leave the red pine and oak for aesthetics on M-77, removing other species. Replant to jack pine. ORV trail follows along the east edge of the stand. PArV from soil survey.
						2015: Split this stand off of the parent stand (33).
<b></b> 74	42110 - Planted Red Pine	Sawtimber Medium	22.3	65	81-110	OPIC - FMD: Stand was planted with jack and red pine as alternate rows. Budworm is in the stand badly, survey from 2005 says, gaining little or no volume with age, heavily impacted if another years of JBW occurs. When cut leave the red pine and oak for aesthetics on M-77, removing other species. Replant to jack pine. ORV trail follows along the east edge of the stand. PArV from soil survey.
						2015: Split off from the parent stand (33)
402	4319 - Mixed Upland Forest	Poletimber Poor	26.5	75	1-50	OPIC - FMD: Hardwood and white pine are starting to creep in from the edges. Scattered jack pine, cherry brush and juneberry.
						2015: Stand is filling in, no longer grass opening.
404	4311 - Pine, Aspen Mix	Poletimber Poor	33.3	65	1-50	OPIC - FMD: There is still grass openings in the center of the stands, however the edges are filling in with white pine, jack pine, black spruce, oak and scotch pine. Next entry period grass may not be grass again.
405	42220 - Natural Jack Pine	Poletimber Poor	87.8	71	1-50	OPIC - FMD: There is still grass openings in the center of the stands, however the edges are filling in with white pine, jack pine, black spruce, oak and scotch pine. Next entry period grass may not be grass again.  Stand contains sand trap for Fish Division, just south of two-track, section 28 SESW. N46.43371 W085.94100 in a 96' X 68'. [11/13/06] Sediments removed from sand trap by Fisheries Division on 7/10/06 undet FTP F41-1234. This will be an annual procedure.



Stand	Cover Type	Acres	Managed Site	General Comments:
15	3102 - Grass	54.2	Yes	OPIC - FMD: Old grass opening converting to forested land. Cherry, juneberry and white pine coming in well some small aspen clones. 1/2 to 1 acre patches that are still actually grass. ORV trail through the north part of the stand. North of the two-track would make shear wood. PArVAa from soil survey.  [2-19-08] Added factor limit to get off of the POW. There is not enough volume for the inmates to harvest as part of a commercial timber sale. Any work will be done under a FTP.  [4-7-08] Deleted factor limit per discussion with Donovan.  [10/03/2011 JB] OPENING MAINTENANCE USING INMATES REMOVE ALL TREES TO OPEN AREA UP. DO NOT CUT JUNEBERRY OI is coded for cleaning and weeding, but opening maintenance is what the intent is. See FTP W41-1293
24	6225 - Bog	25.7	No	OPIC - FMD: Terrain change is where water will hold for a longer period of time with spring runoff. There is a jack pine and black spruce in some of the areas (non-merchantable) Grand Sable Loam, fine sand.
32	3102 - Grass	0.9	No	OPIC - FMD: Starting to get some cherry brush and maple. Old concrete foundation from CCC building.
50	3303 - Mixed Low Density Trees	41.7		OPIC - FMD: Upland brush contains aspen, red maple and some nonmerchantable jack pine. Stand will need to be cut with inmates before conversion. There will also need to be more site prep to insure red pine is not out competed by the other species. Only red pine is to be the MO. ORV trail goes through the stand.[2-19-08] Added factor limit to get off of the POW. There is not enough volume for the inmates to harvest as part of a commercial timber sale. Any work will be done under a FTP C41- 1292.[4-7-08] Deleted factor limit per discussion with Donovan. [5/3/08 jb] Red pine planted 1151t/a.[5/17/08 jb] Red pine planted, needs regen check in 2009. [5/17/11 JB] 3 rd year regen count was 373 trees per acre at an average height of 0.7 inches. Aspen competition may be a problem. Should replant and herbicide until a sufficient amount is regenerating.Stand failed regeneration count in 2014 at 443 trees per ac needs to be replanted.
58	500 - Water	4.7	Yes	OPIC - FMD: Ponds near campground- Steeb pathway goes around the ponds.
62	6229 - Mixed lowland shrub	9.9	No	OPIC - FMD: HCVA-NR-Clear Creek Tributary - Area of 200' buffer for the East Branch Fox River and Clear Creek and small tributary to Clear Creek. Stand contains grass, lows and mixed pine some poor quality hardwoods. Ground cover is anything from tag alder, blue berry, bracken and moss.
65	3102 - Grass	4.4	No	
67	122 - Road/Parking Lot	1.6	Yes	
400	3102 - Grass	0.6	Yes	OPIC - FMD: Hardwood and white pine are starting to creep in from the edges.  Scattered jack pine, cherry brush and juneberry.
401	3102 - Grass	18.6	No	OPIC - FMD: [4/11/03] Burn FTP cancelled per WLD request. 2007-This G stand will be cleaned up by harvest of scattered merchantable wood, trenched and planted to red pine.



Stand	Cover Type	Acres	Managed Site	General Comments:
403	3102 - Grass	10.8	No	OPIC - FMD: Area is not readily filling in. Probably from soil compaction from old landing and campsite or old gravel locations from M-77. 2007-This G stand will be cleaned up by harvest of scattered merchantable wood, trenched and planted to red pine.
407	122 - Road/Parking Lot	63.4	Yes	M-77
412	3102 - Grass	99.1	Yes	OPIC - FMD: Mainly still grass, cherry brush, june berry with the occasional maple and aspen starting to become established. ORV trail in the south part of the stand. Next entry peroid the stand with be an A or U type.
413	3102 - Grass	4.8	No	
414	3102 - Grass	42.1	No	