

Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72282
Entry Year 2019
Acreage: 1,725
County Crawford

Management Area: Kirtland's Warbler

Revision Date: 2017-09-05

Stand Examiner: Matthew Foster

Legal Description:

T27N, R01W, Sections 21, 22, 27, 28, 34 Lovells Township

Identified Planning Goals:

To maintain forest health, productivity, sustainability, and structural diversity by actively managing flora and fauna, while providing for multiple use and visual management. This compartment is a dedicated Dendroica kirtlandii (Kirtland's warbler) management area. The area is to be managed in order to provide a healthy and sustainable habitat for the endangered Kirtland's warbler in accordance with Wildlife Division management plans.

Soil and topography:

Topography is primarily flat with rolling hills in the north. Soils types are Grayling associations with inclusions of Tawas-Leafriver-Lupton and Kinross-Croswell-Au Gres associations. Grayling associations are excessively drained, sandy soils. They are found on outwash plains, kames, and moraines. The other two associations are nearly level, poorly drained, mucky and sandy soils. They are found on outwash plains, stream terraces, and lake plains.

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

The majority of 27N 01W is State of Michigan ownership. Private ownership can be found along the river corridors. Oil and gas development is present and active south of North Down River Road.

Unique Natural Features:

There is potential for dry prairie plants in grassy openings: Hill's thistle, rough fescue, Alleghany plum, and pale agoseris. There is potential for several animals of concern in this compartment: Kirtland's warbler, prairie warbler, secretive locust, dusted skipper, grizzled skipper, and the red legged spittle bug.

Archeological, Historical, and Cultural Features:

This compartment contains an old CCC camp. AuSable Camp 681. Old building foundations are still evident.

Special Management Designations or Considerations:

Compartment 282 is a Kirtland's Warbler Management Area, these areas are designated High Conservation Value Areas (HCVA). The SW1/4 of Section 34 is involved with the Master Plan of the Conner's Marsh Flooding.

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations:

Kirtland's warbler and prairie warbler could occur in the young jack pine. Along the Au Sable, there may be eagles, osprey, and great blue heron rookeries. There is potential for dusted skipper, grizzled skipper, and red-legged spittle bug to occur in grassy openings. Secretive locust may occur in bog habitat and surrounding uplands. Blanding's turtle, wood turtle, and massasauga rattle snake have potential to be found along the drainage ways.

Mineral Resource and Development Concerns and/or Restrictions

Gravel pits are not located in the area, and sand and gravel potential appears to be low to moderate within the compartment. Most of the state mineral interests in the compartment are currently leased for oil and gas and is part of the Conner's Marsh Field. The field has produced over 20 Bcf gas from the Ordovician Prairie du Chien (St. Peter Sandstone). There is no known metallic mineral potential in this part of the state.

Vehicle Access:

This compartment is easily accessed by county roads and two-tracks.

Survey Needs:

A survey request has been submitted for the east edge of stand 58 to establish state/private boundary.

Recreational Facilities and Opportunities:

A portion of the Midland to Mackinaw Hiking Trail system is present in Section 34. Sheep Pasture Boating Access site is located north of the compartment in section 16. This area is used heavily for recreational purposes, notably hunting, fishing, bird watching, dispersed camping and snowmobiling. Continue to use forest management techniques to close illegal activity or damage to natural resources.

Fire Protection:

There is potential for extreme fire events. This compartment has been involved in multiple fire events, including the Stephan Bridge Fire (1990) and the Bald Hill Fire (1975). The North Branch AuSable River provides a natural fire break to the east. This would also be sufficient water source for suppression needs. The area has adequate access for equipment which will be able to use the county roads and forest two-tracks

Additional Compartment Information:

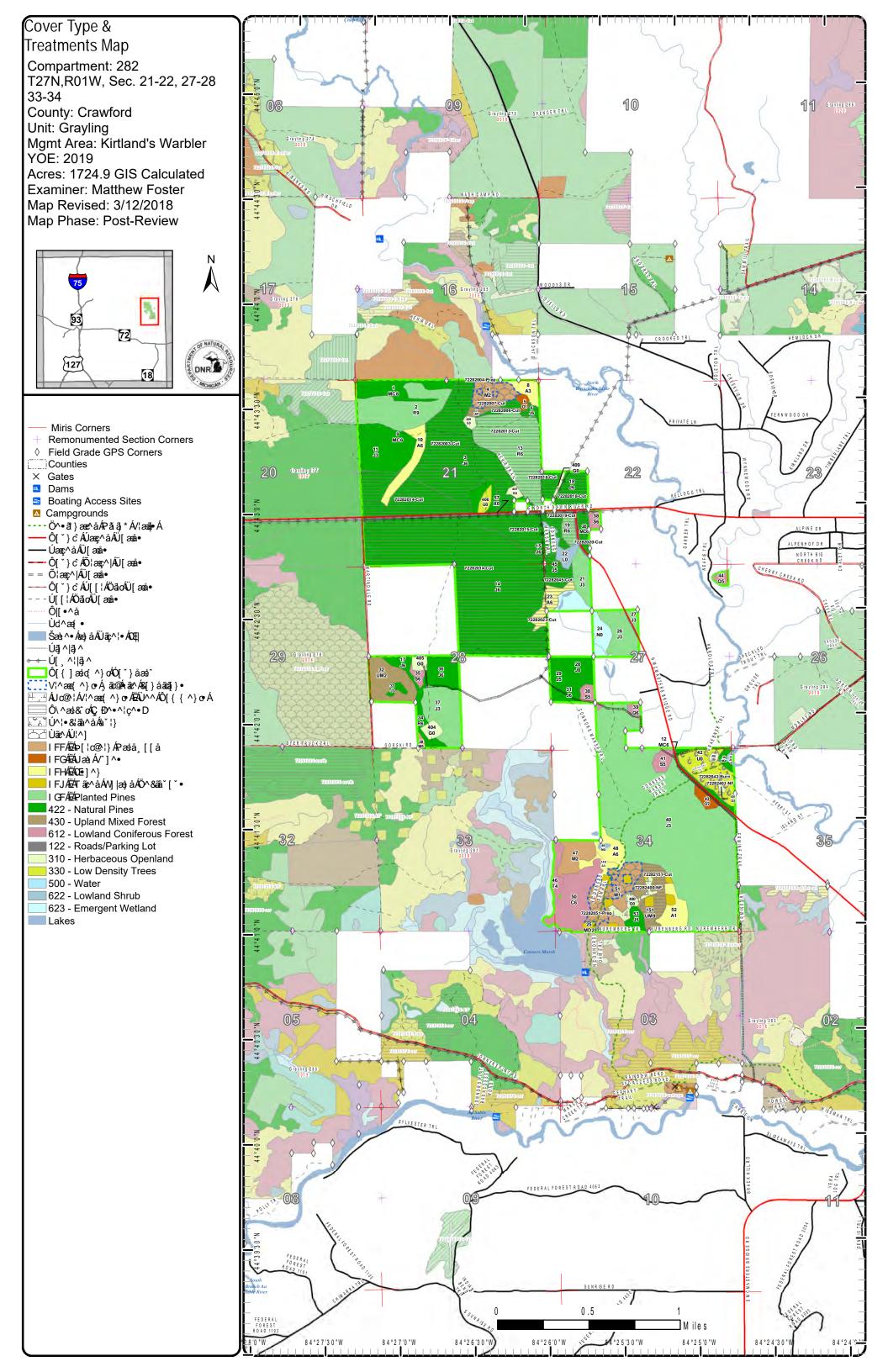
A large portion of Kirtland's warbler habitat is scheduled for treatment and planting north and south of North Down River Road this year.

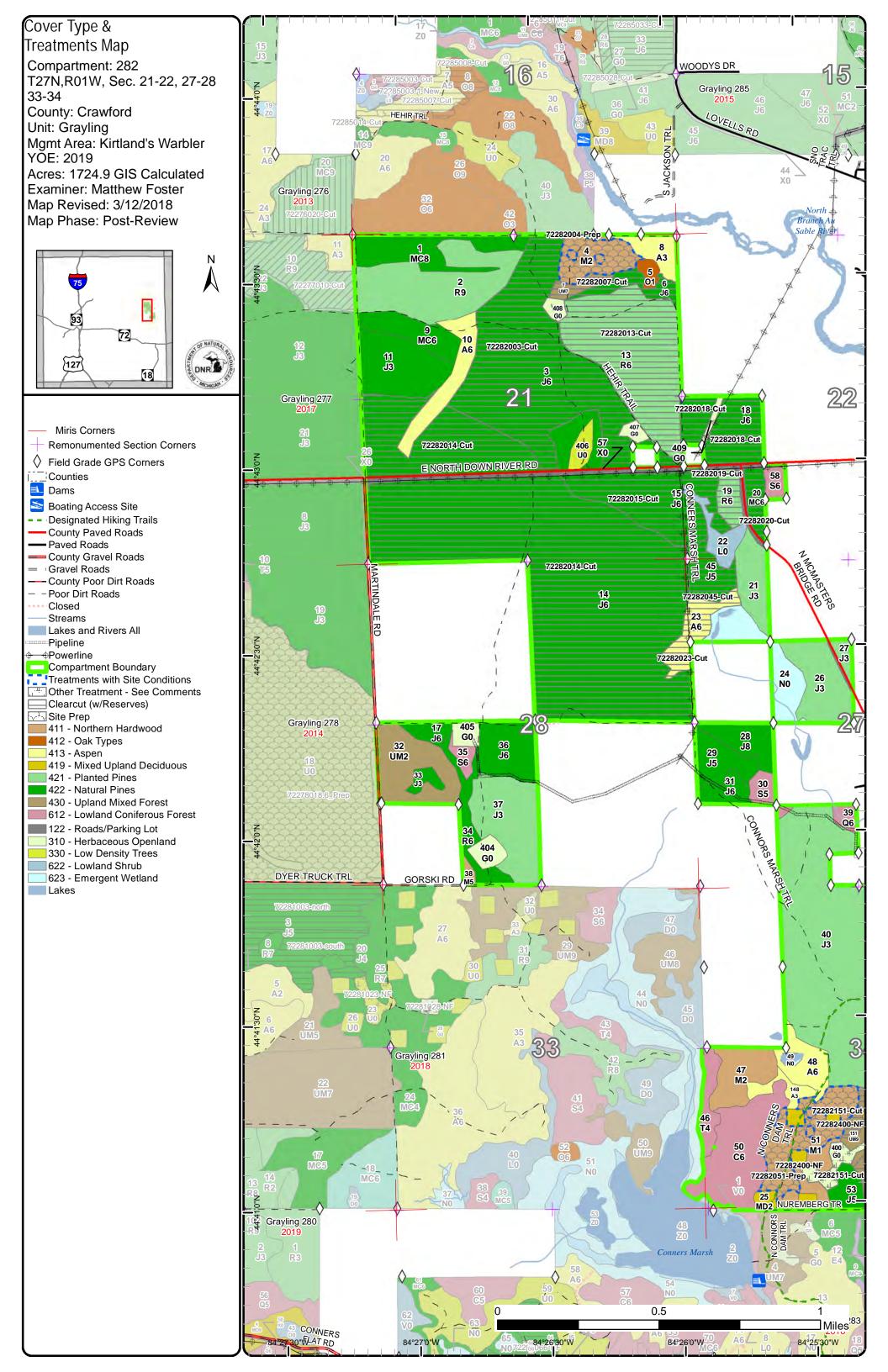
The following reports from the Inventory are attached:

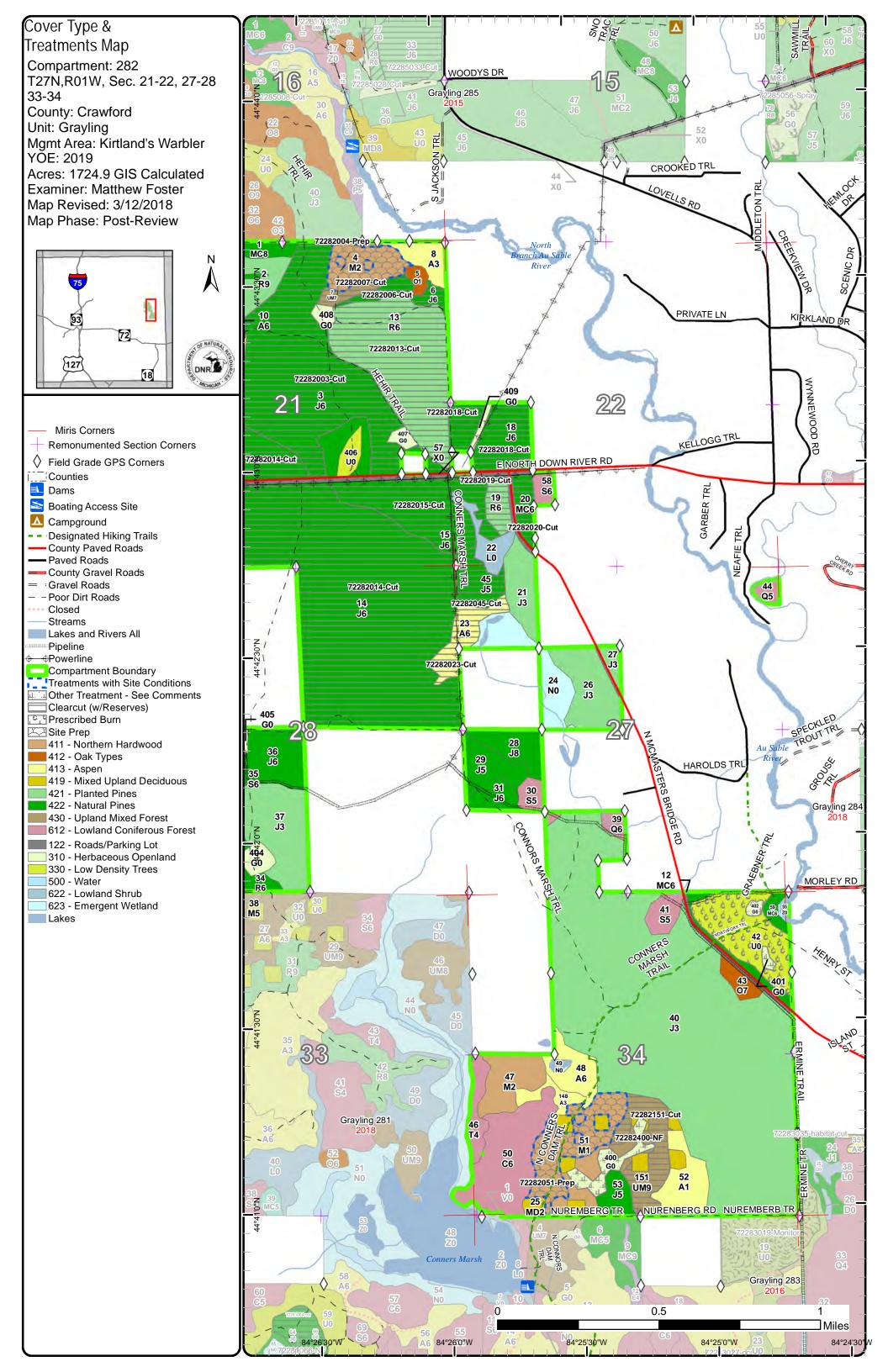
Total Acres by Cover Type and Age Class Cover Type by Harvest Method Proposed Treatments – No Limiting Factors Proposed Treatments – With Limiting Factors Stand Details (Forested and Nonforested) Dedicated and Proposed Special Conservation Areas Site Condition Details

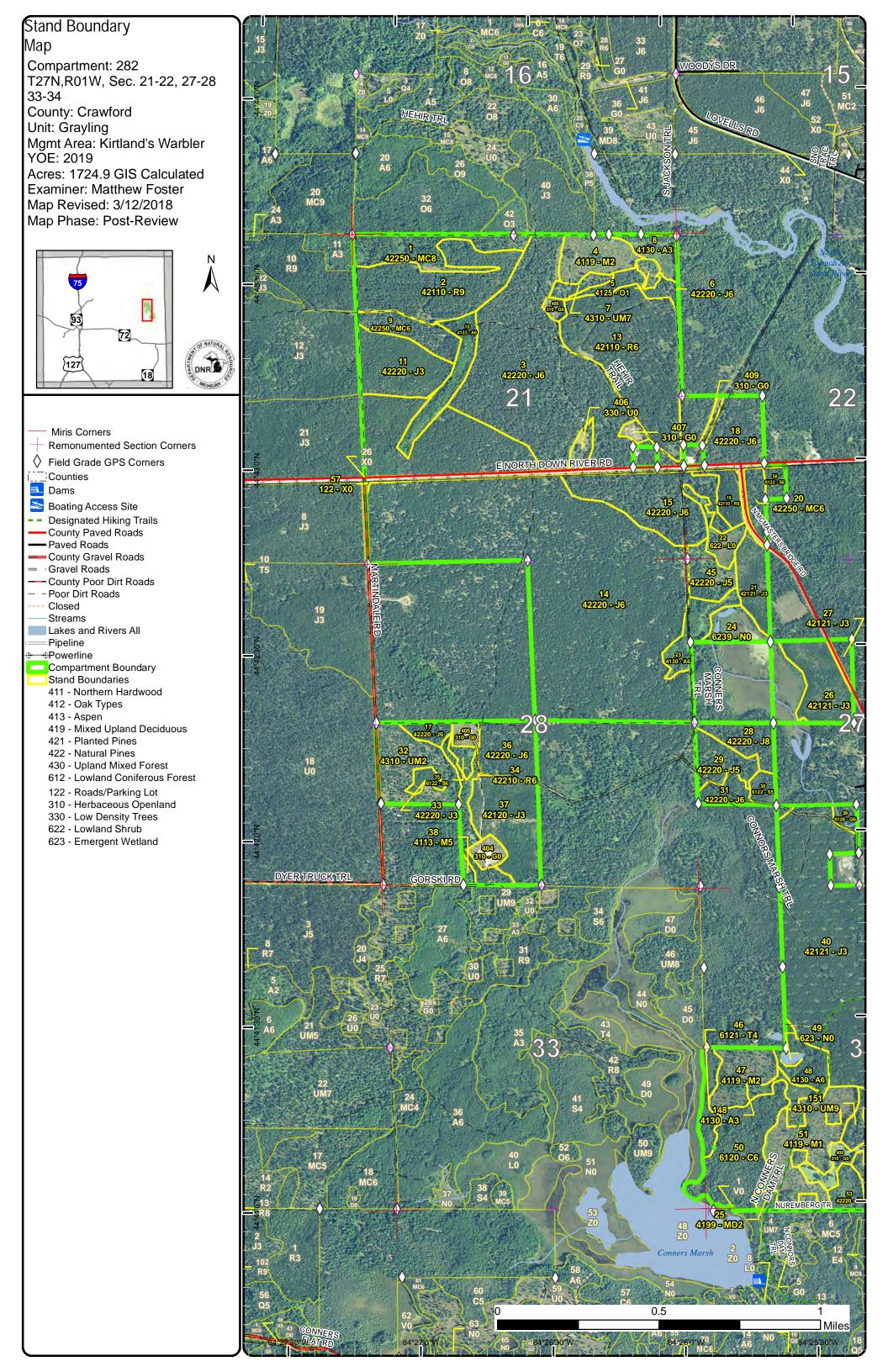
The following information is displayed, where pertinent, on the attached compartment maps:

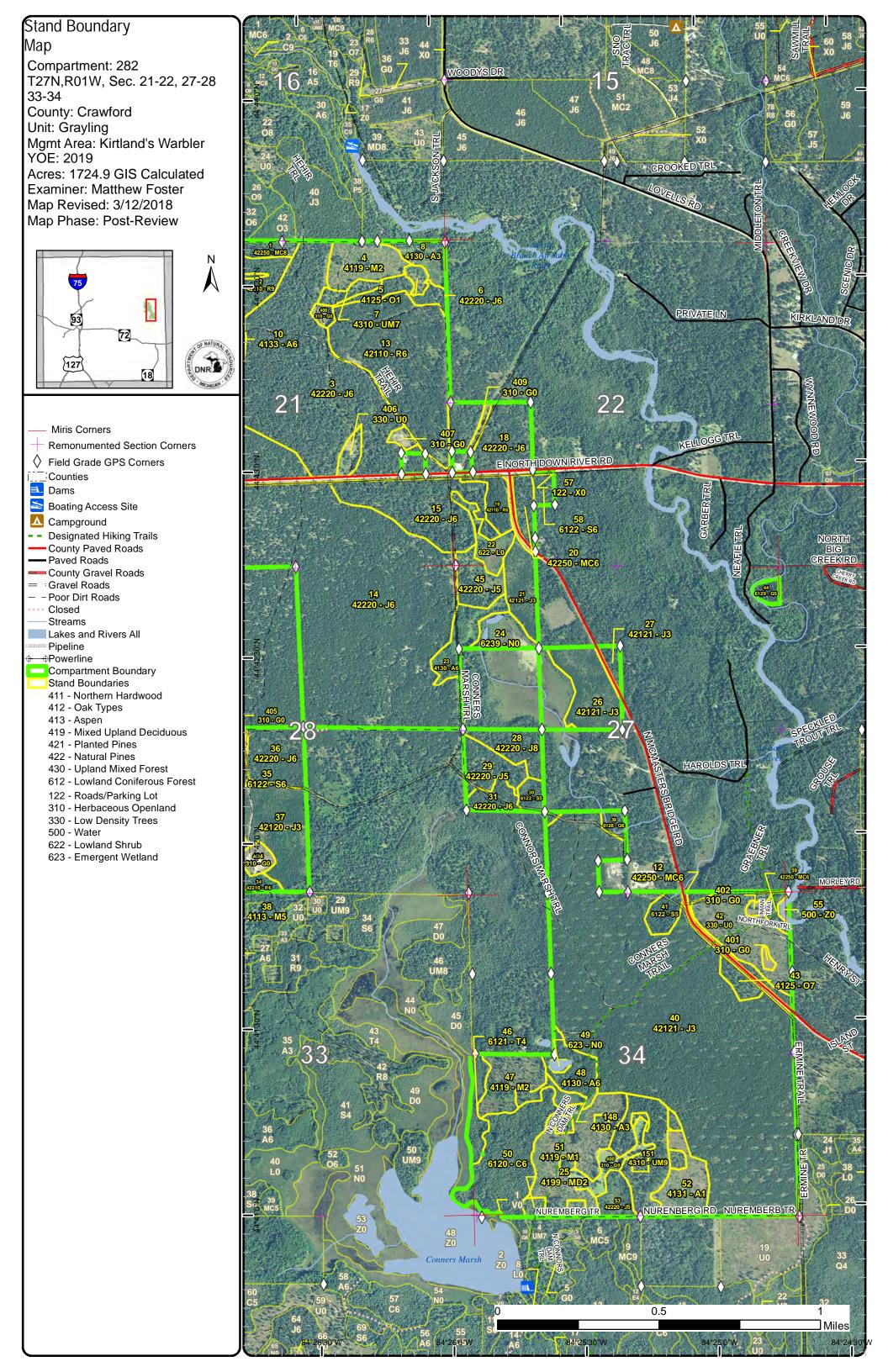
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

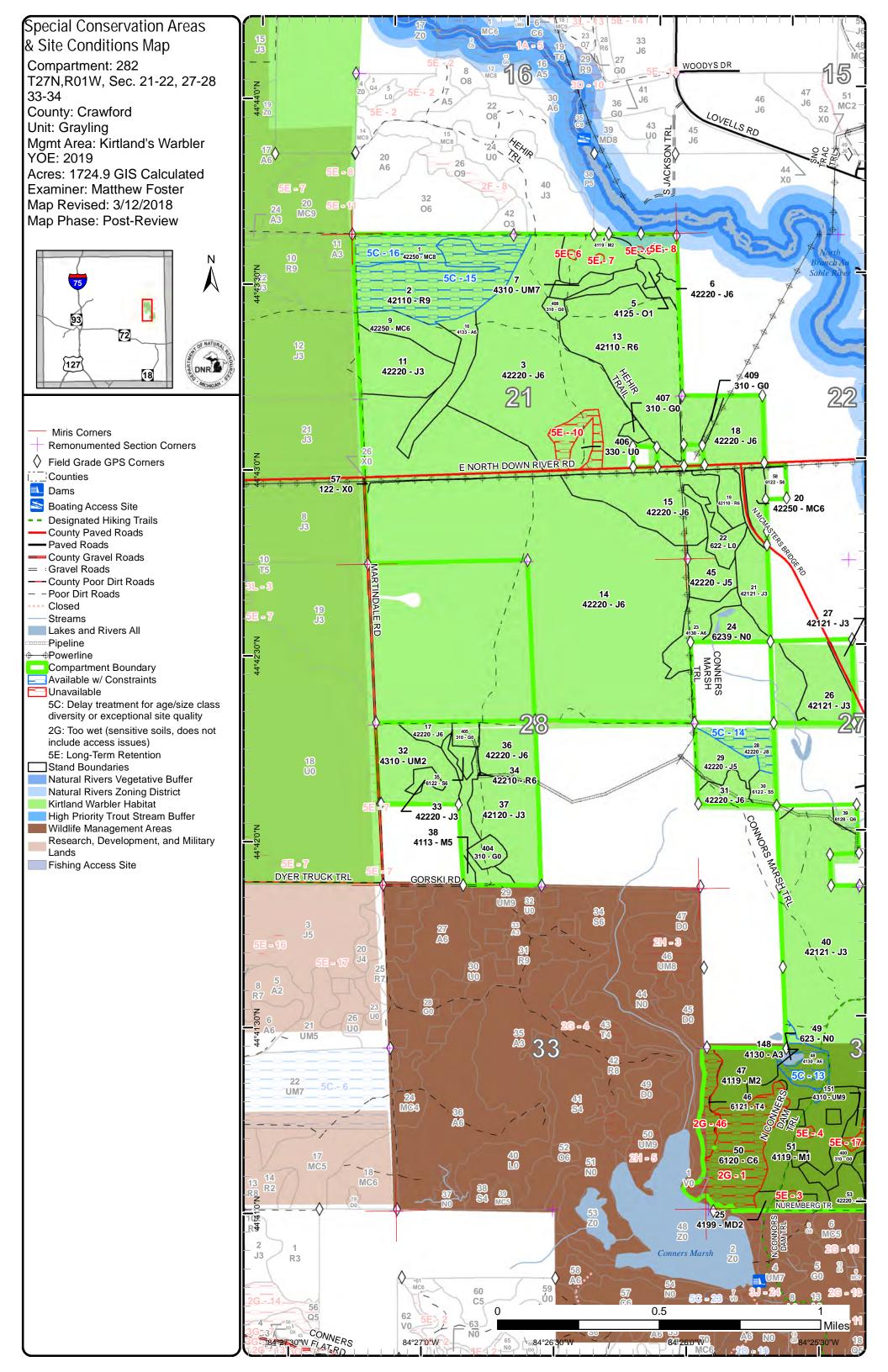


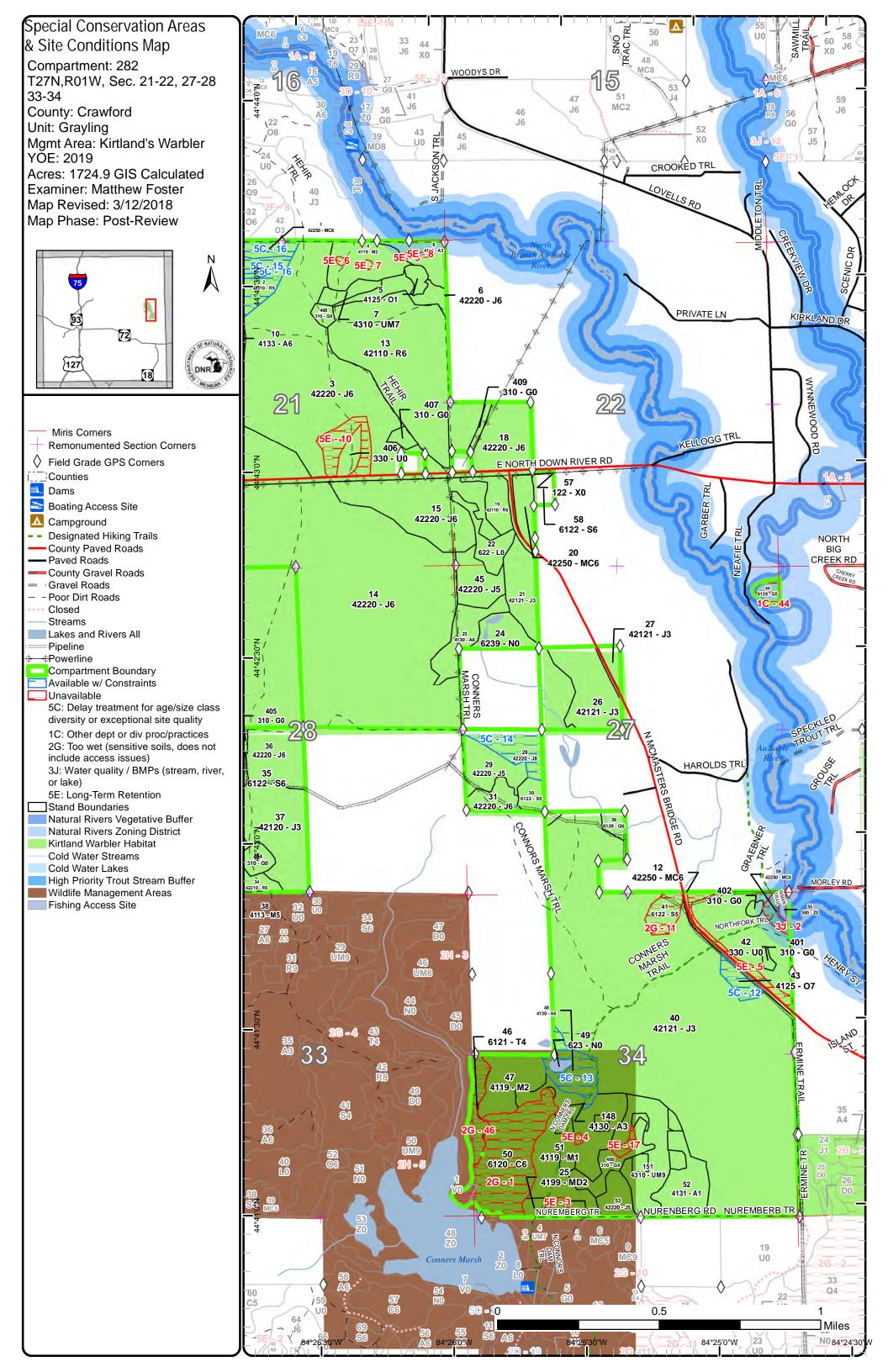












Grayling Mgt. Unit

Compartment 282 Year of Entry 2019

Matthew Foster : Examiner



Age Class

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Aspen	0	32	0	0	0	31	13	0	0	0	0	0	0	0	0	0	0	0	76
Cedar	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	40
Herbaceous Openland	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Jack Pine	0	0	78	370	3	403	31	9	194	0	0	0	0	0	0	0	0	0	1087
Low-Density Trees	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
Lowland Conifers	0	0	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0	7
Lowland Shrub	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Lowland Spruce/Fir	0	0	0	0	0	0	0	4	6	10	0	0	0	0	0	0	0	0	20
Marsh	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Mixed Upland Deciduous	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Natural Mixed Pines	0	0	0	0	0	0	0	32	0	26	0	0	0	0	0	0	0	0	58
Northern Hardwood	0	74	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	76
Oak	0	0	3	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	8
Red Pine	0	0	0	0	0	0	85	0	13	52	0	0	0	0	0	0	0	0	150
Tamarack	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	9
Upland Mixed Forest	0	0	29	0	0	0	0	0	0	5	25	0	0	0	0	0	0	0	59
Urban	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	120	106	125	370	5	434	129	48	217	107	25	40	0	0	0	0	0	0	1725



Report 2 – Treatment Summary

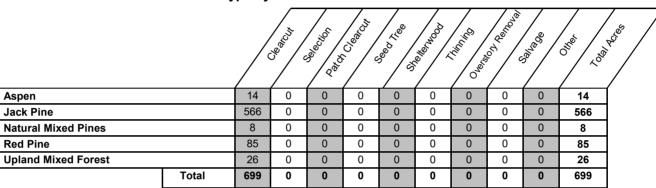
Grayling Mgt. Unit Year of Entry: 2019

Acres of Harvest

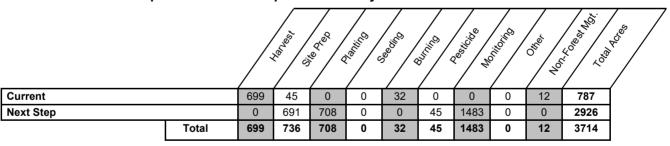
Compartment 282
Total Compartment Acres: 1,725

Commercial Harvest - 699 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Compartment: 282 Year of Entry: 2019

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Treatment Stand **Treatment Treatment Cover Type** Acres Stand Size BA Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 72282003-Cut 42220 - Natural Clearcut with 4212 - Planted **Draft Field** 3 125 6 Poletimber 77 Unspec Harvest Even-Aged Jack Pine Well ified Retention Jack Pine Boundary

Habitat Cut: No Site Condition:

<u>Prescription</u> Final harvest with standard retention and replant to KW habitat, protect HAL site. Leave all red pine >20"DBH. <u>Specs:</u>

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable jack pine

Regen:

Other Start prep early in FY 19 and allow a 2 year contract to meet planting date, needs to be planted in 2023. Most of Hal Site is found in stand 406, some extends into this stand. Treatment has been adjusted to exclude foundations. Any extra foundations found during timber sale prep should

be buffered 50 ft.

Proposed Start Date: 10/01/2018

16.3 4211 - Planted Draft Field 72282004-4119 - Mixed 4 Sapling Immatu SitePrep Roller Chopping Even-Aged Northern Hardwoods Medium Red Pine Boundary Prep

Habitat Cut: No Site Condition: Long-Term Retention

Prescription Roller chop, herbicide, trench and plant red pine.

Specs:

Next Step Pesticide, Skidder/Mechanical; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable Red Pine, Oak

Regen:

Other Comment:

Proposed Start Date: 01/01/2018

42120 - Planted Draft Field 72282006-Cut 9.0 42220 - Natural Poletimber 66 Unspec Harvest Clearcut Even-Aged Jack Pine Well ified Jack Pine Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest, no retention due to small stand size. Replant to KW habitat.

Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable jack pine

Regen: Other

Start prep early in FY 19 and allow a 2 year contract to meet planting date, needs to be planted in 2023.

Comment:

Proposed Start Date: 10/01/2018

7 72282007-Cut 4.6 4310 - Pine, Oak Sawtimber 81 1-50 Harvest Clearcut 42120 - Planted Even-Aged Draft Field Mix Poor Jack Pine Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest with no retention due to small stand size, replant to KW habitat.

Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable jack pine

Regen:

Other Start prep early in FY 19 and allow a 2 year contract to meet planting date, needs to be planted in 2023.

Comment:

Compartment: 282

Year of Entry: 2019

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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
13	72282013-Cut	76.3	42110 - Planted Red Pine	Poletimber Well	57	111- 140	Harvest	Clearcut with Retention	4212 - Planted Jack Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest with standard retention and replant to KW habitat.

Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable jack pine

Regen: Other

Start prep early in FY 19 and allow a 2 year contract to meet planting date, needs to be planted in 2023.

Comment:

Proposed Start Date: 10/01/2018

14 72282014-Cut 344 0 42220 - Natural Poletimber 43 Unspec Harvest Clearcut with 4212 - Planted Even-Aged Draft Field Jack Pine Well Retention Jack Pine ified Boundary

Habitat Cut: No Site Condition:

<u>Prescription</u> Final harvest with standard retention and replant to KW habitat. Leave some retention near North Down River Road to address visual concerns.

Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable jack pine

Regen:

Other Start prep early in FY 19 and allow a 2 year contract to meet planting date, needs to be planted in 2023.

Comment:

Proposed Start Date: 10/01/2018

15 72282015-Cut 4212 - Planted Draft Field 44.0 42220 - Natural Poletimber Clearcut with Unspec Harvest Even-Aged Retention Jack Pine Jack Pine Well ified Boundary

Habitat Cut: No Site Condition:

<u>Prescription</u> Final harvest with standard retention and replant to KW habitat.

Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable jack pine

Regen:

Other Start prep early in FY 19 and allow a 2 year contract to meet planting date, needs to be planted in 2023.

Comment:

Proposed Start Date: 10/01/2018

42220 - Natural 72282018-Cut 30.7 Poletimber 54 Unspec Clearcut with 4212 - Planted Draft Field Harvest Even-Aged Jack Pine Well ified Retention Jack Pine Boundary

Habitat Cut: No Site Condition:

<u>Prescription</u> Final harvest with standard retention and replant to KW habitat.

Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

<u>Treatments:</u>

Acceptable jack pine

Regen:

Other Start prep early in FY 19 and allow a 2 year contract to meet planting date, needs to be planted in 2023.

Comment:

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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
19	72282019-Cut	8.4	42110 - Planted Red Pine	Poletimber Well	57	141- 170	Harvest	Clearcut	4212 - Planted Jack Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest with no retention due to small stand size, replant to KW habitat.

Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable jack pine

Regen:

Other Start prep early in FY 19 and allow a 2 year contract to meet planting date, needs to be planted in 2023.

Comment:

Proposed Start Date: 10/01/2018

20 72282020-Cut 7.7 42250 - Pine, Oak Poletimber 69 51-80 Harvest Clearcut 4212 - Planted Even-Aged Draft Field Well Jack Pine Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest with no retention due to small stand size, replant to KW habitat.

Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable jack pine

Regen:

Other Start prep early in FY 19 and allow a 2 year contract to meet planting date, needs to be planted in 2023.

Comment:

Proposed Start Date: 10/01/2018

23 72282023-Cut 13.8 4130 - Aspen Poletimber 43 Unspec Harvest Clearcut 413 - Aspen Even-Aged Draft Field Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest with no retention due to small stand size and to maximize aspen regeneration. Add drumming log spec.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen

Regen:

<u>Other</u>

Comment:

Proposed Start Date: 10/01/2018

4272282042-
Burn32.1330 - Low-DensityNonstockedUnspecBurnOpening310 -
Herbaceous
OpenlandDraft Field
Herbaceous
Openland

Habitat Cut: No Site Condition:

Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, liming, food plot seeding, no-till prairie grass seeding, mowing,

Specs: brushing, burning, herbicide application, and planting of mast producing tree and shrubs along opening edges.

Next Step Monitoring, Prescribed Burn

<u>Treatments:</u>

Acceptable Regen:

Other Comment:

Boundary

Compartment: 282

Year of Entry: 2019

Jack Pine

Openland

S t a

Treatment Size Stand BA **Treatment Treatment Cover Type** Acres Stand Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d Even-Aged 72282045-Cut 42220 - Natural Clearcut with 4212 - Planted Draft Field 45 127 Poletimber 43 Unspec Harvest

Retention

ified

Habitat Cut: No Site Condition:

Prescription Final harvest with standard retention and replant to KW habitat.

Jack Pine

Specs:

Next Step SitePrep, Trenching; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr); Planting, Initial Plant

Medium

Treatments:

Acceptable jack pine

Regen:

Other Start prep early in FY 19 and allow a 2 year contract to meet planting date, needs to be planted in 2023.

Comment:

Proposed Start Date: 10/01/2018

51 72282051- 28.3 4119 - Mixed Sapling 6 Immatu SitePrep Roller Chopping 4211 - Planted Even-Aged Draft Field Prep Northern Hardwoods Poor re Red Pine Boundary

Habitat Cut: No Site Condition: Long-Term Retention

<u>Prescription</u> Roller chop, herbicide, trench and plant to Red Pine. Protect aspen pocket that is delineated out of treatment shape at the north end.

Specs:

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

Treatments:

Acceptable Red Pine

Regen:

Other Comment:

Proposed Start Date: 01/01/2018

151 72282151-Cut 21.8 4310 - Pine, Oak Sawtimber 91 81-110 Harvest Clearcut with 4211 - Planted Even-Aged Draft Field Mix Well Retention Red Pine Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest, leave retention along adjacent wildlife opening to protect it. Trench and plant to red pine, allowing roller chopping and herbicide use

Specs: if needed.

Next Step Monitoring, Natural Regen (Intermediate)

Treatments:

Acceptable Red pine, oak.

Regen:

Other Set up in FY 18 and try to harvest ASAP so planting can occur the same time as stand 51.

Comment: Treatment area has already been adjusted to buffer wildlife opening, a portion of it has been designated retention for the harvest. T

Proposed Start Date: 01/01/2018

40072282400-NF9.2310 - HerbaceousNonstockedUnspecNonForestMgtOther - Specify310 - HerbaceousDraft FieldOpenlandifiedifiedHerbaceousHerbaceousBoundary

Habitat Cut: No Site Condition:

Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, liming, food plot seeding, no-till prairie grass seeding, mowing,

brushing, burning, herbicide application, and planting of mast producing tree and shrubs along opening edges.

Next Step

Specs:

Treatments:

<u>Acceptable</u>

Regen:

Other Comment:

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 282 s Year of Entry: 2019 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type Approval** Age n Method Objective Name CoverType Density Age Range Type Structure **Status** d 401 72282401-NF 1.2 310 - Herbaceous Nonstocked Unspec NonForestMgt Other - Specify 310 -Draft Field Openland ified Herbaceous Boundary Openland **Habitat Cut: No Site Condition:** Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, liming, food plot seeding, no-till prairie grass seeding, mowing, brushing, burning, herbicide application, and planting of mast producing tree and shrubs along opening edges. Specs: Next Step Treatments: <u>Acceptable</u> Regen: Other Comment: **Proposed Start Date:** 10/01/2018 1.4 310 - Herbaceous Nonstocked Unspec NonForestMgt 310 -Draft Field 402 72282402-NF Other - Specify Openland ified Herbaceous Boundary Openland **Habitat Cut: No Site Condition:** Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, liming, food plot seeding, no-till prairie grass seeding, mowing, Specs: brushing, burning, herbicide application, and planting of mast producing tree and shrubs along opening edges. Next Step Treatments: Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

Total Treatment Acreage Proposed:

787.1

Grayling Mgt. Unit

Matthew Foster : Examiner

Compartment: 282 Year of Entry: 2019

Availa	ability for	Managemer	nt						
Total	Acres	Acres Avail	Acres		Domina	nt Site	e Con	dition	S
Acres	Available	With Condition	Not Available		5C	1C	2G	3J	5E
76	54	13	10	Aspen	13				10
40	0	0	40	Cedar			40		
28	28	0	0	Herbaceous Openland					
1088	1063	13	11	Jack Pine	13				11
37	37	0	0	Low-Density Trees					
7	4	0	3	Lowland Conifers		3			
9	9	0	0	Lowland Shrub					
20	13	0	7	Lowland Spruce/Fir			7		
24	24	0	0	Marsh					
15	15	0	0	Mixed Upland Deciduous					0
58	23	26	9	Natural Mixed Pines	26			4	6
76	20	0	56	Northern Hardwood			0		56
8	3	5	0	Oak	5				
149	97	52	0	Red Pine	52				
9	0	0	9	Tamarack			9		
59	57	0	2	Upland Mixed Forest					2
21	21	0	0	Urban					
1	1	0	0	Water					
1,725	1,468	109	148	Total Forested Acres	109	3	56	4	85
	85%	6%	9%	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 Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	40	3J: Water quality / BMPs (stream, river, or lake)	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified

Comments:

Stand was flagged in 2015 query as being at high risk for Spruce Budworm impact. Checked site 12-21-15. Old OI comments appear to describe a different stand. The stand's core is 90% cedar with minor components of BS & tamarack, on wet ground (black muck & standing water in rootmat holes). A roughly 150-foot wide rim on the stand's north & east sides has majority BS with BF, JP & RM. The driest of that was cut with the adjacent stands 47 & 51. Most of the remaining BS rim is on operable transition ground, but some is too wet. Did not attempt to split out that portion in the Site condition layer. The 3J condition applies near the Conners Marsh Flooding (also not split out).

Report 4 – Site Conditions

Grayling Mgt. Unit

Matthew Foster : Examiner

2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Natural River buffer	.					
3	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	5E: Long-Term Retention	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:	_					
9	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Grayling Mgt. Unit
Matthew Foster : Examiner

10	Unavailable	5E: Long-Term Retention	11	3I: Historical / archeological (add locked comments)	Unspecified	Unspecified	Unspecified
	Comments: Buffer around HAL	Site to serve as retention.					
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
13	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

Report 4 – Site Conditions

Grayling Mgt. Unit
Matthew Foster : Examiner

15	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	52	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
16	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	26	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
17	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
44	Unavailable	1C: Other dept or div proc/practices	3	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
	Comments: No access, should	dispose.					
46	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	4A: No Markets Available for these Forest Products	Unspecified	Unspecified	Unspecified
(Comments:						

Mgt. Unit

Compartment: #Type! Year of Entry:



Report 5 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Grayling Mgt. Unit Compartment: 282
Year of Entry 2019



Report 6 – 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.

Conservation	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 spec 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	Research and Military Areas	These areas provide facilities and lands specifically dedicated for include the 5,847 acre Forest Fire Experiment Station, the 12,00 Area, the Beaver Islands Archipelago Wildlife Research Area (the High and Hog Islands, all state owned land on Beaver, South Fow Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research, and over 144,000 acres of Military Lands.	0 acre Houghton Lake Wildlife Research nat includes most of Garden Island, all of ox and North Fox Islands), the Cusino
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in 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	Designated Critical Habitat	Critical habitat areas are established via a consultative and coop U.S. Fish and Wildlife service for the recovery of threatened and 365, Endangered Species Protection, of the Natural Resources PA 451, and the Federal Endangered Species Act of 1973. This species plans in various stages of review. As of now only two explover Habitat.	endangered species, as governed by Part and Environmental Protection Act, 1994 is an active program, with proposed
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	Grayling Mgt. Unit			Report 7	– Forested	Stands Compartment: 282 Year of Entry: 2019
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42250 - Pine, Oak	Sawtimber Medium	25.8	80	51-80	Variable stand due to past management. Harvest occurred in 2011, red pine pockets were thinned to 80-90BA, areas with more oak were harvested leaving 10-20BA of oak. This looks like it was planted with stand 2 in the past and had pockets of mortality where the oak and maple filled in.
2	42110 - Planted Red Pine	Sawtimber Well	51.6	80	111-140	Stand was thinned in 2000, all jack pine and every third row cut under contract #003-99-01, Tree Slung Compass block. Average BA is around 110-120.
3	42220 - Natural Jack Pine	Poletimber Well	136.5	77	Unspecified	Good amount of red pine and oak mixed in with the jack pine. Found some xlog red pine in the stand, leave all red pine over 20" when harvested. Some old CCC foundations found in southern part of stand.
4	4119 - Mixed Northern Hardwoods	Sapling Medium	18.1	7	Immature	Harvested in 2011, some jack pine seeding in, mostly cherry with stump sprout oak. Heavy deer browse, fails regeneration check.
5	4125 - Black, N. Pin Oak	Sapling Poor	2.9	13	Immature	These tree were harvested for fisheries "big tree project". There is some stump sprout oak and a pocket of aspen along the east edge. The stand is mostly open w/ sedge and sweetfern.
6	42220 - Natural Jack Pine	Poletimber Well	9.0	66	Unspecified	Mostly J6 with a couple pockets of overmature log sized jack pine, a few oak mixed in throughout.
7	4310 - Pine, Oak Mix	Sawtimber Poor	4.6	81	1-50	Log sized oak mixed with pole sized jack pine, open stand.
8	4130 - Aspen	Sapling Well	9.6	7	Immature	West edge of stand is on a hill with a NE aspect. Quaking aspen found in the lower areas, big tooth is found in the dry spots mixed w/ oak. Small drainage with some tag alder along the east edge. Stand is regenerating well to aspen, a lot of deer browse and activity. Visual buffer was left along the north edge along the two track.
9	42250 - Pine, Oak	Poletimber Well	15.1	69	51-80	Jack Pine with oak mixed in, hold stand due to amount of adjacent cutting and manage with stand 2 to the north.
10	4133 - Aspen, Mixed Pine	Poletimber Well	17.0	43	Unspecified	Variable stand, aspen dominated in the south half and north half has more pine. A few scattered xlog red pine and white pine found. Found a big depression at the south end of the stand, not sure what from. Should leave stand as is.
11	42220 - Natural Jack Pine	Sapling Well	29.7	28	Immature	This stand was part of the 1990 Stephan Bridge Fire. Thick regeneration of jack pine and oak.
12	42250 - Pine, Oak	Poletimber Well	5.7	66	51-80	Strip of retention that was left along the road when adjacent stand 42 was harvested.
13	42110 - Planted Red Pine	Poletimber Well	76.3	57	111-140	Third row thinned in 2011, best quality is at the north end. BA is variable but averages around 125ft2/acre.

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t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
14	42220 - Natural Jack Pine	Poletimber Well	344.0	43	Unspecified	Borderline sapling/pole stand, regenerated from the 1975 Bald Hill Fire. A couple pockets of oak with some aspen included.	
15	42220 - Natural Jack Pine	Poletimber Well	44.0	71	Unspecified	Jack pine varies in size and stocking, open pockets are mostly on the west side of the two track. East side of the two track has some aspen and tamarack along the adjacent lowland drainage. There is also a pocket or two of tag alder within the stand on the east side, didn't look too wet though.	
17	42220 - Natural Jack Pine	Poletimber Well	5.4	43	Unspecified	Split this from stand 34, this is mostly thick jack pine regeneration from the bald hill fire, a few large red pine throughout. East end has more of an oak component.	
18	42220 - Natural Jack Pine	Poletimber Well	30.7	54	Unspecified	Slightly higher average diameter on the east side of the powerline, a few oak mixed in.	
19	42110 - Planted Red Pine	Poletimber Well	8.4	57	141-170	Squirrely rows in spots, few jack pine and oak mixed in. Overall stand BA is around 165.	
20	42250 - Pine, Oak	Poletimber Well	7.7	69	51-80	Jack pine and oak are dying out, this needs to be harvested. No much growing in the understory, if harvested we should try to plant it. Driveway crosses the south end of the stand.	
21	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	15.4	18	Immature	Harvested in 1999, planted in spring of 2000. A lot more jack pine volunteers and better survival at the south end near the marsh (stand 24).	
23	4130 - Aspen	Poletimber Well	13.8	43	Unspecified	Part of the bald hill fire, poor quality aspen. A lot of old beaver activity along the east edge.	
25	4199 - Other Mixed Upland Deciduous	Sapling Medium	14.6	17	Immature	Old 5 spot harvests cut in 2001, each block has a slightly different species composition.	
26	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	24.0	18	Immature	Harvested in 1999, planted in 2000. A lot more volunteers and better jack pine survival closer to the adjacent marsh (stand 25).	
27	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	3.5	18	Immature	This stand was underplanted with jack pine in May of 2000, could be coded as an O7 or J3. Driveway to the adjacent PVT land crosses at the south end.	
28	42220 - Natural Jack Pine	Sawtimber Medium	13.4	71	51-80	Found a couple of plow lines, portions of this stand may have been in the bald hill fire. Overall stand is declining jack pine. Small portion of spruce swamp is included at the north edge.	
29	42220 - Natural Jack Pine	Poletimber Medium	13.6	43	Unspecified	Stand regenerated from the Bald Hill Fire, more open grown and larger average diameter than stand 31 to the south. Found a couple of xlog red pine.	
30	6122 - Black Spruce	Poletimber Medium	5.9	78	Unspecified	Very wet, pocket of sapling sized trees in the north half of the stand. Found a few xlog red pine.	

s t	Grayling		Report 7	– Forested	Stands Compartment: 282 Year of Entry: 2019			
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:		
31	42220 - Natural Jack Pine	Poletimber Well	7.6	43	Unspecified	Very dense jack pine, regenerated from the Bald Hill Fire in 1975.		
32	4310 - Pine, Oak Mix	Sapling Medium	29.3	18	Immature	Harvested in 2000, all trees 5" and up were harvested, a few trees were left along Martindale Road for visual. This is developing into a nice mixed stand, south edge along the private is more open than the rest of the stand.		
33	42220 - Natural Jack Pine	Sapling Well	3.3	33	Immature	Small pocket of jack pine and oak that was not entered during the adjacent harvest.		
34	42210 - Natural Red Pine	Poletimber Well	12.7	76	111-140	A thin strip left between adjacent past harvests, mostly red pine in the south but starts to become mixed in the north w/ jack pine, oak, aspen, and scattered sawlog red pine.		
35	6122 - Black Spruce	Poletimber Well	3.3	82	111-140	Small lowland with spruce in the middle and edges with maple and red pine. Leave for diversity.		
36	42220 - Natural Jack Pine	Poletimber Well	20.1	43	Unspecified	Regenerated from the bald hill fire, dense jack pine with areas of leatherleaf underneath. Borderline sapling/pole stand, some oak mixed in. Small strip (<2 acres) at the north end was harvested in 2001 with stand 37 to the south but was not planted, jack pine saplings are regenerating in this area.		
37	42120 - Planted Jack Pine	Sapling Well	34.8	13	Immature	Planted in 2005, dense stand. Small strip in the middle looks like it wasn't planted.		
38	4113 - R.Maple, Conifer	Poletimber Medium	1.8	30	Immature	Mostly just red maple stump sprouts, north half didn't regenerate much and is open. This was harvested with stand 27 to the south.		
39	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	3.5	78	51-80	Small stand, mostly lowland with spruce and tamarack. Upland areas have aspen and jack pine. A small creek weaves through the middle of the stand, a lot of deer sign.		
40	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	332.2	28	Immature	Planted in 1990 in the warbler weave pattern. Getting close to being a pole stand, will be next inventory cycle. Very dense, some oak mixed in with a couple small pockets of aspen.		
41	6122 - Black Spruce	Poletimber Medium	7.1	83	51-80	Thick around the edges and more open in middle, a lot of tag alder throughout. Saw a snowshoe hair, a few cedar north of pipeline, very wet stand overall.		
43	4125 - Black, N. Pin Oak	Sawtimber Poor	5.4	89	1-50	Looks like oak was marked for visual along the road when stand 40 was harvested, this was never planted but now has jack pine volunteers growing in the understory.		
44	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	3.3	64	1-50	Did not visit stand, Big Creek on three sides and private on the east side, no legal access.		

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t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
45	42220 - Natural Jack Pine	Poletimber Medium	12.7	43	Unspecified	Part of the bald hill fire. Most of the stand is open grown jack pine, the south end is the dense area. There are old trenches found throughout, doesn't look like it was ever planted.
46	6121 - Tamarack	Poletimber Poor	9.3	82	1-50	Small diameter tamarack, very wet.
47	4119 - Mixed Northern Hardwoods	Sapling Medium	17.9	6	Immature	Harvested in 2012, outside of a couple pockets of aspen (maybe 3 acres, now merged with stand 148) there is nothing but cherry regenerating. Oak stump sprouts are browsed to the stump. A 1 acre lowland pocket with spruce was excluded from the sale is part of this stand. Residual oak is dying out and blowing over.
						Old comments: Stand is declining, both jack pine and oak are starting to die. Poor regen, there is some scattered mixed pine and a fir here and there- understory is mostly cherry brush. The aspen is in pockets primarily along the SW edge of the stand. Would like to leave 10 -20 BA of oak, also leave some other species represented in the stand in small pockets for in-stand retention. If conditions allow, make the stand boundary about a chain inside stand 50 to try and create a feathered edge contrast. I would like to try and get natural regeneration. The management objective is oak but any combination of aspen, maple, red pine, jack pine, white pine, and fir with an oak component which meets minimum stocking requirements should be considered a success. Pockets of open and/or brushy areas are expected and acceptable. If natural regeneration fails, the stand will be planted to jack pine around any present regen.
48	4130 - Aspen	Poletimber Well	12.7	50	Unspecified	A couple low spots in the stand with tag alder, a pocket of black spruce included. Scattered log sized oak and red pine.
50	6120 - Lowland Cedar	Poletimber Well	40.4	106	141-170	The stand's core is 90% cedar with minor components of BS & tamarack, on wet ground (black muck & standing water in rootmat holes). The stands north and east edges are majority black spruce with some balsam fir, jack pine and red maple. The driest parts of this stand were cut with the adjacent stands 47 and 51.
51	4119 - Mixed Northern Hardwoods	Sapling Poor	38.3	6	Immature	Harvested in 2012, outside of a couple aspen pockets at the north end, this is a cherry field with some oak mixed in. Heavy deer browse on the oak. Scattered old 5 spot cuts were delineated out and made a different stand.
52	4131 - Aspen, Oak	Sapling Poor	17.2	6	Unspecified	Harvested in 2012, south 1/3 of the stand has good aspen regeneration. North part of the stand is open with scattered oak stump sprouts and cherry.
						Old comments: Final harvest - no reserves. Species of stand are represented well by stand 151. This stand is small and I would like to maximize natural regen in order to create as diverse of a stand as possible. There is an aspen clone in the south east which should expand with harvest and some oak stump sprouts are expected. Watch warbler specs. Wartch for green up issues for adj sale. This area is critical warbler habitat and is part of the Warbler Management Plan. These areas are coded as stand condition 8 and are designatd HCVA's. Except any natural regen -a poor to medium stocked pine barren type stand is expected. 6/27/12 Stand was treated under GE Jack Pine & Oak 72-018-09-01

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	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range		General Comments:	MICHIGAN
53	42220 - Natural Jack Pine	Poletimber Medium	7.9	28	Unspecified		mostly jack pine around a sm v small aspen clones present	
58	6122 - Black Spruce	Poletimber Well	4.0	64	51-80	mostly spruce. Overa very close to adja	I near the road is Tamarack, Il this is very wet. East stand cent house, survey request h etermine if this is a trespass o	boundary is as been
59	42250 - Pine, Oak	Poletimber Well	3.8	66	51-80		d to be part of stand 42 but the lifter. Steep drop off down to	
148	4130 - Aspen	Sapling Well	5.8	6	Unspecified	The state of the s	dense aspen stand with some	e jack pine
						<u> </u>		

81-110

Oak is in bad shape, quite a bit is dying/dead. Need to final harvest but will most likely end up regenerating poorly like adjacent stands.

Sawtimber

Well

25.2

91

4310 - Pine, Oak Mix

151



Cover Type	Acres	Managed Site	General Comments:
622 - Lowland Shrub	8.8	No	Lowland shrubs and grasses, drainage comes in from the north. East edge was trenched with stand 21, but looks like no jack pine survived or it was too wet to plant. North finger has some aspen and tamarack growing in it.
6239 - Mixed Emergent Wetland	22.7	No	Large marsh, a couple of very small islands of spruce and areas with open water included. Edged with a mix of tamarack and spruce.
330 - Low-Density Trees	32.1	Yes	Harvested in 2012, scattered red, jack, and white pine throughout with a few oak. A strip of retention was left along the road. The MO of this stand is pine barrens, it was first burned in 2015 under FTP W72-774. Heavy deer browse on the saplings that are growing back, pocket of dense aspen regeneration at the north end of the stand near stand 402.
623 - Emergent Wetland	1.3	No	Open water in the middle, outer edges with lowland shrubs and leatherleaf.
500 - Water	1.4	No	North Branch AuSable River.
122 - Road/Parking Lot	20.6	No	North Down River Rd and McMasters Bridge Rd.
310 - Herbaceous Openland	9.2	Yes	Maintained wildlife opening. JC update: Buckwheat and clover were planted in 2014, rye in 2015, and buckwheat & clover in 2016 (C72-673). Will need new FTP for 2019 YOE
310 - Herbaceous Openland	1.2	Yes	Maintained wildlife opening, trees were originally removed for a "big tree" river restoration project (2002-2003).
310 - Herbaceous Openland	1.4	Yes	Maintained wildlife opening, trees were originally removed for a "big tree" river restoration progect (2002-2003).
310 - Herbaceous Openland	5.1	No	Breitburn Lovell's 1-28, looks abandoned.
310 - Herbaceous Openland	4.2	No	Breitburn Lovell's 2-28, looks abandoned.
330 - Low-Density Trees	4.6	No	Scattered Jack pine establishing in stand. Scattered foundations from AUSABLE CCC CAMP 681.
310 - Herbaceous Openland	2.5	No	Open area north of the transfer station.
310 - Herbaceous Openland	2.5	No	Small open grassy area.
310 - Herbaceous Openland	1.8	No	Powerline ROW.
	622 - Lowland Shrub 6239 - Mixed Emergent Wetland 330 - Low-Density Trees 623 - Emergent Wetland 500 - Water 122 - Road/Parking Lot 310 - Herbaceous Openland	622 - Lowland Shrub 8.8 6239 - Mixed Emergent Wetland 22.7 330 - Low-Density Trees 32.1 623 - Emergent Wetland 1.3 500 - Water 1.4 122 - Road/Parking Lot 20.6 310 - Herbaceous Openland 1.2 310 - Herbaceous Openland 1.4 310 - Herbaceous Openland 5.1 310 - Herbaceous Openland 4.2 330 - Low-Density Trees 4.6 310 - Herbaceous Openland 2.5	Cover Type Acres Site 622 - Lowland Shrub 8.8 No 6239 - Mixed Emergent Wetland 22.7 No 330 - Low-Density Trees 32.1 Yes 623 - Emergent Wetland 1.3 No 500 - Water 1.4 No 122 - Road/Parking Lot 20.6 No 310 - Herbaceous Openland 9.2 Yes 310 - Herbaceous Openland 1.2 Yes 310 - Herbaceous Openland 1.4 Yes 310 - Herbaceous Openland 5.1 No 330 - Low-Density Trees 4.6 No 310 - Herbaceous Openland 2.5 No 310 - Herbaceous Openland 2.5 No