

### **Compartment Review Presentation**

**Grayling Forest Management Unit** 

Compartment 72019
Entry Year 2019
Acreage: 1,966
County Oscoda

Management Area: AuSable Outwash

Revision Date: 2017-09-05

Stand Examiner: Thomas Barnes

**Legal Description:** 

T28N, R01E, Sections: 24, 25, and 36, North Greenwood Township; T28N, R02E, Sections: 30 and 31, North Elmer

Township

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

To improve forest health, productivity, sustainability, and account for species and structural diversity throughout the State of Michigan by actively managing flora and fauna, while providing for multiple use and visual management.

#### Soil and topography:

Topography is flat to slightly rolling with drainages and depressions. Soils are primarily Grayling and Graycalm sands. These soils are excessively to somewhat excessively drained. The common trees found on these types of soils are jack pine, northern pin oak, white oak, red pine, white pine, and aspen.

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

The compartment is a mixture of state and private ownership. Private lands are primarily recreational with a few year-round residences. There is a privately owned cervid facility adjacent to the compartment in the northwest.

#### **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:**

Some known occurrences.

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

None

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

The headwaters of Wright Creek are located within the compartment.

#### Wildlife Habitat Considerations:

Various habitat types present themselves. Swamp conifer and mixed pine stands provide thermal cover for deer and grouse. The younger aspen stands and upland brush types provide areas for browse and cover. Scattered oak is found throughout the compartment and provides a mast source. There are several areas with grassy openings. Current compartment prescriptions will help to maintain the aspen and oak components. Two hunter walking trails will be created following harvest.

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

Sand/gravel pits are not located in the area, but there appears to be good sand and gravel potential within the compartment. Some of the compartment has been developed for the Antrim Shale. Most of the wells in and around the compartment have been plugged and abandoned. There are still some remaining active leases within the compartment that are held by production. The compartment is at the southern edge of the Antrim play, and wells in this area tend to be less productive. The compartment is unlikely to experience further Antrim development in the near future. There is no metallic mineral potential in this part of the state..

#### **Vehicle Access:**

The compartment is easily accessed by maintained county roads which follow the section lines. There are several two-tracks and trails meandering throughout the compartment as well.

#### **Survey Needs:**

None at this time.

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

Designated snowmobile trails #4 & #9 is located along the south boundary of Section 31. Dispersed recreation occurs throughout the compartment due to the close proximity of Garland Resort.

#### **Fire Protection:**

Access is adequate but, equipment limitations within the compartment could be a problem because of swampy terrain. Stand 69 is a fuel break and stand 88 was created for a fuel break

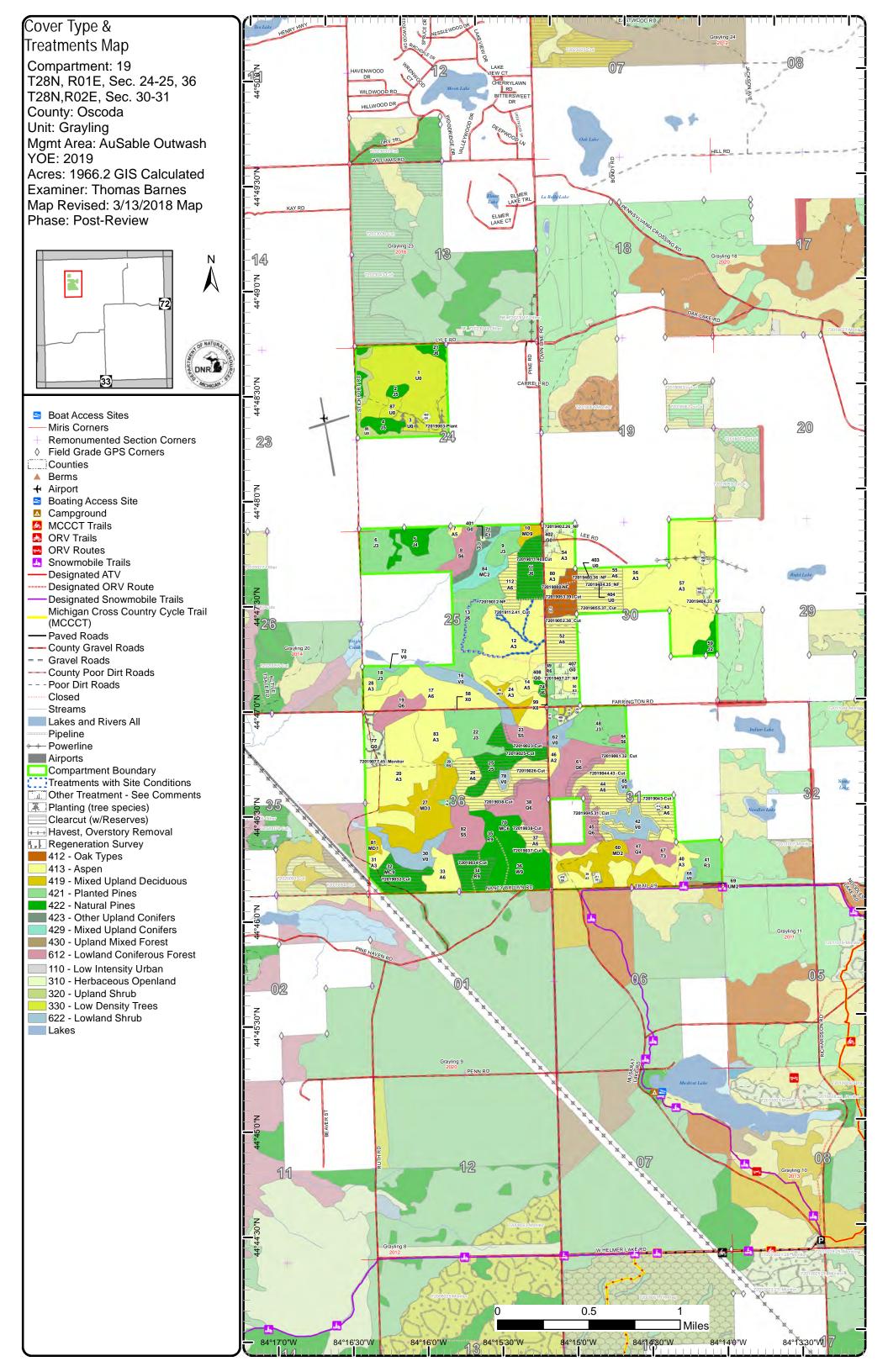
#### **Additional Compartment Information:**

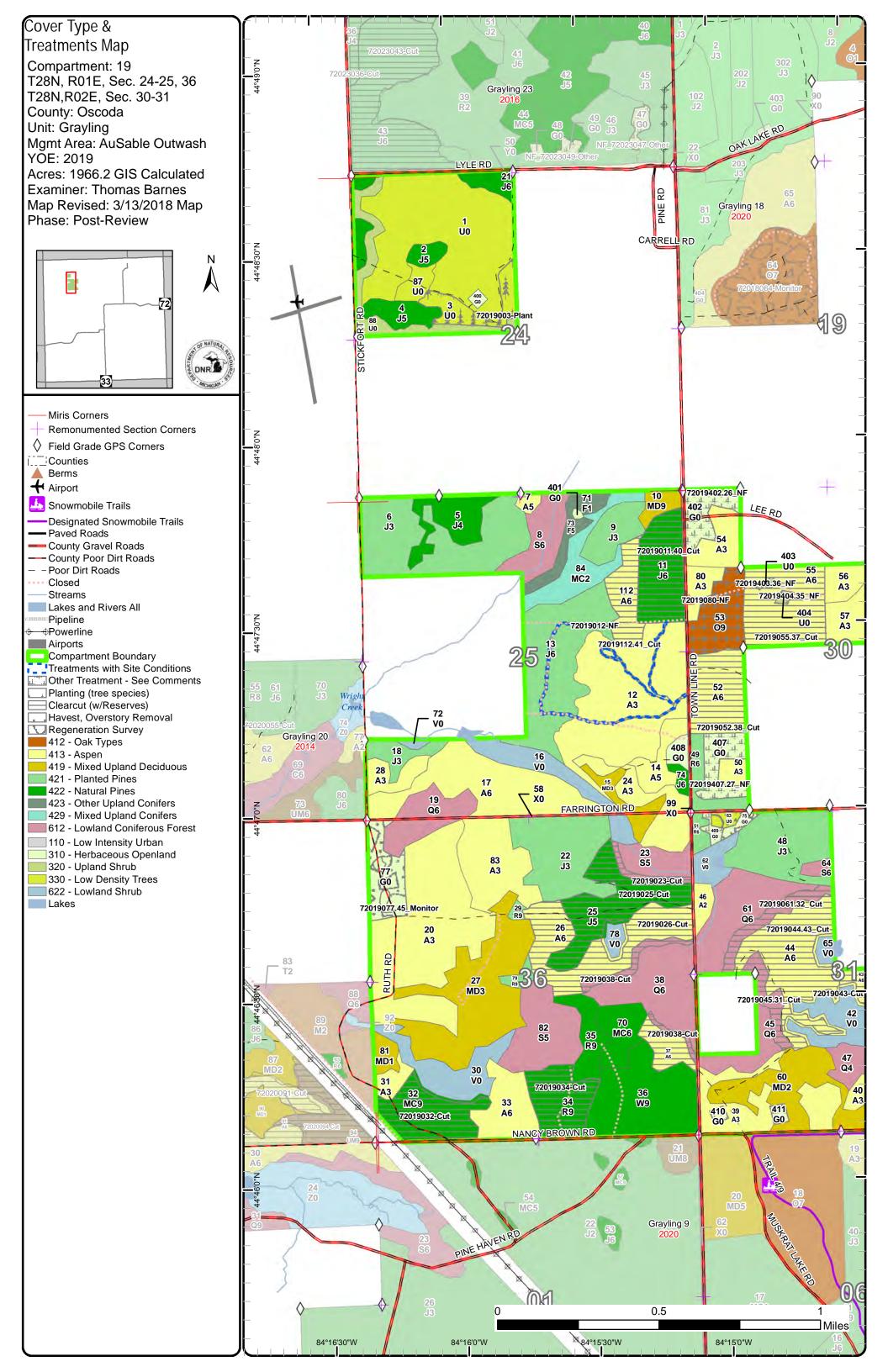
The following reports from the Inventory are attached:

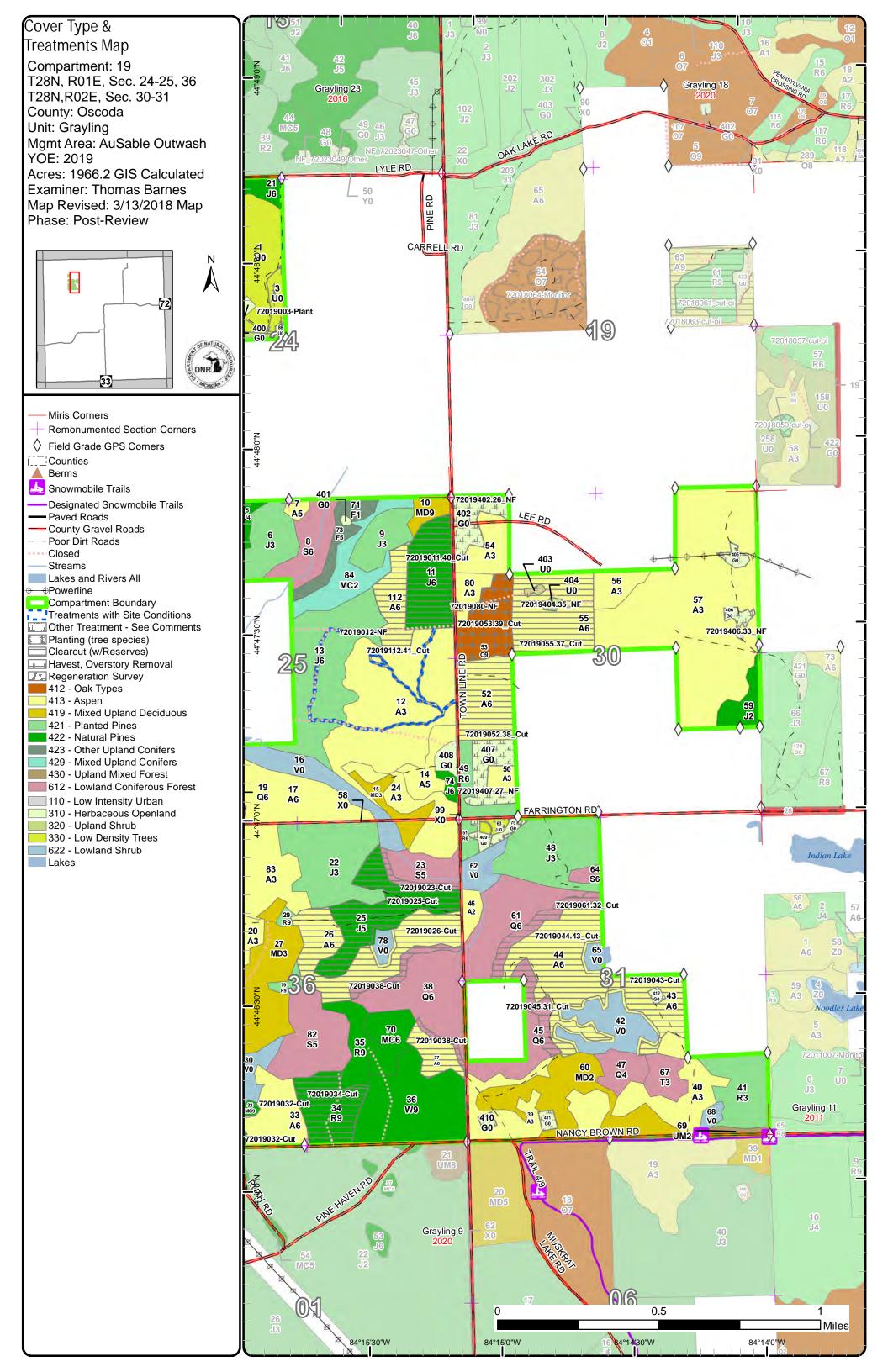
Total Acres by Cover Type and Age Class Cover Type by Harvest Method Proposed Treatments – No Limiting Factors Proposed Treatments – With Limiting Factors Stand Details (Forested and Nonforested) Dedicated and Proposed Special Conservation Areas Site Condition Details

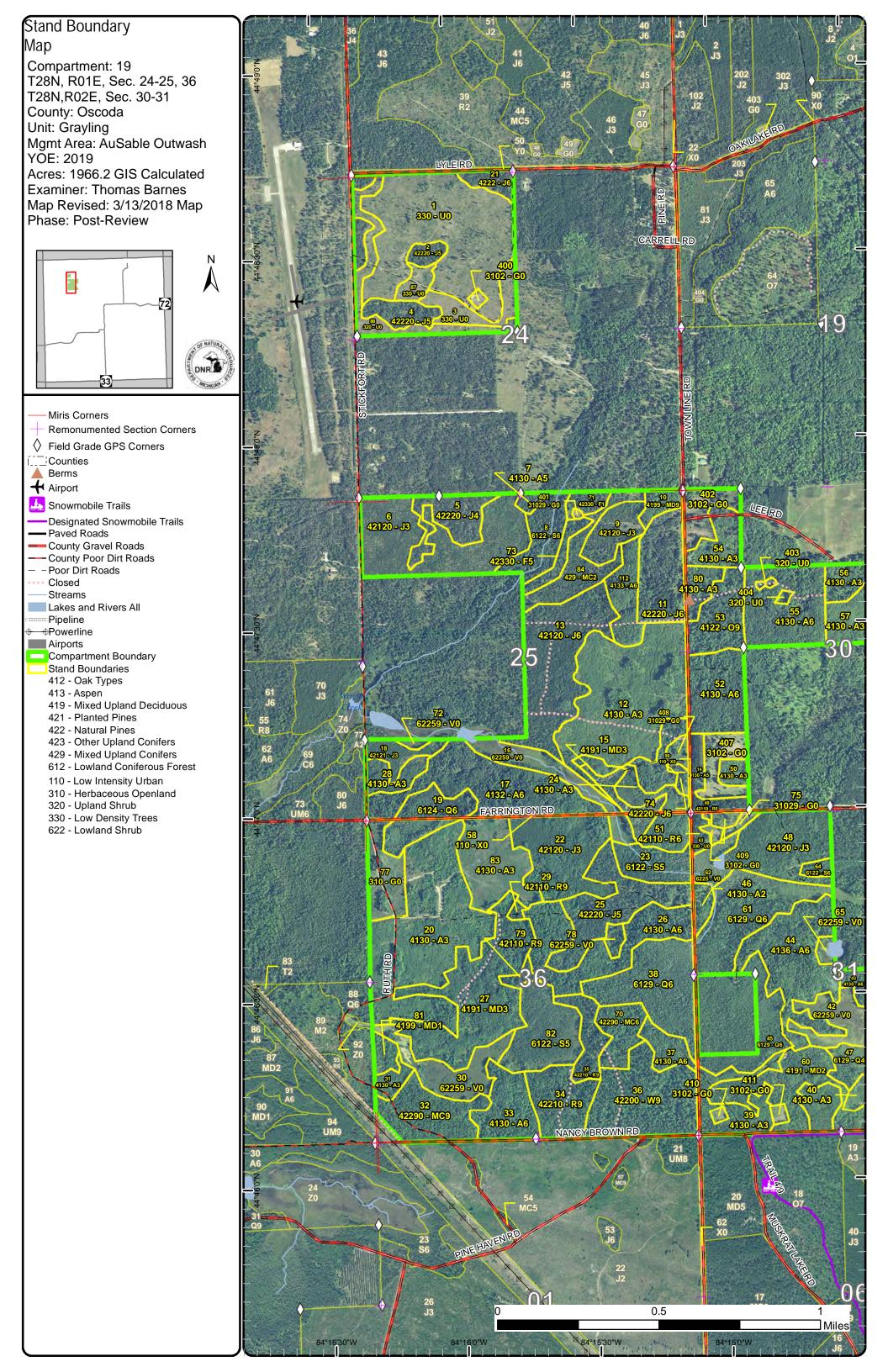
The following information is displayed, where pertinent, on the attached compartment maps:

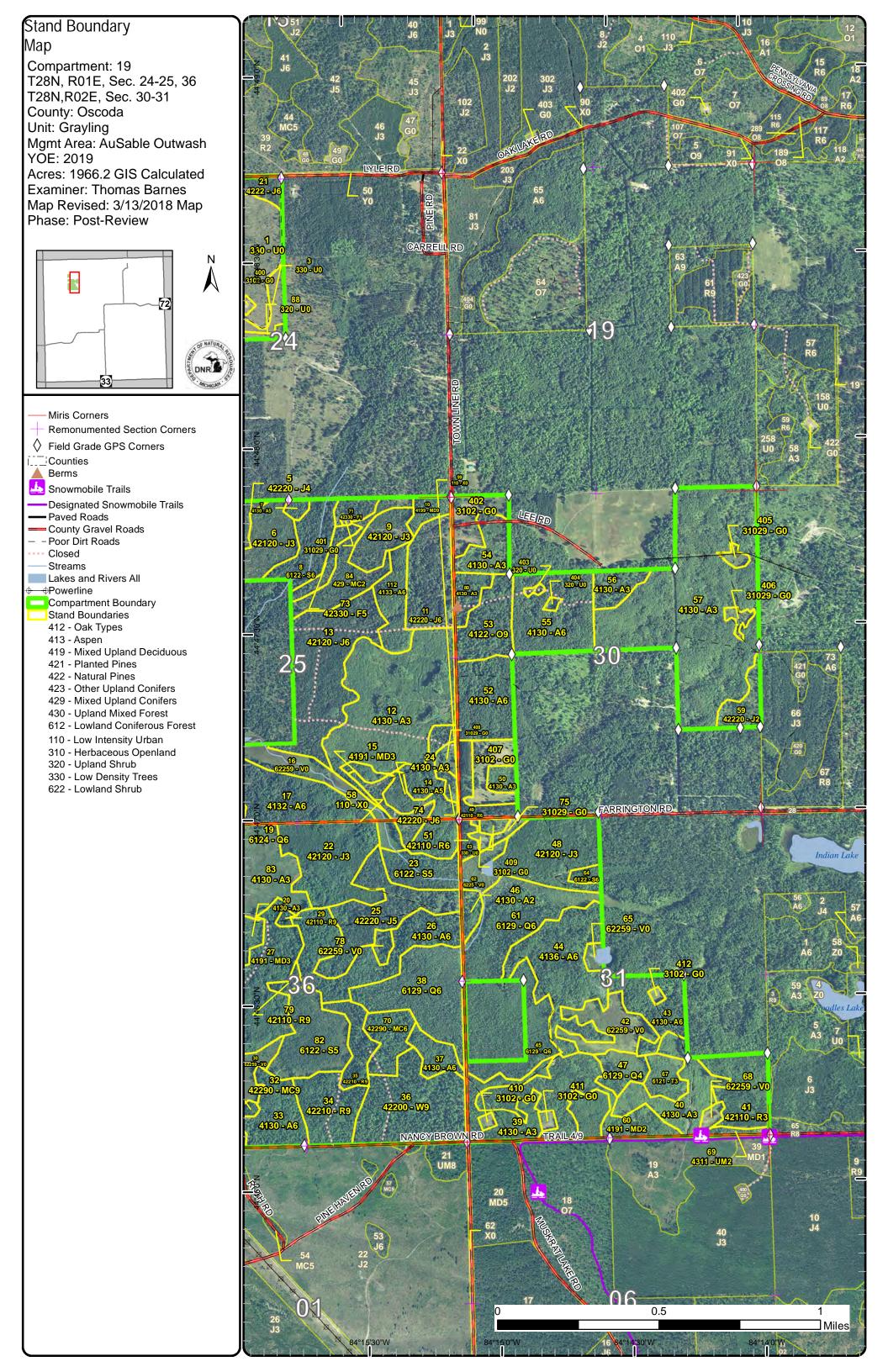
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

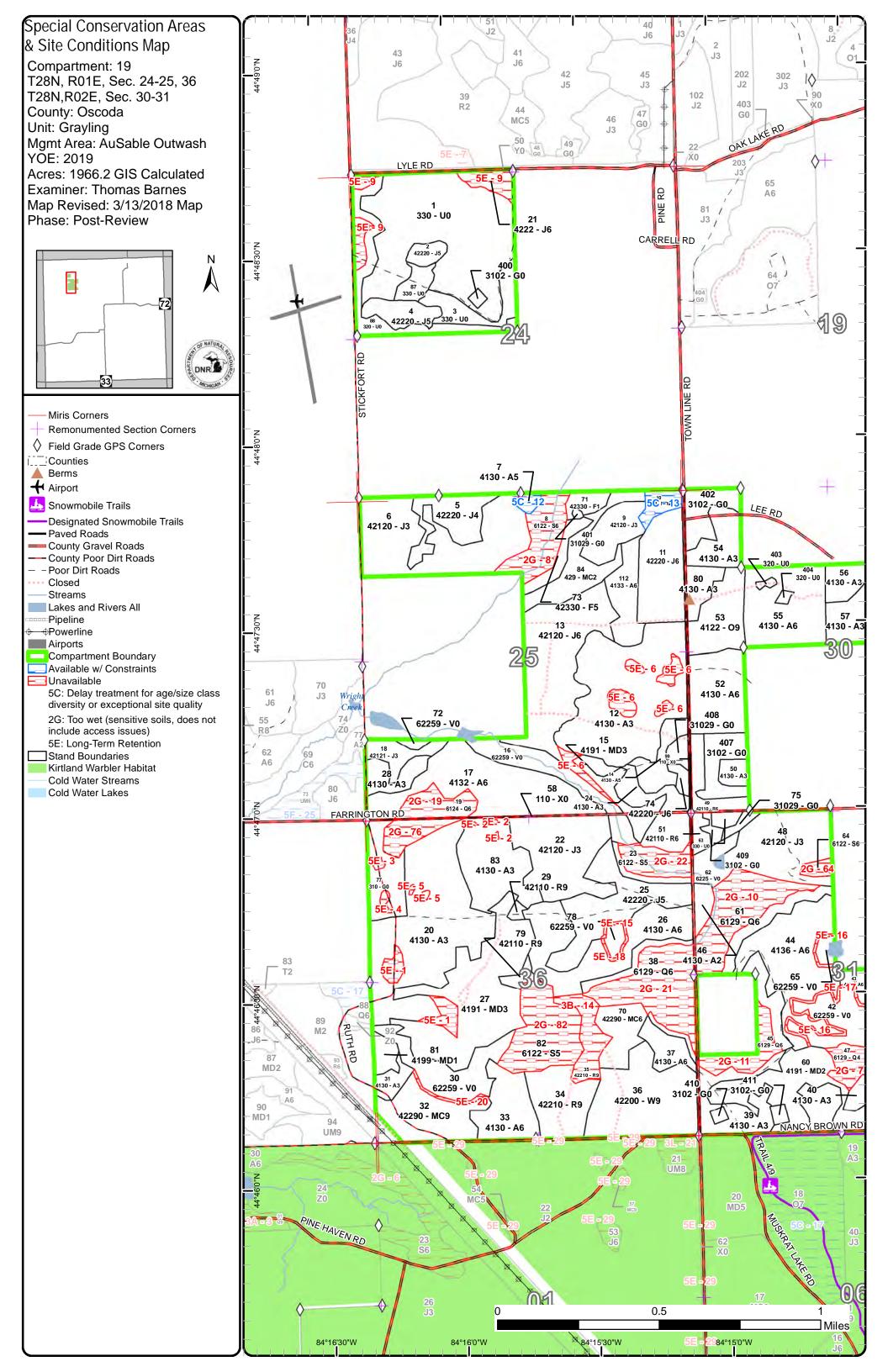


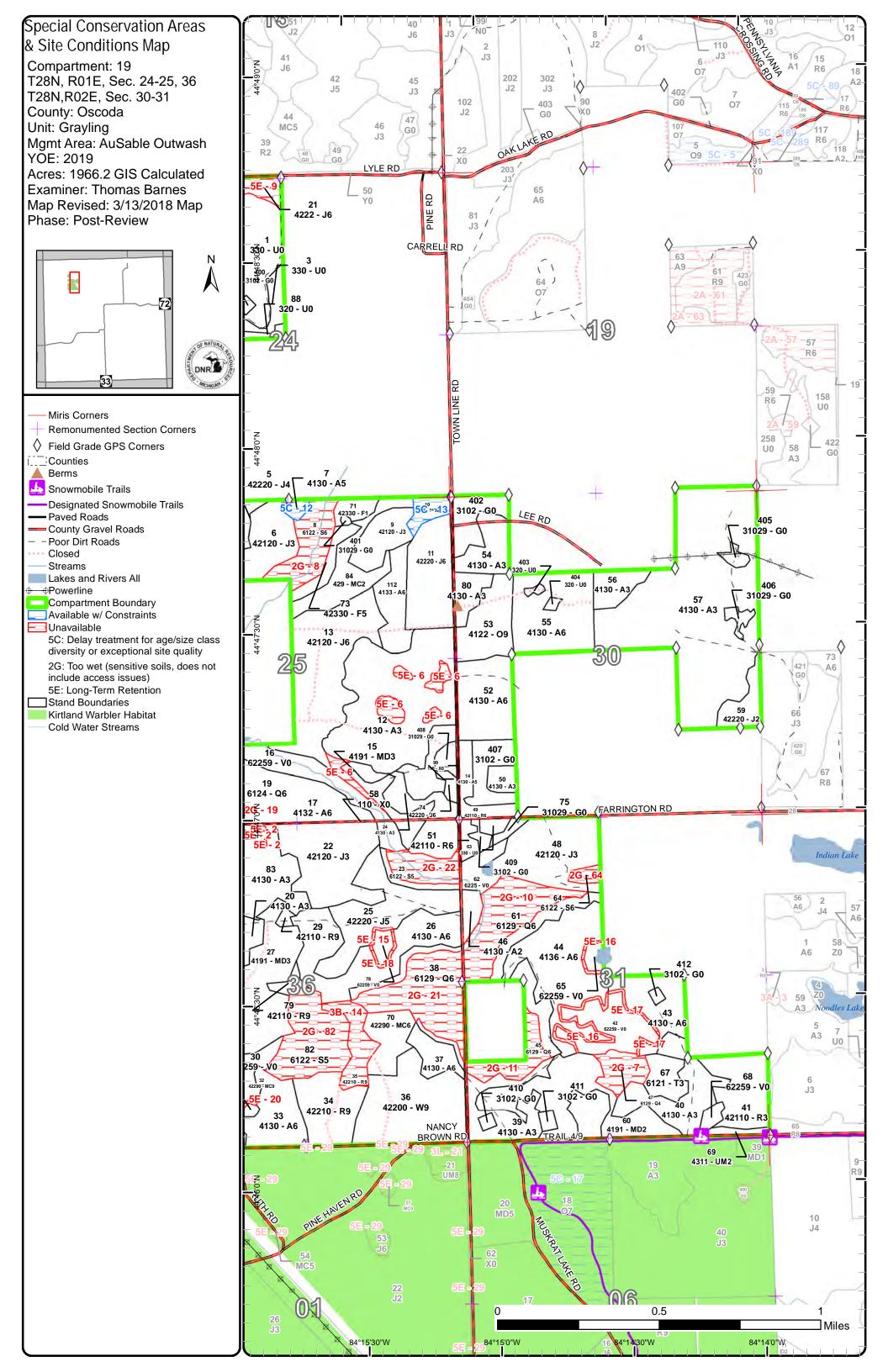












**Grayling Mgt. Unit** 

Compartment 19 Year of Entry 2019

**Thomas Barnes: Examiner** 

#### Age Class

	/	L'OST C	/ 3 / S	/ & /	/ & /	, s /	/ & /	, s /	/ & /	/ ~ /	/ & /	/ 8 /	\ \odots	, & /	/ % /	/ § /	ks /	* /	Se A Se
	<b>≯</b> or			% / %		§ /4		/ %		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		8 /6	20,00	\$. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			IA I	S Jue	
Aspen	0	252	48	177	0	188	103	3	0	0	0	0	0	0	0	0	0	0	770
Bog	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81
Herbaceous Openland	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
Jack Pine	0	0	83	87	57	17	97	0	0	0	0	0	0	0	0	0	0	0	341
Low-Density Trees	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	113	20	0	0	0	0	0	0	133
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	3	46	19	0	0	0	0	0	0	68
Mixed Upland Deciduous	0	0	9	109	0	0	0	0	0	0	6	0	0	0	0	0	0	0	124
Natural Mixed Pines	0	0	0	0	0	0	0	0	15	29	0	0	0	0	0	0	0	0	43
Oak	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	22
Red Pine	0	0	0	24	0	0	13	0	4	37	0	0	0	0	0	0	0	0	77
Tamarack	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10
Upland Conifers	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Upland Mixed Forest	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Upland Shrub	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Upland Spruce/Fir	0	0	5	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Urban	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
White Pine	0	0	0	0	0	0	0	0	0	48	0	0	0	0	0	0	0	0	48
Total	291	252	166	400	64	215	213	3	19	117	165	61	0	0	0	0	0	0	1963



### **Report 2 - Treatment Summary**

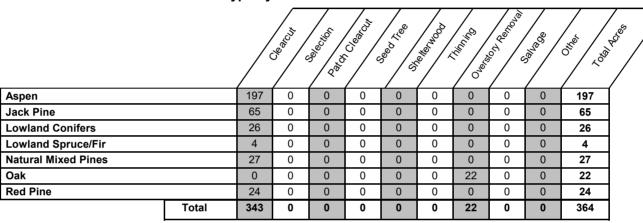
Grayling Mgt. Unit Year of Entry: 2019

#### **Acres of Harvest**

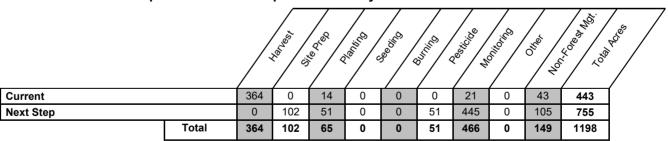
Compartment 19
Total Compartment Acres: 1,966

Commercial Harvest - 364 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

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



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



Grayling Mgt. Unit Report 3 -- Treatments Compartment: 19 s Year of Entry: 2019 t а **Treatment** Stand BA **Treatment Treatment Cover Type** Acres Stand Size Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 3 72019003-13.7 330 - Low-Density 4211 - Planted Draft Field Nonstocked **Planting** Replant Even-Aged Trees Red Pine Boundary **Plant Habitat Cut: No** Site Condition: Prescription supplemental plant RP where 2014 planting is inadequate Specs: Next Step Monitoring, Artificial Regen(1yr), Monitoring, Artificial Regen(3yr) **Treatments:** Acceptable moderate stocking in planted RP Regen: Other Comment: 02/12/2018 Proposed Start Date: 72019011.40 29 2 42220 - Natural Poletimber 51 81-110 Clearcut with 4132 - Aspen, Even-Aged Draft Field Harvest Jack Pine Retention Jack Pine Cut Well Boundary **Habitat Cut: No** Site Condition: Prescription Final harvest, following standard retention and woody biomass guidelines. Focus retention away from stand 112 to allow for aspen expansion. Include grouse specs and low stump spec. Some retention could be put near townline road. Specs: Next Step Monitoring, Natural Regen (Re-Inventory); NonForestMqt, Other - Specify Treatments: <u>Acceptable</u> Mixed stand of jack pine and aspen with other associated species, meeting minimum stocking levels. If natural jack pine regen fails then plant to red pine as a secondary plan. Regen: Other Convert haul/closed road into a hunter walking trail. Tie into the trail system that is going through stand 112. Utilize as a hunting trail until stand is ready for harvest. Gate trail just off Townline Road. Also tie into road/trail in stand 12. Comment: **Proposed Start Date:** 10/01/2018 72019012-NF 4.9 4130 - Aspen Sapling Immatu NonForestMgt Other - Specify 3102 - Grass Draft Field Well re Boundary **Habitat Cut: No** Site Condition: Long-Term Retention Prescription Convert old haul/skid trails into a hunter walking trail. Plant appropriate mix that is beneficial to wildlife species. Tie into the trail system that is going through stand 112. Utilize as a hunting trail until stand is ready for harvest. Gate trail just off Townline Road. Also tie into road/trail in stand 12. Next Step

Specs:

Treatments:

Acceptable Planting mixture that is beneficial to wildlife.

Regen:

Other Comment:

Proposed Start Date: 10/01/2017

Even-Aged 72019023-Cut 3.6 6122 - Black Spruce Poletimber 51-80 Harvest Clearcut 6128 - Lowland Draft Field Medium Coniferous, Boundary

Mixed

Deciduous

**Habitat Cut: No Site Condition:** 

Prescription Final harvest with no retention due to size and to maximize regeneration and expansion of aspen. Include grouse and hare specs. Limiting Specs:

factor could be standing water.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Medium to well stocked stand of lowland species mixed with aspen and other species.

Regen: Other Comment:

Proposed Start Date: 06/07/2017

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
25	72019025-Cut	35.5	42220 - Natural Jack Pine	Poletimber Medium	51	51-80	Harvest	Clearcut with Retention	4222 - Natural Jack Pine	Even-Aged	Draft Field Boundary

**Habitat Cut: No Site Condition:** 

Prescription Final harvest, following standard retention and woody biomass guidelines. Focus retention away from stand 26 to allow for aspen expansion.

Include grouse specs and low stump spec. Some retention could be put near Townline road. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

S

Acceptable Mixed stand of jack pine and aspen with other associated species, meeting minimum stocking levels. If natural jack pine regen fails then plant to Regen: red pine around areas of natural regeneration as a secondary plan.

Other Comment:

**Proposed Start Date:** 10/01/2018

4130 - Aspen 72019026-Cut Poletimber 49 51-80 Clearcut with 413 - Aspen Draft Field 41.3 Harvest Even-Aged Well Retention Boundary

**Habitat Cut: No Site Condition:** 

Prescription Final harvest, follow standard retention guidelines and woody biomass guidelines. Include grouse and hare spec. Run line roughly 150 or until to

Specs: wet into "Q" for harvest.

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable Medium to well stocked stand of aspen and mixed associated species.

Regen:

Other Along "Q" type use lowland conifer species as boundary trees and drop these trees into the "Q" type during the harvest.

Comment

**Proposed Start Date:** 10/01/2018

Draft Field 72019032-Cut 27.3 42290 - Natural Sawtimber 84 Clearcut with 4211 - Planted 111-Harvest Even-Aged Mixed Pine Well 140 Retention Red Pine Boundary

**Habitat Cut: No Site Condition:** 

Prescription Final harvest with retention, retention will be located along Stand 30. Follow woody biomass guidelines. Low stump and chipping spec will be included

Specs:

Next Step SitePrep, Roller Chopping; SitePrep, Trenching; Pesticide, Skidder/Mechanical; Monitoring, Artificial Regen(1yr); Monitoring, Artificial

Treatments: Regen(3yr); Planting, Initial Plant

Acceptable Planted at a density to ensure a well stocked red pine stand.

Regen:

Other Comment:

**Proposed Start Date:** 10/01/2018

72019034-Cut 23.8 42210 - Natural Sawtimber 84 111-Harvest Clearcut with 4211 - Planted Even-Aged Draft Field Red Pine Well 140 Retention Red Pine Boundary

**Habitat Cut: No** Site Condition:

Prescription Final harvest with retention, follow standard retention guidelines. Also follow woody biomass guidelines. Low stump and chipping spec will be Specs:

included. Some retention could be placed along Nancy Brown Rd.

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

Treatments: Monitoring, Artificial Regen(3yr)

Acceptable Planted at a density to ensure a well stocked red pine plantation.

Regen:

Other Option to plant around areas of natural regeneration.

Comment:

**Proposed Start Date:** 10/01/2018 Habitat Cut: No Site Condition:

<u>Prescription</u> Final harvest with no retention due to size and to maximize regeneration and expansion of aspen. Include grouse and hare specs. Limiting <u>Specs:</u> factor could be water. Along "Q" type use lowland conifer species as boundary trees and drop these trees into the "Q" type during the harvest.

Mixed

Deciduous

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

Acceptable Medium to well stocked stand of lowland species mixed with aspen and other species.

Forest

Regen:

Other

Comment:

Proposed Start Date: 06/07/2017

43 72019043-Cut 20.0 4130 - Aspen Poletimber 49 81-110 Harvest Clearcut with 413 - Aspen Even-Aged Draft Field Well Retention Boundary

Habitat Cut: No Site Condition:

<u>Prescription</u> Final harvest follow woody biomass guidelines. Include grouse and hare specs. Retention will be placed along the VO Stand.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Medium to well stocked stand of aspen and mixed associated species.

Regen:

Other Comment:

. . . . . .

Proposed Start Date: 10/01/2018

4136 - Aspen, 413 - Aspen 72019044.43 44.3 Poletimber 51 81-110 Draft Field Clearcut with Even-Aged Harvest Cut Mixed Conifer Well Retention Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest, follow standard retention guidelines and woody biomass guidelines. Include grouse and hare spec. Leave all red pine over 20"

Specs: dbh. Run line roughly 150 or until to wet into "Q" for harvest.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Medium to well stocked stand of aspen and mixed associated species.

Regen:

Other Along "Q" type use lowland conifer species as boundary trees and drop these trees into the "Q" type during the harvest.

Comment:

Proposed Start Date: 10/01/2018

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 19 s Year of Entry: 2019 t а **Treatment** Stand **Treatment Treatment Cover Type** Acres Stand Size BA Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 72019045.31 6129 - Mixed 6128 - Lowland **Draft Field** 45 88 Poletimber 96 81-110 Harvest Clearcut Even-Aged Coniferous Lowland Well Coniferous, Boundary Cut Forest Mixed Deciduous **Habitat Cut: No** Site Condition: Prescription Final harvest with no retention due to size and to maximize regeneration and expansion of aspen. Include grouse and hare specs. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable Medium to well stocked stand of lowland conifer with aspen and other associated species. Regen: Other Comment: **Proposed Start Date:** 05/23/2017 72019052.38 28.1 4130 - Aspen Poletimber 56 81-110 Harvest Clearcut with 413 - Aspen Even-Aged **Draft Field** Well Retention Boundary Cut **Habitat Cut: No Site Condition:** Prescription Final harvest, follow standard retention guidelines and woody biomass guidelines. Include grouse and hare spec. Focus some of the retention island near Townline Rd. and private land. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable Medium to well stocked stand of aspen with mixed associated species. Regen: Other Comment: **Proposed Start Date:** 10/01/2018 72019053.39 21.8 4122 - Oak, Pine Sawtimber 100 51-80 Overstory 4139 - Aspen, Even-Aged Draft Field Harvest Mixed Cut Well Removal Boundary Deciduous **Habitat Cut: No** Site Condition: Prescription Overstory removal, follow standard retention and woody biomass guidelines. Include grouse and 4" dbh spec. Focus retention around red pine Specs: in southern portion of stand. Next Step Monitoring, Natural Regen (Re-Inventory); NonForestMgt, Other - Specify **Treatments:** Acceptable Aspen with mixed hardwood species meeting minimum stocking levels. Regen: Other Convert haul/closed road into a hunter walking trail. Tie into the trail system that is going through stand 80 and 55. Utilize as a hunting trail until stand is ready for harvest again. Gate trail just off Townline Road. Comment:

This road will also provided access to manage two wildlife openings.

10/01/2018 **Proposed Start Date:** 

Draft Field 55 72019055.37\_ 38.0 4130 - Aspen Poletimber 48 81-110 Harvest Clearcut with 413 - Aspen Even-Aged Retention Boundary Cut

**Habitat Cut: No Site Condition:** 

Prescription Final harvest, follow standard retention guidelines and woody biomass guidelines. Include grouse and hare spec. Focus some of the retention

Specs: along private.

Next Step Monitoring, Natural Regen (Re-Inventory); NonForestMgt, Other - Specify

**Treatments:** 

Acceptable Medium to well stocked aspen stand with mixed associated species.

Regen:

Other Convert haul/closed road into a hunter walking trail. Tie into the trail system that is going through stand 53. Utilize as a hunting trail until stand is

ready for harvest again. Gate trail just off Townline Road. Comment:

This road will also provided access to manage two wildlife openings.

10/01/2018 **Proposed Start Date:** 

Regen:

Comment:

6128 - Lowland 16.4 310 - Herbaceous Nonstocked Natural Regen **Draft Field** 72019077.45 Unspec Monitoring Even-Aged (Re-Inventory) Monitor Openland ified Coniferous, Boundary Mixed

Deciduous

**Habitat Cut: No Site Condition:** 

**Prescription** 

Specs:

Next Step

Treatments:

Acceptable Mixed swamp conifer with pockets of aspen.

Regen:

Other Percent to Treat = 100%

Comment:

10/01/2016 **Proposed Start Date:** 

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 19 s Year of Entry: 2019 t а Stand **Treatment** Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d Sapling 80 72019080-NF 0.6 4130 - Aspen Immatu NonForestMgt Other - Specify 3102 - Grass Draft Field 17 Well Boundary **Site Condition: Habitat Cut: No** Prescription Convert haul/closed road into a hunter walking trail. Tie into the trail system that is going through stand 53. Utilize as a hunting trail until stand is ready for harvest again. Gate trail just off Townline Road. Specs: Next Step **Treatments:** Acceptable Planting mixture that is beneficial to wildlife. Regen: Other This road will also provided access to manage two wildlife openings. Comment: **Proposed Start Date:** 10/01/2017 112 72019112.41 4133 - Aspen, 163 Poletimber 55 81-110 Harvest Clearcut 413 - Aspen Even-Aged Draft Field Mixed Pine Well Boundary Cut **Habitat Cut: No Site Condition:** Prescription Final harvest, follow standard retention guidelines and woody biomass guidelines. Include grouse and hare spec. Specs: Next Step Monitoring, Natural Regen (Re-Inventory); NonForestMqt, Other - Specify **Treatments:** Acceptable Medium to well stocked stand of aspen with mixed associated species. Regen: Convert haul/closed road into a hunter walking trail. Tie into the trail system that is going through stand 13. Utilize as a hunting trail until stand is **Other** ready for harvest. Gate trail just off Townline Road. Also tie into road/trail in stand 11. Comment: 10/01/2018 **Proposed Start Date:** 3102 - Grass Draft Field 402 72019402.26 128 Nonstocked Unspec NonForestMgt Other - Specify 3102 - Grass NF ified Boundary **Habitat Cut: No** Site Condition: Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing, brushing, tree and shrub planting, Rx burning and herbicide application. Specs:

Next Step Treatments:

<u>Acceptable</u>

Regen:

Other

Comment:

**Proposed Start Date:** 10/01/2018

NF

403 72019403.36

0.9 320 - Upland Shrub Nonstocked

NonForestMgt Other - Specify 3102 - Grass Draft Field Boundary

**Habitat Cut: No Site Condition:** 

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

brushing, tree and shrub planting, Rx burning and herbicide application.

Next Step **Treatments:** 

Acceptable

Regen:

**Other** Comment:

Proposed Start Date: 10/01/2018

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 19 s Year of Entry: 2019 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 72019404.35 0.9 320 - Upland Shrub Nonstocked NonForestMgt Other - Specify 3102 - Grass Draft Field 404 Boundary NF **Habitat Cut: No Site Condition:** Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing, brushing, tree and shrub planting, Rx burning and herbicide application. Next Step Treatments: <u>Acceptable</u> Regen: Other Comment: **Proposed Start Date:** 10/01/2018 405 72019405.34 2.4 31029 - Grass (OI) Nonstocked NonForestMqt Other - Specify 3102 - Grass Draft Field Boundary NF **Habitat Cut: No Site Condition:** Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing, brushing, tree and shrub planting, Rx burning and herbicide application. Specs: Next Step Treatments: <u>Acceptable</u> Regen: Other Comment: **Proposed Start Date:** 10/01/2018 406 72019406.33 2.7 31029 - Grass (OI) Nonstocked Draft Field NonForestMgt Other - Specify 3102 - Grass NF Boundary **Habitat Cut: No Site Condition:** Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing, Specs: brushing, tree and shrub planting, Rx burning and herbicide application. Next Step Treatments: <u>Acceptable</u> Regen: Other Comment: **Proposed Start Date:** 10/01/2018 407 72019407.27\_ 13.0 3102 - Grass Nonstocked NonForestMgt Other - Specify 3102 - Grass Draft Field Unspec ified Boundary NF **Habitat Cut: No Site Condition:** Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing, Specs: brushing, tree and shrub planting, Rx burning and herbicide application.

Next Step Treatments:

<u>Acceptable</u>

Regen:

<u>Other</u>

Comment:

Proposed Start Date: 10/01/2018

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 19 s Year of Entry: 2019 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure **Status** d 72019409.28 2.0 3102 - Grass Unspec NonForestMgt Other - Specify 3102 - Grass Draft Field 409 Nonstocked ified Boundary NF **Habitat Cut: No Site Condition:** Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing, brushing, tree and shrub planting, Rx burning and herbicide application. Specs: Next Step Treatments: <u>Acceptable</u> Regen: Other Comment: **Proposed Start Date:** 10/01/2018 410 72019410.24 12 3102 - Grass Unspec NonForestMqt Other - Specify 3102 - Grass Draft Field Nonstocked ified Boundary NF **Habitat Cut: No Site Condition:** Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing, brushing, tree and shrub planting, Rx burning and herbicide application. Specs: Next Step Treatments: <u>Acceptable</u> Regen: Other Comment: **Proposed Start Date:** 10/01/2018 72019411.25 Draft Field 18 3102 - Grass Nonstocked Unspec NonForestMgt Other - Specify 3102 - Grass NF ified Boundary **Habitat Cut: No** Site Condition: Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing, Specs: brushing, tree and shrub planting, Rx burning and herbicide application. Next Step Treatments: <u>Acceptable</u> Regen: Other Comment: **Proposed Start Date:** 10/01/2018 412 72019412.30\_ 3102 - Grass Nonstocked NonForestMgt Other - Specify 3102 - Grass Draft Field Unspec ified Boundary NF **Habitat Cut: No Site Condition:** Prescription Periodic opening maintenance, as needed, that may include disking, fertilizing, food plot seeding, no-till prairie grass drill seeding, mowing,

Specs: brushing, tree and shrub planting, Rx burning and herbicide application.

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

10/01/2018 Proposed Start Date:

**Total Treatment Acreage Proposed:**  443.5

Grayling Mgt. Unit

**Thomas Barnes: Examiner** 

Compartment: 19 Year of Entry: 2019

Availa	ability for	Managemer	nt					
Total	Acres	Acres Avail	Acres		Domina	nt Site	Con	ditions
Acres	Available	With Condition	Not Available		5C	2G	3B	5E
773	588	3	183	Aspen	3			183
81	81	0	0	Bog				
63	61	0	2	Herbaceous Openland		0		2
341	328	0	13	Jack Pine				13
114	114	0	0	Low-Density Trees				
133	26	0	107	Lowland Conifers		107		
69	4	0	65	Lowland Spruce/Fir		65		
125	119	6	0	Mixed Upland Deciduous	6			
43	42	0	1	Natural Mixed Pines				1
22	22	0	0	Oak				
78	65	0	13	Red Pine			13	
9	9	0	0	Tamarack				
21	21	0	0	Upland Conifers				
3	3	0	0	Upland Mixed Forest				
22	22	0	0	Upland Shrub				
12	12	0	0	Upland Spruce/Fir				
12	12	0	0	Urban		0		
48	48	0	0	White Pine				
1,970	1,577	9	384	Total Forested Acres	9	172	13	199
	80%	0%	19%	Relative Percent				

\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	5E: Long-Term Retention	8	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
2	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Grayling Mgt. Unit

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3	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	5E: Long-Term Retention	11	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
	Comments:						
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	19	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
	Comments:						
9	Unavailable	5E: Long-Term Retention	13	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Retention islands le	eft in harvest #013-09.					

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10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	30	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
С	comments:						
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
С	comments:						
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	3	Unspecified	Unspecified	Unspecified	Unspecified
S	comments: Stand access is wo ut.	ould have to be cut thru a jack p	ine pla	ntation, the stand value does	s not warrant that type of o	effort. Let stand go until sta	and 5 is ready to be
13	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
	comments: Small hardwood st	and that adds to the diversity of	the are	ea.			
14	Unavailable	3B: Threatened, endangered, and special concern species	13	Unspecified	Unspecified	Unspecified	Unspecified
_	comments: Park like understor	y with large diameter red pine.					
15	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						

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16	Unavailable	5E: Long-Term Retention	5	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
17	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
18	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified
(	Comments:						
20	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
21	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	35	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
(	Comments:						

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22	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
C	comments:						
64	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
C	comments:						
76	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
C	Comments:						
82	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	31	Unspecified	Unspecified	Unspecified	Unspecified
C	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: 19





### 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 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 condition stocked trout populations and those of other coldwater fish species conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of the Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable y are relatively deep, have substantial he state. Such lakes are established by				
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen condistocked trout populations and those of other coldwater fish specification 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.	es (e.g., slimy sculpin) to persist from se conditions due to substantial				
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 at PA 451, and the Federal Endangered Species Act of 1973. This is species plans in various stages of review. As of now only two ex Plover Habitat.	endangered species, as governed by Part nd Environmental Protection Act, 1994 s an active program, with proposed				

S t	Graylin	g Mgt. Unit		Report 7	- Forested	Stands Compartment: 19 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	42220 - Natural Jack Pine	Poletimber Medium	4.7	41	1-50	Open pockets of sweetfern. Poor form open grown jack pine, keep as an open barren type area.
4	42220 - Natural Jack Pine	Poletimber Medium	10.3	49	51-80	All trees with 2 or more 100" sticks were taken out of stand in 1976'. The regen came back scattered w/ various stocking densities. Several trees are not of merchantable size. Scattered red pine and oak throughout stand.
5	42220 - Natural Jack Pine	Poletimber Poor	18.8	50	1-50	Small stand of pole sized jack pine of fair quality and trees are 2-3 stick trees. there some scattered red pine within the stand.  OPIC - FMD: Pockets of bigger trees mixed with small 1-2 stick stuff. This stand provides a good visual buffer for surrounding area.
6	42120 - Planted Jack Pine	Sapling Well	58.9	17	Immature	Stand harvested in 2000 under contract 72-055-99-01, stickfort jack. Stand is doing well with good density and some aspen pockets as well. OPIC - FMD: Planted to jack pine. Regen is 3-6' tall. East portion of stand has 3 nice pockets of aspen regen. CUT 2000 -SALE # 720559901 (STICKFORT JACK)
7	4130 - Aspen	Poletimber Medium	2.5	63	51-80	Small stand of aspen pole size, in the transition zone to the lowland. Treat stand when other stands in area are treated.  OPIC - FMD: Stand should have been cut w/ adjacent stands last YOE. Treat with stand 5 in future. Extend cut into the swamp conifer to create a mixed edge. Hypox in stand-some aspen w/ dead tops. Stand runs along the swamp edge.
8	6122 - Black Spruce	Poletimber Well	19.2	108	81-110	Lowland conifer stand with a fair amount of standing water. All trees look really healthy and a good understory is established.  OPIC - FMD: Did not visit stand in 2007.
9	42120 - Planted Jack Pine	Sapling Well	14.7	18	Immature	12 acres planted by hand crew 2000. Regen 8-10' high. (old comments): Stand did not convert to oak as expected, what oak there is has heavy deer brouse. Seed to JP, seedable acres are less than stand acres due to stump pile and oak regeneration.  12 ACRES OF THIS STAND WAS HAND PLANTED TO JACK PINE DURING THE SPRING OF 2000 BY A CONTRACT CREW. FTP # 72-0409.
10	4199 - Other Mixed Upland Deciduous	Sawtimber Well	6.1	94	51-80	Stand is clumps of maple w/ clumps of sawlog oak and patches of aspen. Heavy browse. Some birch in stand. Average BA was 85. Small Stand and should be retained for species diversity.
11	42220 - Natural Jack Pine	Poletimber Well	29.2	51	81-110	Bushy open grown trees. Majority of red pine is in SW corner. 17-22 inches DBH. East part of stand is more of a open grown pole jack pine and grassy openings. Oak few and far between.

S t a	Grayling	Mgt. Unit		Report 7	- Forested	Stands	Compartment: 19 Year of Entry: 2019	DNR DNR
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range		General Comments:	MICHIGAN .
12	4130 - Aspen	Sapling Well	84.4	7	Immature	regenerated nicely Stand passes i #720080901 al leave islands. 2 (BT & QA) in the there is a spi Oak/maple influen the south. So understory. Rets shaped islands. aesthetics whe couple islands and stand 13 for a feat This stand will reg stand with minor pine species. So in stand and are e If natural regeners pine. Per WD at from the treatment	2011 under contract 72-008-09-01.  7. Some maple, cherry and oak regregen survey. OPIC - FMD: 2011:  1 trees 2" up harvested except for vectors.  2007: (Final harvest w/ reserves) of the except for vectors.  2007: (Final harvest w/ reserves) of the except for vectors.  2007: (Final harvest w/ reserves) of the except for vectors.  2007: (Final harvest w/ reserves) of the except for vectors.  2007: (Final harvest w/ reserves) of the except for vectors.  2008: (Final harvest w/ reserves) of the except for vectors.  2009: (Final harvest w/ reserves) of the except for vectors.  2019: (Final harvest w/ reserves) of the	gen as well. Sale WO and 4 Mixed aspen state wide ution. influence in hazel in di irregular Manage for e oak in a ain or so into expansion. ocked aspen c and misc rrently exist the future. hted w/ jack of stand 12 at stand 112
13	42120 - Planted Jack Pine	Poletimber Well	56.7	35	Unspecified	pockets and in-gr grown into t Ground cover sw Plantation has so Good chance i	ation, adjacent to private land. So, owth from adjacent aspen harvest. he pole size with some saplings st veet fern and blueberry. OPIC - FN ome open areas but looks to be we t will be a J6 NYOE. J PLANTATI REAS OF INAUDIQUATE TAKE	Stand has ems. //D: J3/J2. II stocked.
14	4130 - Aspen	Poletimber Medium	10.9	40	1-50	Sweetfern and ch (better oak regen	aspen in stand, which is keeping onerry brush. Scattered poor quality in north part of stand). Stand has pactivity. Cut stand in next inventor	oak regen some minor
15	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	9.3	17	Immature	advanced oak reg	mp sprouts w/ natural jack pine re len was left from cut. Scattered ch 54-99-01, Farrington Blocks, cut in	erry brush.
17	4132 - Aspen, Jack Pine	Poletimber Well	53.0	45	111-140	Scattered oak w	007: Pockets of mixed pine-areas of ere left. White pine influence in not ments)A TRACE OF MATURE R A Stand is a mixture of Aspen-JF	orth part of AND J ARE
18	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	9.2	18	Immature	oak stump sprout type. Stand has comments) Plant of ridge for BMPs	d around aspen regen. Clumps of s. Aspen 10' tall -jack 3 1/2' tall. F very little down woody debris. or seed to JP after harvest. Keep . Contract #054-99-01, Farrington 0. FTP C72-449 plant to jack pine	ockets of u- (old sale on top Blocks, cut
19	6124 - Lowland Spruce- Fir	Poletimber Well	20.2	102	81-110	water. Understor	stand. Very wet with a fair amount y has a good mix of species. heal d.OPIC - FMD: old data used.	

s t	Grayling	Grayling Mgt. Unit			<ul><li>Forested</li></ul>	Stands Compartment: 19 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
20	4130 - Aspen	Sapling Well	90.0	8	Immature	Harvested in 2010 under contract 72-027-09-01.OPIC - FMD: 2007: Possible green up conflicts with Nancy Joar Sale to the west- evaluate at time of set up as probably will be ok. Browse evident in understory. Aspen is better quality in NESome hypox- Currently state wide there is a spike in the 40yr old age class distribution. (FINAL HARVEST W/ RESERVES) Retain about 3-8% of stand in scattered irregular shaped islands. Cut all species 2" inches and up. Leave some high stumps for wildlife. Manage for aesthetics when painting in islands try to include oak in a couple islands and avoid pine. This stand will regenerate to a fully or moderately stocked aspen stand with minor components of red maple, pin oak and misc. pine species. Some open upland brush pockets currently exist in stand and are expected to develop in this stand in the future. If stand regeneration is inadequate, the stand will be replanted to a mix of red and jack pine. (old comments)SCATTERED MATURE OAK, RP, AND JP ARE LEFT Aspen in transition to A6. (SW finger - MANUAL CUT IN 1976 - FTP #158)
21	4222 - Natural Jack Pine	Poletimber Well	12.6	58	81-110	Retention left from 2011 harvest of stand 3.OPIC - FMD: Harvest w/ stand 1. This stand similar to 1 except it does not have as much red pine. Leave scattered healthy oak and red pine. Replant to jack pine w/ scattered red pine. Leave a visual buffer along Stickfort road reference file indicates a need for a fuel brake if visual strip is not applied, paint in leave islands to account for aesthetics. (Final Harvest w/ reserves) Per prereview note green up conflict due to adj sale called Well Knee Jack Pine- delay this treatment until adj stand to the north is cut or adjust this stand by leaving retnention islands along Lyle Road to assist with visual and minimize green up conflict. Also hold stands 2 and 4 as no cut for retention and cut remainder of stands 1 and 3 except those islands needed for visual along road. Per CR- when replanting stand, leave an open corridor to connect stnads 2 and 4 for connectivity and manage this open area more for barrens or grassy type. 1/9/12 stand treated under Lyle/Stickfort Jack 72-013-09-01. FTP C72-703 has been submitted for replanting. Trenched in 2013, planted in 2014, most to JP, part to RP, part unplanted for barrens; passed Year-3 regen survey (see FTP, completion report and Greco's shapefiles loaded in MiFI Reference layers).
22	42120 - Planted Jack Pine	Sapling Well	39.4	22	Immature	JP planted 1996, Aspen clones within the stand year of origin 1989. Islands of mixed merchantable pine.
23	6122 - Black Spruce	Poletimber Medium	15.6	96	51-80	Lowland stand evaluated from the edge and cored a few trees along the edge. Didn't go to far in due to standing water. OPIC - FMD: OI Stand Year Origin was 1900
24	4130 - Aspen	Sapling Well	21.5	18	Immature	Stand cut in 2000, Contract #054-99-01, Farrington Blocks. Nice young aspen regen with mixed associated species.
25	42220 - Natural Jack Pine	Poletimber Medium	36.1	51	51-80	Jack pine stand of poor to fair quality. Many areas of open grown as well us more traditional densities. Scattered red and white pine, n ok much for an understory. OPIC - FMD: Multiple age classes represented - 60ish being the oldest. Old comments still hold true. (old comments)-Variable stocking, ranges from G to J6 with average of J4

S t	Grayling	g Mgt. Unit		Report 7	<ul><li>Forested</li></ul>	Stands Compartment: 19 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
26	4130 - Aspen	Poletimber Well	42.4	49	51-80	Mixed aspen of poor to fair quality with many stems with conks. Some wet areas wl\lowland species. A few XLoy white pine in excess of 36"DBH.OPIC - FMD: 2007: Still pockets of aspen that do not make sticks. Will be an A6 NYOE. May want to harvest w/ stand 25 in future. (old comments)Mix of Aspen with some JP, 1 acre R9 in NW corner of stand
27	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	64.3	29	Immature	Mixed stand of aspen and jack pine. Stand is Large sapling to small poles of fair quality. Density is variable with some open areas. OPIC - FMD: 2007: Deer activity. Scattered jack pine and cherry. Hypox in stand. Stand varies in stocking. The better quality areas the regen is 30', the poorer quality areas 10' (old comments) Stand a mixture of Aspen and JP'.
28	4130 - Aspen	Sapling Well	9.2	18	Immature	Jack pine planted around aspen regen. Clumps of cherry and oak stump sprouts. Aspen 10' tall -jack 3 1/2' tall. Pockets of utype. Stand has very little down woody debris. (old comments) Plant or seed to JP after harvest. Keep sale on top of ridge for BMPs. Contract #054-99-01, Farrington Blocks, cut in 2000. FTP C72-449 plant to jack pine.
29	42110 - Planted Red Pine	Sawtimber Well	1.4	76	111-140	Nice little stand of red pine. Provides good structural and species diversity for this area aspen. Good quality. Age of trees varied from a low of 62 to a high of 87, averaged the age to 75.
31	4130 - Aspen	Sapling Well	5.3	29	Immature	Small stand of aspen with mixture of cherry, maple, oak and j pine. Good stem density.OPIC - FMD: North part is now stand 81. A3 20-25' tall. (old comments) Landing did not regenerate
32	42290 - Natural Mixed Pine	Sawtimber Well	28.8	84	111-140	Appears stand may have had the hard word component removed when other stands in area were treated. Over story heavy to Log/Log red pine. Stand also has large pule red pine too. Understory is primarily red maple with aspen and some mixed conifer. OPIC - FMD: 2007: Green up issues. Aspen, maple, oak are in the understory. Heavy browse. Jack pine is in decline. Is a natural red pine stand, not a plantation.(old comments)PLANTED 1934 R W J
33	4130 - Aspen	Poletimber Well	21.7	46	81-110	Aspen stand with mixture of DBIt's doe pending on soils.  Northern portion of start is log/pole while rest of stand is pole/sap. N ice mixture of oak and pines too. OPIC - FMD: Areas of A3 w/ clumps of red maple regen. (old comments) A TRACE OF OAK LEFT FOR MAST
34	42210 - Natural Red Pine	Sawtimber Well	23.8	84	111-140	Stand had hardwood species removed in 1974, succeeding regeneration is doing well with medium to high densities, ranging from 5-20' tall. Nice looking stand that will be ready for harvest during the next round of inventory. Three BA swings were taken, average stand BA was 113. Goshawk in area unable to local nest.
						OPIC - FMD: Red pine with pockets of aspen and hdwd regeneration. (old comments)Hardwood removed in 1974, RP left as overstory, MO = RP Is a natural red pine stand, not a plantation.

s t	Graylin	Grayling Mgt. Unit			<ul><li>Forested</li></ul>	Stands Compartment: 19 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
35	42210 - Natural Red Pine	Sawtimber Well	12.7	81	81-110	Scattered sawlog red pine with intermediate aspen and jack pine. Good mix of q-types along swamp edges. Jackpine cut in 1974 Is a natural red pine stand, not a plantation. Manage stand for big tree management.
36	42200 - Natural White Pine	Sawtimber Well	47.7	80	81-110	Nice mixed stand of red and white pine with oak log size with a well established understory of conifer and hardwood regen.  Aspen and red maple were removed in 2001. Stand can hold for another 10 years and should be harvested in the next inventory cycle. OPIC - FMD: 2007: Poor quality oak. WP has weevil damage. Decent red and white pine regen. (old comments)  Oak and R/W pine left, all other species cut in 2001 under contract #72-004-00-01, 19-36 Thin Block.
37	4130 - Aspen	Poletimber Well	9.4	51	81-110	Aspen stand wow and conifer. Southern portion has red y white pine component. saturated soils with some standing water.
						OPIC - FMD: Swamp conifer understory. QA and BT Treat with stand 36 in 10yrs. (old comments)Stand in transition to A6
38	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	42.0	96	81-110	This is a lowland conifer dominated by tamarack and black spruce. Large red and white pine a found along the perimeter of the stand. Fair amount of stand water, all species look healthy.  OPIC - FMD: SCATTERED BIG PINES ALONG SWAMP EDGE. JC update: horizontal cover creation was approved by variance in February 2014. Small groups of trees were hinge-cut that winter (W72-744).
39	4130 - Aspen	Sapling Well	29.3	25	Immature	Young aspen stand doing well with good stem densities. Scattered misc species in overstory. Mostly along the road edge R5-O5. Scattered oak, pine, & cherry regen.
40	4130 - Aspen	Sapling Well	26.3	8	Immature	Stand Havested 2010 "Smiling Turtle Aspen" #720290901. Stand is regenerating well, there are a few areas that are less dense. However, overall stem density is good. Old Comments. Aspen w/ mixed conifer. Stand has some low/wet areas. Birch and maple also found in stand. Most of jack pine is found along the 2-track. This stand is in the 40 year old age class. Currently state wide there is a spike in the 40yr old age class distribution.  This type and age class is also the most common found in compartment 19. I recommend a (FINAL HARVEST W/ RESRVES). Cut all trees 2" inches and up. Leave several high stumps for wildlife- approx 3-4 per acre. Follow in stand retention guidelines. If possible extend sale boundary into the adjacent q-types if conditions and timber quality warrant. This will create a feathered edge and possibly help to expand the stand. (old comments) Stand in transition to A6, scattered JP in stand. POSSIBLY NEED TO REQUEST A SURVEY TO DETERMINE NORTH EDGE OF STAND 43! Per CR- keep high stumps back along the swamp edge.
41	42110 - Planted Red Pine	Sapling Well	23.7	22	Immature	Planted red pine. Some areas of planted jack. Cherrybrush throughout. A couple areas with aspen rege that were planted through There are some overstory red pine scattered thru out. Red pine averages 8-12' high- some areas regen is 15'+ (old comments) RP planted, but not to road?

S t	Graylin	Grayling Mgt. Unit			<ul><li>Forested</li></ul>	Stands Compartment: 19 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
43	4130 - Aspen	Poletimber Well	22.0	49	81-110	Mixed stand of aspen with oak, maple and conifer. Quality of aspen is fair, with pole to small log sized stems as well as large sapling. Some aspen showing conks. OPIC - FMD: 2007: Open pockets. Scattered red and jack pine. (old comments) clones of A3 with openings between them. includes scattered RP, JP, & Oak
44	4136 - Aspen, Mixed Conifer	Poletimber Well	49.3	51	81-110	Nice stand with a good diversity of species. There are some areas of standing water and low land type species are on the perimeters of the wet areas. Some pockets of red pine and super canopy r pine scattered along edge of "Q" types. Aspen is getting some conks on stems. OPIC - FMD: 2007: (old comments)TREAT R7 WITH A3 '97:A3 with overstory RP, stand in transition to A6
45	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	20.9	96	81-110	This is a lowland conifer dominated by tamarack and black spruce. Large red and white pine a found along the perimeter of the stand. Fair amount of stand water, all species look healthy. Old Comment: SCATTERED BIG PINES ALONG SWAMP EDGE. JC update: horizontal cover creation was approved by variance in February 2014. Small groups of trees were hinge-cut that winter (W72-744).
46	4130 - Aspen	Sapling Medium	4.8	29	Immature	Young aspen stand with a mixture of oak, cherry, and pine. Overstory pine left from the harvest. Old Comments: pockets of aspen with open areas. Scattered cherry, fir, and pine regen. (old comments)RP logs left when stand was harvested
47	6129 - Mixed Coniferous Lowland Forest	Poletimber Poor	9.9	98	1-50	Stand evaluated from edge due to standing water. Tag alder, grasses and sedge. Stand is open and wet.
48	42120 - Planted Jack Pine	Sapling Well	37.2	22	Immature	Jack Pine planted 1996, stand includes clones of Aspen. Jp regen is 10 - 15' tall.
49	42110 - Planted Red Pine	Poletimber Well	9.7	58	111-140	Sale #720080901, 3rd row thin and remove majority of jack pine in 2010. Very little ground cover.
50	4130 - Aspen	Sapling Well	4.6	8	Immature	Nice young aspen stand w/ good she density. Not much for or the species other than cherry. Perimeter of stun has boy size trees to separate stand from grassy opening. OPIC - FMD: 2011: Sale #720080901 Stand has good oak regen in some locations 15'+ tall. The jack pine is declining and the aspen has hypox (several broken tops). Mature oak is poor quality. Equipment will have to cross an opening to access stand. Leave healthy advanced oak regen do to small acreage, recommend that all other trees 2" and up be harvested and retention guidelines not followed (Final Harvest). Treatment should produce a moderate to fully stocked aspen stand with components of red maple, pin oak, and misc. conifer. If adequate natural regeneration is not obtained the stand will be planted to jack pine. Per pre-review: restrict or minimize operations on landing area- leave a few trees (such as painted boundary trees) along edge of stand 50 to define the edge of the grassy opening, these trees can assist with retention.
51	42110 - Planted Red Pine	Poletimber Well	3.6	58	111-140	Sale #720080901, 3rd row thin and remove majority of jack pine in 2010. Very little ground cover.

s t	Grayliı	ng Mgt. Unit		Report 7	<ul><li>Forested</li></ul>	Stands Compartment: 19 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
52	4130 - Aspen	Poletimber Well	28.1	56	81-110	Service beryy all over the place in understory. There is an open U-type in middle portion of stand. Scattered pine throughout.  Some real big pine along northern boundary.
53	4122 - Oak, Pine	Sawtimber Well	21.8	100	51-80	Cut in 2007, all red maple an aspen removed. Understory growth is doing wen roughly 15-30 ft tall of maple and aspen. Residual BA is 53, Mixed oak BA of 33, red pine BA is 17 white pine BA is 3. OPIC - FMD: 2007: Sawlog oak and red pine w/ a well stocked maple and aspen understory. A3/M3 where there is little overstory. A2-A1/M2-M1 under canopy. Some open areas where the ground is covered w/ rasberry. old comments)Remove Birch, Maple, Aspen; Save RP, WP, Oak RETAIN SNAGS! Contract #015-99-01, Lost Trail Sale, cut in 2000. Aspen birch and maple were cut, R & W pine and oak were left.
54	4130 - Aspen	Sapling Well	14.0	8	Immature	Stand cut in 2010. Young stand regenerating to aspen, maple, and some oak. Residual overstory trees left of red pine and oak; with less than 20BA. old Comment- The management objective is an oak stand. Any natural regeneration at moderate to full stocking with an oak component will be a success. standha regenerated to a moderately stocked stand, will accept present regen. OPIC - FMD: 2011: Sale #720080901 Majority of birch is dead or declining. Aspen component found primarily in the north. Red pine is in the south. Some oak starting to decline but there are areas of oak that still look quite healthy. Recommend a final harvest w/ reserves leaving clumps of misc species but target healthy oak and pine as leave trees. Protect oak advanced regen. Consider leaving a small island along Townline Rd for visual. Omit portion of stand north of Lee Rd from sale. This prescription is intended to create an even aged stand except for a small number of widely dispersed trees retained for seed production. These trees should be left in the stand after regeneration has established. The management objective is an oak stand. Any natural regeneration at moderate to full stocking with an oak component will be a success. If adequate natural regeneration is not obtained this stand will be replanted w/ mixed pine species.
55	4130 - Aspen	Poletimber Well	38.0	48	81-110	Mixed Aspen stand, more quaking the bigtooth. Some oak, birch an white pine scattered through at as well. Understory mixture of oak, cherry and whil pine of low density. OPIC - FMD: Mixed aspen stand w/ patches of open areas. Some stump sprout oak and mixed pine. Scattered pine found in the understory.
56	4130 - Aspen	Sapling Well	9.5	18	Immature	Stand cut in 2000 with removal of aspen, maple and oak was marked to leave. Stand has regenerated to a you my aspen stand with residual oak, red and white pine log trees. Higher residual a long private line. Average BA< than 50sqft.  Highlighting regenerating stand. OPIC - FMD: 2007: Aspen clone has regenerated in NE corner. Scattered oak and pine in understory. Small stand. Less residual oak than expected. 1997: remove Aspen, Red maple, and mark Oak to Residual 70 BA with Regeneration Holes. 1987-REQUEST TO NOT SCHEDULE TREATMENT ADJACENT TO PRIVATE HOME. HEALTHY STAND WILL PROVIDE MAST FOR WILDLIFE. Thinned fall of 2000 under contract #051-99-02, Comp.19 Oak Block. One aspen den tree, birch and unmarked oak left for BA of 63.

s t	Grayling	Grayling Mgt. Unit			<ul><li>Forested</li></ul>	Stands Compartment: 19 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
57	4130 - Aspen	Sapling Well	137.7	29	Immature	Regen varies. 20-30' in some areas, 10-20' in others. Hypox observed in stand. High amounts of deer activity. Stand is gaining more pole sized stems but still sapling overall. Power line does run through stand. Scattered jack pine and oak regen. Grassy opening found throughout.
59	42220 - Natural Jack Pine	Sapling Medium	10.1	21	Immature	Stand is open grown jack pin with aspen along perimeter and cherry. stand never planted to red pine as past notes is show.  OPIC - FMD: 2007: Stand was never planted to red pine. It is mostly cherry brush w/ scattered jack and red pine. Oak and aspen regen can also be found in stand. Deer seem to be using this opening a lot. GC is bb, sweetfern, rasberry, and bracken. (old comments)1997, no regeneration from cut, plant to RP; check to see if FTP was written
60	4191 - Mixed Upland Deciduous with Conifer	Sapling Medium	40.3	25	Immature	Hodge poge stand of open grown j pine with other upland species. OPIC - FMD: 2007: Open w/ jack pine & oak regen. Pockets of A3. Cherry and red maple also present. Heavy browse. Big ditch/pit in stand-old gravel pit for county road? (old comments) BUFFER LEFT ALONG ROAD
61	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	40.1	96	81-110	This is a lowland conifer dominated by tamarack and black spruce. Large red and white pine a found along the perimeter of the stand. Fair amount of stand water, all species look healthy. OPIC - FMD: SCATTERED BIG PINES ALONG SWAMP EDGE. JC update: horizontal cover creation was approved by variance in February 2014. Small groups of trees were hinge-cut that winter in the other two approved stands (38 & 45), but not recorded in this one (W72-744).
64	6122 - Black Spruce	Poletimber Well	2.9	88	51-80	Stand consists of tamarack, black spruce, b fir and some white pine. Small pole sized stand. Lots of huckleberry.
67	6121 - Tamarack	Sapling Well	9.5	48	111-140	Stand evaluated from edge of stand due to standing water. Stand is sapling tamarack with mature lowland conifer along edge. adjacent to a "V" type stand. OPIC - FMD: Very wet. Poor quality tamarack and swamp conifer regen on south end of bog.
69	4311 - Pine, Aspen Mix	Sapling Medium	3.0	22	Immature	This portion of old sale was not planted. It has sparse jack pine regeneration with oak, aspen, cherry, and red pine present as well. Western end of the stand is dominated by aspen.  According to reference file this strip is part of an old fuel brake plan.
70	42290 - Natural Mixed Pine	Poletimber Well	14.5	71	81-110	Stand is bordered by Q type on north side and also has a lowland component on the nw portion f stand. Red and white pine dominate the side but low BA's. Three BA swings were taken with stand average 85 Pockets of aspen and maple with open grown jack pine.OPIC - FMD: Several open grassy areas. Pockets of aspen and maple. GC=huckleberry. Areas of open water.
71	42330 - Upland Fir	Sapling Poor	5.3	18	Immature	Open and brushy. Area was not replanted with stand 9. Fir also starting to seed into stand from adjacent Q type.

S t	Graylin	g Mgt. Unit		Report 7	<ul><li>Forested</li></ul>	Stands Compartment: 19 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
73	42330 - Upland Fir	Poletimber Medium	6.9	33	51-80	Balsamfir and black spruce seeding into unplanted portion of old sale. Looks like they left some of the advanced fir regen during harvest operations. Stand has a feathered edge quality. Majority of stand is high and dry. Transition zone between up\and and lowland
74	42220 - Natural Jack Pine	Poletimber Well	2.4	40	1-50	Southern part of an old grass opening that has filled in with jack pine. Harvest w/ adjacent aspen stands. Manage as a open area with sparse to moderate mixed regenartion. Adjacent aspen stands may expand into area which is acceptable.
79	42110 - Planted Red Pine	Sawtimber Well	3.0	76	111-140	Nice little stand of red pine. Provides good structural and species diversity for this area aspen. Good quality. Age of trees varied from a low of 62 to a high of 87, averaged the age to 75.
80	4130 - Aspen	Sapling Well	8.0	17	Immature	Aspen regen is 10-15' tall Residual is roughly less than 20 BA. Good stem density.
81	4199 - Other Mixed Upland Deciduous	Sapling Poor	5.3	29	Immature	Cherry brush w/ scattered oak regen and pockets of aspen. Pocket of oak regen in Se part of stand.
82	6122 - Black Spruce	Poletimber Medium	30.7	94	1-50	Black spruce, jack pine, and fir with some tamarack. Stand is sparse with open water
83	4130 - Aspen	Sapling Well	32.5	3	Immature	Harvested in 2015.
84	429 - Mixed Upland Conifers	Sapling Medium	21.1	18	Immature	Open and brushy. Area was not replanted with stand 9. Fir also starting to seed into stand from adjacent stand. Some Red pine scattered in the stand as well
112	4133 - Aspen, Mixed Pine	Poletimber Well	16.3	55	81-110	Mixed aspen that are starting to show some conks Oak/maple influence in the north, white pine/red pine influence in the south. Some hypox. Understory does have some decent species diversity. (old comments) Mature A3 in transition to A6, scattered mature Aspen, Maple, and Oak in stand. Per WD at pre-review, remove north portion of stand 12 from the treatment and create a new stand 112. Treat stand 112 when stands 10 and 11 are treated. This allows expansion of the aspen type in the future.



Stand	Cover Type	Acres	Managed Site	General Comments:
1	330 - Low-Density Trees	91.8		Was final harvested by 2011 (#013-09). C72-703 trenched in 2013 and planted to JP in 2014, excluding small pockets of natural regen with heavier residual. Passed year 3 regen survey.OPIC - FMD: Not much in the understory(J1-O1). The red pine component is primarily in the north/east part of stand. There are a couple open J4/J5 areas with cherry brush and oak. Possible green up issues with adjacent compartment to the north. Leave healthy red pine and some healthy sawlog size oak in scattered islands. Plant to jack pine-with scattered red pine around residual. Would like leave a visual buffer along Lyle and Stickfort Roads but reference file indicates the need for a fuel brake along Stickfort Rd and the southern property line. If visual strip is not used - paint in leave islands for retention and aesthetics. (Final Harvest w/ reserves) Per pre-review note green up conflict due to adj sale called Well Knee Jack Pine- delay this treatment until adj stand to the north is cut or adjust this stand by leaving retnention islands along Lyle Road to assist with visual and minimize green up conflict. Also hold stands 2 and 4 as no cut for retention and cut remainder of stands 1 and 3 except those islands needed for visual along road. Per CR, harvest priority of stand should be 2 due to green up requirements.
3	330 - Low-Density Trees	13.7		Was final harvested by 2011 (#013-09). C72-703 trenched in 2013 and planted 2014, excluding small pockets of natural regen with heavier residual. This portion of the majority-JP FTP was planted to RP. Passed year 3 regen survey.OPIC - FMD: Harvest w/ stand 1. This stand similar to 1 except it does not have as much red pine. Leave scattered healthy oak and red pine. Replant to jack pine w/ scattered red pine. Leave a visual buffer along Stickfort road reference file indicates a need for a fuel brake if visual strip is not applied, paint in leave islands to account for aesthetics. (Final Harvest w/ reserves) Per pre-review note green up conflict due to adj sale called Well Knee Jack Pine- delay this treatment until adj stand to the north is cut or adjust this stand by leaving retnention islands along Lyle Road to assist with visual and minimize green up conflict. Also hold stands 2 and 4 as no cut for retention and cut remainder of stands 1 and 3 except those islands needed for visual along road. Per CR- when replanting stand, leave an open corridor to connect stnads 2 and 4 for connectivity and manage this open area more for barrens or grassy type.
16	62259 - Bog (OI)	20.3	No	Lots of open water with tag alder, lowland shrubs and some standing dead timber.
30	62259 - Bog (OI)	22.7	No	Open water, small islands of mixed conifer. Lowland brush w/ a lot of huckleberry.
42	62259 - Bog (OI)	19.6	No	This is a nice stand- similar or exceeds quality of Lovell's Bog
58	110 - Low Intensity Urban	3.2	No	Farrington Road
62	6225 - Bog	8.0	No	
63	330 - Low-Density Trees	2.5		Young stand slowly seeding in will keep a monitoring treatment on this stand. There is some pine seeding in. Think will will pass the poorly stocked once it is a bit older. Cherry brush is also seeding in to this area. OPIC - FMD: 2011: Sale #720080901 Porky damage in stand. Treat w/ stands 49 and 51. Do not cut red pine. Leave limbs and/or tops scattered in sale area. A poorly stocked stand is acceptable as long as some natural jack pine regeneration occurs. This cut will help to enhance and expand the adjacent grass stand and create a small jack pine barren type area. The limbs and tops will add a woody debris element and provide new habitat.
65	62259 - Bog (OI)	2.9	No	Some open water



Stand	Cover Type	Acres	Managed Site	General Comments:
68	62259 - Bog (OI)	2.8	No	Open water - grasses - brush along edge
72	62259 - Bog (OI)	1.6	No	
75	31029 - Grass (OI)	2.3		Stand was cut in 2010 and red pine was left. MO is natural pine regeneration. Currently regen is struggling, will keep monitoring treatment on stand. Mered with 65OPIC - FMD: Part of an old grass opening that has filled in with jack pine. Final harvest w/ adjacent red pine stands. Manage as an open area w/ mixed pine regeneration.
77	310 - Herbaceous Openland	18.1		Harvested in July 2015 under contract 72-035-13-01. Leaving regen monitoring treatment on this site. There are pockets of good regeneration and areas where nothing is sprouting. Better regen and densities on the east side of Stickfort Rd.Old comment: OPIC - FMD: Mixed stand of aspen, red-white-jack pine, black spruce, and fir. Good area for dropping and leaving conifers for wildlife? Harvest all species 2" and up except for a few pockets of healthy red pine and misc swamp conifer. Apply rabbit habbitat specs and leave some tops (5-10per acre) and limb piles. Or else specifically mark trees in stand for them to push over and leave. Leave scattered high stumps for wildlife. This stand should regenerate to a moderately to well stocked mixed swamp conifer stand w/ pockets of aspen. Per prereview we decided to change from seed tree to final harvest treatment.
78	62259 - Bog (OI)	3.2	No	Moss, huckleberry grasses - open water - scattered conifer on ridges
87	330 - Low-Density Trees	5.8	No	Final harvested by 2011 (#013-09). This portion of the original stand 3 was left unplanted to serve as a barrens connecting stands 2 & 4.  OPIC - FMD: Harvest w/ stand 1. This stand similar to 1 except it does not have as much red pine. Leave scattered healthy oak and red pine. Replant to jack pine w/ scattered red pine. Leave a visual buffer along Stickfort road reference file indicates a need for a fuel brake if visual strip is not applied, paint in leave islands to account for aesthetics. (Final Harvest w/ reserves) Per pre-review note green up conflict due to adj sale called Well Knee Jack Pine- delay this treatment until adj stand to the north is cut or adjust this stand by leaving retnention islands along Lyle Road to assist with visual and minimize green up conflict. Also hold stands 2 and 4 as no cut for retention and cut remainder of stands 1 and 3 except those islands needed for visual along road. Per CR- when replanting stand, leave an open corridor to connect stnads 2 and 4 for connectivity and manage this open area more for barrens or grassy type.
88	320 - Upland Shrub	20.0	Yes	Was final harvested by 2011 (#013-09). This strip was left unplanted as a fuelbreak, with opening maintenance needs to be evaluated during re-inventory.  OPIC - FMD: Not much in the understory(J1-O1). The red pine component is primarily in the north/east part of stand. There are a couple open J4/J5 areas with cherry brush and oak. Possible green up issues with adjacent compartment to the north. Leave healthy red pine and some healthy sawlog size oak in scattered islands. Plant to jack pine-with scattered red pine around residual. Would like leave a visual buffer along Lyle and Stickfort Roads but reference file indicates the need for a fuel brake along Stickfort Rd and the southern property line. If visual strip is not used - paint in leave islands for retention and aesthetics. (Final Harvest w/ reserves) Per pre-review note green up conflict due to adj sale called Well Knee Jack Pine- delay this treatment until adj stand to the north is cut or adjust this stand by leaving retnention islands along Lyle Road to assist with visual and minimize green up conflict. Also hold stands 2 and 4 as no cut for retention and cut remainder of stands 1 and 3 except those islands needed for visual along road. Per CR, harvest priority of stand should be 2 due to green up requirements.
99	110 - Low Intensity Urban	9.0	No	Townline Road



Stand	Cover Type	Acres	Managed Site	General Comments:
400	3102 - Grass	1.2	No	OPIC - FMD: STATE GREENWOOD B2-24 DELTA/FORCE (MAY HAVE BEEN PURCHASED BY O.I.L.?) GC IS MOSTLY SWEETFERN & KNAPPWEED.
401	31029 - Grass (OI)	0.5	No	Grassy opening. Sweetfern-bracken-cherry brush.
402	3102 - Grass	12.8	No	Portion of stand 54) a long southern edge of this stand, it war not cut. GC= sweetfern, bracken, rasberry, sedge, and grasses. Powerline runs through stand. Scattered jack pine and cherry. Less sweetfern in west part of stand. (old comments) TO BE MAINTAINED FOR WILDLIFE REFER TO W 163 AND FTP W 135. JC update: was mowed in 2014 and 2016 (C72-660).
403	320 - Upland Shrub	0.9	No	Opening filling with cherry and pine. Berry bushes also starting to get more established. OPIC - FMD: Converting to upland brush.
404	320 - Upland Shrub	0.9	No	Berry bushes beginning to dominate. OPIC - FMD: rasberry and brush - ground cover is mostly sweetfern
405	31029 - Grass (OI)	2.4	Yes	OPIC - FMD: Poweline runs through stand - grass - sedge - sweetfern
406	31029 - Grass (OI)	2.7	Yes	OPIC - FMD: Opening- NW part of stand looks like an abondoned well pad. Grasses, sedge-sweetfern- some knapp weed
407	3102 - Grass	13.0	Yes	OPIC - FMD: Couple scattered jack pine Maintained opening. JC update: was mowed in 2014 and 2016 (C72-660).
408	31029 - Grass (OI)	3.5	No	Small opening with some scattered jack pine. OPIC - FMD: A field full of sweetfern and spotted knapp weed
409	3102 - Grass	2.0	No	Small opening with some cherry and jack pine seeding in. JC update: was mowed in 2014 and 2016 (C72-660).
410	3102 - Grass	1.2	No	Open area with grass and knapweed. OPIC - FMD: Abondoned well? Pad in poor condition - little top soil- covered in knapp weed
411	3102 - Grass	1.8	No	Abondoned well? Pad in poor condition - berms of stumps and top soil along westen edge- some grass and sedge but mostly covered in knapp weed
412	3102 - Grass	1.1	No	Abandoned well? - not as much knapweed and sweetfern as the other two abandoned wells, but still poor quality.