

Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72022
Entry Year 2017
Acreage: 1,563
County Oscoda

Management Area: AuSable Outwash

Revision Date: 2015-07-09

Stand Examiner: Thomas Barnes

Legal Description:

T28N R1E Sections 5, 6, 8, 17, 20 & 21

Identified Planning Goals:

To maintain forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment while providing for multiple use and visual management.

Soil and topography:

Terrain is flat to gently-rolling. Soils are primarily Grayling, Roselawn & Rubicon Sands, with Houghton Muck & Rifle Peat associated with the swamps and river floodplain.

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

State ownership is broken and spread out across several sections. Consumer's Power owns a 365-foot wide strip of land that runs diagonally through the compartment; they did not clear the entire width of their property on the high-voltage power line corridor's southwest side, however. Adjacent private land had been primarily used for hunting and other seasonal recreation, with large blocks in hunt club ownership. The continuing trend has been one of property subdivision and development, with seasonal cabins giving way to year-round residences and the expansion of an adjacent golf course resort. Stands 56 & 63, two small isolated parcels, are proposed for disposal; Stand 63, 49, 55 and 62 had an illegal roads pushed through it and a fence crossing the powerline by stand 57 is in trespass.

Unique Natural Features:

Native dry prairie plants have been found in association with grassy openings and managed jack and red pine plantations.

Archeological, Historical, and Cultural Features:

Old building sites, possibly associated with homesteads or logging/railroad activity, were evident.

Special Management Designations or Considerations:

None

Watershed and Fisheries Considerations:

The Middle Branch of Big Creek runs through the northern third of the compartment. It is shallow, unshaded and heavily impacted by a series of beaver dams. This stream is part of the AuSable River's Natural Rivers designation.

Wildlife Habitat Considerations:

The compartment's diverse mix of habitats, from riparian zone floodplains to upland jack pine, aspen and oak, provide good habitat for a variety of game and non-game wildlife species. Two grassy openings in Section 21 are maintained by Wildlife Division staff on an annual basis. South of the compartment, in Section 29's cedar swamp, there is a large deer yard which makes winter cutting a priority in Sections 20 & 21. The swamp also provides snowshoe hare habitat, so hare specs and slash retention are very important in any treated stands near that area.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. Gravel pits are not located in the area, but there should be some potential. The northern half of the compartment (sections 5, 6, & 8) is mostly leased and developed for the Antrim Shale.

Vehicle Access:

Access is good throughout the compartment by county roads, including Old 612, Pickerel Lake, Williams, Henning and Neuman Roads, and also by a network of two-tracks associated with power line rights-of-way, gas well access roads and the snowmobile trail. No new roads have been identified for closure.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

A snowmobile trail #429 and #4 run through the compartment. Deer and grouse hunting are the primary forms of dispersed recreation in the compartment.

Fire Protection:

The compartment has pine stands scattered throughout, but they are generally less than 80 acres. Six of those stands are mature and are proposed for final harvest. The larger, contiguous blocks are generally stocked with seedling/sapling sized red or jack pine. The pole-sized pine stands are generally separated by oak and aspen types or by grassy openings. The sandy two-tracks and right-of-way corridors may serve as fire breaks in addition to providing fire equipment access. A potential water source is on Pickerel Lake Road where it crosses the Middle Branch of Big Creek, or to the north where Old 612 crosses the same creek. While there are gas wells within the compartment, none were identified as hydrogen sulfide hazards.

Additional Compartment Information:

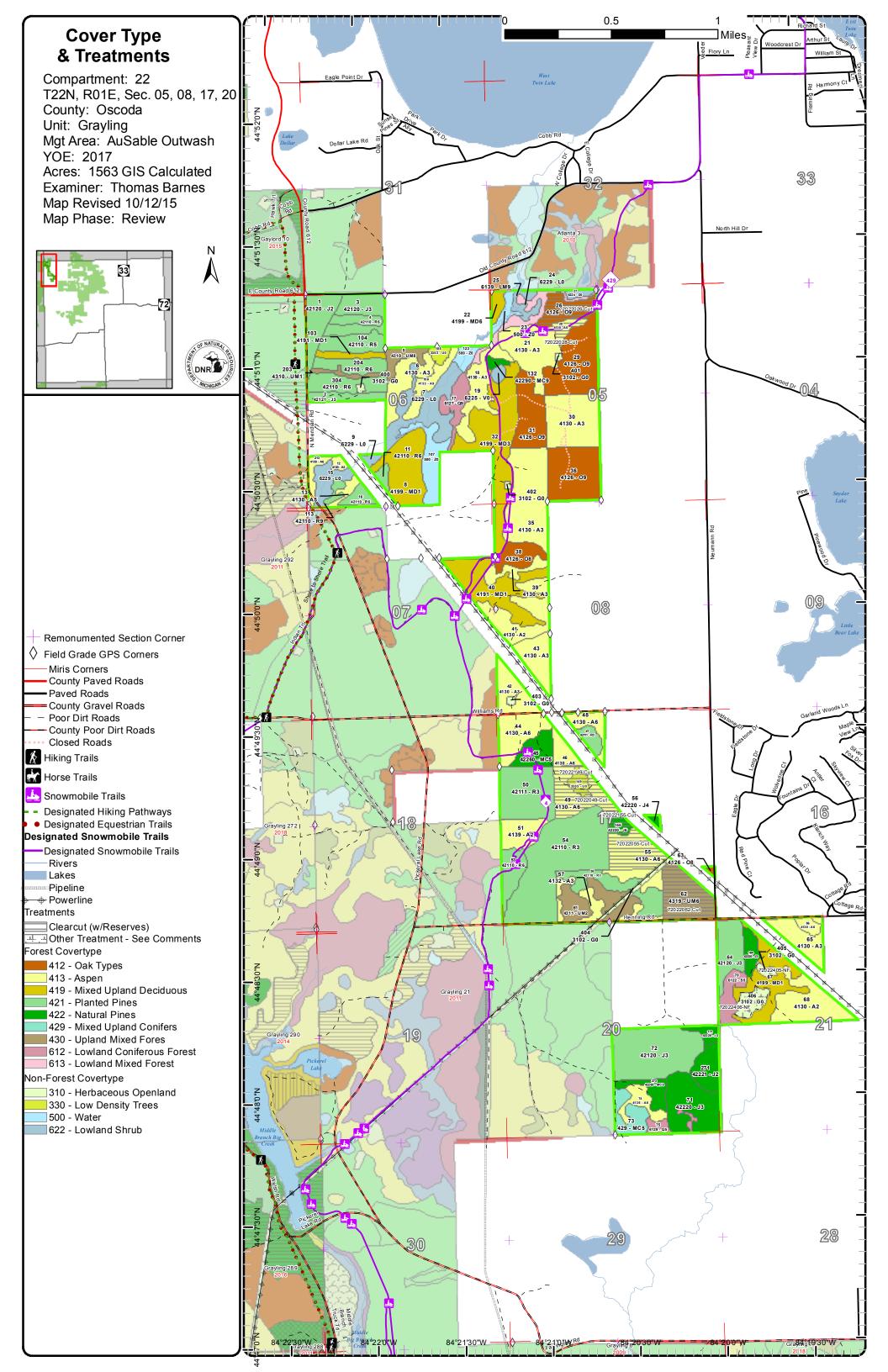
Trespasses noted include a fence in Stand 404, deer blinds in Stand 22 & 105, and illegally posted "no trespassing" signs in Stands 55, 62, 57, 63. As was noted under Ownership, Stand 49,55, 62 and 63 had a road cut through it.

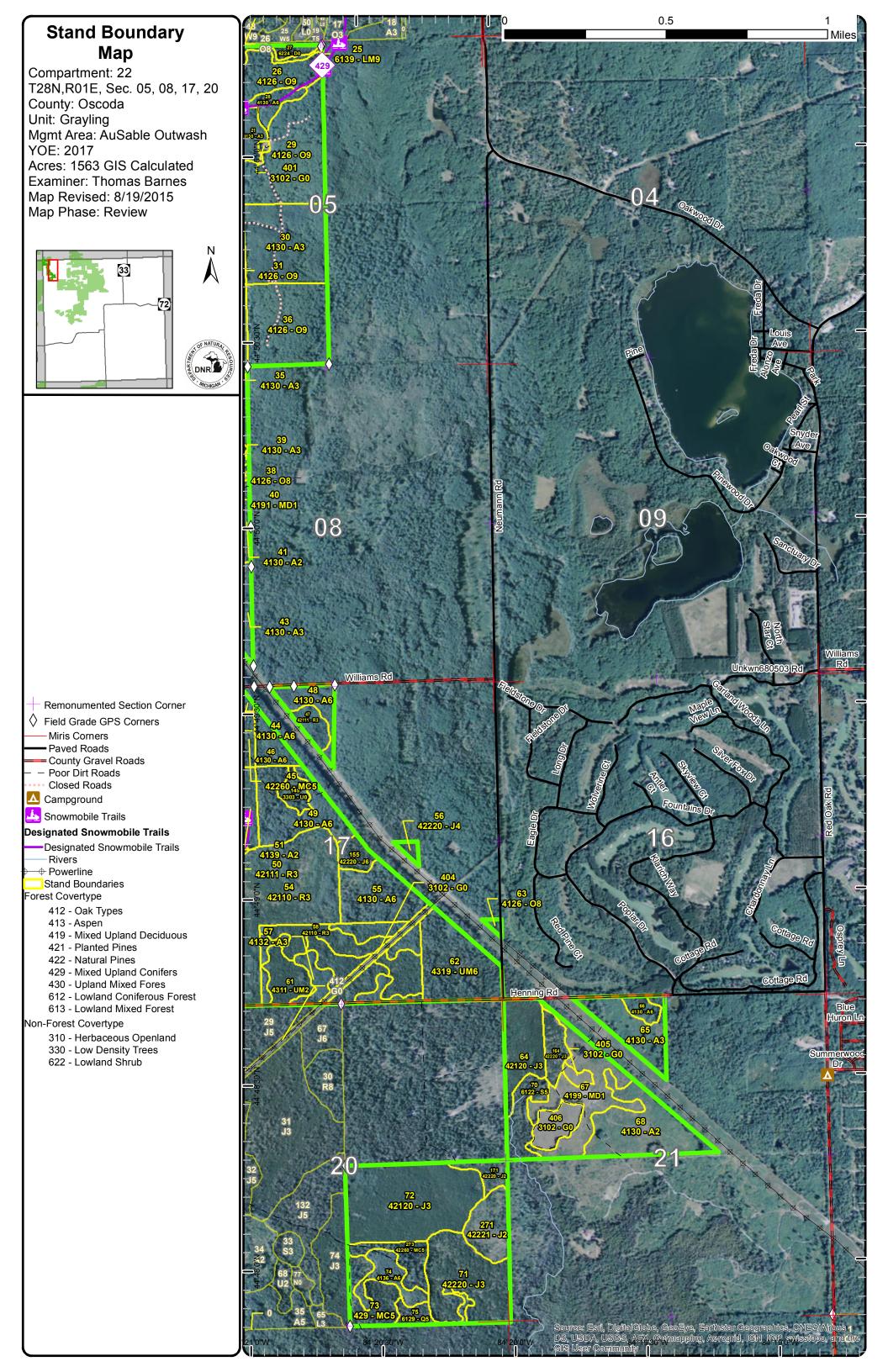
The following reports from the Inventory are attached:

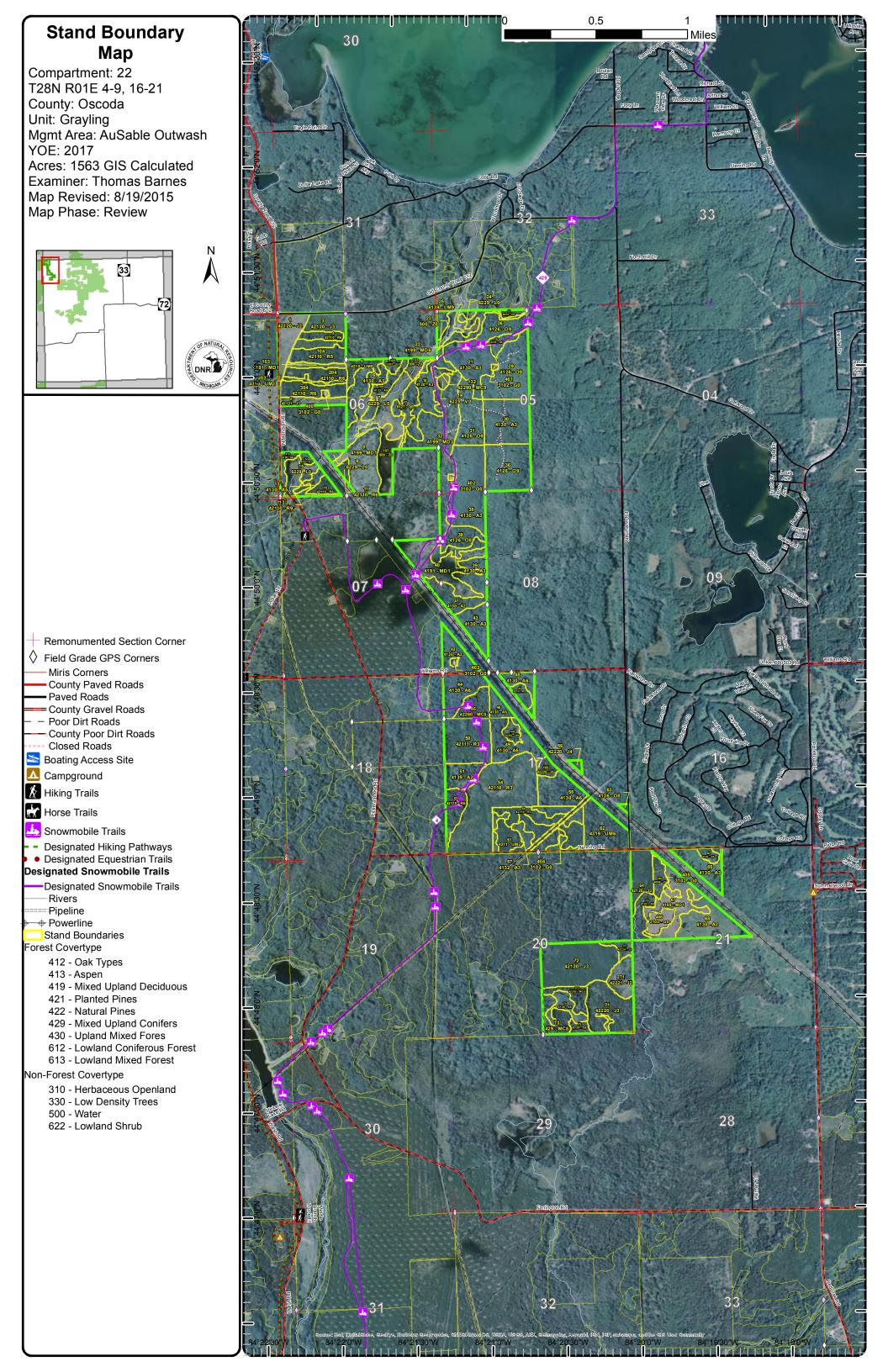
Total Acres by Cover Type and Age Class Cover Type by Harvest Method Proposed Treatments – No Limiting Factors Proposed Treatments – With Limiting Factors Stand Details (Forested and Nonforested) **Dedicated and Proposed Special Conservation Areas Site Condition Details**

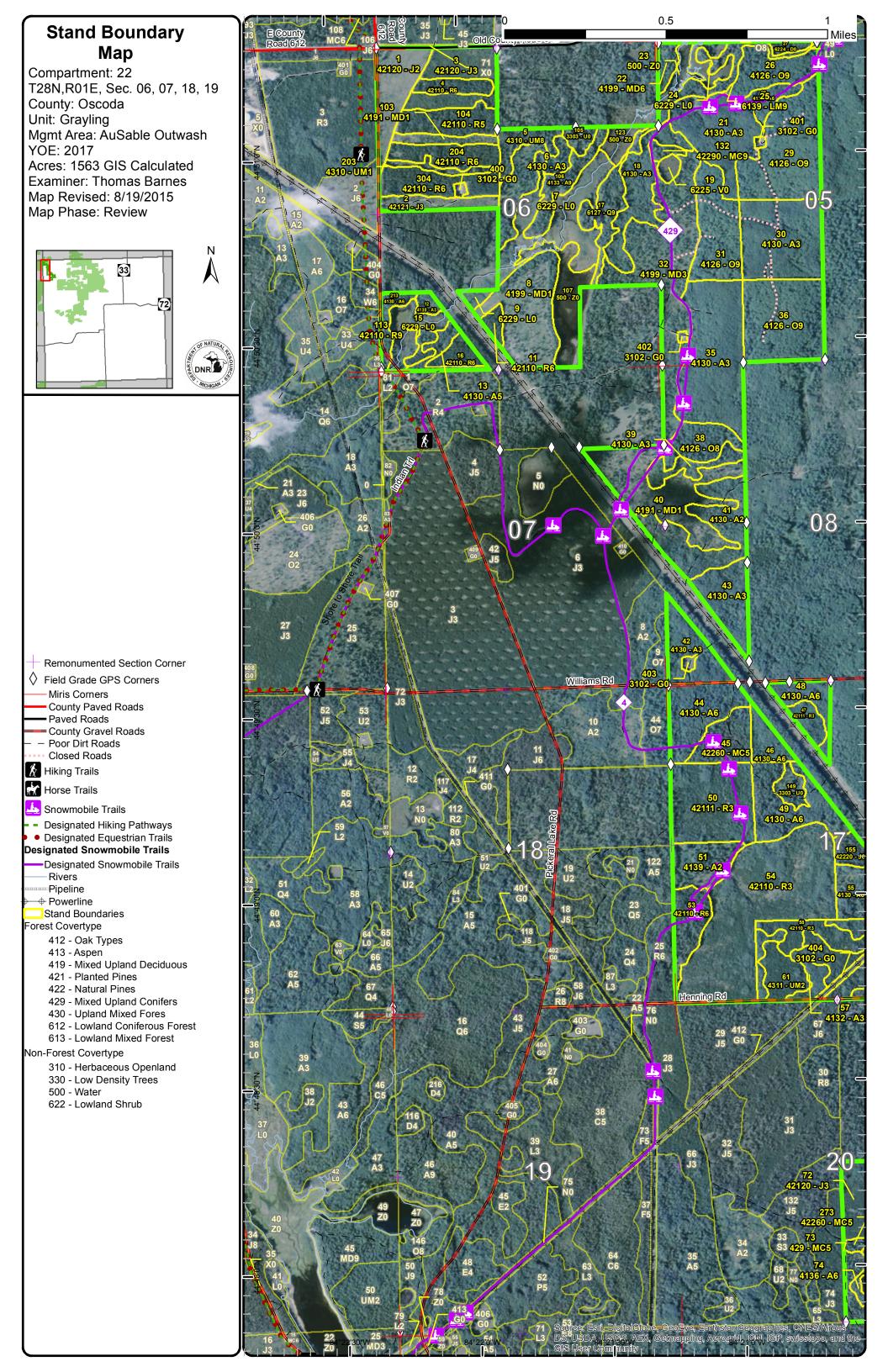
The following information is displayed, where pertinent, on the attached compartment maps:

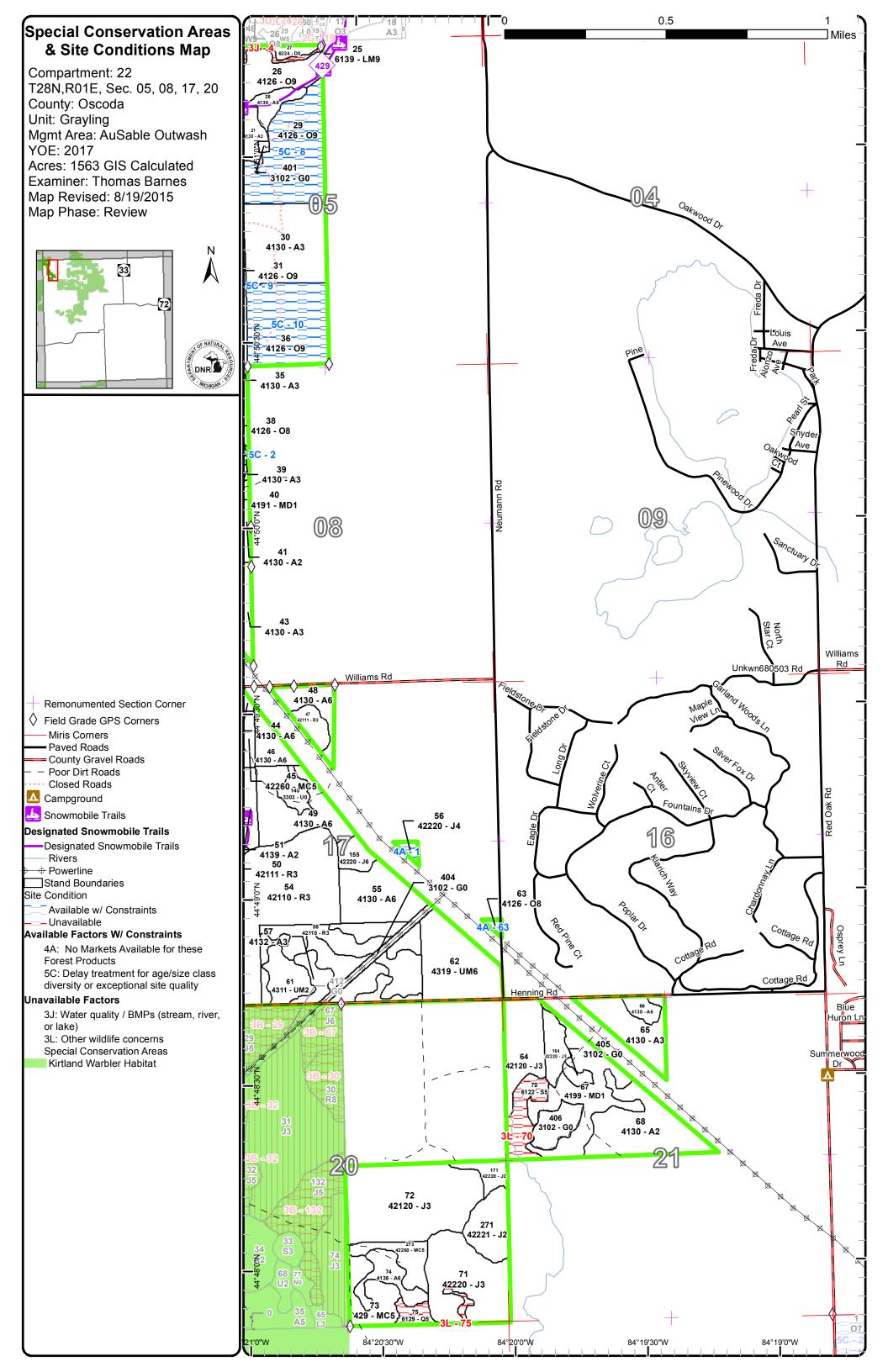
Base feature information, stand boundaries, cover types, and numbers **Proposed treatments** Site condition boundaries Details on the road access system

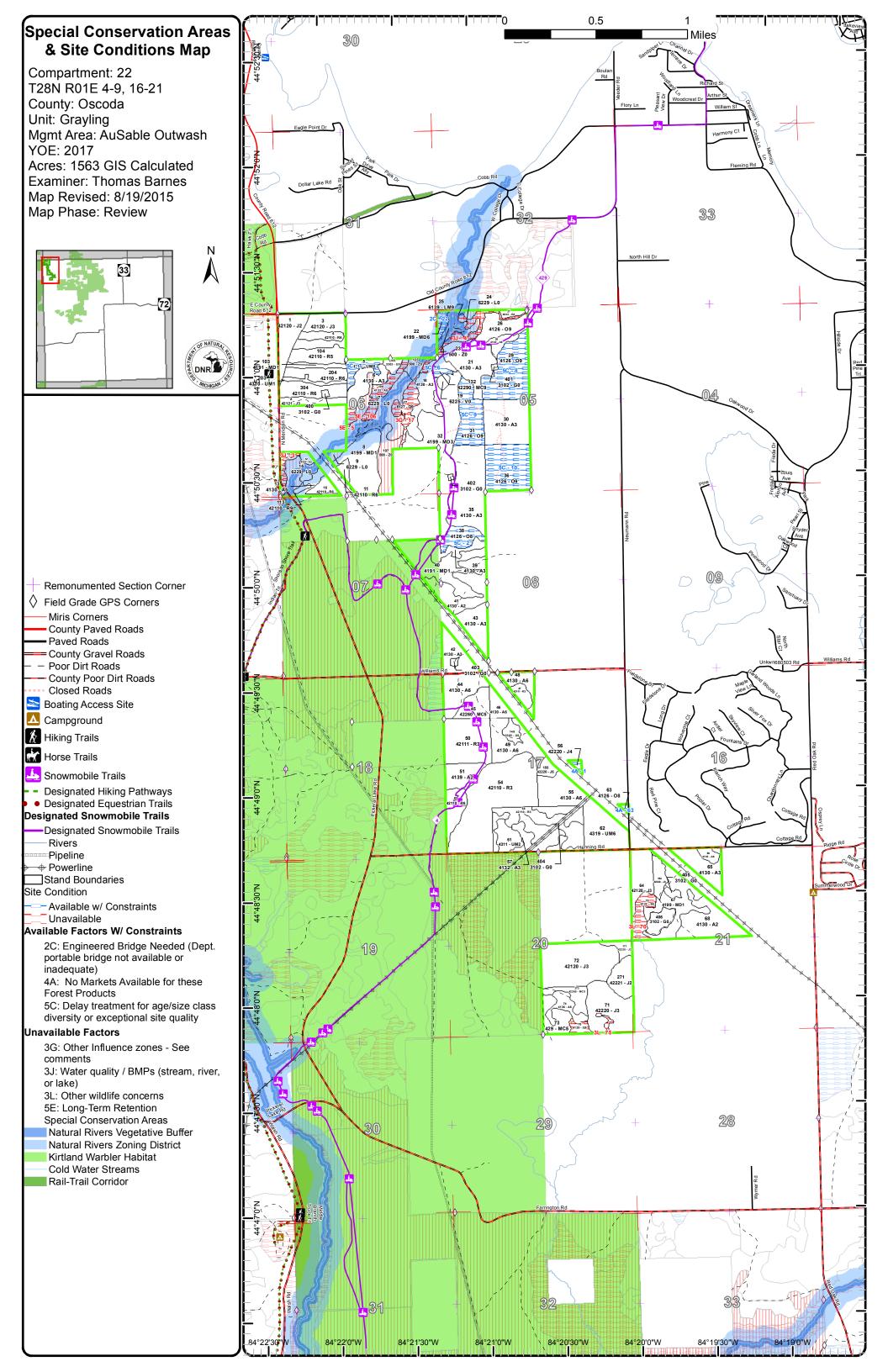


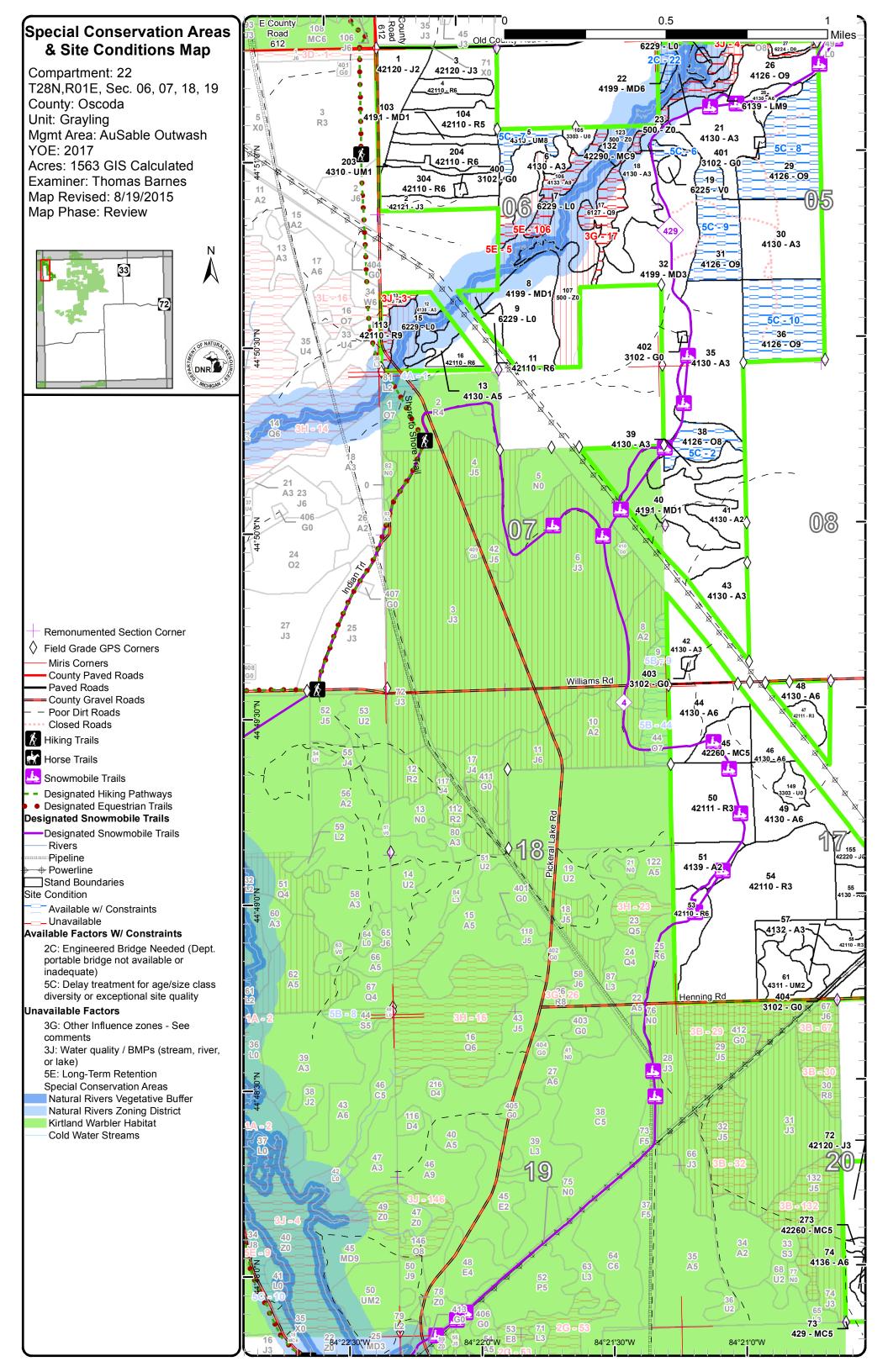












Grayling Mgt. Unit

Compartment 22 Year of Entry 2017

Thomas Barnes: Examiner

Age Class

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Aspen	0	90	27	255	51	48	6	0	0	12	0	0	0	0	0	0	0	0	489
Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Herbaceous Openland	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Jack Pine	0	31	96	73	0	8	0	0	0	0	0	0	0	0	0	0	0	0	208
Low-Density Trees	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	7	0	0	0	14	0	0	0	21
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14
Lowland Shrub	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	13
Mixed Upland Deciduous	0	131	6	42	0	0	0	0	0	0	5	0	0	0	0	0	0	0	184
Natural Mixed Pines	0	0	0	0	0	11	0	15	0	0	0	0	0	0	0	0	0	3	29
Oak	0	0	0	0	0	0	0	0	0	14	131	0	1	0	0	0	0	0	146
Red Pine	0	0	93	70	0	0	79	0	0	0	0	0	0	0	0	0	0	3	245
Treed Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Upland Conifers	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	15
Upland Mixed Forest	0	0	4	26	0	33	0	0	0	9	0	0	0	0	0	0	0	0	72
Water	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Total	127	252	226	466	51	115	85	15	0	35	156	0	1	0	14	0	0	20	1563



Report 2 – Treatment Summary

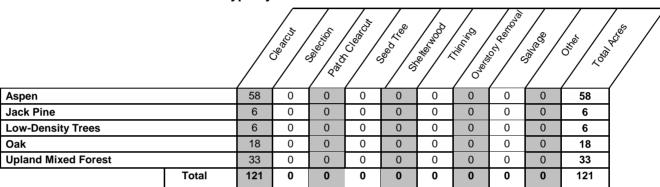
Grayling Mgt. Unit Year of Entry: 2017

Acres of Harvest

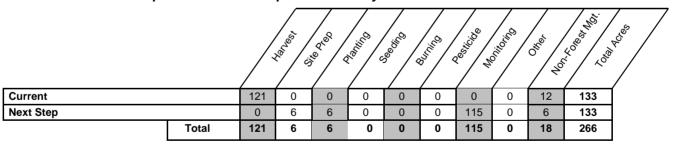
Compartment 22
Total Compartment Acres: 1,563

Commercial Harvest - 121 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



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
26	72022026-Cut	18.0	4126 - White, Black, N. Pin Oak	Sawtimber Well	91	81-110	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	Proposal

Habitat Cut: No Site Condition:

Prescription Final harvest with retention, follow standard retention guidelines. Include chipping, low stump as well as snowmobile trail specs. Focus retention

along snowmobile trail and that portion of stand south of trail. Specs:

Next Step Treatments:

Acceptable Stand should regenerate to a mixture of oak, aspen, red maple and some conifer resulting in a moderately stocked stand.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

6.5 48 Proposal 72022028-Cut 4130 - Aspen Poletimber Unspec Harvest Clearcut with 413 - Aspen Even-Aged Well ified Retention

Habitat Cut: No Site Condition:

Prescription Final harvest with retention, follow standard retention guidelines. Include chipping, low stump, drumming log and snowmobile spec. Focus

Specs: retention in small island's along the snowmobile trail.

Next Step Treatments:

Acceptable Aspen with associated species resulting in a moderate to well stocked stand.

Regen:

Old next step comments:

Other Comment:

Proposed Start Date: 10/1 /2016

72022049-Cut 26.5 4130 - Aspen Poletimber 39 Unspec Harvest Clearcut with 4139 - Aspen, Even-Aged Proposal Well ified Retention Mixed Deciduous

Habitat Cut: No Site Condition:

Prescription Final harvest with retention, follow standard retention guidelines. Incorporate drumming log spec and require chipping. Also use low stump spec

to facilitate chipping operation. Specs:

Next Step

Treatments:

Acceptable Aspen with mixed associated species resulting in moderate to well stocked stand.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

55 72022055-Cut 24.6 4130 - Aspen Poletimber 40 Unspec Harvest Clearcut with 413 - Aspen Even-Aged Proposal Well Retention

ified

Habitat Cut: No Site Condition:

Prescription Final harvest with retention, follow standard retention guidelines. Include chipping and low stump spec as well as drumming log spec.

Specs:

Next Step **Treatments:**

Acceptable Aspen with mixed species resulting in a moderate to well stocked stand.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016 S t Compartment: 22 Year of Entry: 2017

DNR
Annroval

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
62	72022062-Cut	33.5	4319 - Mixed Upland Forest	Poletimber Well	40	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal

Habitat Cut: No Site Condition:

Prescription Final harvest with retention, follow standard retention guidelines. Include chipping, low stump and drumming log spec for this sale.

Specs:

Next Step Treatments:

Acceptable Stand should regenerate to a mixture of conifer and hardwood species resulting in a moderate to well stocked stand.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

149 72022149-Cut5.7 3303 - Mixed Low Density TreesNonstocked Unspec Harvest lifedClearcut Herbaceous310 - Herbaceous

Openland

Habitat Cut: No Site Condition:

Prescription Final harvest all species without retention.

Specs:

Next Step Treatments:

Acceptable Maintain as a wildlife opening in the areas that don't have natural regeneration of a mixture of species.

Regen:

Other The areas that do not regenerate heavily should be maintained as per wildlife opening maintenance requirements. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

155 72022155-Cut 6.1 42220 - Natural Poletimber 40 Unspec Harvest Clearcut 4211 - Planted Even-Aged Proposal Jack Pine Well ified Red Pine

Habitat Cut: No Site Condition:

<u>Prescription</u> Final harvest without retention due to size. Chipping and low stump spec to help facilitate planting operation.

Specs:

Next Step SitePrep, Trenching; Planting, Replant; Monitoring, Artificial Regen(3yr)

Treatments:

<u>Acceptable</u> Planting density to ensure a fully stocked stand of red pine.

Regen:

Other Stand is small so the planting of red pine could be pulled. Expect stand to have aspen expansion from treated stands to both the north and

Comment: south. Old next step comments:

Proposed Start Date: 10/1 /2016

405 72022405-NF 2.5 3102 - Grass Nonstocked Unspec NonForestMgt Other - Specify 3102 - Grass Proposal

ified

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,

<u>Specs:</u> brushing, burning and herbicide application.

Next Step

Treatments:

Acceptable Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

Grayling Mgt. Unit Report 4 -- Treatments

Nonstocked

Compartment: 22 Year of Entry: 2017

Proposal

t а **Cover Type Treatment** Acres Stand Size Stand BA **Treatment Treatment** Age **Approval** n Objective **Density** Method Status d Name CoverType Age Range Type Structure 406 72022406-NF 3102 - Grass Unspec NonForestMgt Other - Specify 3102 - Grass

Habitat Cut: No Site Condition:

9.7

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

ified

brushing, burning and herbicide application.

Next Step Treatments:

s

<u>Acceptable</u> Regen:

Old next step comments:

Comment:

<u>Other</u>

Proposed Start Date: 10/1 /2016

Total Treatment 133.0 Acreage Proposed:

Compartment: 22

Grayling Mgt. Unit

Thomas Barnes : Examiner Year of Entry: 2017

Total	Acres	Acres Avail	Acres		Domina	nt Site	Con	dition	2		
Acres	Available	With Condition		!	2C	4A		3G	3 J	3L	5E
488	467	0	22	Aspen		<u> </u>			6	Г	15
3	3	0	0	Bog							
21	21	0	0	Herbaceous Openland							
207	206	2	0	Jack Pine		2					
10	10	0	0	Low-Density Trees							
20	0	0	20	Lowland Conifers				14		7	
14	0	0	14	Lowland Mixed Forest					14		
57	57	0	0	Lowland Shrub							
13	0	0	13	Lowland Spruce/Fir						13	
185	180	5	0	Mixed Upland Deciduous	5						
29	26	3	0	Natural Mixed Pines			3				
146	18	129	0	Oak		1	127				
246	246	0	0	Red Pine							
3	3	0	0	Treed Bog							
15	15	0	0	Upland Conifers							
73	64	9	0	Upland Mixed Forest			9				
33	33	0	0	Water							
1,563	1,347	147	69	Total Forested Acres	5	3	139	14	20	20	15
	86%	9%	4%	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.

	Dominant Site ond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	4A: No Markets Available for these Forest Products	2	Unspecified	Unspecified	Unspecified	Unspecified
Co	mments:						
2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	14	Unspecified	Unspecified	Unspecified	Unspecified
Со	mments:						

Grayling Mgt. Unit

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Compartment: 22 Year of Entry: 2017

3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	6	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	14	3L: Other wildlife concerns	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified
	Comments:						
5	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	3	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	44	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Grayling Mgt. Unit
Thomas Barnes : Examiner

Compartment: 22 Year of Entry: 2017

9	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	28	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	41	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
17	Unavailable	3G: Other Influence zones - See comments	14	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
(Comments:						
22	Available	2C: Engineered Bridge Needed (Dept. portable bridge not available or inadequate)	5	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified
(Comments:						
63	Available	4A: No Markets Available for these Forest Products	1	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
70	Unavailable	3L: Other wildlife concerns	13	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

Grayling Mgt. Unit

Compartment: 22 Year of Entry: 2017 **Thomas Barnes : Examiner**

75	Unavailable	3L: Other wildlife concerns	7	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
106	Unavailable	5E: Long-Term Retention	13	3L: Other wildlife concerns	3G: Other Influence zones - See comments	Unspecified	Unspecified
С	omments:						

Mgt. Unit

Compartment: #Type! Year of Entry:



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Grayling Mgt. Unit Compartment: 22
Year of Entry 2017



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

Conservation Area	n Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen condistocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	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 a PA 451, and the Federal Endangered Species Act of 1973. This species plans in various stages of review. As of now only two ex Plover 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 sp approved 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 locat folder.	Zoning District is a 400 foot buffer for 00 feet. To view specific Zoning Districts

S t	Grayling	g Mgt. Unit		Report 8	Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42120 - Planted Jack Pine	Sapling Medium	20.8	5	Immature	Jack pine plantation with scattered oak and some aspen regen. Grass and sweet fern ground cover with some snags still standing.
						OPIC - FMD: (up-date) Harvested in winter 08/09 sale# 720610701 FTP#C72-617 (old comments)60-65 year-old JP poles w/ scattered older JP saw. Nice advanced oak saps and 2 strips of underplanted RP from '64. JP stems dying individually. Final harvest & replant along with stand 2. Spec the cut so that all of the underplanted RP is removed also (it's extremely variable in size & stocking from being suppressed for so long). J5/J7/R4. Planted Jack Pine May, 2010 per C72-617.
2	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	10.2	5	Immature	Stand harvested in winter of 09 and planted in 2010. Merged with stand 102, small aspen stand with roughly 25% aspen rest of open with natural jack pine.OPIC - FMD: (up-date) Harvested in winter 08/09 sale# 720610701 FTP#C72-617 (old comments)Older oak & JP components declining, younger JP/WP component inadequate stocking. Set clock back to zero: final harvest, trench & plant to JP along w/ stand 1. Scattered TA could present problems for JP regen - plant around it. Stand age based on older JP component. Fence along S edge is in trespass see survey folder. J5/J7/O4. Planted Jack Pine May, 2010 per C72-617.
3	42120 - Planted Jack Pine	Sapling Well	22.2	12	Immature	Jack pine plantations planted in 2003, doing very well with high density and very little understory.
						OPIC - FMD: Stand was cut in '99 & trenched & planted to JP. Stand planted in 6/2003 to 2-0 JP per C72-468. Good survival. Some spots thick with seeded JP from harvest. Used preharvest SI.
4	42110 - Planted Red Pine	Poletimber Well	7.1	51	51-80	Planted red pine in 1964 under jack pine. In 1999 stand harvested and all species removed other than Red pine. Grassy understory with a small wet depression on the western side of stand. Stand 104 and 204 have similar treatment in 1999. Site index is roughly 50.
						OPIC - FMD: RP planted under JP in '64. JP/O/A removed in '99. Wide range of diam & heights (3"-10" DBH, 10'-50' tall). Responding to release from the overstory removal. 1/10-ac bog at W end. SI low due to suppression from JP/O overstory.
5	4310 - Pine, Oak Mix	Sawtimber Medium	9.2	86	1-50	Sparse stand with oak and jack pine as dominate species, poor quality (open grown). Jack pine has been filling in with a diverse DBH. Illegal metal elevated deer blind along north end. Three BA swings were taken with average BA of 62. Site is PVCd.
						OPIC - FMD: Sparse, open stand with v. poor-quality, declining NPO, WO in better shape, short brushy JP & WP poles, & an occasional RP saw. Previous OI decision was to develop (with stand 105) for wildlife by opening maintenance/creation. Notes also indicated to treat as an oak savannah. O7/O4/J4

S t	Graylin	Grayling Mgt. Unit			– Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
6	4130 - Aspen	Sapling Well	18.7	6	Immature	Stand harvested in 09, nice regen with varying densities. Stand passes regen survey. RMZ left along the creek is included in this stand. Retention was left as part of this stand at the southern end of the stand. Will be a nice wildlife stand.
						OPIC - FMD: (up-date) Harvested in winter 08/09 sale# 720610701. Red and white pine left. (old comments) This "stand" is made up of several aspen clones that vary in age, size & condition & are separated by U/G inclusions & have JP/RP/WP poles & RP/O saw scattered throughout. Most of the clones are mature, some vastly overmature, & the younger clones tend to have a mix of overmature & young stems. Final harvest the aspen, JP, RM & oak, leaving the RP & WP since it is heaviest along the wetland interface. The Middle Branch of Big Creek is part of the AuSable's Natural Rivers designation: leave a 150'-foot uncut buffer between the river's edge and the treatment boundary. While aspen is the management objective, a mix of regen is expected & acceptable. SI not done on the overmature component. A4/A7/R7/M4
8	4199 - Other Mixed Upland Deciduous	Sapling Poor	36.7	2	Immature	Stand harvested in winter of 2013. Stand is showing signs of good regeneration but only one growing season since harvest, do not think it will be an issue for this stand to pass the regen survey, acceptable regen is mixed composition of natural regen and from what is currently present this will happen. Stand also has a retention inclusion along stand 107 and 7 providing RMZ for water bodies.
						OPIC - FMD: Poor-quality NPO saw w/ pockets of TA & U/G inclusions, more RP/WP to the N & E along the wetland edge. Stand had 2, 5-spot openings cut in '99 (5 ac. Total). They weren't effective in terms of securing seed-source oak regen, but the patch cuts did demonstrate that the oak stump sprouts were fast-growing enough to get above the browse line. Cut all oak (6" & up), aspen (2" & up) & red maple, with the goal of regenerating oak, however a mixed composition of natural regeneration is expected and acceptable. Leave the scattered RP & WP since it is concentrated along the stand's wetland interface. The Middle Branch of Big Creek is part of the AuSable's Natural Rivers designation: leave a 150-foot uncut buffer between the river's edge and the treatment boundary. Set up as one sale with stand 10. Harvest update: was cut by December 2013 (72-041-11-01), 6" DBH & up on the oak, and everything else except RP & WP. Stated cruise residual of 1 BA pine.
11	42110 - Planted Red Pine	Poletimber Well	3.5	51	51-80	Very similar to stand 16, third row thinned in 1998, treat stand when stand 16 is treated. Consumers ROW separates stands 16 and 11.
						OPIC - FMD: Planted in '64, 3rd row thinned in '98 with JP/O/A removed. Fairly uniform poles.
12	4130 - Aspen	Sapling Well	2.7	17	Immature	Young stand harvested in 1998, RMZ left along the creek. OPIC - FMD: Final harvested in '98. 5-10' A3 with small openings & JP seedlings/oak stump sprouts/ cherry brush. An uncut buffer of overmature JP/TA/RP was left along the creek's edge. SI from stand 213.

S t	Graylin	Grayling Mgt. Unit			- Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
13	4130 - Aspen	Poletimber Medium	6.3	47	1-50	Pole sized aspen in good shape, sandwiched between RP stands. Treat stand when adjacent RP stand are treated. Stand is PVCd with a good SI of roughly 65.
						OPIC - FMD: TA on former floodplain, most stems moved into the pole class, scattered RP saw. If you go with the Oscoda Co. survey monuments vs. the DNR monument, this stand also includes a 1-chain-wide strip of misc JP/NPO/U/G (~1.5 acres) between the S edge of stand 16's RP plantation & the Pvt.
16	42110 - Planted Red Pine	Poletimber Well	6.4	51	51-80	Stand thinned in 1998, stand has responded well from the thinning on the border of becoming a log sized stand. Sparse understory.
						OPIC - FMD: Planted in '64. 3rd row thinned in '98 along with JP/A/O removed. Range of diam & heights, a lot of doubles & forked tops. When ready to thin, thin stand 113 at the same time. R5/R7
17	6127 - Lowland Pine	Sawtimber Well	13.6	135	111-140	Large diameter red and white pine with associated hardwood species. Stand is bordering the Middle Branch Big Creek flood plain. Kotar classification is unclassified lowland. Treating stand would convert to lowland hard woods. Good wildlife travel corridor and vast majority of stand falls within either the natural rivers or cold water stream riparian zone. Three BA swings were taken with stand average of 115. Beaver activity on the north end of stand.
						OPIC - FMD: Super-canopy RP & WP circa late 1800's w/ fire-scarred boles. WP & E (RM) filling in below. Stand borders creek floodplain & has strips of tag alder swamp. Removal of the RP would convert the stand to a lowland hardwood type with a WP component. Has greater importance to leave as a riparian zone buffer for as long as possible, given the recent & currently-presdcribed cuts adjacent. R8/W7/E4
18	4130 - Aspen	Sapling Well	24.2	17	Immature	Aspen stand cut back in 1998 that has very good regen with a nice mix of species. Site if primarily PVCd and unclassified lowland.
						OPIC - FMD: Cut in '98. 10-15' aspen regen with RM, oak sprouts & U/G inclusions. TA predominantly. Heavier to RM, Cherry & oak sprouts in the S1/4. Oak stumps sprouted well. Used stand 6 SI.
21	4130 - Aspen	Sapling Well	33.1	27	Immature	Good dense stand of aspen with mixed associated species.
						OPIC - FMD: 20-30' aspen regen with RM & oak sprouts. BTA with some TA. Cut in '87. Used stand 28's SI
22	4199 - Other Mixed Upland Deciduous	Poletimber Well	4.8	90	51-80	Isolated stand in corner of compartment, not good access bordered by pvt and Middle Branch big creek. Keep stand as is and site condition for diversity.
						OPIC - FMD: Small stand across creek with no public access. Sign trespass & 2 permanent deer blinds. Mix of NPO, young & overmature TA, & RM with scattered large RP, WP poles & saps. Beaver dropping a lot of TA. Used stand 26's SI. Stand Condition coded 8 because its S & E edges are within a Natural Rivers corridor, an HCVA. O7/M4/A4

S t	Grayling	Grayling Mgt. Unit			- Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
25	6139 - Mixed Lowland Forest	Sawtimber Well	14.0	132	81-110	Diverse stand in age, species composition and diameters. Average age for the pine was roughly 132 and oak was low 90's. Understory fairly developed. Site condition stand as a good travel corridor for wildlife and because of close proximity to creek.
						OPIC - FMD: Uneven-aged mixed pine / E stand along L/Q/Z types on mostly low ground. Supercanopy RP & WP with small WP saw & WP/RP/JP poles, overmature TA pockets. Excellent value as a buffer between wetlands & intensively managed aspen & oak stands. Includes islands of RP/WP/JP that are inaccessible at this time. SI on the younger saw. Stand Condition coded 8 because its SW edge is within a Natural Rivers corridor, an HCVA. W7/W4/R7/A4/O4/M4
26	4126 - White, Black, N. Pin Oak	Sawtimber Well	18.0	91	81-110	Thinned in 1999, stand has responded well to the thinning understory is well developed with regen being stump sprout and seedling sprouts. Average stand BA was 83. Stand is PArVha/PArVVb.
						OPIC - FMD: Thinned in '99, all aspen & RM removed & marked oak down to 70 BA. Decent RO on hilltop, quality decreases downhill toward L/Q. Oak stump sprouts heavily browsed. Residual oak responding ot release. Used the old SI; it better fits the stand's overall appearance than the SI's taken this time (68-78). O8/O4
28	4130 - Aspen	Poletimber Well	6.5	48	Unspecified	Nice stand of aspen pole log size, with some conks forming. Oak is sawlog size and of fair to good quality. SI is roughly 75 and kotar is PArVHa/PArVVb.
						OPIC - FMD: Aspen cut in '67 with residual oak saw. BTA poles healthy & growing well. Scattered overmature TA is declining. Large RM saplings below. Let BTA mature & wait until the RM has grown to 2"+ DBH so that it will be removed when the aspen is ready to be regenerated. A5/O7
29	4126 - White, Black, N. Pin Oak	Sawtimber Well	44.0	92	51-80	Stand was thinned in 1997 removing all maple and aspen, oak marked down to 70 BA. Average BA for the stand was 75 with a site index of 64, heavy regen to maple and aspen, however, very little advanced oak regen. Fair to good quality oak in crowns look healthy. Hold stand for another 10 years allow maple and aspen regen to grow past the 2" dbh then harvest stand, giving oak a better chance to compete. Stand is both PVCd and PArVHa/PArVVb.
						Thinned in '97; all RM & aspen removed & oak marked down to 70 BA. Decent-quality RO on rolling terrain, some epicormic branching. Thick RM & aspen regen, few oak removed & little stump sprouting. Thinning gave the RM & aspen a good head-start. O8/O4
30	4130 - Aspen	Sapling Well	40.1	26	Immature	Stand cut in 1989, very good regen with good stem density. Stand is on the edge of being a pole size stand. Stand is primarily PArVHa/PArVVb.
						OPIC - FMD: Cut in '89. 20-30' aspen regen (mostly BTA) with RM & oak sprouts. Used stand 28's SI.

s t	Grayling	Grayling Mgt. Unit			Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	4126 - White, Black, N. Pin Oak	Sawtimber Well	28.3	92	51-80	Stand harvested in 1997, three BA swings were taken with BA average of 58. Heavy maple presence in the understory with few oak saplings present. Hold stand for another 10 years to allow understory to grow a bit more and allow oak saplings more time.
						OPIC - FMD: All JP, aspen, RM were cut in '97 & oak marked in a shelterwood/thin. Decent RO saw with 15-20' aspen & RM regen below. Little oak removed, little oak regen. O7/O4
32	4199 - Other Mixed Upland Deciduous	Sapling Well	62.0	7	Immature	This stand is composed of stands 20, 32, 33 and 34 all were harvested in 2008. Good natural regeneration of all species removed and densities vary a little over the stand. Oak is only species with pole size timber as one of the old stands specs was to leave all oak < 6". Acceptable regen for all stands was a mixed of species and all older stands pass the regen survey.
						OPIC - FMD: Poor NPO, dieback in mature JP, overmature TA, good advanced oak regen 01-03, along w/ WP/RP saps. Cut all JP, NPO & aspen. Leave JP tops scattered for seed. Cut when the ground is not frozen to maximize scarification. Leave all RP/WP for additional seed. Cut will release existing oak regen, secure more oak through stump sprouting, & regenerate the aspen. Will perpetuate the existing mixed species composition. Treat with stands 20, 33 & 34. O7/J4/J7/R7. Cut under 720620701 (Tres Amigos) by Carroll's Forest Products in fall 2008.
35	4130 - Aspen	Sapling Well	53.9	26	Immature	Harvested in 1989, nice dense stand with oak and maple stump sprouts. Red and jack pine scattered throughout stand.
33						OPIC - FMD: Cut in '89. 20-35' aspen, mostly BTA, with TA mixed in & RM, RO stump sprouts, occasional RP/JP poles & saps. Some pockets approach O3. Oak stump sprouts are +/-equal in height with the aspen & are doing good. Used stand 28's SI.
36	4126 - White, Black, N. Pin Oak	Sawtimber Well	41.0	93	81-110	Thinned in 1998 and stems have responded well and doing very well. Understory is well developed and heavy to red maple. Average BA was 100 and SI 65. Stand is PArVHa/PArVVb.
						OPIC - FMD: Thinned oak in '98 & all RM & aspen removed. Decent-quality oak, responding to release. A few oak stumps sprouting & getting above the browse line, but still well below the thick RM regen. O9/O4
38	4126 - White, Black, N. Pin Oak	Sawtimber Medium	14.2	81	51-80	East end of stand had a higher component of aspen. Mixed stand of log and pole size stems of fair quality and good crown development. Understory is patchy in density throughout stand. Leave for another 10 years then remove overstory. Stand is entirely PArVHa/PArVVb, SI was roughly 43.
						OPIC - FMD: Sparse, open stand with mature oak, but also has a distinctly younger age class of oak poles in their early 40's that are healthy & have good crown development, & O3 saps in pockets. BA of overstory saw so low that it doesn't appear to be hindering the younger oak component's development. Look at removing the mature oak component in 10 or 20 years when the RM understory competition reaches >2" DBH & will be removed during harvest. Let small overmature aspen component finish breaking up it is minor & the oak doesn't need any aspen regen competition. O7/O4

S t	Grayling	Grayling Mgt. Unit				Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
39	4130 - Aspen	Sapling Well	8.8	22	Immature	Very similar to stand 41, however, stem density is greater with a good mix of oak and maple. Stand is a mix of PVCd and PArVHa/PArVVb.
						OPIC - FMD: 15-25' TA within '93 tornado salvage area. Used stand 28's SI
40	4191 - Mixed Upland Deciduous with Conifer	Sapling Poor	42.4	22	Immature	Salvage in 1993 following a tornado, poor quality stems not growing like stands 39 or 41. Was a U type but has grown into a forested stand but low crown closure of mixed species. Stand is PVCd.
						OPIC - FMD: Sparsest area of the '93 tornado salvage sale; lowest ground & poorest site. Has scattered JP small poles & regen, some oak sprouts, but less than J1 on average. G/U
41	4130 - Aspen	Sapling Medium	32.4	21	Immature	Salvage cut from tornado damage from 1993. Lower end of canopy closure as there are open areas throughout the stand with low density trees, openings not large enough to delineate. Good mix of speices with pipeline running thru stand. Stand is PVCd.
						OPIC - FMD: 10-15' TA & BTA, cut in '93 tornado salvage sale. Varying denisty aspen A0-A3 with U/G inclusions, JP seedlings, RM & oak sprouts. O3 near the W edge. Used stand 44's SI. A2/O1
42	4130 - Aspen	Sapling Well	18.1	24	Immature	Nice stand of aspen, primarily quaking, stand harvested in 1991. Stand is primarily PVCd.
						OPIC - FMD: 10-40' aspen regen, mostly TA with BTA mixed in to S & E. Interior has areas of RM & oak regen with scattered JP saps. Ranges from A1/M2 to M3/O1 to A3. Cut in '91. Used stand 44's SI. A2/M1/O1
43	4130 - Aspen	Sapling Well	19.4	24	Immature	Stand harvested in 1991, few opening starting to fill in. Varying density of oak and red maple. Overall good looking stand. Kotar is PVCd.
						OPIC - FMD: Cut in '91. 15-20' tall TA with inclusions of U/G, J1, O2, Mr2. Was a varying-density mixed stand before harvest, so the the resulting regen is clumpy & variable. A2-A3 on average. Used stand 44's SI. A2/O1/M1/J1
44	4130 - Aspen	Poletimber Well	24.0	39	Unspecified	Stand cut in 1976, good mix of species mainly a pole stand with stems in both the sap and log stage. White oak that was left from prior harvest is looking healthy. Good site and entire stand is PArVHa/PArVVb.
						OPIC - FMD: Aspen was cut in '76 & all of the white oak was left for mast. These mostly large wolf trees are scattered throughout, with higher concentrations on the N side along the road & in the SW corner. TA & BTA poles & large saps approaching pole size. Scattered saw-sized aspen. Thick RM poles, some nice oak saps & a few RP saw. A4/O7/A1

S t	Grayling	Grayling Mgt. Unit			- Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
45	42260 - Natural Pine, Mixed Deciduous	Poletimber Medium	15.3	60	51-80	Diversity stand with mix of size classes and ages. averaged the age for Jack pine to 60, stand was diameter limit cut in 76 and some stems were residual from the prior cut. Stand can be treated during next inventory cycle.
						OPIC - FMD: JP poles & saw with pockets of TA & scattered RP/WO/NPO saw. Sparse pine/U/G type along border with stand 44. Surprisingly little dieback in the JP. Was diameter-limit cut in '76 so the stand is 2+ aged. Did SI on the older JP but used '76 as the year of origin. J4/J7
46	4130 - Aspen	Poletimber Well	9.0	24	Immature	Stand harvested in 1991 regenerating well with good stem denisities and species mix. Stand is PArVHa/PArVVb.
						OPIC - FMD: Cut in '91. 20-30' aspen with RM & oak stump sprouts. Fully-stocked, but not all to aspen: ranges from A3 to M3 to O2M2. Used SI from stand 44.
47	42111 - Planted Red Pine, Mixed Deciduous	Sapling Well	6.3	21	Immature	Red pine planted in 1994, naturally regenerating oak, aspen and red maple are overtopping red pine.
						OPIC - FMD: 4-10' trenched & planted RP, most of stand being overtopped by TA/RM/oak sprouts. Planted in '94. Used previous OI's SI
48	4130 - Aspen	Poletimber Well	10.5	24	Immature	Stand harvested in 1991 regenerating well with good stem denisities and species mix. Stand is PArVHa/PArVVb.
						OPIC - FMD: 10-20' TA, RM & oak sprouts, spreads into planted RP stand in interior. Cut in '91. Used stand 44's SI. A3/M2/O1
49	4130 - Aspen	Poletimber Well	26.5	39	Unspecified	Stand was cut in 1976 diameter limit cut and is similar to stand 55. Small area adjacent (North) of illegal rd and old logging trail should be excluded when stand is treated during the next inventory cycle. There is a fence across the Consumers ROW that blocks access to portion of this stand and an illegal road runs along the inside of the fence onto state ground. Good site, kotar is PArVHa/PArVVb and site index is roughly 67.
						OPIC - FMD: Diameter-limit cut in '76 with residual RP & oak saw, some overmature TA stems, but mostly small poles. Inclusions of JP along W edge.
50	42111 - Planted Red Pine, Mixed Deciduous	Sapling Well	40.1	21	Immature	Stand planted in 1994 with red pine good natural regen of associated species. In some places natural regen is overtopping red pine. Nice looking stand that is PArVHa/PArVVb.
						OPIC - FMD: '94 trenched & planted RP 4-8' tall, with inclusions of A3 (mostly avoided by the trencher, but some RP overtopped by TA & also by seeded-in J1/J2 in areas). Seeded JP taller than the planted RP. Used stand's 53's SI

S t	Graylin	Grayling Mgt. Unit			- Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
51	4139 - Aspen, Mixed Deciduous	Sapling Medium	16.0	6	Immature	Stand was harvested in 2009, regeneration is a mix of aspen, maple, oak and jack pine stand passes the regen survey as acceptable regen. Overstory is residual oak and red pine log sized trees.
						OPIC - FMD: stand harvested under contract 720630701 "3 Foresters Aspen" JP, BTA & TA mostly overmature & breaking up. Large RO & WO wolf trees scattered throughout. The aspen is not evenly distributed, but is in dense clones. RM is filling in aggressively. Cut all JP, RM & aspen. Leave the scattered oak & RP. Harvest when the ground is not frozen to maximize scarification & leave JP tops for seed in areas where aspen regen won't be coming in. While aspen is the management objective, a mix of natural regeneration is expected and acceptable. Treat along with stand 52. A8/A4/O7/J7
53	42110 - Planted Red Pine	Poletimber Well	14.2	51	81-110	Stand thinned in 2006, stand is responding well to the thinning. Average BA is 100 with an SI of 60.OPIC - FMD: RP was planted around residual NPO, JP & RP so there are pockets of suppressed RP. TA young stems along the NW edge. Scheduled to be thinned with the rest of the plantation (stand 25 in Compt 21 YOE 2001). The stand's boundary has been painted in but no rows have been designated yet. Timber sale 72-049-03-01, Pickeral Lake Red Pine. Contract held by Bisballe Forest Product. Cut in December 2006. The stand is now R6. 01/04/2007 mm
54	42110 - Planted Red Pine	Sapling Well	92.9	17	Immature	Red pine planted in 1998 with other naturally regen species all doing well, in some places natural regen is overtopping the planted red pine. Denser pockets of aspen regen were planted around. Stand is PArVHa and PArVHa/PArVVb.
						OPIC - FMD: Trenched & planted in '98. 1-3' RP with cherry brush, seeded-in JP & clumps of A3. RP planted around aspen in some areas of stand. JP generally growing better than the planted RP. SI from stand 53.
55	4130 - Aspen	Poletimber Well	24.6	40	Unspecified	Stand is primarily aspen with residual oak and red pine left from the prior diameter limit cut. Where residual oak is present very little aspen, mostly oak and maple. Aspen is starting to form conks. Site index is good at 65 and kotar is PArVHa/PArVVb.
						OPIC - FMD: JP, aspen, & oak diameter-limit cut in '75 with RP/WO left. Sparse stand with U/G inclusions throughout, mostly small TA poles with a few BTA stems. TA not the best quality, some clones have sooty black fungus streaks around knots. Older TA stems (residual from '75 cut) are breaking up; aspen saps are filling in U/G areas. Stand has scattered RP saw & JP/NPO. A4/J4/R7
56	42220 - Natural Jack Pine	Poletimber Poor	1.8	40	1-50	Small pocket of Jack pine proposing disposal.
						OPIC - FMD: Diam limit cut in '75. Small JP poles with large saps approaching pole size. Used stand 155's SI. Proposed this small, isolated parcel for disposal along with stand 63. J4/J2

S t	Grayling	Grayling Mgt. Unit			- Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
57	4132 - Aspen, Jack Pine	Sapling Well	25.4	25	Immature	Merged 57, 157, 257, 59 and 259 as they were all treated at the same time in 1990 and are all very similar in species makeup. Stands are doing well and separated by natural jack pine and planted red pine stands that were treated at the same time. Small power line does bisect some of this stand with an illegal fence at the NE end of powerline. Kotar is a mix of PArVHa/PArVVb and PArVHa.
						OPIC - FMD: 15-25' TA regen with JP regen scattered within, some areas with RP planted but losing out to the TA. Used stand 55's OI.
58	42110 - Planted Red Pine	Sapling Well	23.7	21	Immature	Merged 58 and 60, planted red pine in 1994, in areas naturally seeded jack pine is over topping. Kotar is PArVha/PArVVb.
						OPIC - FMD: Trenched & planted RP 3-8' tall, 60-90% stocking, with seeded-in JP overtopping it in places. Will end up being a mixed RP/JP stand. Ranges from R1-R3. Used stand 53's SI.
61	4311 - Pine, Aspen Mix	Sapling Medium	26.1	25	Immature	Merged stands 61, 161 and 162 all harvested in 1990 along with stand 57. Primarily jack pine with aspen, oak and cherry. Stand is doing well, has powerline running thru it. Kotar is PArVha and PArVHa/PArVVb.
						OPIC - FMD: J1-J3, averaging J2, with TA mixed in. JP 5-10' tall. Natural regen resulting from harvest, so it is unevenly distributed. Is overtaking some of the planted RP. Used preharvest SI.
62	4319 - Mixed Upland Forest	Poletimber Well	33.5	40	51-80	Very mixed stand between pole and log. Several small openings and pockets of aspen in the pole to log size some stems starting to show conks. Jack pine is open grown and poor form 1-3 sticks. Areas of good oak regen with a mixture of white and hybrid oak. Average BA was 72. Site index for jack pine is roughly 50 but is influenced by open grown conditions kotar is PArVHa/PArVVb.
						OPIC - FMD: Diam limit cut in '75, leaving the WO. Sparse stand of short, shrubby JP, scattered TA clones, & scattered RP, oak saw with U/G inclusions throughout. Has O1-O3, 5-15' tall, in places, but averages to less than O1 overall. Let young JP & oak regen continue to develop. J4/A4/R7/O7
63	4126 - White, Black, N.	Sawtimber	1.1	110	1-50	Same as old OI comments
	Pin Oak	Medium				OPIC - FMD: Poor-quality oak saw & poles on small triangular lot surrounded by private. Adjacent landowners trespassed, grubbing a road through it. Proposed for disposal along with stand 56. O7/O4
64	42120 - Planted Jack Pine	Sapling Well	20.6	22	Immature	Trench and planted in 1993, dense JP stand with some oak. Stand is doing very well.
						OPIC - FMD: Trenched & planted JP 8' tall, gall rust common. Used old SI. Planting FTP was not completed over the entire harvested area, resulting in stand 164's spotty natural regen.

S t	Graylin	Grayling Mgt. Unit			– Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
65	4130 - Aspen	Sapling Well	19.8	6	Immature	Stand cut in 2009, some log sized oak were left. Stand is doing very well and passes the regen survey.
						OPIC - FMD: stand harvested under contract 720630701 "3 Foresters Aspen" Cut in '65 & KG bladed in '66. More poles than saw, individual stems dying, soot-streaked knots & false tinder fungus present. Pockets of JP along powerline & E dege, pocket of NPO in NW corner. Pvt signs incorrectly placed on state @ SE corner along Consumers Power ROW. Final harvest to regenerate aspen before it starts to really deteriorate. Cut in winter and leave the tops. Cut with stands 67, 68 & 69. SI averaged with stand 68's.
66	4130 - Aspen	Poletimber Well	4.3	25	Immature	Stand cut in 1990, good looking stand with nice stem densities and mix. Stand is PArVHa/PArVVb.
						OPIC - FMD: 15-25' TA regen with pockets of J2 at former landing & at S end. U inclusion at S end also. SI from stand 65.
67	4199 - Other Mixed Upland Deciduous	Sapling Poor	32.6	4	Immature	Stand cut in 2011, poorly stocked stand mostly of shrubby cherry with scattered aspen, oak and jp. FTP was on hold to see how natural regen was progressing. From a Jack Pine MO, natural regen would fail at this point in time. Heavy jack pine around the landing areas. Old OI SI is 50 and kotar is PArVHa/PArVVb. Having wildlife openings area in the vicinity, this stand may complement those openings with its sparse natural regen. Recommend accepting current natural regen.
						OPIC - FMD: stand harvested under contract 720630701 "3 Foresters Aspen" FTP#C72-685 Cut in '65 & KG bladed in '66 with many scattered immature JP stands left that then spread & developed into this 2+ aged stand. Double tops & gall rust cankers common. Stand yr of origin is based on harvest records, but there are younger & older age classes. While this stand does have a small-pole/large-sap component, most stems are merchantable. The oldest component is breaking up but the younger components are healthy, so this stand could be left to develop for 10 more years. I recommend final harvest & replanting to JP at this time, though, because this stand's JP type intermixes so much with Stand 68's aspen type; it would be more efficient to treat 67 at the same time as 68 in one integrated sale. Given the scattered aspen w/in the stand & along the boundary of stand 68, plant around areas w/ expected aspen regen. Cut as one sale w/ stands 65, 68 & 69. Note when establishing line: do not run the line out to the cleared powerline ROW Consumers Power did not clear to the edge of their property see survey folder regarding pin location. J6/J7

S t	Grayling Mgt. Unit			Report 8	- Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
68	4130 - Aspen	Sapling Medium	34.7	4	Immature	Stand cut in 2011, regen 5 - 10' with varying density and a few opening areas mixed in. A couple of retention patches were left as well. Stand was merged with stand 69, both stands pass the regen survey. Stand is both PArVVB and PArVHa/PArVVb.
						OPIC - FMD: stand harvested under contract 720630701 "3 Foresters Aspen" Cut in '65 followed by KG blade in '66 with small immature JP stands left. Mostly small diam TA poles, w/ more break-up & fungus than what you'd expect in <40 yr old aspen. Final harvest to regenerate aspen before it starts to really deteriorate. Also remove the scattered NPO, JP & RP. This stand has many low-density/U inclusions separating the aspen clones & a wide transition zone w/ the JP stand 67. Cut as one sale w/ stands 65, 67 & 69. Apply snowshoe hare specs to this stand & stand 69, but not to stand 65 (for visual reasons & because it is not contiguous w/ the swamp type to the SW). For this stand, 65 & 69, cut in winter and leave tops since they are near a major deer yard. Note when establishing line: do not run the line out to the cleared powerline ROW Consumers Power did not clear to the edge of their property see survey folder regarding pin location. A5/A7/R7
70	6122 - Black Spruce	Poletimber Medium	13.0	98	1-50	Lowland stand with spruce fir mix with a tag alder understory. Does have evidence of flowing water in the stand.
						OPIC - FMD: Sparse Q stand with open tag alder swamp below, some higher ground to the S with a 2'-wide drainage. Q slowly filling in. Used old SI.
71	42220 - Natural Jack Pine	Sapling Well	37.6	27	Immature	Harvested in 1988 not replanted has good natural regen. Stand does have some open areas within and these areas are being occupied by cherry.
						OPIC - FMD: 10' JP regen varying from J0 to J3, averaging J2 with U inclusions, particularly to NW. Cut in '88 & the FTP was cancelled because it was regenerating on its own. A portion (new stand 271) burned in August '04, splitting off stand 171. Used old SI.
72	42120 - Planted Jack Pine	Sapling Well	58.0	17	Immature	Stand was cut in 1998 and planted in 1999. Stand is doing well. Kotar is PArVha/PArVVb.
						OPIC - FMD: Cut in '97, furrow-seeded in '98. JP regen 3-5' tall with excessive stocking in areas. ~4 acres in the SE corner burned in '04, forming stand 172.
73	429 - Mixed Upland Conifers	Poletimber Medium	14.6	44	51-80	Mixed stand cut in 1971, with some residual oak and red pine of small log size left. Majority of stand is still pole size and doing well can be held for another 10 years. There are some open pockets within this stand. Kotar is a mix of unkown and PArVHa.OPIC - FMD: Was clearcut in '71 except for scattered seed trees. Mixed stand with small JP poles, scattered RP & JP saw, & balsam fire, NPO, RM & TA poles. Used stand 71's SI. J5/M4
74	4136 - Aspen, Mixed Conifer	Poletimber Well	10.6	44	51-80	Nice pole size timber should be ready for treatment during next inventory cycle.
						OPIC - FMD: Clearcut in '71 with seed trees left. Small diam TA poles, with A1 moving into the pole class. Scattered balsam fir. Used more conservative SI.

S t	Grayling	Grayling Mgt. Unit			– Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
75	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	6.7	98	51-80	Lowland conifer stand of pole size. Ground cover of moss and lab tea. Average stand BA was 60. Kotar is Unclassified lowland and PArVHa.
						OPIC - FMD: Cedar, black spruce, tamarack & RM with thick spruce regen. E1/2 of this stand is more of a D-type, with pockets of spruce & an occasional cedar on a sphagnum moss/labrador tea bog. Majority of this swamp type lies in section 29 (USFWS property) to the south. Used old SI
103	4191 - Mixed Upland Deciduous with Conifer	Sapling Poor	6.3	16	Immature	Open grown site harvested in 1999. Stand was not replanted, old comments are below regarding wildlife concerns. Stems are typical open grown bushy.
						OPIC - FMD: Cut in '99 with JP/O/A removed. Mostly upland brush w/ scattered JP/O regen & occasional RP/WP. Per Wildlife Division: do not replant; leave open to serve as a wildlife corridor.
104	42110 - Planted Red Pine	Poletimber Medium	16.2	51	51-80	Upper end of pole size not yet log stand. Good quality stand with nice crown ratios. Site index roughly 50. Three BA swings were taken and stand average was roughly 80.
						OPIC - FMD: JP/O/A removed in '99, W & E ends of stand were 3rd row thinned in "98. RP underplanted in '64: poles with a wide range of diam & hts, depending on amount of JP/O overstory, with better stocking & uniformity at the E end. Stand is responding to release. SI low due to overstory suppression.
106	4133 - Aspen, Mixed Pine	Sawtimber Well	12.5	89	81-110	Diverse stand left from the timber harvest due to proximity to the Big Creek. Keep stand as is and let nature takes its course. Will be a great wildlife stand.
						OPIC - FMD: Diverse mixed stand with overmature TA, supercanopy RP & WP, & NPO, filling in below with swamp hardwoods & good WP regen. Stand is on a peninsula bordered by beaver floodings & separated from stand 6 by two strips of tag alder slough. Beaver cutting & decadence are creating snags & recruiting significant coarse woody debris. While access to the stand is not impossible, I'd recommend letting nature take its course, given the proximity to the Middle Branch of Big Creek floodplain, the cutting that will be taking place in stand 6 and the number of aspen stands in the compartment that are under intensive management. The stand would provide habitat for that spectrum of wildlife that relys on overmature timber in the riparian zone. Used stand 6's SI, but used the previous Ol's stand age since my SI's were not on the overmature aspen. Stand Condition coded 8 because the stand's SE boundary is within a Natural Rivers corridor, an HCVA. A8/R7/M4/O4
113	42110 - Planted Red Pine	Sawtimber Well	3.4	112	81-110	Red pine stand of with varying ages ranging from 50 - 112 +. Small stand but unique enough to separate from 13. Treat stand when stand 16 is treated in 10 years. SI roughly 63, and stand BA average was 95.
						OPIC - FMD: Uneven-aged RP stand on former floodplain, range in size from super-canopy RP to RP seedlings. This small stand is split out from stand 13's aspen. Thin when the adjacent RP plantation (stand 16) is treated in the next 20 years. R9/R4

S t	Graylin	Grayling Mgt. Unit			- Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
132	42290 - Natural Mixed Pine	Sawtimber Well	2.7	151	81-110	Diverse stand of large pine and over mature jack and aspen. Surrounding area is being treated or has been treated heavily leave for age and structural diversity.
						OPIC - FMD: Multiple-aged RP stand on the N side of bog stand 19, with super-canopy RP moving into the snag class, smaller RP saw, poles & regen, overmature JP & TA & a little oak. Hold for vertical/age class diversity given currently prescribed treatments & A3 stands adjacent to it. R8/R4/J7/W4.
155	42220 - Natural Jack Pine	Poletimber Well	6.1	40	Unspecified	Poorly formed stand with pole and log sized trees. Site index is 45 and kotar is PArVHa/PArVVb.
						OPIC - FMD: Diam limit cut in '75, so have scattered mature JP over small poles & large saps. SI on older JP component; year of origin based on cut records. J5/J7
164	42220 - Natural Jack Pine	Sapling Well	8.4	25	Immature	Jack pine stand with varying density, form and dbh, stand was cut in 1990. Stand was supposed to be planted with 64 but it doesn't appear that happened.
						OPIC - FMD: 8-12' JP regen with very uneven distribution, J3 to U & all gradations in between. Might average out to J2. Denser to N than S, with U inclusions throughout. Was cut in 1990 as stand 64, but the planting FTP was incomplete, resulting in this stand. Used old SI
171	42220 - Natural Jack Pine	Sapling Medium	6.0	27	Immature	Harvested in 1988 not replanted has good natural regen. Stand does have some open areas within and these areas are being occupied by cherry. Site is PArVha/ParVVb.
						OPIC - FMD: Split from stand 71 by fire stand 271. Same as stand 71 except includes an uncut buffer of scattered mature RP/JP along the private line to the N.
203	4310 - Pine, Oak Mix	Sapling Poor	4.4	16	Immature	Harvested in 1999 was a U type now forested poor stem quality due to open grown conditions.
						OPIC - FMD: A2-A3 at W & E ends, U1/J1 in the middle with scattered RP saw, poles & saps. A2/U1/J1
204	42110 - Planted Red Pine	Poletimber Well	14.3	51	81-110	Upper end of pole size not yet log stand. Good quality stand with nice crown ratios. Site index roughly 53. Three BA swings were taken and stand average was roughly 100.
						OPIC - FMD: RP underplanted in '64. JP/O/A removed in '99, most of stand also 3rd row thinned. Has varying-size RP poles that are responding to release. Low SI due to years of being suppressed by JP/O overstory.
213	4130 - Aspen	Poletimber Well	6.2	52	Unspecified	Narrow strip of aspen along Pickeral Lake Rd and flood plain of creek. Site condition because of size and proximity to the creek. Stand is PVCd and SI is 64.OPIC - FMD: Aspen stand with~1/4 of stems not yet merchantable, but also with scattered TA saw, poor NPO saw, super-canopy RP, & WP regen filling in below. A5/R7/O7/W4

S t	Grayling Mgt. Unit			Report 8	- Forested	Stands Compartment: 22 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
271	42221 - Natural Jack Pine, Mixed Deciduous	Sapling Medium	15.6	18	Immature	Stand has sparse density resulting from harvest (1988) and fire (2004), but naturally regenerating. Stand age is a blended age of survivors from the fire and stems regenerated by the fire. Kotar is PArVHa/PArVVb, with grass, sweet fern and blueberry for ground cover.OPIC - FMD: Is that part of stand 71 that was burned by a wildfire in August '04. Mortality ranged from 0 to 100% in the 10' JP regen. The JP was already producing cones, so the fire may result in a second round of JP regen. Was ~J2/J3 before the fire, is J1/J2 currently. Was cut in '88 and naturally regenerated.
273	42260 - Natural Pine, Mixed Deciduous	Poletimber Medium	10.8	44	51-80	Pole size jack pine with mixed hardwood and some scattered Red Pine. OPIC - FMD: Same as stand 73 (split off by stand 173), except
						for more scattered RP saw. J5/R4/R7
304	42110 - Planted Red Pine	Poletimber Well	17.7	51	81-110	Upper end of pole size not yet log stand. Good quality stand with nice crown ratios. Site index roughly 57. Three BA swings were taken and stand average was roughly 90.
						OPIC - FMD: RP underplanted in '64. 3rd row thinned & JP/O/A removed in '98. RP poles vary in size, but are more uniform than in stands 4, 104 or 204. Stand is responding to release. R5/R7

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Compartment: 22

Year of Entry: 2017

Stand	Cover Type	Acres	Managed Site	General Comments:
7	6229 - Mixed lowland shrub	34.9	No	area primarily covered with tag alder, middle branch of big creek runs thru this stand.
				OPIC - FMD: Beaver flooding area containing the Middle Branch of Big Creek. Mix of open water, marsh grass, tag alder. Stand Condition coded 8 because it is within a Natural Rivers corridor, an HCVA.
9	6229 - Mixed lowland shrub	2.4	No	OPIC - FMD: Floodplain: tag alder with a 1/2-ac clump of TA poles. Beaver dam upstream from ROW bridge. Stand Condition coded 8 because it is within a Natural Rivers corridor, an HCVA.
15	6229 - Mixed lowland shrub	13.0	No	Evidence of beaver activity, Middle Branch of Big Creek runs thru this stand.
				OPIC - FMD: Middle Branch of Big Creek & its floodplain, with tag alder, spirea, salix. Beaver dam just upstream of Pickerel Lake Road culvert. Stand Condition coded 8 because it is within a Natural Rivers corridor, and HCVA.
19	6225 - Bog	2.9	No	Same as old OI comment.
				OPIC - FMD: Leatherleaf bog with JP snags around margin.
23	500 - Water	5.9	No	Beaver flooding with open water, within a Natural Rivers corridor, an HCVA.
				OPIC - FMD: Beaver-flooded area with open water, marsh grass & L. Stand Condition coded 8 because it is within a Natural Rivers corridor, an HCVA.
24	6229 - Mixed lowland shrub	6.6	No	Same as old OI comment.
				OPIC - FMD: L/N mix with tag alder, leatherleaf, marsh grass & some open water. Stand Condition coded 8 because its W edge is within a Natural Rivers corridor, an HCVA.
27	6224 - Treed Bog	2.8	No	Same as old OI comments.
-				OPIC - FMD: Leatherleaf bog with spruce regen filling in from the edges.
105	3303 - Mixed Low Density Trees	4.0	No	U type with a good mix of species scattered across the stand.
				OPIC - FMD: U/G type with scattered very poor quality NPO saw, bushy JP & a few RP saw. Decision last YOE was to develop for wildlife by upgrading the opening. It is filling in with upland brush.
107	500 - Water	21.1	No	Standing water with marsh perimeter, within a Natural Rivers corridor, an HCVA.OPIC - FMD: Shallow open water with marsh perimeter associated with the Middle Branch of Big Creek's floodplain. Stand Condition coded 8 because its N end is within a Natural Rivers corridor, an HCVA.
123	500 - Water	5.8	No	Beaver flooding with open water, within a Natural Rivers corridor, an HCVA.
				OPIC - FMD: Beaver-flooded area with open water, marsh grass & L. Stand Condition coded 8 because it is within a Natural Rivers corridor, an HCVA.

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Compartment: 22

Year of Entry: 2017

Stand	Cover Type	Acres	Managed Site	General Comments:
149	3303 - Mixed Low Density Trees	5.7	No	Open area filling in with trees. As per old OI Comment.
				OPIC - FMD: Upland brush with scattered oak & RP saw, filling in with JP/TA/BTA regen from edges.
400	3102 - Grass	0.9	No	Well site Greenwood B2-6 Permit 45847 MPSC 6384 Well
				OPIC - FMD: Well site dominated by spotted knapweed, with some grass.
401	3102 - Grass	0.7	No	Well Site Greenwood B2-5 Permit 45846 MPSC 6306 Well
				OPIC - FMD: Well site dominated by spotted knapweed, with some grass.
402	3102 - Grass	0.6	No	Well site dominated by spotted knapweed, with some grass.
403	3102 - Grass	1.1	No	Gas well site Greenwood D1-8 Permit 47144 MPSC 6351 Well
				OPIC - FMD: Well site dominated by spotted knapweed, with some grass.
404	3102 - Grass	5.3	No	Same as old OI. Fence in trespass at the NE end of powerline just before reaching consumers ROW.
				OPIC - FMD: Powerline ROW perpendicular to Consumers Power ROW.
405	3102 - Grass	2.5	Yes	Nice wildlife opening.
				OPIC - FMD: High quality wildlife opening, almost pure grass. Maintain as needed through FTP's.
406	3102 - Grass	9.7	Yes	Nice wildlife opening. OPIC - FMD: High quality wildlife opening, almost pure grass. Maintain as needed through FTP's.