DNR DNR

Compartment Review Presentation

Grayling Forest Management Unit

Compartment 249
Entry Year 2016
Acreage: 1,876

County Crawford

Management Area: Camp Grayling

Revision Date: 03/12/2014

Stand Examiner: Patrick Mohney

Legal Description:

T28N R2W Sections 19, 20, & 21 Northwest Lovell's Township, Crawford County

Identified Planning Goals:

To provide an area that allows for National Guard training while maintaining forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment.

Soil and topography:

Upland is mainly Grayling/Rubicon sand and the lowland is Tawas Lupton muck.

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

The entire compartment is under a long-term lease agreement with the Michigan National Guard, DMA (Act 154 P.A. 1935). This agreement provides for use by the military during their encampment, with no permanent buildings or improvements to be erected. Military needs take precedence over resource management needs on long-term leased lands.

There are private residences to the south near KP Lake. Range 40 is located to the north.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

Area is used for Military training.

Watershed and Fisheries Considerations:

The East Branch of the AuSable River is a designated natural river. Clear Lake has limited fishing opportunities due to winter kill situations.

Wildlife Habitat Considerations:

Outwash plain and ice contact ridges explain ecotype potential – river corridor with hemlock and white pine historically to west; red and white pine with red oak mix to east. This area makes for some nice aspen.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of ice-contact and 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. A gravel pit is located in Section 21 and potential is good in the upland areas. None of the compartment is leased for oil and gas, as it is within the Military area. The Antrim Shale has been developed for gas production three miles to the north.

Vehicle Access:

County Road 612 (paved), Kinney Road, and Briggs Road (poor dirt roads) are county roads. The sandy conditions of trail roads, heavy military use, and hilly terrain make vehicle access very difficult on trail roads throughout the compartment.

Survey Needs:

None needed at this time.

Recreational Facilities and Opportunities:

No designated recreational trails or facilities occur in the compartment.

Fire Protection:

Due to the hilly terrain and the sandy conditions of the roads and trails in the compartment, access is difficult for fire suppression equipment. Some areas may not be accessible by 4-wheel drive equipment.

Additional Compartment Information:

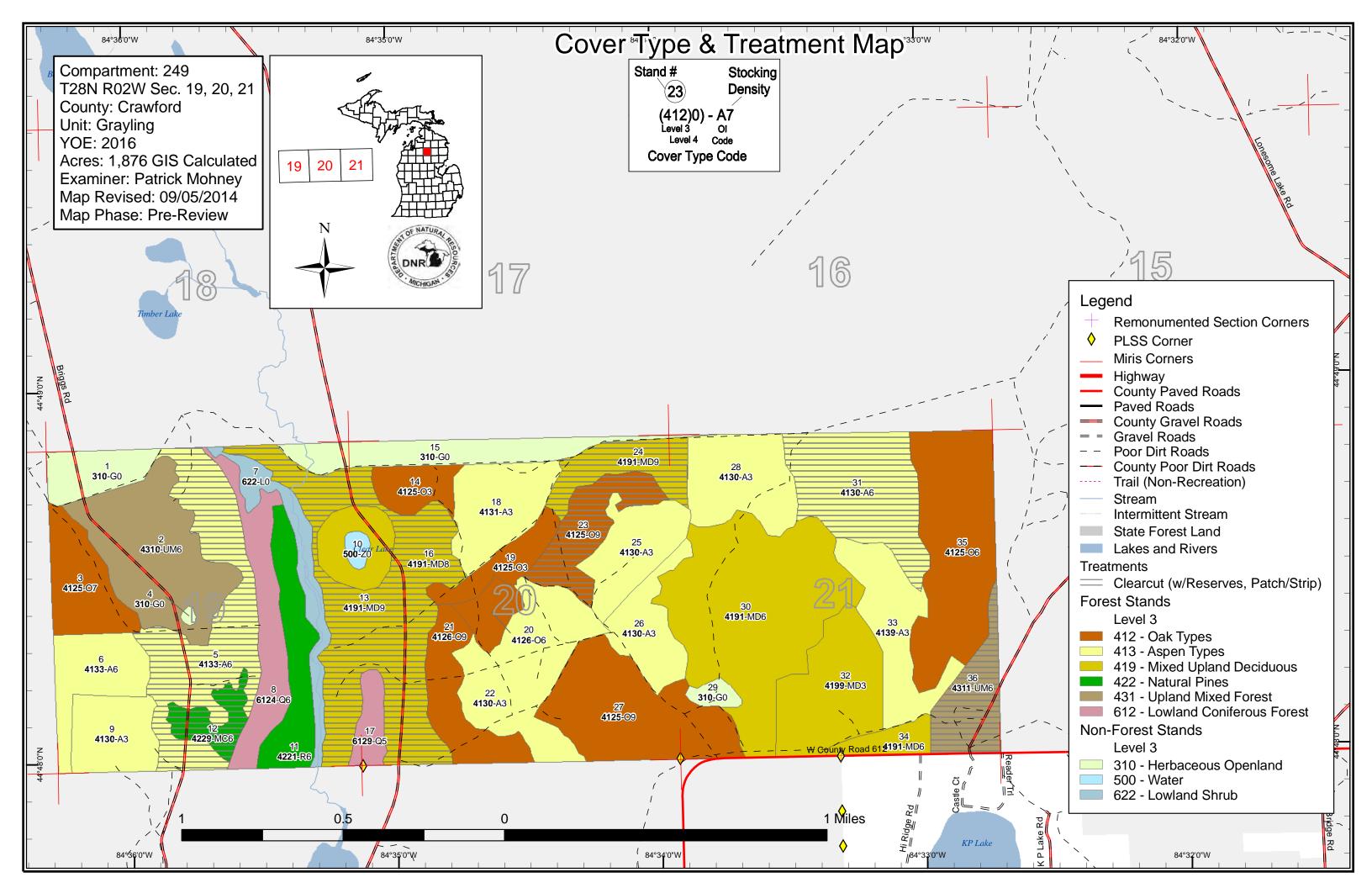
A wooden military observation tower is located in section 20 along the tank trail.

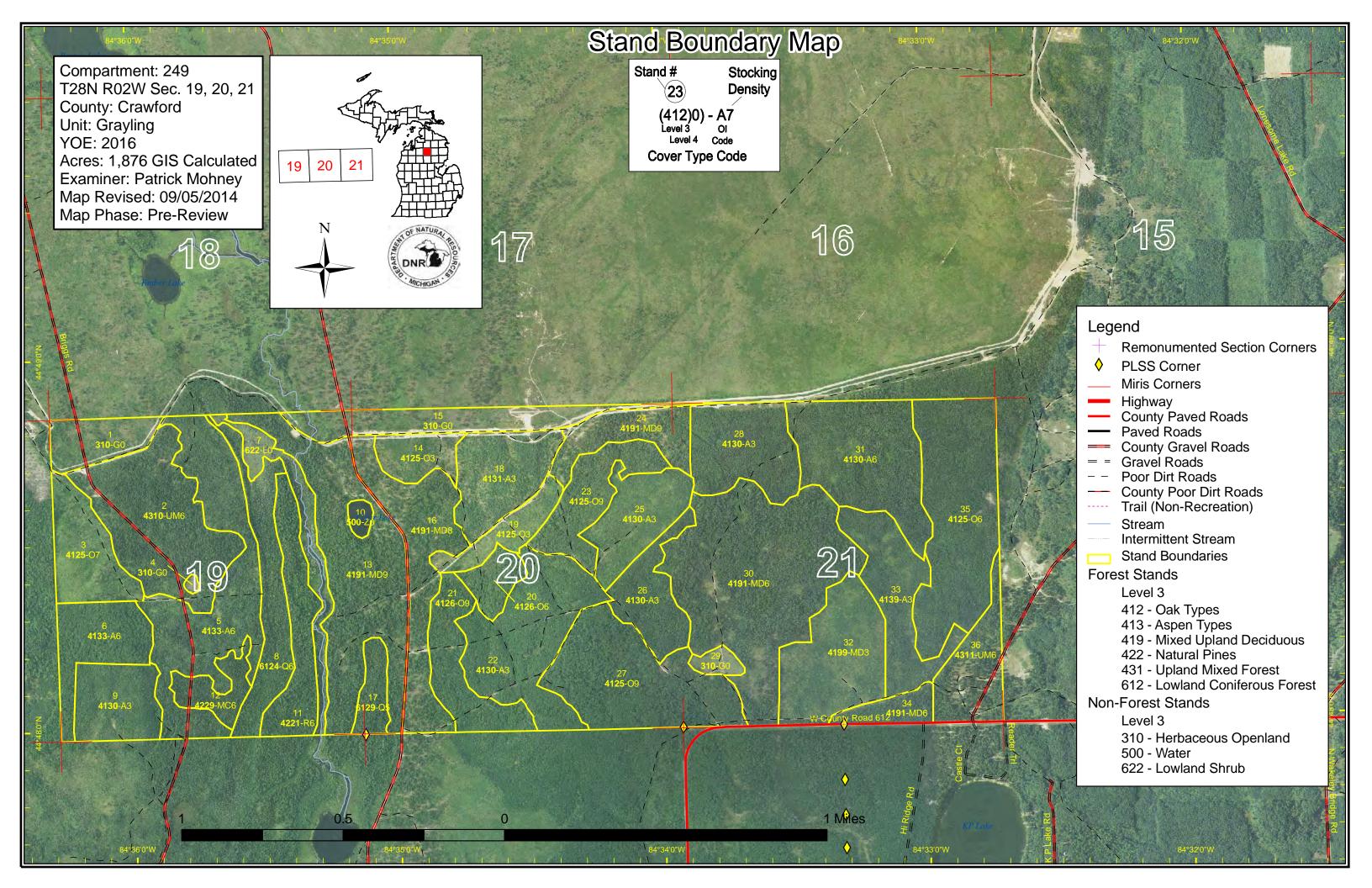
The following reports from the Inventory are attached:

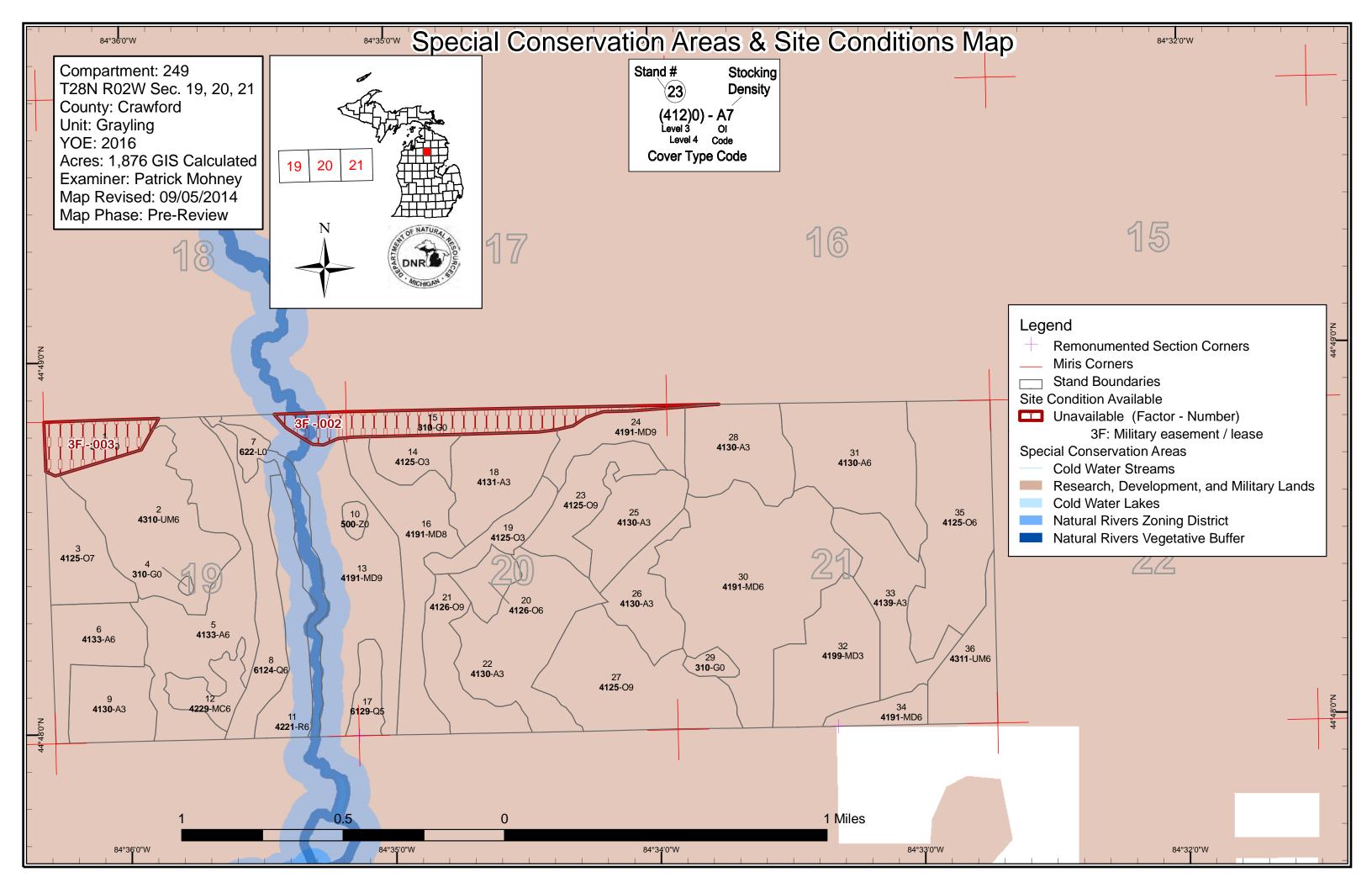
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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







Compartment 249 Year of Entry 2016

Grayling Mgt. Unit
Patrick Mohney: Examiner



Age Class New Age 70,79 70,709 10.0 70,70 20.28 % % ⁶0, % × × Aspen Herbaceous Openland **Lowland Conifers** Lowland Shrub Mixed Upland Deciduous Natural Mixed Pines Oak Red Pine **Upland Mixed Forest** Water Total



Report 2 – Proposed Treatment Summaries

Grayling Mgt. Unit Year of Entry 2016

Compartment 249 **Total Compartment Acres: 1,876**

Acres by Treatment Type

Commercial Harvest - 499 Tree Planting - 0 Other - 0

Habitat Cut - 0

Opening Maintenance - 0

	Cover Type by Harvest Method								
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Aspen Types		196	0	0	0	0	0	196	
Mixed Upland Deciduous		202	0	0	0	0	0	202	
Natural Pines		20	0	0	0	0	0	20	
Oak Types		42	0	0	0	0	0	42	
Upland Mixed Forest	<u>'</u>	39	0	0	0	0	0	39	
	Total	499	0	0	0	0	0	499	

Compartment: 249 Grayling Mgt. Unit Report 3 -- Treatments Prescribed Year of Entry 2016 with No Limiting Factor s t а **Treatment** Acres CoverType Size BA **Treatment Treatment Cover Type** Approval n Density Method Objective d Name Age Range Type **Status** 109.9 72249005-Cut 4133 - Aspen, High 47 Harvest Clearcut with 4121 - Oak, Aspen Cmpt. Review 5 Mixed Pine Density Reserves Proposal Pole Prescription Final harvest stand, leave island retention in stand where beneficial. Let regenerate naturally. Will accept a mix of oak, aspen, pine. Specs: Other Comments: <u>Next</u> Regen survey. Steps: <u>Proposed</u> Start Date: 10/01/2015 12 72249012-Cut 19.7 42290 - Natural High 51 1-50 Harvest Clearcut with 4131 - Aspen, Oak Cmpt. Review Mixed Pine Reserves Proposal Density Pole Prescription Final harvest stand. Apply island retention where necessary. Let regenerate naturally. Will accept a mix of oak, pine, aspen. Specs: <u>Other</u> Comments: Regen Survey <u>Next</u> Steps: Proposed Start Date: 10/01/2015 72249013-Cut 100.6 4191 - Mixed High 83 1-50 Harvest Clearcut with 4191 - Mixed Cmpt. Review 13

Upland Deciduous Density Log Reserves **Upland Deciduous** Proposal with Conifer with Conifer

Prescription Final harvest stand. Work around any low areas near the river, make sure to buffer the river 200 feet. Buffer clear lake as well. Leave island

retention in areas that are beneficial. Let regenerate naturally. A mix of oak, pine, aspen is acceptable. Specs:

Other Comments:

Next Regen survey

Steps:

Proposed

10/01/2015 Start Date:

72249016-Cut 67.0 4191 - Mixed Medium 87 1-50 Harvest Clearcut with 4191 - Mixed Cmpt. Review 16 **Upland Deciduous** Upland Deciduous Density Log Reserves Proposal with Conifer with Conifer

Prescription Final harvest stand. Apply island retention where beneficial. Let stand regenerate naturally. A mix of oak, pine, aspen and red maple is

acceptable. Specs:

<u>Other</u>

Comments:

Regen Survey.

Next Steps:

Proposed

Start Date: 10/01/2015

Report 3 -- Treatments Prescribed Compartment: 249 Grayling Mgt. Unit Year of Entry 2016 with No Limiting Factor s t а **Treatment** Acres CoverType Size Stand BA **Treatment Treatment Cover Type** Approval n Method Objective **Status** d Name Density Age Range Type 42.1 4125 - Black, N. Pin High Clearcut with 412 - Oak Cmpt. Review 72249023-Cut 67 51-80 Harvest 23 Oak Density Log Reserves Proposal Prescription Final harvest stand. Apply island retention. let regenerate naturally. A mix of oak, pine, aspen is acceptable. Specs: Other Comments: Regen Survey Next Steps:

Upland Deciduous Density Log
with Conifer

High

<u>Prescription</u> Final harvest stand. Leave no retention to maximize regen. Let regen naturally. Acceptable mix of oak, aspen and pine. <u>Specs:</u>

82

Other Comments:

Proposed

Start Date:

24

Next Regen Survey. Steps:

72249024-Cut

10/01/2015

34.8

4191 - Mixed

Proposed

Start Date: 10/01/2015

31 72249031-Cut 86.2 4130 - Aspen High 53 1-50 Harvest Clearcut with 4121 - Oak, Aspen Cmpt. Review Density Reserves Proposal

1-50

Harvest

Clearcut

4191 - Mixed

Upland Deciduous

with Conifer

Cmpt. Review

Proposal

Pole

Prescription Final harvest stand. Apply island retention. Let regenerate naturally. A mix of oak, aspen and pine is acceptable regen.

Specs:

Other Leave snags and drumming logs per wildlife. Treat with stand 13 in compartment 248 to the north.

Comments:

Next Regen survey.

Steps:

<u>Proposed</u>

Start Date: 10/01/2015

36 72249036-Cut 39.1 4311 - Pine, Aspen High 41 1-50 Harvest Clearcut with 4191 - Mixed Cmpt. Review Mix Density Reserves **Upland Deciduous** Proposal with Conifer Pole

Prescription Final harvest stand, apply island retention. Leave all red pine. Let regenerate naturally. A mix of oak, aspen, pine is acceptable.

Specs:

Other Account for visual along county road 612.

Comments:

Next Regen survey.

Steps:

Proposed

Start Date: 10/01/2015

Total Treatment

Acreage Proposed: 499.5

Grayling Mgt. Unit Report 4 -- Treatments Prescribed with Compartment: 249 a Site Condition s Year of Entry 2016 t **Treatment** Acres CoverType Size Stand ВА **Treatment Treatment Cover Type Approval** n Method Objective Status Name Range Density Age Type #Type! #Type! **Prescription** Specs: **Other** Comment: <u>Next</u> Steps: <u>Proposed</u> #Type! Start Date:

Total Treatment

Limiting Factor

Acreage Proposed: 0.0

Report 5 – Site Conditions

Grayling Mgt. Unit
Patrick Mohney: Examiner

Compartment 249 Year of Entry 2016

*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 Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition	
002	Not Available	3F: Military easement / lease	nent / 49 1A: Federal/St Law					
	Comments: Range 40 air to grou	und range, no access.						
003	Not Available	3F: Military easement / lease	27	1A: Federal/State/Local Law				
	Comments: Range 40 air to ground range, no access.							

Grayling Mgt. Unit Compartment: 249

Year of Entry: 2016



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: 249
Year of Entry 2016



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	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area				
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical risites of cultural and historical significance that may occur upon to bottomlands. They include thousands of Native American settler and British outposts, nineteenth century logging camps, mines at the Great Lakes, there are shipwrecks and other remains documbe identified by Natural heritage data from the State Historic Prethis compartment will be implemented in such a manner as to make the sensitive nature of this information, no further detail about log	errestrial areas and Great Lakes ments and burial sites, as well as French and homesteads. Beneath the waters of menting the maritime trade. Such sites may servation Office. Proposed treatments in aintain the integrity of these sites. Due to				
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.					
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish spec year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	ies (e.g., slimy sculpin) to persist from ese conditions due to substantial				
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.					
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spapproved distance from the river centerlines. The Natural Rivers most Natural Rivers. The Vegetative Buffer ranges from 25 to 10 and Vegetative Buffers for each Natural River see the table local folder.	s Zoning District is a 400 foot buffer for 00 feet. To view specific Zoning Districts				

s t	Grayling Mgt. Unit			Report 8	– Forested	Stands Compartment: 249 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4310 - Pine, Oak Mix	High Density Pole	98.3	48	1-50	PARVHA. Low quality aspen, red pine is decent quality. Still seems to be putting on good growth. Has some steep terrain in the western part of the stand.
3	4125 - Black, N. Pin Oak	Low Density Log	43.4	68	1-50	PARVHA. Stand was cut in 2009, 72-625-06-01. Stand has decent regen coming in the understory. Some steep terrain throughout the stand.
5	4133 - Aspen, Mixed Pine	High Density Pole	109.9	47		PARVHA. Poor quality aspen. Good access to stand.
6	4133 - Aspen, Mixed Pine	High Density Pole	41.9	40		PARVVB/AFO Soils. I dont think this is entirely accurate judging by the quality of the aspen. Poor quality aspen stand with a mixture of oak, maple and red & white pine. Aspen is starting to decline.
8	6124 - Lowland Spruce- Fir	High Density Pole	51.1	76	51-80	Lots of balsam fir, tag alder is mixed throughout stand as well. Excellent wildlife value in this stand. Cedar is patchy throughout stand, balsma is pretty uniformly spread throughout.
9	4130 - Aspen	High Density Sapling	39.5	23		Stand was cut in 1987. Decent regen, quality is variable throughout stand.
11	42210 - Natural Red Pine	High Density Pole	45.5	65	141-170	Natural red pine stand, has some white pine and red maple mixed in. Also some small aspen clones in spots. Quality is decent. Access is decent. Could not find a treatment history on the stand.
12	42290 - Natural Mixed Pine	High Density Pole	19.7	51	1-50	PARVHA. Mixed pine stand. has some aspen mixed within.
13	4191 - Mixed Upland Deciduous with Conifer	High Density Log	123.1	83	1-50	Stand has a lot of older oak that is starting to decline. Also has a fair amount of nice larger red pine mixed throughout stand. Some of the large red pine aged out over 100 years. Stand gets lower as you get closer to the river and the balsam density increases. No information from previous inventory.
14	4125 - Black, N. Pin Oak	High Density Sapling	21.5	18		stand was cut in 1996. Good regeneration, oak stump sprouts. Steep terrain throughout stand.
16	4191 - Mixed Upland Deciduous with Conifer	Medium Density Log	72.4	87	1-50	PARVHA. Similar stand as 13, just does not have the lowland conifer component. Poor quality and old aged oak. It is starting to decline.
17	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	15.5	73	1-50	Lowland conifer stand. Good mix of cedar, spruce, fir and red maple. Excellent wildlife value. Stand would be pretty wet most of the season I would imagine. Lots of snowshoe hare sign.

s t	Grayling Mgt. Unit			Report 8	– Forested	Stands Compartment: 249 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4131 - Aspen, Oak	High Density Sapling	50.1	18		Reasearch area located in the north part of the stand. University of Michigan established three plots during the summer of 1997. A wooden military observation tower is located in the stand. 01/27/2004 mm.
						Stand was cut in 1996
						I do not believe that the research area is still active. Regeneration is coming back nicely. Approximately 15-20 ft tall. Steep terrain throughout stand. Borders up to Range 40.
19	4125 - Black, N. Pin Oak	High Density Sapling	23.2	6		Stand was harvested under tsale contract #726020601. Sale was completed in 2008. has since regenerated nicely. Lots of oak regen working its way past the browse line.
20	4126 - White, Black, N. Pin Oak	High Density Pole	16.7	71	1-50	PARVHA. Stand is on top of a large hill. Interesting make up of stand. Decent conifer component. Oak is good quality.
21	4126 - White, Black, N. Pin Oak	High Density Log	42.0	64	51-80	PARVHA. Decent quality oak. It is up on a hill so the soils must be a bit better. Very little in the understory. Steep terrain throughout stand.
22	4130 - Aspen	High Density Sapling	87.0	23		PARVHA. Stand was cut in 1987. No information available from previous inventory. Stand has regenerated nicely. Aspen is decent quality. Oak is coming in nicely along with teh aspen.
23	4125 - Black, N. Pin Oak	High Density Log	42.1	67	51-80	Oak is decent quality. Some steep hills in stand. Minimal understory coming in underneath.
24	4191 - Mixed Upland Deciduous with Conifer	High Density Log	34.8	82	1-50	Stand has some steep terrain, borders range 40. Oak is declining. Aspen is poor quality
25	4130 - Aspen	High Density Sapling	44.3	5		Stand was harvested under tsale contract #726020601. Sale was completed in 2008. Stand has good regen.
26	4130 - Aspen	High Density Sapling	36.3	26		Stand was cut in 1987. Regen is good quality. Filling in nicely.
27	4125 - Black, N. Pin Oak	High Density Log	94.3	84	51-80	(REMOVE ASPEN AND RED MAPLE. Old comment). Timber sale 72-010-96-01, Oak Regeneration Block cut by Georgia-Pacific in Winter 1996/1997. Aspen and red maple were cut. No oak was cut. The stand is starting to regenerate to aspen, red maple and oak. Average basal area of oak is 50 square feet. The northern 2/3 of the stand has less oak and the southern 1/3 of the stand has more oak. 01/27/2004 mm
						Stand is now approaching log sized. Quality is fair. Oak is getting old and will start to decline before too long.
28	4130 - Aspen	High Density Sapling	56.9	26		PARVVB. Aspen regen, decent quality. Some oak growing up with it.
30	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	168.9	81	1-50	Very mixed stand. some very nice large diameter RP mixed in. Aspen varies in quality throughout stand.

S t	Grayling	Grayling Mgt. Unit		Report 8 – Forested Stands		Stands Compartment: 249 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	4130 - Aspen	High Density Pole	86.2	53	1-50	Stand is variable sized. larger sized aspen located closer to the range. Smaller stuff further away, all falls within the same size class.
32	4199 - Other Mixed Upland Deciduous	High Density Sapling	70.7	5		Tsale #726020601 Wounded Knee Aspen/Oak. Completed 1- 12-2009. Good regen, larger pine that was left is nicely distributed throughout the stand.
						PARVVB Soils.
33	4139 - Aspen, Mixed Deciduous	High Density Sapling	56.2	17		Stand cut in 1996. Good regen, mostly aspen and red maple. Has some oak coming in as well.
34	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	15.6	71	51-80	Small stand right along CR 612, was probably left when stand to the north was cut for visual along the road. Stand is just getting into log class. Quality is decent, has some white oak in the stand so the site must be a little better than normal.
35	4125 - Black, N. Pin Oak	High Density Pole	108.4	72	51-80	PARVHA. Oak is doing well, decent quality. Lots of smaller stuff coming up in the understory. Some steep terrain in the stand. I did not make it to the southern-most part of the stand.
36	4311 - Pine, Aspen Mix	High Density Pole	39.1	41	1-50	Mixed pine stand with some oak and hardwood mixed in. Quality is variable throughout the stand.

Report 9 - Nonforested Stands

Compartment: 249 Year of Entry: 2016



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	3105 - Mixed Upland Herbaceous	27.4	No	Unspecified	
4	3102 - Grass	1.3	No	Low	grassy opening. Military Firing Point
7	6220 - Alder/willow	33.6	No	Unspecified	tag alder stand along the river. Density varies throughout stand.
10	50 - Water	4.6	No	Unspecified	Clear Lake
15	3105 - Mixed Upland Herbaceous	48.5	No	Unspecified	Range 40, inside the range fence. Has some meandering water throughout the stand. Cannot access due to range fence.
29	3102 - Grass	6.9	Yes	Low	Firing Point 214