

Compartment Review Presentation

Grayling Forest Management Unit

Compartment 273 Entry Year 2015 Acreage: 880 County Crawford

Management Area: Ausable Outwash

Revision Date: 07/30/2013

Stand Examiner: Patrick Potter

Legal Description:

T28N, R01W Sections 9, 16 and 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:

The topography is mostly level lowlands with a few scattered upland areas that are also level. The soils consist mostly of Tawas-Lupton in the lowland areas. The higher ridges consist of Croswell, Kinross-Au Gres and Croswell-Au Gres Sands with a few area of Grayling Sand.

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

The compartment is comprised of two large parcels of state land with a sizeable amount of private interface. Private lands consist of both seasonal and permanent residences.

Unique Natural Features:

The West Branch of the Big Creek is designated as a natural and scenic river. There is the potential for rare wetland plants and reptiles to occur along the riparian corridors. There is also the potential for rare dry prairie plants and insects to occur in upland grassy openings.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

The West Branch of the Big Creek is a High Conservation Value Area (HCVA).

Watershed and Fisheries Considerations:

The West Branch of Big Creek, which is part of the Au Sable River natural river plan flows through section 9, 16 and 21 into the mainstream of the AuSable which is a quality trout stream.

Wildlife Habitat Considerations:

The compartment's wide range of cover types – ranging from mixed pine, aspen and oak, to conifer swamp, lowland brush and super-canopy stature pine -- provide habitat for a variety of game and non-game wildlife species. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation opportunity and management of the state wildlife management areas

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 400 and 600 feet. Beneath the glacial drift is the Coldwater Shale. The Coldwater does not have a current economic use. The nearest gravel pit is located two miles to the west and potential is thought to be good on the upland areas. There has been no drilling and there are no oil and gas lease in this compartment. The closest production is from the Antrim Shale just to the northwest.

Vehicle Access:

Very poor access into this compartment, especially along Big Creek. Most access is across private land. There are a few stands within this compartment that can be accessed from Lovell's Road (F-97), County Road 612 and Boondock Road. No existing roads need to be closed at this time. All new roads created through management activities are to be closed upon completion

Survey Needs:

None at this time

Recreational Facilities and Opportunities:

There are no designated trails or facilities within this compartment. The West Branch of Big Creek may experiences seasonal use, primarily canoeing and fishing. Hunting is the main form of dispersed use.

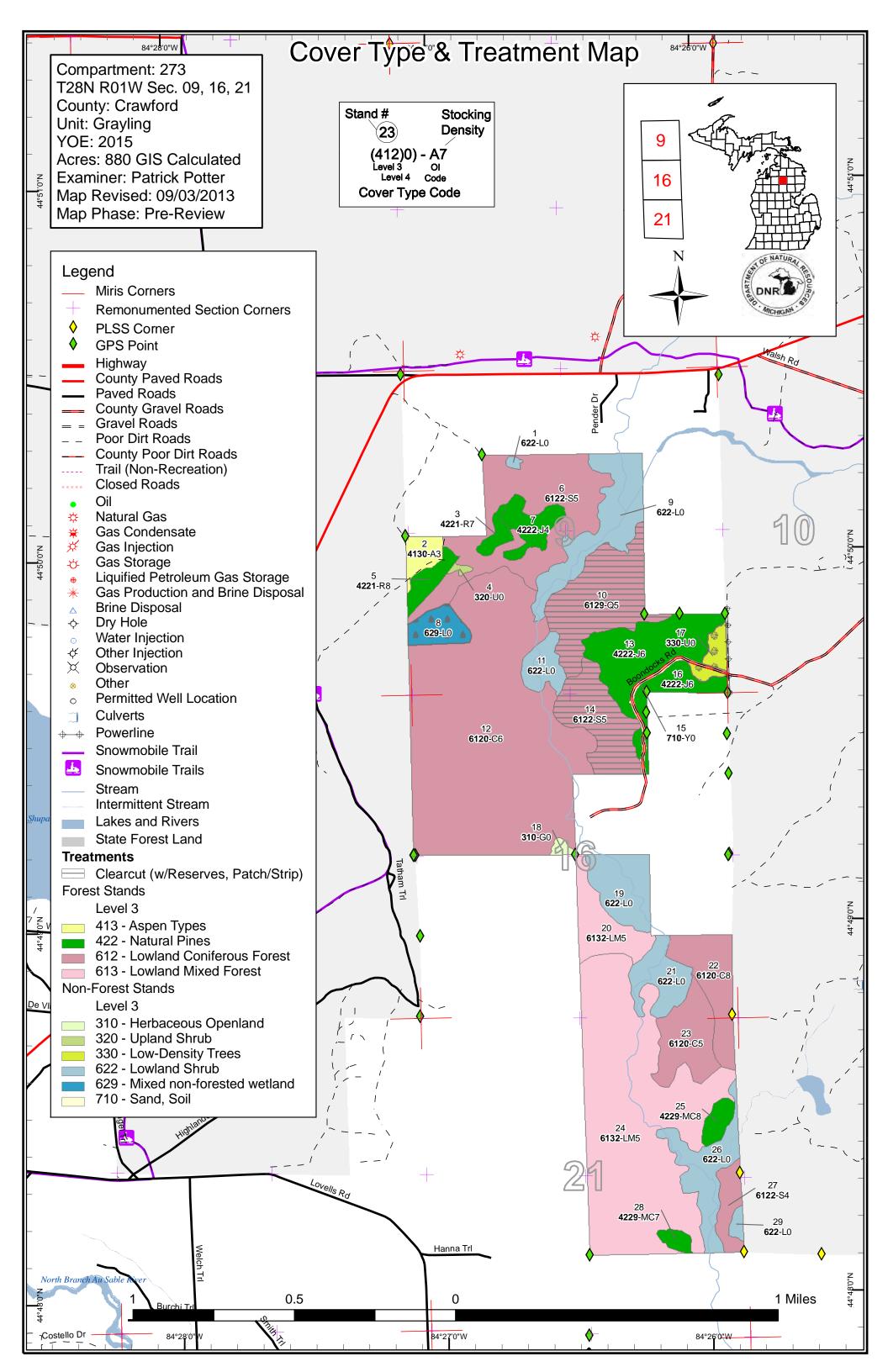
Fire Protection:

County roads and open two-tracks provide good access to the compartment's dry upland types. The West Branch of Big Creek and the North Branch of the AuSable River are a good water source.

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



Stand Boundary Map Compartment: 273 T28N R01W Sec. 09, 16, 21 County: Crawford Stocking Stand # Unit: Grayling Density (23) YOE: 2015 9 (412)0) - A7 Level 3 OI Acres: 880 GIS Calculated OI Level 4 **Examiner: Patrick Potter** Code 16 Cover Type Code Map Revised: 09/03/2013 Map Phase: Pre-Review 21

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Legend

Miris Corners

- +**Remonumented Section Corners**
- \diamond PLSS Corner
- \diamond **GPS** Point
- Highway
- County Paved Roads
- Paved Roads
- **County Gravel Roads**
- Gravel Roads
- Poor Dirt Roads
- **County Poor Dirt Roads**
- Trail (Non-Recreation) ____ Closed Roads
- Oil ٠
- Natural Gas ₩
- Gas Condensate ¥
- Gas Injection ж
- **Gas Storage** .Ф
- Liquified Petroleum Gas Storage Ð
- Gas Production and Brine Disposal ☀
- **Brine Disposal** ⊿
- Dry Hole ф
- Water Injection \odot
- Other Injection ÷ X Observation
- Other
- 8 Permitted Well Location 0
- Culverts \square

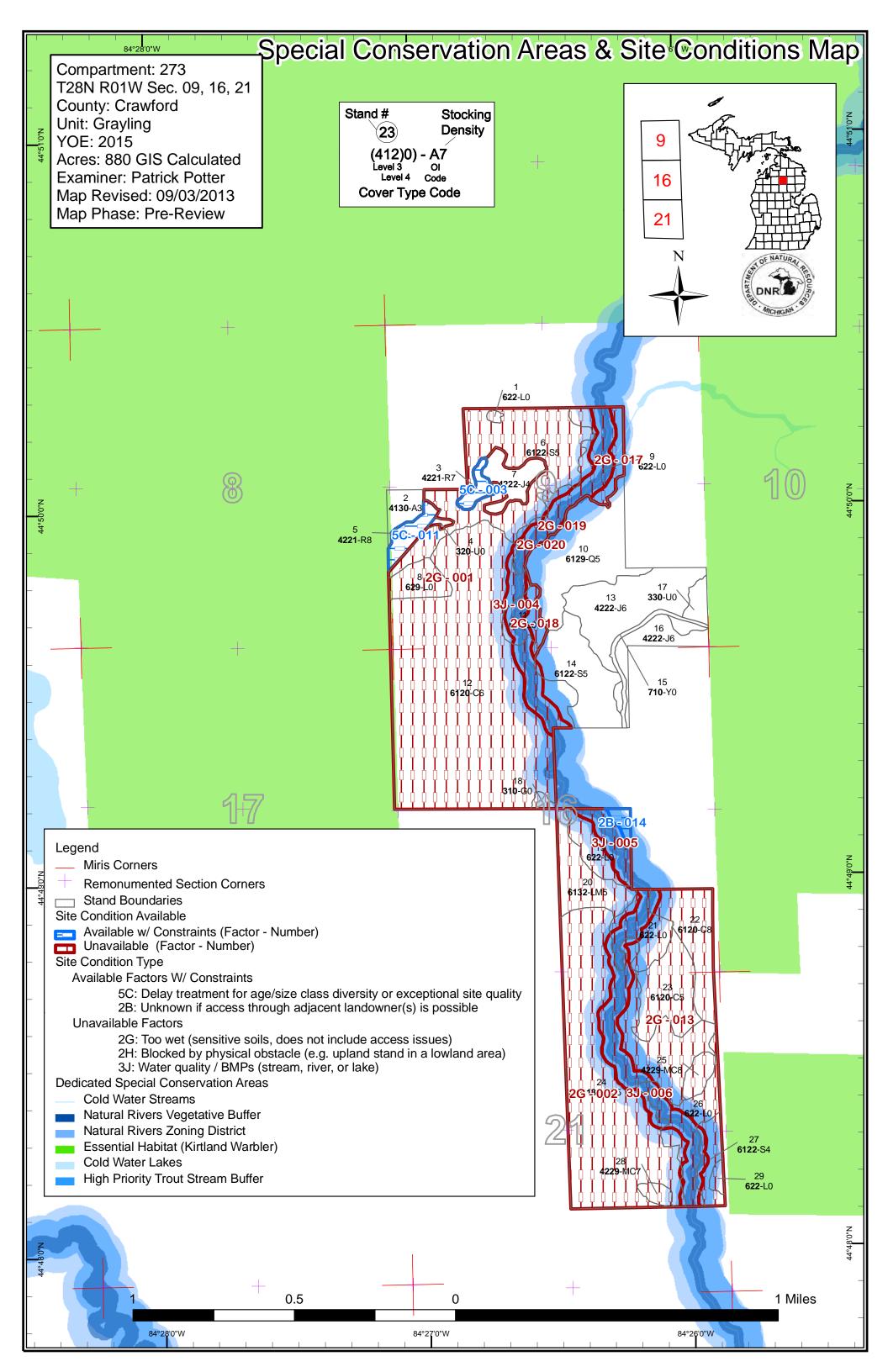
Φ

- Powerline $-\phi$
- **Snowmobile Trails**
- **Snowmobile Trail** Stream
- Intermittent Stream
- **Stand Boundaries**
- **Forest Stands**
 - Level 3
 - 413 Aspen Types
 - 422 Natural Pines
 - 612 Lowland Coniferous Forest

613 - Lowland Mixed Forest **Non-Forest Stands**

Level 3

310 - Herbaceous Openland 320 - Upland Shrub 330 - Low-Density Trees 622 - Lowland Shrub 629 - Mixed non-forested wetland 710 - Sand, Soil



Report 1 – Total Acres by Cover Type and Age Class

Grayling Mgt. Unit Craig Farrer : Examiner

Compartment 273 Year of Entry 2015



		a.9	⁷ a ⁷ 0	22 ²²	³ 0,39	40 ⁻⁴⁹	5a.39	00 ^{.00}	101	99 99 99	8°.30	Non in the second secon	12°179	407 × 65	400 × 400	
Aspen	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	
Cedar	0	0	0	0	0	0	0	0	27	0	0	230	27	0	284	
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Jack Pine	0	0	0	0	67	0	0	0	0	0	0	0	0	0	67	
Low-Density Trees	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
Lowland Conifers	0	0	0	0	0	0	0	50	0	0	0	0	0	0	50	
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	169	22	0	0	191	1
Lowland Shrub	130	0	0	0	0	0	0	0	0	0	0	0	0	0	130	1
Lowland Spruce/Fir	0	0	0	0	10	0	0	0	0	33	71	0	0	0	115	1
Natural Mixed Pines	0	0	0	0	0	0	0	0	6	0	4	0	0	0	10	1
Red Pine	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12	1
Sand, Soil	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1
Upland Shrub	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Total	144	8	0	0	78	0	0	50	33	33	243	264	27	0	880]

DRR DRR	Report 2 – Proposed Treatment Summaries											
MICHIGAN	Grayling Mgt. Unit		Compartment	273								
	Year of Entry 2015		Total Compartment Acres:									
		Acres by Treatment Type										
	Commercial Harvest - 83	Tree Planting - 0 Other - 0										
	Habitat Cut - 0	Opening Maintenance - 0										
		Cover Type by Harvest Method										
		Contraction of the second state of the second										
	Lowland Coniferous	Forest 83 0 0 0 0 83										
		Total 83 0 0 0 0 83										

S t		Gray	ling Mgt. Unit	Repo			nents Prescri iting Factor	bed	Compartment: 273 Year of Entry 2015	DIR NATURAL
a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
10	72273010-Cut	49.6	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	72	81-110	Harvest	Clearcut with Reserves	612 - Lowland Coniferous Forest	Cmpt. Review Proposal
<u>Spec</u> <u>Othe</u>	<u>s:</u> smaller. ability to		vesting all year, and ap						r and protect all trees 4 le tires/dual front and b	
<u>Next</u> Steps Propo Start I	Monitor : <u>s:</u> <u>used</u>		regeneration the next	treatment p	oeriod. A	cceptable	regeneration mix	of lowland conifer	:	
14	72273014 Iowland-Cut	33.0	6122 - Black Spruce	Medium Density Pole	94	51-80	Harvest	Clearcut with Reserves	612 - Lowland Coniferous Forest	Cmpt. Review Proposal
Preso Spec	<u>s:</u> year, an	d apply eq		tracked ha	arvester a	and the sk			es and smaller. Allow h nt and back with the ab	
<u>Othe</u> Com	<u>r</u> ments:									
<u>Next</u> Steps		the succes	s of regerenation							
<u>Propo</u> <u>Start [</u>		14								
A	Total Treatmer creage Propose		2.6							

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Grayling Mgt. Unit Report 4 S t							ts Prescribed Factor	Compartment: 273 Year of Entry 2015	DIR NATURAL WARD	
a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
		#Type!	#Type!							
Presc Specs Other Comn										
<u>Next</u> Steps	<u>:</u>									
<u>Propo</u> Start I	<u>sed</u> <u>Date:</u> #Type!									

Grayling Mgt. Unit

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Compartment 273 Year of Entry 2015

Availability for Management

	,	nanagement						
Total	Acres	Acres		Do	minaı	nt Site	e Cone	ditions
Acres	Available	Not Available			No	5C	ЗJ	2G
8	8		Aspen		8			
284	6	278	Cedar		6		17	261
67	67		Jack Pine		67			
50	50		Lowland Conifers		50			
191		191	Lowland Mixed Forest				21	169
114	33	82	Lowland Spruce/Fir		33		3	79
10		10	Natural Mixed Pines					10
12	12		Red Pine			12		
735	176	560	Total Forested Acres		163	12	41	519
	24%	76%	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 Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
001	Not Available	2G: Too wet (sensitive soils, does not include access issues)	302				
С	omments:						
002	Not Available	2G: Too wet (sensitive soils, does not include access issues)	158	2B: Unknown if access through adjacent landowner(s) is possible			
	omments: xaminer Approved	12/07/2012					
003	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5				
С	omments:						

Report 5 – Site Conditions

Compartment 273 Year of Entry 2015

Patrick Potter : Examiner

Grayling Mgt. Unit

004	Not Available	3J: Water quality / BMPs (stream, river, or lake)	43		
С	omments:				
005	Not Available	3J: Water quality / BMPs (stream, river, or lake)	10		
С	omments:				
006	Not Available	3J: Water quality / BMPs (stream, river, or lake)	46		
С	omments:				
011	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8		
С	omments:				
013	Not Available	2G: Too wet (sensitive soils, does not include access issues)	117	2B: Unknown if access through adjacent landowner(s) is possible	
	omments: xaminer Approved	12/07/2012			
014	Available	2B: Unknown if access through adjacent landowner(s) is possible	3	2G: Too wet (sensitive soils, does not include access issues)	
	omments: xaminer Approved	12/07/2012			

		yling Mgt. Unit Potter : Examiner		Report 5 – Site Conditions	Compartment 273 Year of Entry 2015		
017	Not Available	2G: Too wet (sensitive soils, does not include access issues)	7				
С	omments:						
018	Not Available	2G: Too wet (sensitive soils, does not include access issues)	6				
С	omments:						
019	Not Available	2G: Too wet (sensitive soils, does not include access issues)	0				
С	omments:						
020	Not Available	2G: Too wet (sensitive soils, does not include access issues)	0				
С	omments:						



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



Report 7 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

onservatio 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 conditio stocked trout populations and those of other coldwater fish speci conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable by are relatively deep, have substantial the state. Such lakes are established by
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish 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
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high o communities are ecologically and socially significant in their effer as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and coop U.S. Fish and Wildlife service for the recovery of threatened and 365, Endangered Species Protection, of the Natural Resources 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.	S 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: 273 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4130 - Aspen	High Density Sapling	8.0	10		Aspen sapling stand mixed with other deciduous spieces. Harvested in 2003 with adjacent comp 271. A couple of two tracks traverse through std. Some are being overgrown.
3	42210 - Natural Red Pine	Low Density Log	4.6	113	141-170	Small upland std of mature Red pine surrounded on three sides by lowland conifer. Large diameter. Some Jack pine and other spieces mixed.
5	42210 - Natural Red Pine	Medium Density Log	7.8	113	81-110	
6	6122 - Black Spruce	Medium Density Pole	71.1	101	81-110	New stand added. Lowland mixed conifer swamp with some deciduous trees scattered throughout. Stand is disected by old rail road grade. Stand is mostly blk spruce with scattered cedar throughout. North side of stand is a pocket of cedar west of rail road grade. Stand 1 was cut out of this pocket in a trespass. North part of rail road grade has been maintained. Understory consists of tag ader and blk spruce. Some balsam fir and even some oak saplings along old rail road grade. North and west side borders private. Wet saturrated muck soils with pockets of standing water.
7	42220 - Natural Jack Pine	Low Density Pole	12.4	42		Scattered pockets of Jack pine throughout stand and surrounding edge. Also scattered Oak and Red maple along with large diamter Red pine. Cherry brush and grasses in understory. Stand could go either way as a forested std or non forested std. It is an upland site with a drainage traversing through it. Drainage consists of Tmerack, cedar and blk spruce with tag alder below.
10	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	49.6	72	81-110	New stand added. Lowland Tamerack mixed with Blk spruce and some cedar or Mixed lowland conifer std. Gets wetter closer to Big Creek. Under story consists of predominantly Blk spruce and tag alder over mosses and leatherleaf. East side of std borders private.
12	6120 - Lowland Cedar	High Density Pole	230.0	113	141-170	Lowland Cedar with areas of spruce/fir mixed within. Also some areas of Aspen/Birch long west side of stand. Stand gets wetter to the east. Scattered dence pocket of Cedar with little to no understory other than mosses with standing water pockets. Saturated muck soils. Areas less dence of cedar are Blk spruce/fir with some Tamerack. Private land to the south and state land to the west. Tag alder and spruce/fir make up the make up the majority of the understory where cedar is less dence. Some small pockets of cattail with tag alder closer to Big Creek.
13	42220 - Natural Jack Pine	High Density Pole	41.9	42		Jack pine pole stand. Some scattered pockets of sawtimber, but mostly 7 inch poles on avg. North side of stand borders private; west side lowland conifer swamp and north east side powerline. Two track trail traverse through stand. Recommend no treatment at this time. Small herbaious opening within stand.
14	6122 - Black Spruce	Medium Density Pole	33.0	94	51-80	New stand added. Lowland Black spruce stand mixed with other lowland conifer spieces. Stand gets wetter and has more cedar the closer you get to Big Creek. South east side of stand has a small pocket of Quaking aspen/Jack pine on slope, sloping into lowland.

S t	Graylin	Grayling Mgt. Unit				Stands Compartment: 273 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	42220 - Natural Jack Pine	High Density Pole	13.1	42		Jack pine std similar to std 10. Middle of std less dense with some larger diameter trees. Stand borders private to south and finger runs south along the private on west side of private. Recommend final harvest and replant to JP with no retetion or leave finger that runs south as retetion.
20	6132 - Mixed Lowland Forest with Cedar	Medium Density Pole	21.9	113		New stand added. Mixed lowland conifers with cedar. Tag alder understory with spruce. Stand is probably a fair amount of blk spruce with scattered cedar and tamerack. Stand is probably on the wetter side enhance the tag alder.
22	6120 - Lowland Cedar	Medium Density Log	26.9	161	51-80	New stand added. Lowland N. White Cedar stand with a lesser amount of spruce,fir,tamerack and aspen.
23	6120 - Lowland Cedar	Medium Density Pole	26.9	87		Very wet lowland cedar stand mixed with some Blk spruce and very little Tamerack. Understory consists of Tag Alder and cattails. Poor quality in mostly pole size. 6-8 inch dbh C5/Q5 approx. 40-60 BA
24	6132 - Mixed Lowland Forest with Cedar	Medium Density Pole	168.8	103		Stand swapped from Non-Forested to Forested. Lowland mixed conifer swamp with cedar. Scattered pockets of dence cedar along with a band of cedar running north/south along Big Creek. The remaining portions of the std and majority is Blk spruce, Tmerack, Balsam fir and scaterred single tree/clumps of cedar. Tag alder, Blk spruce and Balsam fir make up understory. South and east side is private and mostly all conifer swamp. Access is and would be difficult for any mgt.
25	42290 - Natural Mixed Pine	Medium Density Log	6.0	80		New stand added. Small upland std of mixed pine. Doninantly large dia (16-22) White pine, Red pine with Jack pine in understory along with Balsam fir . Approximately 100+ in BA surronded by lowland conifer swamp. Inacessible. 60 BA at least in the large diameter White and Red pine. Jack pine pole in understory along with Balsam fir. Small tag alder inclusion also.
27	6122 - Black Spruce	Low Density Pole	10.4	47	1-50	Lowland mixed conifer of Blk spruce with Tamerack, Balsam fir and N. White Cedar with a wide range of ages. Wet saturrated muck soils with standing water.
28	42290 - Natural Mixed Pine	Low Density Log	3.5	100		New stand added. Small upland std of mixed pine. Dominantly Red pine with some White pine and Jack pine. Small herbacious opening in the southeast portion of the std. No legal access to std. Large diameter Red and White pine. Approx 60 or more BA, taken from old data. 16-20+ in dia.

Grayling Mgt. Unit

Compartment: 273



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Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6229 - Mixed lowland shrub	1.0	No	Unspecified	Stand swapped from Forested to Non-Forested.
4	3205 - Mixed Upland Shrub	1.0	No	Unspecified	Stand swapped from Forested to Non-Forested. Small opening of grasses and cherry shrubs with Jack pine, Oak and Q. aspen encroaching into stand. Standis located next old rail road grade.
8	629 - Mixed non-forested wetland	11.3	Natural Regen	Lowland Spruce/Fir	Mixed nonforested wetland. Stand was harvested in the early eighties. Some scattered pole size Blk spruce throughout std. Blk spruce sapling regen. 3-6 ft tall and 1-2 inches dbh on west side of std. Predominately cattail and tag alder. Harvest made stand wetter than was before harvest. Std has drainage through it.
9	6220 - Alder/willow	36.6	No	Unspecified	Lowland stand of Tag Alder. Big Creek traverses through stand. Some scattered Blk spruce/Tamerack/Quaking aspen on edge of stand.
11	6220 - Alder/willow	11.0	No	Unspecified	New stand added. Lowland Tag Alder stand. West Branch of Big Creek traverses through stand. Some Blk spruce/Tamerack/N. White Cedar scaterred through and around the edges of stand.
15	710 - Sand, Soil	4.5	No	Unspecified	Stand swapped from Forested to Non-Forested. Boonedock County Road. Road deadend into gated private property.
17	3302 - Low Density Conifer Trees	7.0	Plantation	Jack Pine	Jack pine plantation. Boonedock Rd traverses through stand. 2-21/2 foot planted Jack pine seedlings. Some scattered advance Jack pine and Oak natural regen of sapling size. No treatment recommended. Stand harvested under contract 720590501 in 2007; FTP 72-587.
18	3105 - Mixed Upland Herbaceous	1.7	No	Unspecified	Small upland opening. Mostly mosses/grasses and exposed soil. Some scattered cherry brush and some scattered Blk spruce on edge of stand.
19	6220 - Alder/willow	23.8	No	Unspecified	Stand swapped from Forested to Non-Forested. Lowland Tag Alder stand. West Branch of Big Creek traverses through stand. Some scaterred and pockets of Blk spruce/Tamerack/N. White Cedar within stand and on edge of stand
21	6220 - Alder/willow	18.1	No	Unspecified	Lowland Tag Alder stand. West Branch of Big Creek traverses through stand. Some scattered Blk spruce/Tamerack/ N. White Cedar within and on edge of stand.
26	6220 - Alder/willow	25.6	No	Unspecified	Lowland Tag Alder stand. West Branch of Big Creek traverses through stand. Some scaterred and pockets of Blk spruce/Tamerack/N. White Cedar within and around edges of stand.

Report 9 – Nonforested Stands

Compartment: 273 Year of Entry: 2015



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
29	6220 - Alder/willow	2.3	No	Unspecified	Stand swapped from Forested to Non-Forested. Tag Alder with scattered Q and pockets of cattail.