



GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 217 ENTRY YEAR: 2013

GIS Compartment Acreage: 1298 County: Crawford

Revision Date: 8/17/2011

Stand Examiner: Patrick L. Potter

Legal Description: T27N R03W Section 19, 20, 21

Management Goals: To maintain forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment. In addition, to provide an area that allows for National Guard training needs on ten-year lease lands within the compartment.

Soils and Topography: Croswell, Croswell-AuGres complex, Rubicon, Grayling, and AuGres sands. Leafriver muck and Tawas-Leafriver Complex in the lowland areas. The terrain is level to rolling hills.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The entire compartment is contiguous state ownership except for in section 21, which contains several private parcels. The compartment is bisected by I-75. A large portion of section 20 is part of Hartwick Pines State Park. State Park ownership is not included in compartment acreage. Section 19 and the portion of section 20 lying west of I-75 is under the 10-year management agreement with the National Guard (DMA).

Unique, Natural Features (include only non-site specific and non-sensitive information): Per Michigan Natural Features Inventory there is limited potential for dusted skipper, grizzled skipper, red-legged spittlebug, Henry's elfin, and secretive locust, in barrens. This compartment shows some potential for red-shouldered hawk and Bald eagle.

Plant species that may occur are rough fescue, pale agoseris, Hill's thistle, and Alleghany plum in pine barrens/dry sand prairie. False violet may occur in hummocky pine, hardwood, or aspen stands.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): None recorded to date.

Special Management Designations or Considerations: The compartment's proximity to Hartwick Pines State Park increases the compartment's recreational potential. This compartment offers many educational and visual management opportunities.

Watershed and Fisheries Considerations: One small stream which feeds into the North Branch of the AuSable River flows through section 20.

Wildlife Habitat Considerations: Maintain the existing cover types and promote age class diversity where possible to improve habitat conditions for various species of wildlife. The compartment serves as a wintering area for deer.

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 400 and 600 feet. Beneath the glacial drift is the Marshall Sandstone. The Marshall was used as a building stone in the past. The nearest gravel pit is in the center of Section 20 and potential is thought to be good in the upland areas. No wells have been drilled in this area and there are no current oil and gas leases in the compartment. Three miles to the north, the Antrim Shale has been developed. The Antrim Shale appears to have limited potential in this area, due to the thickness of overburden, and has not been developed.

Vehicle Access: Access is obtained from M-93 (Hartwick Pines Road), Wilcox Bridge Road, and Lewiston Grade Road. The area west of I-75 contains numerous trail roads. These trails receive heavy use from the military and hunters. Recommended no existing road be closed. All new roads created are to be closed upon completion of the prescription

Survey Needs: None needed at this time

Recreational Facilities and Opportunities: Dispersed recreational opportunities occur throughout the compartment. The Lovells snowmobile trail # 47, the South Frederic Snowmobile Trail Connector #7, and the Michigan Shore to Shore Riding-Hiking Trail run through this compartment. Evidence was seen of mountain bike use on trails through the compartment. The area receives heavy dispersed recreational use, particularly hunting. A paved bicycle/recreational pathway runs from Grayling along M-93 north to the entrance of Hartwick Pines State Park.

Fire Protection: The current road system is adequate. No timber conversion needed.

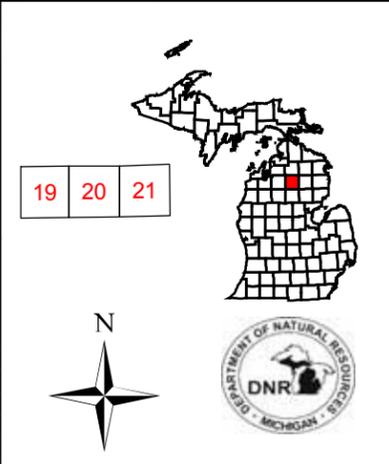
Additional Compartment Information:

- **The following reports are available:**
 - ◆ **Total Acres by Cover Type and Age Class**
 - ◆ **Proposed Treatment Summaries**
 - ◆ **Dedicated Conservation Area Details**
 - ◆ **Listing of Forested Stands**
 - ◆ **Listing of Non-Forested Stands**
 - ◆ **Proposed Treatments with No Limiting Factor**
 - ◆ **Proposed Treatments with Limiting Factors**

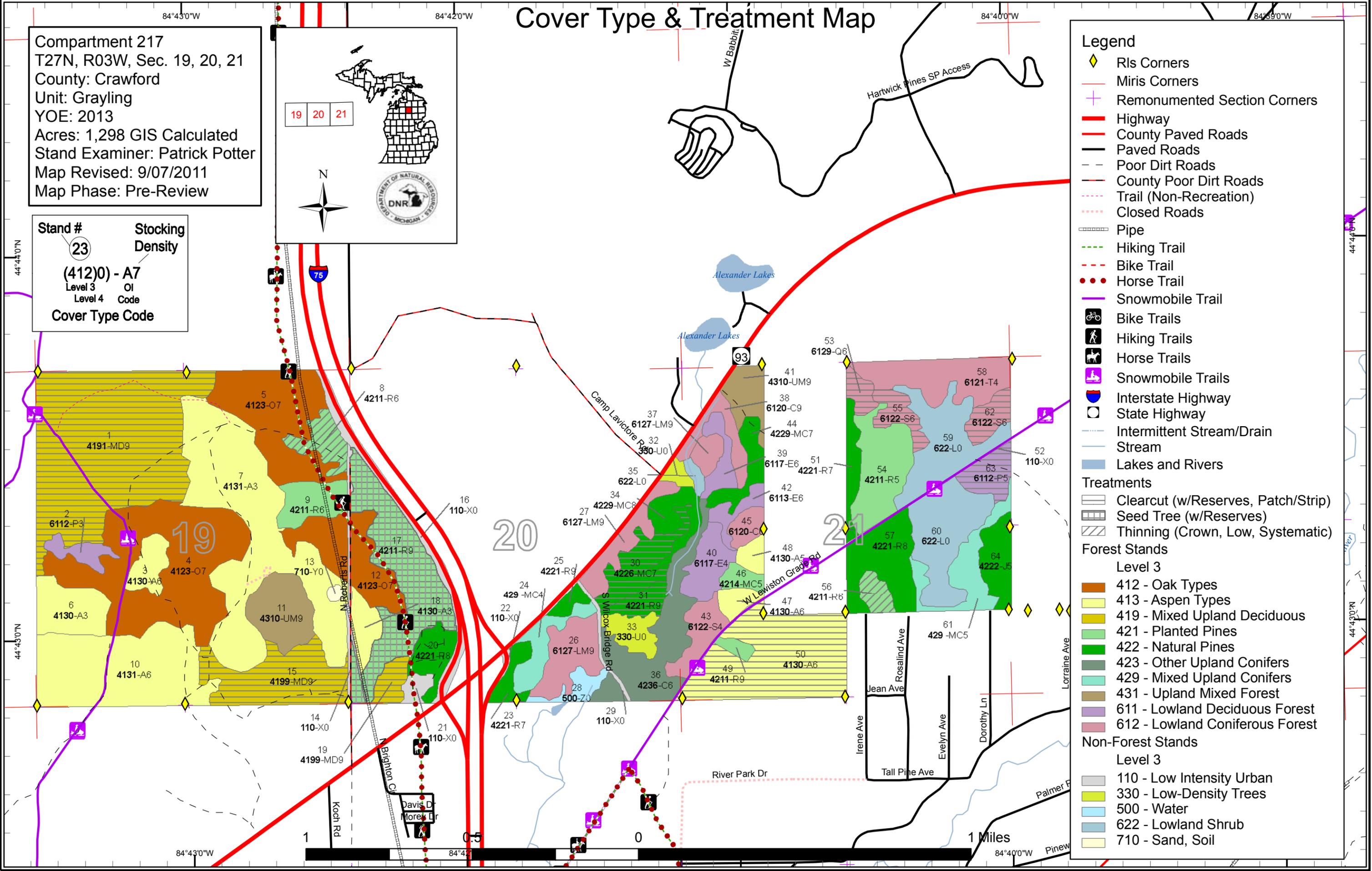
- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand numbers, cover types, recreation trails and facilities**
 - ◆ **Proposed treatments**
 - ◆ **Dedicated & Proposed Special Conservation Areas**

Cover Type & Treatment Map

Compartment 217
 T27N, R03W, Sec. 19, 20, 21
 County: Crawford
 Unit: Grayling
 YOE: 2013
 Acres: 1,298 GIS Calculated
 Stand Examiner: Patrick Potter
 Map Revised: 9/07/2011
 Map Phase: Pre-Review



Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



- ### Legend
- ◆ RIs Corners
 - Miris Corners
 - ⊕ Remonumented Section Corners
 - ▬ Highway
 - ▬ County Paved Roads
 - ▬ Paved Roads
 - ▬ Poor Dirt Roads
 - ▬ County Poor Dirt Roads
 - ▬ Trail (Non-Recreation)
 - ▬ Closed Roads
 - ▬ Pipe
 - ▬ Hiking Trail
 - ▬ Bike Trail
 - Horse Trail
 - ▬ Snowmobile Trail
 - 🚲 Bike Trails
 - 🚶 Hiking Trails
 - 🐎 Horse Trails
 - 🚙 Snowmobile Trails
 - 🛣 Interstate Highway
 - 🛣 State Highway
 - ▬ Intermittent Stream/Drain
 - ▬ Stream
 - 🌊 Lakes and Rivers
- ### Treatments
- ▨ Clearcut (w/Reserves, Patch/Strip)
 - ▨ Seed Tree (w/Reserves)
 - ▨ Thinning (Crown, Low, Systematic)
- ### Forest Stands
- Level 3
- 412 - Oak Types
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 429 - Mixed Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
- ### Non-Forest Stands
- Level 3
- 110 - Low Intensity Urban
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub
 - 710 - Sand, Soil

84°43'0"W

84°42'0"W

84°40'0"W

84°39'0"W

44°44'0"N

44°43'0"N

44°44'0"N

44°43'0"N

1

0.5

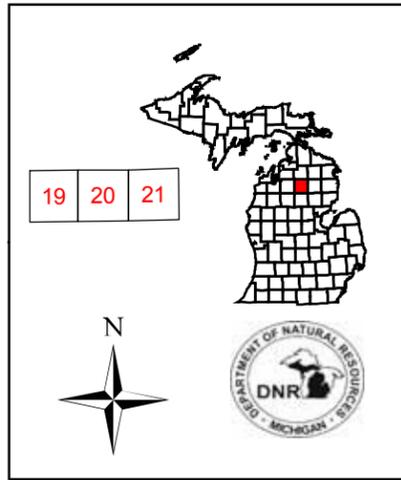
0

1 Miles

84°40'0"W

Dedicated & Proposed Special Conservation Area Map

Compartment 217
 T27N, R03W, Sec. 19, 20, 21
 County: Crawford
 Unit: Grayling
 YOE: 2013
 Acres: 1,298 GIS Calculated
 Stand Examiner: Patrick Potter
 Map Revised: 9/07/2011
 Map Phase: Pre-Review



Legend

- Miris Corners
- Stand Boundaries
- Dedicated Special Conservation Areas
- Cold Water Streams
- Research, Development, and Military Lands
- Cold Water Lakes
- Natural Rivers Zoning District
- Natural Rivers Vegetative Buffer
- Boat Access Sites

Forest Stands

- Level 3
- 412 - Oak Types
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 429 - Mixed Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest

Non-Forest Stands

- Level 3
- 110 - Low Intensity Urban
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub
 - 710 - Sand, Soil

Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

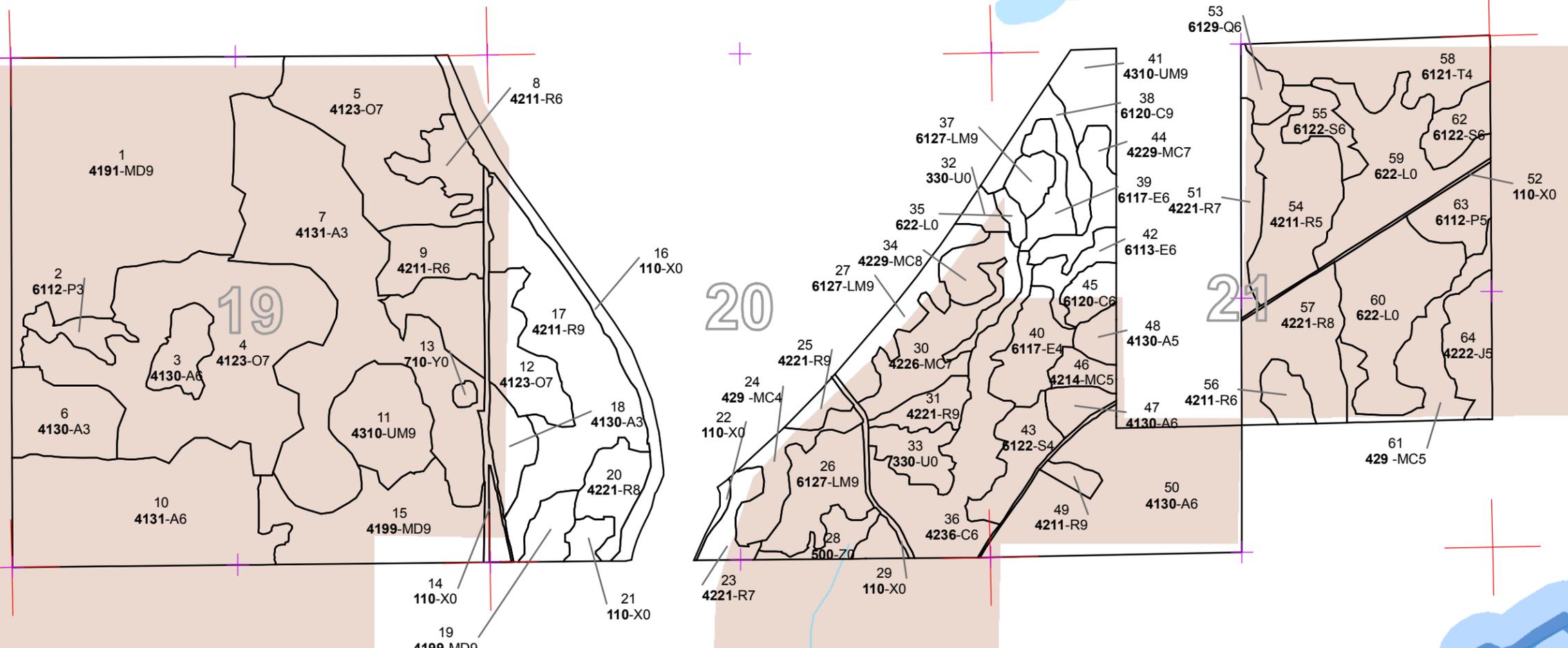


Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total	
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Uneven Age
Aspen	0	0	136	81	77	0	0	0	0	0	0	0	0	0	0	295
Cedar	0	0	0	0	0	0	0	0	0	0	6	39	10	0	0	56
Jack Pine	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	14
Low-Density Trees	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Lowland Aspen/Balsam Poplar	0	0	7	0	0	0	0	11	0	0	0	0	0	0	0	18
Lowland Conifers	0	0	0	0	0	0	0	14	6	0	6	20	0	0	0	45
Lowland Deciduous	0	0	14	0	0	6	0	8	0	0	0	0	0	0	0	29
Lowland Shrub	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
Lowland Spruce/Fir	0	0	0	0	13	0	0	0	18	0	0	0	0	0	0	31
Mixed Upland Deciduous	0	0	0	0	0	0	0	7	40	0	135	0	0	0	0	181
Natural Mixed Pines	0	0	0	0	0	0	0	0	31	0	11	0	0	0	0	42
Oak	0	0	0	0	0	0	0	0	0	0	171	0	0	0	0	171
Planted Mixed Pines	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5
Red Pine	0	0	0	0	0	24	29	112	11	0	0	8	0	0	4	188
Sand, Soil	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tamarack	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	30
Upland Conifers	0	0	12	0	0	19	0	0	0	0	0	0	0	0	0	31
Upland Mixed Forest	0	0	0	0	0	0	0	0	23	0	12	0	0	0	0	35
Urban	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
Water	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	127	0	170	86	90	63	29	183	128	0	340	67	10	0	4	1298



Table 2 – Proposed Treatment Summaries

Grayling Mgt. Unit
Year of Entry 2013

Compartment 217
Total Compartment Acres: 1298

Acres by Treatment Type

Commercial Harvest - 384	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	67	0	0	0	0	0	0	67
Lowland Aspen/Balsam Poplar	11	0	0	0	0	0	0	11
Lowland Conifers	6	0	0	0	0	0	0	6
Lowland Spruce/Fir	18	0	0	0	0	0	0	18
Mixed Upland Deciduous	181	0	0	0	0	0	0	181
Natural Mixed Pines	19	0	0	0	0	0	0	19
Red Pine	8	0	57	0	17	0	0	82
Total	310	0	57	0	17	0	0	384



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	72217001-Cut	134.6	4191 - Mixed Upland Deciduous with Conifer	High Density Log	98	Harvest	Clearcut with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with retention. Do not leave islands, will need to mark individuals and small clumps 3-5 trees. Walk through the stand identifying individual and clumps which will be wind firm. Mark to leave One oak tree and 6 red pine per acre will be approx 7% residual. No harvesting between May and August 15. Will accept any mix of natural regeneration.</p> <p><u>Specs:</u></p> <p><u>Other</u> Only oak regen is white oak and it is mostly ground cover, very few above 3'. Plenty of white and red pine regen with a few areas very heavy.</p> <p><u>Comments:</u> Most of the Red pine is 14-16 inch with areas of mixed sizes. Cored one red pine 102-105 in age.</p> <p><u>Next Steps:</u> Will accept any mix of natural regeneration. Regen survey</p>									
8	72217008-Cut	11.0	42110 - Planted Red Pine	High Density Pole	72	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Do an individual marking to a residual of 70-120 BA. Do a mix of leave quality trees (120 BA) Crop tree release-(residual 70 BA)</p> <p><u>Specs:</u></p> <p><u>Other</u></p> <p><u>Comments:</u></p> <p><u>Next Steps:</u></p>									
15	72217015-Cut	39.6	4199 - Other Mixed Upland Deciduous	High Density Log	75	Harvest	Clearcut with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Final Harvest with retention 3-5 %. There is some regen of oak and aspen but mostly red maple. Kotar Habitat type (PVCd/PArVHA). Large red oak stems are present from stump sprout , and although oak seedlings are present in the understory it is not assured that they will be recruited into the canopy. Without intervention, red maple and white pine will largely displace the less shade tolerant red pine, aspen, and oak. The surround stands which were harvested 10-30 years ago all have an oak</p> <p><u>Specs:</u></p> <p><u>Other</u> stumps sprouts right up there with the aspen and red maple regeneration. Will accept mix of natual regeneration (red maple, aspen, oak & pine)</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Regeneration Survey.</p>									
17	72217017-Cut	57.3	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	65	Harvest	Seed Tree with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Red pine plantation planted around the residual oak. Lots of oak in the ground cover. Plenty of red maple stump sprouts, heavier red pine cover in the south and west part of the stand. Stand was set-up in 1993 and completed in 1995 of a mostly species removal. Focus visual management around I-75 and trail. Release oak</p> <p><u>Specs:</u></p> <p><u>Other</u> Seed tree stand mark the down to a residual of 10-20 BA, and leave a little heavier along next to I-75 . The species removal has created a varied dense of red pine, we need to mark the stand and allow natural regeneration.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Regeneration survey</p>									
19	72217019-Cut	7.0	4199 - Other Mixed Upland Deciduous	High Density Log	66	Harvest	Clearcut with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest, herbicided and then plant red pine. If we do not herbicide the red maple which is a aggressive competitor then the current composition and condition of the stand will be strongly influence by that management decision. This Kotar site has the capability to support stands of high quality timber of a number of important species.</p> <p><u>Specs:</u></p> <p><u>Other</u> Red maple strump sprouts, stand appears to have been final harvested in the early 40's leaving some oak, then red pine was planted. Red pine and red maple only a few years different in age. Kotar: PArVVB--</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u></p>									



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30	72217030-Cut	19.1	42260 - Natural Pine, Mixed Deciduous	Low Density Log	73	Harvest	Clearcut	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription: Final harvest and trench and replant to red pine. Do a bid per acre sale and treat stand 31 at the same time. Allow burn or herbicide as needed
Specs: for site prep prior to planting. Also allow herbicide to release red pine after planting if needed

Other Comments:

Next Steps: Regeneration survey. FTP as needed for herbicide or burn.

31	72217031-Cut	7.6	42210 - Natural Red Pine	High Density Log	102	Harvest	Clearcut with Reserves	42210 - Natural Red Pine	Cmpt. Review Proposal
----	--------------	-----	--------------------------	------------------	-----	---------	------------------------	--------------------------	-----------------------

Prescription: Final harvest and allow natural regen, or if stand 31 is treated then treat at the same time and machine replant to red pine. Also allow herbicide
Specs: to release red pine after planting if needed

Other Comments:

Next Steps: Regeneration survey. FTP allow herbicide to release red pine after planting if needed.

50	72217050-Cut	66.9	4130 - Aspen	High Density Pole	39	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
----	--------------	------	--------------	-------------------	----	---------	----------	--------------	-----------------------

Prescription: We can try two things: Final harvest and prescribe burn to eliminate the fungus which I do not believe will work because of the damage to the
Specs: root system back in 72., or final harvest and plant to red pine. May have to herbicide.

Other Comments:

Next Steps:

53	72217053-Cut	5.7	6129 - Mixed Coniferous Lowland Forest	High Density Pole	72	Harvest	Clearcut with Reserves	6129 - Mixed Coniferous Lowland Forest	Cmpt. Review Proposal
----	--------------	-----	--	-------------------	----	---------	------------------------	--	-----------------------

Prescription: Final harvest with stand 53. Short-wood only, best to use a cut-to-length process with track or six wheels. Leftover branches and other slash
Specs: should be stacked in brushpiles along the edge for rabbit habitat.

Other Comments:

Next Steps:

55	72217055-Cut	9.1	6122 - Black Spruce	High Density Pole	72	Harvest	Clearcut with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
----	--------------	-----	---------------------	-------------------	----	---------	------------------------	---------------------	-----------------------

Prescription: Final harvest leaving all super canopy red and white pine.
Specs:

Other Comments:

Next Steps:

**Table 3 -- Treatments Prescribed
with No Limiting Factor**



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
56	72217056-Cut	6.1	42110 - Planted Red Pine	High Density Pole	46	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Either do a thrid row or a free thinning reducing the residual BA to 90. Tree averaging 8-10 inches dia. with a few 12 inches. Not much more
Specs: than 12 inches of growth between the whorles.

Other
Comments:

Next
Steps:

62	72217062-Cut	8.8	6122 - Black Spruce	High Density Pole	72	Harvest	Clearcut with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
----	--------------	-----	---------------------	-------------------	----	---------	---------------------------	---------------------	--------------------------

Prescription Log only when the ground is frozen or very dry summer, and leave clumps of scattered trees as seed sources for regeneration. After the harvest,
Specs: close any roads or trails against further use and reseed them if necessary. Leftover branches and other slash should be stacked in brushpiles
along the edge for rabbit habitat.

Other
Comments:

Next
Steps:

63	72217063-Cut	11.2	6112 - Lowland Aspen	Medium Density Pole	65	Harvest	Clearcut	6112 - Lowland Aspen	Cmpt. Review Proposal
----	--------------	------	-------------------------	------------------------	----	---------	----------	-------------------------	--------------------------

Prescription Final harvest and allow natural regen, stand is a mix of Quaking Aspen and Balsam Poplar. High water table but no standing water and the
Specs: ground was not spongy.

Other
Comments:

Next
Steps:

**Total Treatment
Acreage Proposed: 384.0**

Table 4 -- Treatments Prescribed with a Limiting Factor



S
t
a
n
d

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
----------------	-------	------------------	--------------	-----------	----------------	------------------	----------------------	-----------------

#Error

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2013



Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
----------------	-------	------------------	--------------	-----------	----------------	------------------	----------------------	-----------------

Prescription
Specs:

Other
Comments:

Next
Steps:

**Total Treatment
Acreage Proposed: 0**

Stand	Grayling Mgt. Unit		5 – Forested Stands			Compartment: 217	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
1	4191 - Mixed Upland Deciduous with Conifer	High Density Log	134.6	98	81-110		Only oak regen is white oak and it is mostly ground cover, very few above 3'. Plenty of white and red pine regen with a few areas very heavy. Most of the Red pine is 14-16 inch with areas of mixed sizes. Cored one red pine 102-105 in age.
2	6112 - Lowland Aspen	High Density Sapling	6.8	14			Stand set up in 1993, but harvested 1997.
3	4130 - Aspen	High Density Pole	9.8	27			In 1983-84 all trees which would yeild one or more 100" pulpwood stick was cut by Champion International corporation.
4	4123 - Red Oak	Low Density Log	89.7	96	1-50		Stand shelterwood harvested 2003, Field office Oak. Good regen of all species.
5	4123 - Red Oak	Low Density Log	49.9	96	1-50		Stand was shelterwood cut 2003. Great regen, a mix of aspen, red maple and oak mostly from stumps. The aspen and red maple are in the lead at this time but I expect the oak to caught up within the next YOE.
6	4130 - Aspen	High Density Sapling	20.4	17			Stand harvest 93-94. Sale # 720529301, sale name (Summer Fawn Sale)
7	4131 - Aspen, Oak	High Density Sapling	106.9	18			Stand harvested 1993. Good regeneration
8	42110 - Planted Red Pine	High Density Pole	11.0	72	171-200		Stand third Row thinned 2003.
9	42110 - Planted Red Pine	High Density Pole	14.6	46	111-140		A few scattered super-canopy Red pine. Trees smaller in height and dia as you move south. Why? Same age, site appears drier and less hardwood regen
10	4131 - Aspen, Oak	High Density Pole	71.4	28			In 1983-84 all trees which would yeild one or more 100" pulpwood stick was cut by Champion International corporation. Oak stump sprout right up there with the aspen and red maple good sign for stand #16.
11	4310 - Pine, Oak Mix	High Density Log	22.9	70	111-140		1993 stand set for harvest cutting all oak and red maple and some red & white pine tree marked with orange paint. Pockets of dense white pine regen and a few areas of dense red pine along the west edge.
12	4123 - Red Oak	Low Density Log	31.4	92	1-50		Stand shelterwood harvested 2003, Field office Oak. Good regen of all species, lots of oak in the ground cover not yet 3' tall need more time. A few scattered JP & RP trees
15	4199 - Other Mixed Upland Deciduous	High Density Log	39.6	75	81-110		Stand final harvested middle 30's. There is some regen of oak and aspen but mostly red maple. Kotar Habitat type (PVCd/PArVHA). Large red oak stems are present from stump sprout , and although oak seedlings are present in the understory it is not assured that they will be recruited into the canopy. Without intervention, red maple and white pine will largely displace the less shade tolerant red pine, aspen, and oak.





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	57.3	65	111-140	Red pine plantation planted around the residual oak. Lots of oak in the ground cover. Plenty of red maple stump sprouts, heavier red pine cover in the south and west part of the stand. Stand was set-up in 1993 and completed in 1995 of a mostly species removal.
18	4130 - Aspen	High Density Sapling	9.1	18		Stand harvested 1993, great oak regen staying up with the aspen.
19	4199 - Other Mixed Upland Deciduous	High Density Log	7.0	66	81-110	Red maple stump sprouts, stand appears to have been final harvested in the early 40's leaving some oak, then red pine was planted. Red pine and red maple only a few years different in age. Kotar: PARVVB--
20	42210 - Natural Red Pine	Medium Density Log	12.0	68	81-110	Grayling field office bone yard
23	42210 - Natural Red Pine	Low Density Log	6.9	60	1-50	Stand was treated 93-94, everything taken but the red pine. Stand was harvested back in the 1940's, current stand is the residual red pine trees that were left. Open grown and very branchy.
24	429 - Mixed Upland Conifers	Low Density Pole	12.2	18	1-50	Stand final harvest 1993, but the residual trees meet the requirement of a forested stand.
25	42210 - Natural Red Pine	High Density Log	3.8	Uneven Age	81-110	Stand is adjacent to M-93 which is the main road leading to Hartwick Pines State Park.
26	6127 - Lowland Pine	High Density Log	20.0	102	81-110	Stand changes a lot, it switches from White pine, balsam, spruce to Aspen white pine with scattered red pine with jack pine mixed in. Wilcox Bride Road an old grade created a small wet site with tag alder along the east side.
27	6127 - Lowland Pine	High Density Log	14.1	61	81-110	Stand is adjacent to M-93
30	42260 - Natural Pine, Mixed Deciduous	Low Density Log	19.1	73	1-50	Stand switched from non-forested to forested, there is enough tree cover.
31	42210 - Natural Red Pine	High Density Log	7.6	102	111-140	Stand was thinned in 1993 and completed in 9/95. Red pine marked with orange paint was cut (3 acres) only. The stand is also being used for a dump site. High water table
34	42290 - Natural Mixed Pine	Medium Density Log	12.3	73	1-50	Red Pine is what stands out.
36	42360 - Upland Cedar	High Density Pole	39.4	102	111-140	Standing water, Tamarack located mostly on the edge and Wilcox bridge road. More tag alder around stand 29. There is a over-flow drainage from Bright & Glory Lake with defined banks, but Wilcox bridge road created a sort of dam which cause the water to back up and spread out.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
37	6127 - Lowland Pine	High Density Log	5.6	98	81-110	Interesting stand it appears the red maple other hardwoods were removed at one time, no records.
38	6120 - Lowland Cedar	High Density Log	10.5	110	141-170	A narrow band of cedar
39	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	8.2	68	81-110	High water table, scattered large mature red and white pine throughout the stand. Only found couple of live paper birch
40	6117 - Lowland Deciduous, Mixed Coniferous	Low Density Pole	14.2	16	1-50	Stand was final harvested/set-up 1993 cut 1995. A few residual trees, but red maple is from the regen.
41	4310 - Pine, Oak Mix	High Density Log	12.1	92	81-110	Stand was setup for timbersale in 1993 and cut/closed 1995. Trees marked with orange paint were to be cut in addition to all red maple.
42	6113 - Lowland Maple	High Density Pole	6.5	48	81-110	The large Red and White pine are on the edges. They disappear within the first chain with a few scattered inside.
43	6122 - Black Spruce	Low Density Pole	12.9	39	1-50	Stand was treated back in 72 when the aspen stand across the road was treated. Some of the Black spruce is residual and a little older.
44	42290 - Natural Mixed Pine	Low Density Log	10.6	92	1-50	Stand treated 2003-04, All white pine was left in addition red pine trees were marked for visual management purpose. There was very good advance white pine regen along the private boundary. Currently there is nice red pine regen.
45	6120 - Lowland Cedar	High Density Pole	6.2	92		Small pocket of cedar with black spruce mixed in.
46	42140 - Planted Mixed Pine	Medium Density Pole	5.1	26		Small stand of mostly planted jack with some scotch pine mixed in. What I can not tell or have record for is was this jack & scotch pine put in after or was left after the 1972 harvest, because the pine mix extend onto the adjacent private. Checking the photos no plantation on the 78's. but you can see it on the 88.
47	4130 - Aspen	High Density Pole	5.6	39		A D-7 was used to harvest this stand in 1972 and because of the impact on the root system. This stand is heavily infected with (Ceratomyces fimbriata) Black canker and in very bad shape.
48	4130 - Aspen	Medium Density Pole	4.6	39	1-50	A D-7 was used to harvest this stand in 1972 and because of the impact on the root system. This stand is heavily infected with (Ceratomyces fimbriata) Black canker and in very bad shape.
49	42110 - Planted Red Pine	High Density Log	3.0	45	111-140	Stand was third row thinned in 2003. Stand looks good heavier BA along Lewiston Grade road but changes within a chain. A few oak wolf trees within the stand. Stand planted 1968 with two year old stock



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
50	4130 - Aspen	High Density Pole	66.9	39	1-50	A D-7 was used to harvest this stand in 1972 and because of the impact on the root system. This stand is heavily infected with (Ceratocystis fimbriata) Black canker and in very bad shape. While this canker rarely kills trees because it develops so slowly; the major impacts are trunk deformity, cull, and predisposition to wind breakage. Conks of species of wood decay fungi may develop in dead portions of old cankers and wood may be decayed. However, the agent of black canker (Ceratocystis fimbriata) does not cause wood decay.
51	42210 - Natural Red Pine	Low Density Log	8.4	65	51-80	All jack pine and red maple harvested last YOE 2003
53	6129 - Mixed Coniferous Lowland Forest	High Density Pole	5.7	72		High water table but dry enough to be harvested in the winter or a dry summer. Trees average 3-7 sticks
54	42110 - Planted Red Pine	Medium Density Pole	29.2	50	81-110	Stand third row thinned 2003. Red maple and some oak in the ground cover. North west end of the stand had more red maple which was harvested. Stand planted 1961.
55	6122 - Black Spruce	High Density Pole	9.1	72	81-110	Final harvest leaving all super canopy red and white pine.
56	42110 - Planted Red Pine	High Density Pole	6.1	46	141-170	Tree averaging 8-10 inches dia. with a few 12 inches. Not much more than 12 inches of growth between the whorles.
57	42210 - Natural Red Pine	Medium Density Log	27.8	69	81-110	Stand treated 2003. This is a nice natural stand of red pine with a couple of small red pine plantations these were also marked last YOE.
58	6121 - Tamarack	Low Density Pole	30.0	68	1-50	Scattered trees through out the stand some in clumps with strips of tag alder. The stand is mostly large white pine and tamarack with red maple and paper birch mixed in.
61	429 - Mixed Upland Conifers	Medium Density Pole	18.9	41		All jack pine 4 inches and larger was cut 1971, stand is a mix of stuff. Quaking Aspen, Balsam fir west side. Aspen impacted with black canker, Residual larger white pine also mix in.
62	6122 - Black Spruce	High Density Pole	8.8	72	81-110	Log only when the ground is frozen, and leave clumps of scattered trees as seed sources for regeneration. After the harvest, close any roads or trails against further use and reseed them if necessary. Leftover branches and other slash should be stacked in brushpiles along the edge for rabbit habitat.
63	6112 - Lowland Aspen	Medium Density Pole	11.2	65	81-110	Aspen is dying off. Rot present throughout stand. Some areas are not as wet so better aspen with balsam fir regen. Ground cover is grasses, choke cherry, bracken fern in the drier areas. Need to final harvest now
64	42220 - Natural Jack Pine	Medium Density Pole	14.0	40	51-80	All jack pine 4 inches and larger was cut 1971. Stand is interesting mostly jack pine with white pine but there are a few small pockets of dog hair balsam fir. No record of harvesting balsam fir, but I am sure it was harvested with the jack pine.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
13	710 - Sand, Soil	1.3	Yes	High (NonForested)	Grayling's weather station.
14	11 - Low Intensity Urban	6.1	No	Unspecified	Roberts Road and high pressure pipeline
16	11 - Low Intensity Urban	18.5	No	Unspecified	South Boundary I-75
21	11 - Low Intensity Urban	4.1	No	Unspecified	Grayling's back parking lot and buildings
22	11 - Low Intensity Urban	1.3	No	Unspecified	Off ramp I-75
28	50 - Water	6.3	No	Unspecified	
29	11 - Low Intensity Urban	2.5	No	Unspecified	Wilcox Bridge road
32	3301 - Low Density Deciduous Tree	3.3	No	Unspecified	
33	3303 - Mixed Low Density Trees	9.8	No	Unspecified	In 1983 approximately 38 cords of cedar were cut plus 6 cords of paper birch for the department's use. The stand is mainly Tag alder with areas of heavy black spruce and red maple sapling. We cut the most of the cedar back in the 80's. The stand has some scattered residual Black spruce, Red maple, cedar and Tamarack but it does not meet the current requirement for a forested stand.
35	6223 - Inundated Shrub Swamp	2.4	No	Unspecified	Old beaver dam which has been abandoned but is in place and is backing up the water.
52	11 - Low Intensity Urban	3.1	No	Unspecified	Lewiston Grade Road
59	6220 - Alder/willow	32.9	No	Unspecified	
60	6220 - Alder/willow	35.2	No	Unspecified	



7 – 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.

Stand	SCA Type	SCA Name	Acres	Comments
-------	----------	----------	-------	----------



8 – 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.

ERA = Ecological Reference Area
 HCVA = High Conservation Value Area
 SCA = Special Conservation Area

Conservation Area	Type	Description
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 conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
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 Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of 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.