



Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72221

Entry Year 2019

Acreage: 578

County Crawford

Management Area: Ogemaw Hills

Revision Date: 2017-09-05

Stand Examiner: Thomas Barnes

Legal Description:

T26N R3W Sections 20 & 21 South Central Grayling Township

Identified Planning Goals:

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

Soil and topography:

Terrain is flat to rolling, with some steep portions, on primarily Grayling Sands.

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

There is a mixture of state, municipal, private industrial and residential ownership. The compartment is adjacent to the City of Grayling's waste water settling ponds and spray fields. A 100-foot strip of land along the north-south centerline of Section 20 was conveyed to the Township of Grayling in 2003 for a recreational trail corridor. A portion of the compartment is included in a Memorandum of Understanding with local units of government to facilitate disposal for industrial development. A land transaction application is currently being considered for part of the compartment lying west of the railroad tracks.

Unique Natural Features:

The compartment contains a mix of cover types – upland pine, aspen and oak – that are typical of the area and soils. Given the habitat types and adjacent observations, there is the potential for occurrences of goshawk, Kirtland's warbler, prairie warbler, Henry's elfin, Eastern massasauga rattlesnake, red-legged spittlebug, Hill's thistle, Alleghany plum and rough fescue.

Archeological, Historical, and Cultural Features:

Evidence of historic logging activity was noted within the compartment.

Special Management Designations or Considerations:

See Ownership regarding the Memorandum of Understanding.

Watershed and Fisheries Considerations:

Municipal waste water treatment facilities border the compartment. This area is over the groundwater aquifer that feeds the Manistee and AuSable Rivers. There are no streams or lakes contained within the compartment.

Wildlife Habitat Considerations:

Maintaining the current mix of oak and pine will benefit a variety of game and non-game wildlife.

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 200 and 600 feet. Beneath the glacial drift is the Michigan Formation. The Michigan is quarried for gypsum elsewhere in the State. A gravel pit is located in Section 27 and potential is good. The Compartment is not currently leased for oil and gas development.

Vehicle Access:

The compartments' two main blocks can be reached by way of Industrial Drive and Barker Lake Road. There is no legal access to the block of state land bordering I-75, although access has been gained in the past from the adjacent gravel pit owner.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

Hunting and dispersed snowmobiling occur within the compartment. The snowmobile trail that was in this compartment was closed in 2016-2017. The planned Iron Belle Trail, a non-motorized corridor, will traverse thru the compartment near center of section 20. The Beal Plantation, a historical site and interpretive trail, lies just north of this compartment, located in the center of the Grayling Industrial Park.

Fire Protection:

Equipment-related fire starts are not uncommon along the railroad grade, but access is good on both sides of the tracks for fire suppression.

Additional Compartment Information:

Crawford County Road Commission is planning on extending Industrial Drive, connecting the portions coming off M-72 and 4 Mile Rd. Once land in Section 20 is disposed of under MOU, it is recommended remaining land be merged with an adjacent compartment.

The following reports from the Inventory are attached:

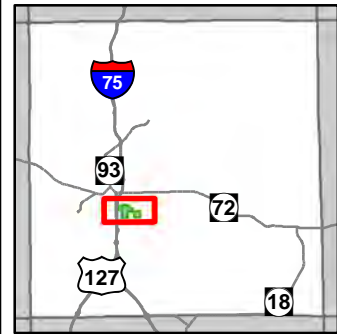
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

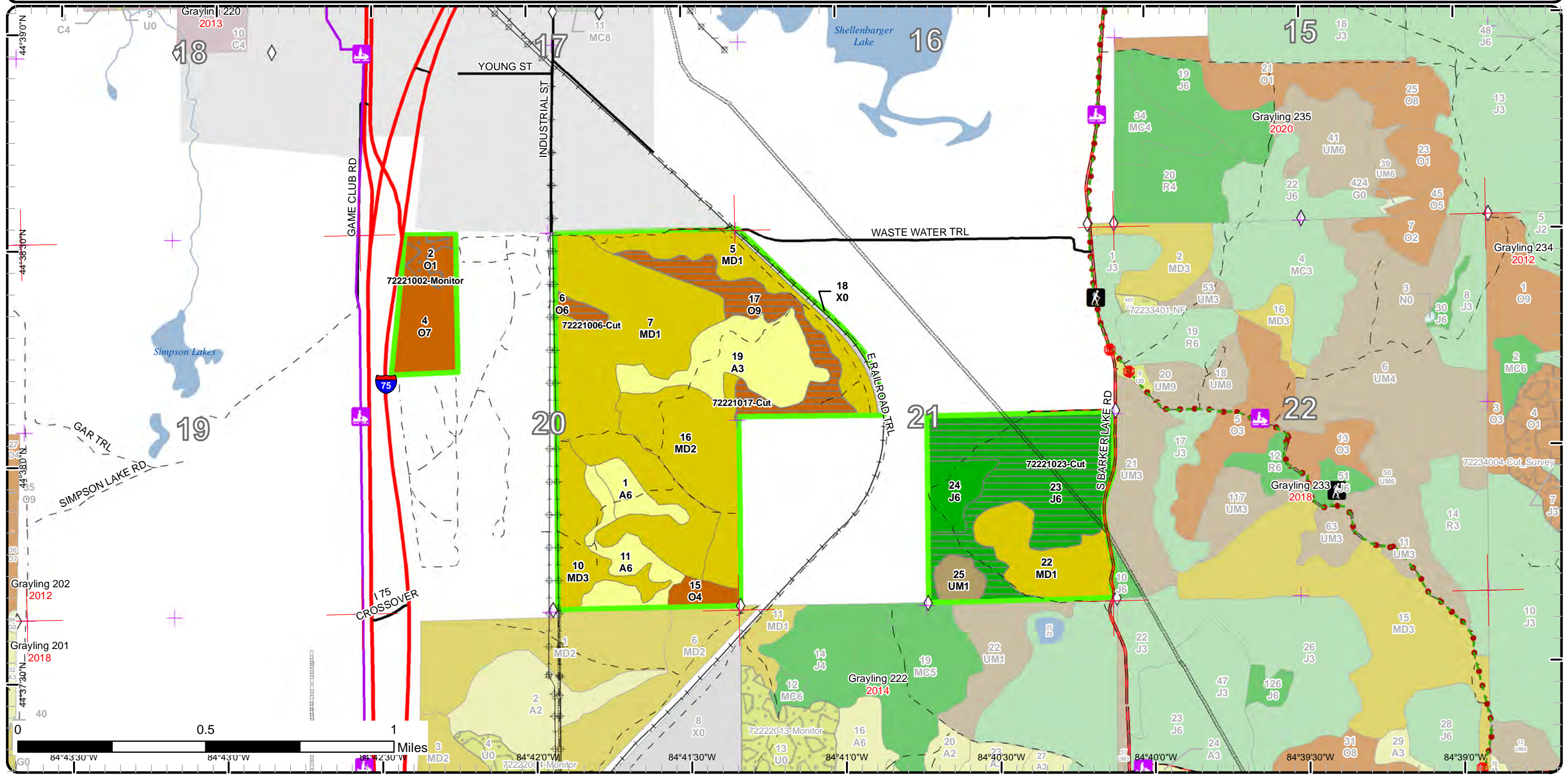
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 221
 T26N R03W 20-21
 County: Crawford
 Unit: Grayling
 Mgmt Area: Ogemaw Hills
 YOE: 2019
 Acres: 578.5 GIS Calculated
 Examiner: Thomas Barnes
 Map Revised: 3/13/2018
 Map Phase: Post-Review

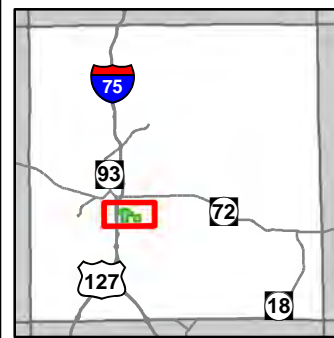


- Miris Corners
- + Remonumented Section Corners
- Field Grade GPS Corners
- Counties
- Sign
- Hiking Trails
- Horse Trails
- Snowmobile Trails
- - - Designated Hiking Trails
- - - Designated Equestrian Trails
- - - Designated Snowmobile Trails
- Highway
- Paved Roads
- County Gravel Roads
- Gravel Roads
- - - County Poor Dirt Roads
- - - Poor Dirt Roads
- - - Closed
- Active Railroads
- Streams
- Lakes and Rivers All
- Pipeline
- Powerline
- Cities
- Compartment Boundary
- Clearcut (w/Reserves)
- Regeneration Survey
- 412 - Oak Types
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 110 - Low Intensity Urban
- Lakes

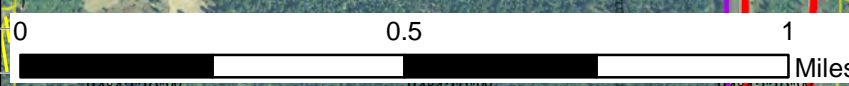
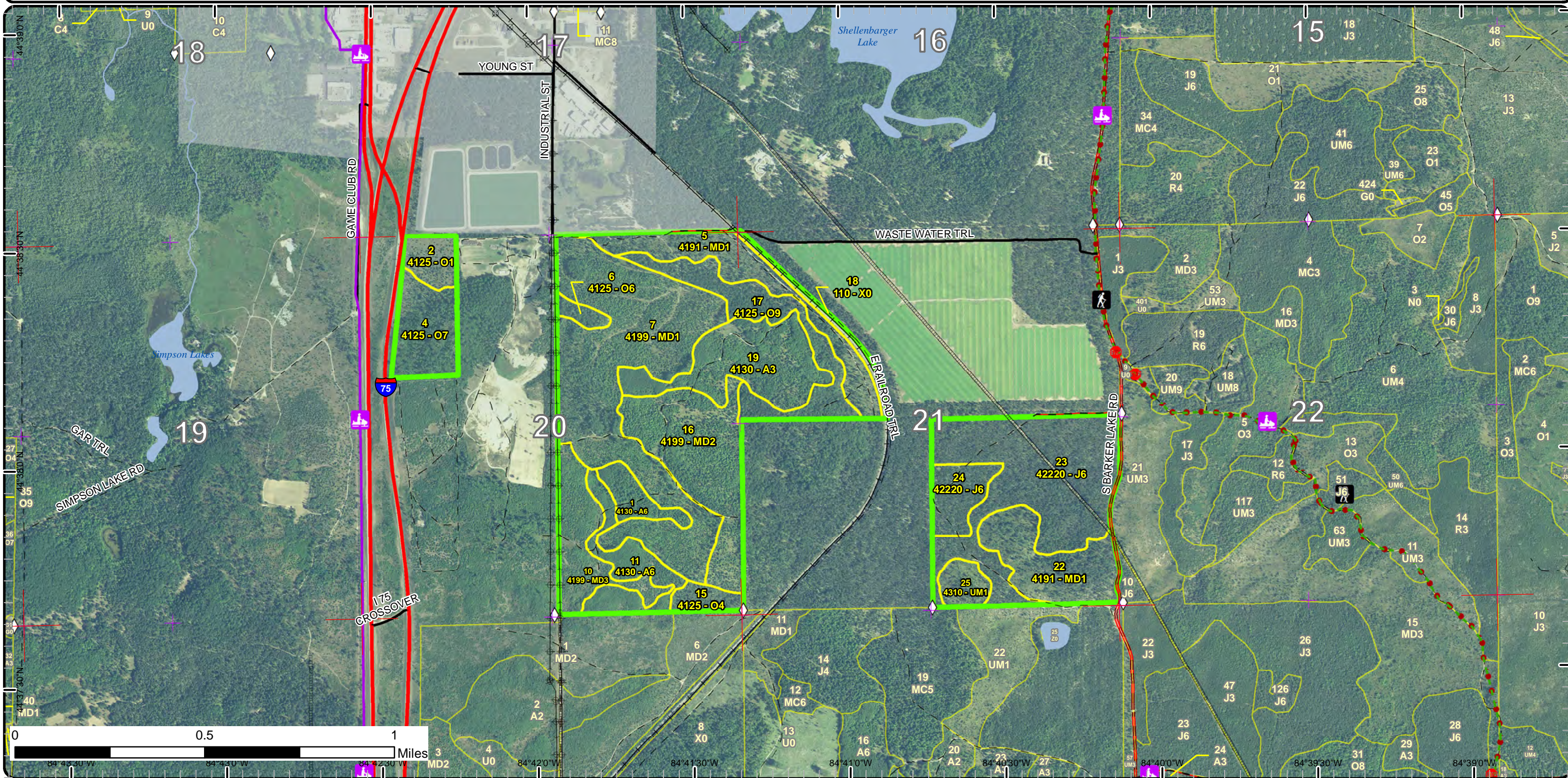


Stand Boundary Map

Compartment: 221
 T26N R03W 20-21
 County: Crawford
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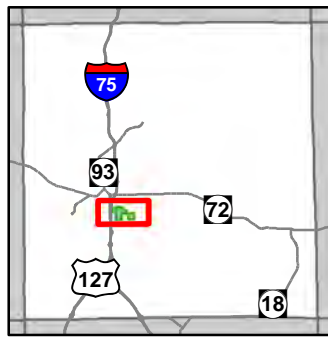
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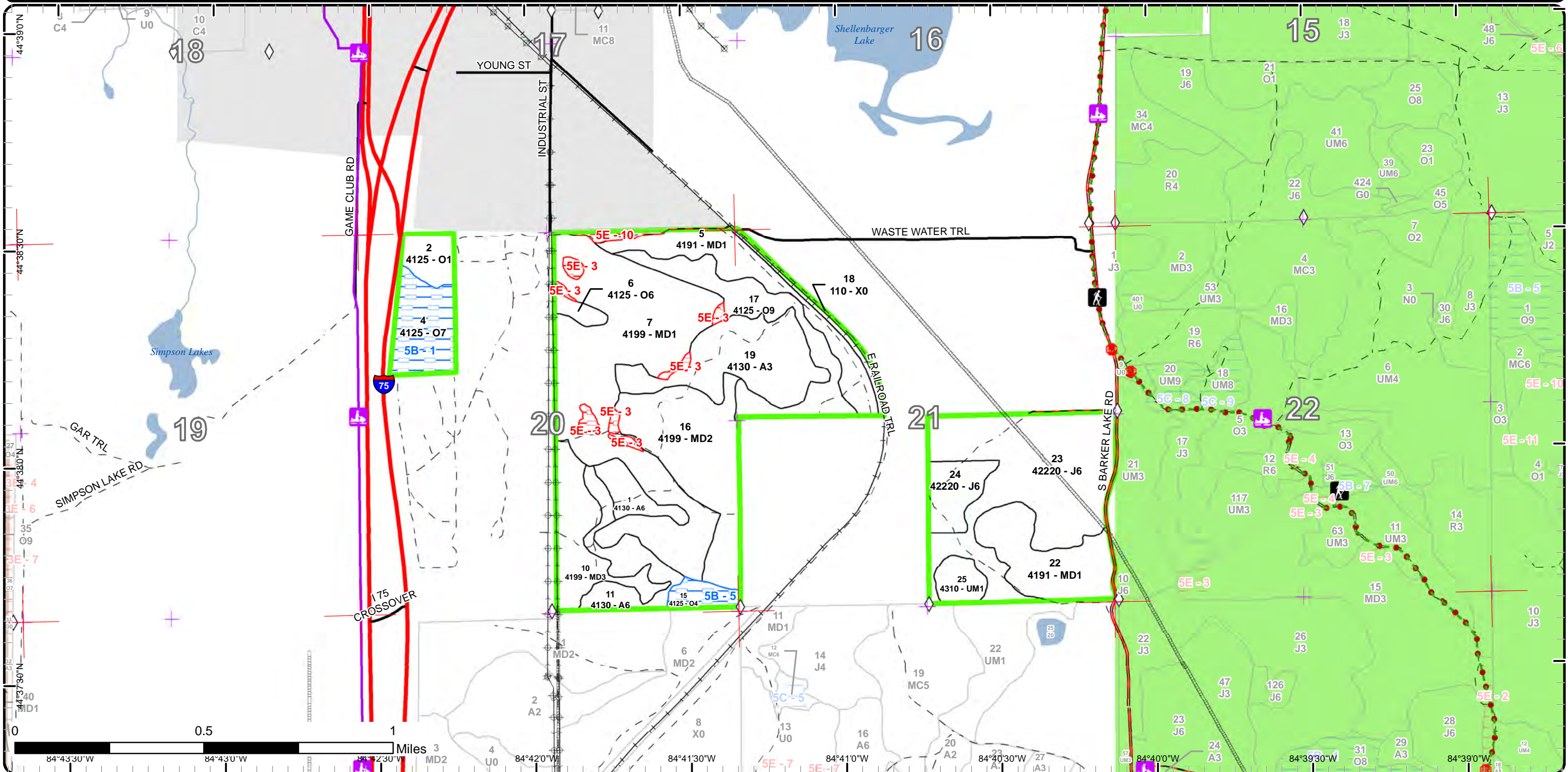
84°43'30"W
84°43'0"W
84°42'30"W
84°41'30"W
84°41'0"W
84°40'30"W
84°40'0"W
84°39'30"W
84°39'0"W

Special Conservation Areas & Site Conditions Map

Compartment: 221
 T26N R03W 20-21
 County: Crawford
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- Pipeline
- Powerline
- Cities
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes
- 5E: Long-Term Retention
- Stand Boundaries
- Kirtland Warbler Habitat
- Cold Water Streams





Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	47	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81
Jack Pine	0	0	0	16	0	0	0	93	0	0	0	0	0	0	0	0	0	0	109
Mixed Upland Deciduous	0	231	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	289
Oak	0	11	0	0	0	4	0	0	0	37	33	0	0	0	0	0	0	0	84
Upland Mixed Forest	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Urban	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	6	251	105	50	0	4	0	93	0	37	33	0	0	0	0	0	0	0	578



Report 2 – Treatment Summary

Grayling Mgt. Unit

Year of Entry: 2019

Acres of Harvest

Compartment 221

Total Compartment Acres: 578

Commercial Harvest - 134
 Harvests with Site Condition - 0
 Next Step Harvest - 0
 Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Jack Pine	93	0	0	0	0	0	0	0	0	93
Oak	41	0	0	0	0	0	0	0	0	41
Total	134	0	0	0	0	0	0	0	0	134

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	134	0	0	0	0	0	11	0	0	145
Next Step	0	93	93	0	0	0	93	41	0	320
Total	134	93	93	0	0	0	104	41	0	464



S t 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
2	72221002-Monitor	10.9	4125 - Black, N. Pin Oak	Sapling Poor	9	Immature	Monitoring	Natural Regen (Re-Inventory)	4199 - Other Mixed Upland Deciduous	Even-Aged	Draft Field Boundary

Habitat Cut: No

Site Condition:

Prescription Keeping treatment on, I think it passes currently but more time will help.

Specs:

Next Step

Treatments:

Acceptable Mixed oak with associated species meeting minimum stocking levels.

Regen:

Other Stand was consumed in the Four Mile Fire.

Comment:

Proposed Start Date: 10/01/2018

6	72221006-Cut	4.4	4125 - Black, N. Pin Oak	Poletimber Well	47	111-140	Harvest	Clearcut	110 - Low Intensity Urban		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Final harvest without retention due to size.

Specs:

Next Step Other, Other

Treatments:

Acceptable None,

Regen:

Other Stand is within the Industrial Park, high probability that this area will be converted to industrial use.

Comment:

Proposed Start Date: 10/01/2018

17	72221017-Cut	36.5	4125 - Black, N. Pin Oak	Sawtimber Well	83	51-80	Harvest	Clearcut	110 - Low Intensity Urban		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Final harvest with no retention.

Specs:

Next Step Other, Other

Treatments:

Acceptable None future site conversion to industrial use.

Regen:

Other Stand is within the Industrial Park, high probability that this area will be converted to industrial use.

Comment:

Proposed Start Date: 10/01/2018

23	72221023-Cut	92.9	42220 - Natural Jack Pine	Poletimber Well	69	81-110	Harvest	Clearcut with Retention	4222 - Natural Jack Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Final harvest with retention, following standard retention guidelines. Use the low stump and chipping spec as a precaution to allow for roller

Specs: chopping if natural regen fails.

Next Step Monitoring, Natural Regen (Intermediate); SitePrep, Trenching; Planting, Replant

Treatments:

Acceptable Mixture of jack pine with mixed oak and red pine meeting minimum stocking level. If natural regeneration fails then roller chop, herbicide and

Regen: plant to red pine.

Other If natural regeneration fails then roller chop, herbicide and plant to red pine.

Comment:

Proposed Start Date: 10/01/2018

**Total Treatment
Acreage Proposed: 144.7**

Report 4 – Site Conditions

Grayling Mgt. Unit

Thomas Barnes : Examiner

Compartment: 221

Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	5B	5E
		With Condition	Not Available			
81	81	0	0	Aspen		
109	109	0	0	Jack Pine		
288	277	0	11	Mixed Upland Deciduous		11
85	52	33	0	Oak	33	
9	9	0	0	Upland Mixed Forest		
6	6	0	0	Urban		
578	534	33	11	Total Forested Acres	33	11
	92%	6%	2%	Relative Percent		

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

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	5B: Maintain for regeneration purposes	26	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Low residual BA was left from last treatment. Quality of stems is not worth damaging the regeneration that has become established in the understory. Parcel is landlocked and is being recommended for disposal.							
2	Available	Minor Change in Acreage	0	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	5E: Long-Term Retention	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	5B: Maintain for regeneration purposes	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Overstory has low BA and of poor form, not worth harvesting and setting back advance regeneration that is currently in place.							

Report 4 – Site Conditions

Grayling Mgt. Unit

Thomas Barnes : Examiner

Compartment: 221

Year of Entry: 2019

10	Unavailable	5E: Long-Term Retention	3	1C: Other dept or div proc/practices	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 5 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.

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Grayling Mgt. Unit

Report 7 – Forested Stands

Compartment: 221
Year of Entry: 2019



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4130 - Aspen	Poletimber Well	11.0	27	Immature	Young stand of Bigtooth Aspen, on edge of being pole sized stand still keep stand at Sapling. OPIC - FMD: Cut in '90-'91 under #720348901. 15-30' BTA, with RM & NPO stump clumps scattered and in inclusions. Used previous ground cover and SI.
2	4125 - Black, N. Pin Oak	Sapling Poor	10.9	9	Immature	<p>All merchantable stems cut in 2000 under #720229901 Millikin Access Block. Stand was also consumed in the 4 Mile Fire in 2008. This restarted the stand and scattered clump sprouting of oak, maple and some jack pine seeding in. Stand is borderline forested.</p> <p>OPIC - FMD: Permission was gained from Millikin's to access across their gravel pit property for that harvest. Borders the I-75 corridor. Good oak stump sprouts above the browse line. O2 on ave but with lower stocking to the N. Few scattered pine saps. Used previous ground cover code. Used former stand 3's SI - it was adjacent on similar ground.</p>
4	4125 - Black, N. Pin Oak	Sawtimber Poor	25.8	99	1-50	<p>This stand was treated in 2000 under contract 72-022-99-01. Stand was also impacted in Spring of 2008 by the 4 Mile Fire. Stand does have regen coming into the understory of heavy oak, aspen and maple. Other than aspen the sprouting is clumped. Majority of oak is between 3-8 feet tall. Overstory is log size with some mortality occurring.</p> <p>OPIC - FMD: Was shelterwood-seed cut, leaving all oak >8" DBH, in 2000 under #720229901, Millikin Access Block. Permission was gained from Millikin's to access across their gravel pit property for that harvest. Borders the I-75 corridor. There is a minor amount of epicormic branching on some of the small oak saw. Below is variable stocking in BTA, RM & RO sprout regen. A2 is an ave/composite of the 3 species. Some of the oak stump sprouts show browse damage, but a majority of them are doing well. The overstory is open enough so as not to seriously suppress the regen. Incorporated former stand 3 into this stand. Stand 3 was on the flats and had the same treatment as stand 4, which is on rolling terrain. Used previous stand 4's SI.</p>



S t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
5	4191 - Mixed Upland Deciduous with Conifer	Sapling Poor	36.8	7	Immature	<p>Stand was cut in 2009 as part of 4 mile fire salvage. Stand was separated from other stand harvested as the Mo is jack pine. Stand is regenerating naturally heavier to oak with jack pine coming back. I would Say failed region for Mo, but acceptable when considering other species. Residual Red an white pine along with some white oak</p> <p>OPIC - FMD: Limit Factored due to potential land disposal under a Memorandum of Understanding for industrial/commercial development. Low volume, poor quality over-mature JP saw component that is senescing, ~60 year old mature poles, and younger smaller poles and large saps. Scattered throughout are also poor-form and quality NPO cull saw and poles, few BTA to the south and a mix of size classes of RP also in the S1/2. O/J 1 in scraggly small oak saplings and seedlings, suppressed JP small saps, but also near-merchantable JP large saps. The stand is basically a multiple-age mix of pine and oak with over- and under-mature components. J1 is a composite of the oak and JP regen. The stand is nearly a mile long, and narrow, paralleling the railroad tracks. Harvest all merchantable JP, oak and aspen. Retain the younger, healthy RP component and protect the existing regen. The goal is to secure a mix of natural regen, although this may take longer than the certification standard of 5 years. These stands on poorer soils that regenerated naturally without a stand-replacement level fire typically took decades to fill in to a fully-stocked condition. Dropped extremely low SI as not representative (SI 34), and used second SI (49) that was more in line with the previous SI of 48. Harvest update: cut 2010 (#72-009-09-01) by S. Muma, merch & up except retention islands, WO, WP, RP & green-marked mixed oak. Cruised residual of 2 sq. ft. oak and 4 sq. ft. total WP & RP.</p>
6	4125 - Black, N. Pin Oak	Poletimber Well	4.4	47	111-140	<p>Mixed stand of DBHs as well as species. Mixture of hybrid oak, white oak, aspen maple, and some pine. Small stand along power line. Fair amount of oak regen in understory. OPIC - FMD: 15-30' tall oak saplings, some near-merchantable. RM stump clumps are ~ merchantable. Oak saw trees are scattered throughout. The cut most likely occurred before the state aquired the property through tax reversion in 1932. Cut an oak sapling, was 37 years old, but used the encompassing stand 7's SI. Old comments: "OPEN STAND WITH SPOTS OF OAK AND RED MAPLE."</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
7	4199 - Other Mixed Upland Deciduous	Sapling Poor	127.6	7	Immature	<p>Harvested in 2010 (#72-009-09-01) by S. Muma, merch & up except retention islands, green-marked trees, WP, RP & JP. Cruised residual of 2 sq. ft. WP & RP.</p> <p>Stand has regenerated to clump maple and oak with some aspen and scattered jack pine. Roughly 7 retention islands were left as well as the above mentioned species. Regen is getting browsed.</p> <p>OPIC - FMD: South part of stand burned in four mile fire on 4/24/08. Limit Factored due to potential land disposal under a Memorandum of Understanding for industrial/commercial development. Was thinned in 2002, all aspen, RM & marked oak, under #720419901. Stand has large pole/small saw hybridized RO and large pole suppressed WO, with an understory of scattered RM stump sprout clumps and some aspen sprouts. Most of the oak stump sprouts have been impacted by browsing. The stand occupies a series of ridges that have some steeper sides. The previous SI was 58. Per Pre-Review discussion: if the area is not disposed of under the industrial park MOU, final harvest now, given the oak's age, applying standard retention specs. Harvest update: cut 2010 (#72-009-09-01) by S. Muma, merch & up except retention islands, green-marked trees, WP, RP & JP. Cruised residual of 2 sq. ft. WP & RP.</p>
10	4199 - Other Mixed Upland Deciduous	Sapling Well	29.7	9	Immature	<p>Stand was part of the 4 mile fire in the spring of 2008. Stand has regenerated to mixture of red maple, aspen and oak. Much of the maple and oak is clump regeneration. Merged with stand 110 as they were both part of the fire and regenerated to basically the same type of stand.</p> <p>OPIC - FMD: Cut in '90-'91 under #720348901. 15-25' RM stump clumps, with NPO stump clumps and aspen suckers. Inclusions of O3 and A3, but on average, RM dominates. Used previous SI and ground cover.</p>
11	4130 - Aspen	Poletimber Well	22.6	27	Immature	<p>Young stand of Bigtooth Aspen, on edge of being pole sized stand still keep stand at Sapling. OPIC - FMD: Cut in '90-'91 under #720348901. 15-30' BTA, with RM & NPO stump clumps scattered and in inclusions. Used previous ground cover and SI.</p>
15	4125 - Black, N. Pin Oak	Poletimber Poor	7.5	95	1-50	<p>Stand was impacted by the 4 mile fire. Pole size with a good percentage of mortality. Understory is seeding in very nicely with a diversity of species. BA swings netted a stand average of 37sqft. Heavy wildlife presence in the stand.</p> <p>OPIC - FMD: Spindly NPO & WO poles with small diameter oak saw, JP & RP of all size classes mixed in. Lower end PARVHa. Previous comments indicate: "MANAGE STAND WITH COMPARTMENT 222", but that note was not cross-referenced in compt 222's adjacent stands' comments, so the sale has been set up and sold already without including this stand. The adjacent stand 116 to the north was recently final harvested, and the sale to the south in compt 222 will be final harvested also, so for green-up considerations, leave this YOE. Used former stand 14's SI (stand 14 was combined with this stand after both lost acres to stand 16). See locked comments.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	4199 - Other Mixed Upland Deciduous	Sapling Medium	57.9	14	Immature	<p>All merchantable stems were cut in 2003 under 720580101. While the stand has oak stump sprouts scattered throughout and patches of aspen regen, RM stump sprouts are the most common regen. Residual from the harvest (lg. sap/sm. pole RP, WP, oak & RM) are scattered throughout the stand.</p> <p>Previous comments: "Cut 1.5 to 2.0 acre patches, but only within that part of the stand which is on the ridges. Prescription changed to final harvest."</p>
17	4125 - Black, N. Pin Oak	Sawtimber Well	36.5	83	51-80	<p>Long, narrow stand, mostly on the flats, with poor-quality short scrubby NPO & WO in the N, grading slightly uphill. Along the edge near stand 19 there were scattered very overmature BTA, some nice RO, but also NPO. There is little oak regen except at the N end. Four BA swings were taken with a stand average of 62.5.</p>
19	4130 - Aspen	Sapling Well	47.0	15	Immature	<p>You my aspen stand with variable densities of stems. Some re maple and oak d clumps. Scattered log sized oak residual. Stand was cut in 2003. OPIC - FMD: 5-15' BTA in A0-A3. Averages to A3 when the RM stump sprouts are included. Oak stump sprouts are in the minority, and there is more RM regen to the south. Was cut in 2002-2003 under 720419901, all stems 2" & up. Approximately 10 acres in the stand's SE were cut in 2003 under 720580101, taking all merchantable stems. This area regenerated largely to aspen, so it was split off of stand 16 and included with this stand's A-type. Used previous SI.</p>
22	4191 - Mixed Upland Deciduous with Conifer	Sapling Poor	36.3	8	Immature	<p>Harvested under 720070901 East 221 Salvage by Shawn Muma F.P. in late 2009. Stand is very similar to stand 25 but with a component of aspen. White oak has a residual over story of about 10 BA. Regen coming back as oak, pine, maple and aspen. Stock in is between poor and moderate.</p> <p>OPIC - FMD: Higher ground island of oak surrounded by outwash plain JP (stand 23). Dying back NPO, with poor form/health BTA in scattered small clones, WO saw growing very slowly (SI 34) but holding up better than the NPO and seeding in regen, and JP represented by a variety of size/age classes, including pockets of lg. poles/sm. saw. O1 understory is a composite of all regen. Kept the previous NPO SI since my SI on the WO wasn't representative. Final harvest with reserves: cut all merchantable JP, NPO, RM and aspen. Leave all WO for additional seed. The goal is to regenerate the NPO and aspen before they senesce out of the stand. A mix of pine, oak and aspen is expected. Treat at the same time as stand 25. Given this stand's relatively small acreage, its high amount of edge relative to its area, and the NPO's declining condition, I would prefer to not increase the amount of ISR beyond leaving the WO. Variance approved 1-30-09 to allow for greater than 25% differential in acreage resulting from running line to take into consideration terrain limitations on equipment operation. Harvest update: cut under 720070901 East 221 Salvage by Shawn Muma F.P. in late 2009.</p>



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	42220 - Natural Jack Pine	Poletimber Well	92.9	69	81-110	<p>Stand is a mature Jack pine stand. Large pole size wit some log and sapling sized trees. Scattered Pin oak and red pine. Understory does have an oak and jock pine component. Jack pines are 3- 4 stick trees. Gas pipeline runs diagonally thru the stand.</p> <p>OPIC - FMD: 2+ aged JP stand with a minor overmature saw component that is dying out, scattered scraggly NPO, and a majority in 2-3 stick JP poles over large sap/just merchantable JP, and oak seedlings/saplings in O0-O2. The stand has over- & under-mature components. Hold this YOE since stands 22 & 25 and the adjacent compartment 233's stand 21 will be final harvested. SI averaged between this and the previous inventory. Previous comments: "STAND IS ALONG BARKER LAKE ROAD. Two aged stand, 3-5 inch and 7-9 inch DBH. Include that portion of the stand that is east of Barker Lake Road to cut with Compartment 233, stand 21 to the east. Leave red pine and oak along Barker Lake Road along a three chain wide strip for visual concerns. This portion of the stand has been given a new stand number, #26. 09/08/2006 mm"</p>
24	42220 - Natural Jack Pine	Poletimber Well	16.0	28	Immature	<p>Young Stand of pole sapling sized jack pine. There is a component of pin oak and red pine. Jack pine are nearing 2 stick stems.</p> <p>OPIC - FMD: All merchantable stems were cut in 1990 under #720478901. JP saplings (J0-J3), with low-density 1-stick JP that was residual from the 1990 cut. There are pockets of J4/J5, but the merchantable stems are generally scattered and the stand is characterized by its regen. Good oak stump sprouts 10-15' tall along with smaller individual oak seedlings/saplings. Used previous SI.</p>
25	4310 - Pine, Oak Mix	Sapling Poor	9.0	8	Immature	<p>Harvested under 720070901 East 221 Salvage by Shawn Muma F.P. in late 2009.</p> <p>Residual white oak with Less than 10 BA. Regan is mixture of pin oak and Jack pine. Fair amount of deer browse. OPIC - FMD: Small stand on higher ground than the surrounding JP stand 23. Poor-quality breaking up NPO, better health WO, a mix of size-classes of JP & RP poles, over oak seedlings & saplings (O1 achieved by combining the oak and JP regen). Small RM component in the stand. Final harvest with reserves: Cut all merchantable JP, NPO & RM. Leave all WO for additional seed. The goal is to regenerate the NPO before it senesces out of the stand. A mix of pine & oak is expected. Treat at the same time as stand 22. Given this stand's relatively small acreage, its high amount of edge relative to its area, and the NPO's declining condition, I would prefer to not increase the amount of ISR beyond leaving the WO. Harvest update: cut under 720070901 East 221 Salvage by Shawn Muma F.P. in late 2009.</p>



Stand	Cover Type	Acres	Managed Site	General Comments:
18	110 - Low Intensity Urban	6.4	No	Railroad grade corridor with grass-covered ditches.