



Compartment Review Presentation

Gladwin Forest Management Unit

Compartment 73138

Entry Year 2018

Acreage: 1,385

County Arenac

Management Area: Gladwin Lake Plain

Revision Date: 2016-05-31

Stand Examiner: Rick Myrick

Legal Description:

T20N-R07E Sections 2, 3, 4, 9, 10, & 11

Identified Planning Goals:

The Compartment is within the Gladwin Lake Plain Management Area (MA) and is predominately lowland hardwood. Swamp Hardwoods make up 19% of the MA. Limited management will take place in swamp hardwoods. Care must be taken to protect soil and water resources from harvesting impacts. Aspen makes up 41% of the MA. Largely due to the habitat impacts on game species and markets for aspen raw material, aspen will continue to be the featured species. Balance the distribution of the 0-59 year age classes and seek opportunities for harvests in the 60-89 year age classes to maintain the acreage of aspen. Due to high water tables, wetter aspen sites may be difficult to harvest during wet years. Allow aspen on inoperable sites to succeed to more shade tolerant species.

Soil and topography:

Roscommon-AuGres association: Mainly level to gently undulating, somewhat poorly drained to very poorly drained deep sands. Wisner-Sims association: Level or nearly level, poorly drained and very poorly drained soils formed in clay loam. Tawas-Carbondale association: shallow to deep, very poorly drained, organic soils in level to depressional areas.

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

The Compartment is one large, generally contiguous, parcel of State ownership. Approximately one fifth of the Compartment borders State forestland to the north in Iosco County. The other three fifths are surrounded by private property consisting of mainly farmlands and hunting land.

Unique Natural Features:

There is a known occurrence of Red-shouldered Hawk (*Buteo lineatus*), a Michigan Threatened species, within the Compartment. The Michigan Natural Features Inventory database indicates no other known occurrences of unique natural features.

Archeological, Historical, and Cultural Features:

The database indicates there are no known archeological, historical, or cultural features within the Compartment.

Special Management Designations or Considerations:

The East Branch of the Au Gres River is a Special Conservation Area (SCA); noted as a high priority trout stream.

Watershed and Fisheries Considerations:

The East Branch of the Au Gres River runs south through a portion of the Compartment, where it eventually discharges to the Whitney Drain. Whitney Drain flows east and discharges to Lake Huron.

Wildlife Habitat Considerations:

Wildlife Habitat Considerations: Compartment #138 contains a variety of vegetative types, making it suitable for a number of wildlife species. Lowland hardwood systems are dominant. Game species likely to be present in this compartment include black bear, bobcat, raccoon, coyote, wild turkey, ruffed grouse and white-tailed deer. Many bird species stand to benefit from the juxtaposition of lowland and upland habitats present in the compartment. These include common yellowthroat, yellow-rumped warbler, gray catbird, redbellied vireo, white-throated sparrow, hermit thrush, red-breasted nuthatch, ruffed grouse, and American woodcock. The compartment has limited access but is accessible to hunters via Andrews Road.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine (lake) clay and silt. The glacial drift thickness varies between 0 and 50 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan is quarried for gypsum. A quarry is located in Section 24. Sand pits are located within one mile, but gravel potential may be limited. Santiago Field is located four miles to the southwest. Discovered in 1986, the field has produced oil and gas from the Prairie du Chien.

Vehicle Access:

Vehicle access to the Compartment is off Andrews Road via a poor dirt road that runs west to a State owned gate, and continues into the interior of the Compartment. The Compartment's organic soils which are wet most of the year restrict access from the east. Access from the west is restricted by the East Branch of the Au Gres River.

Survey Needs:

None during this YOE.

Recreational Facilities and Opportunities:

The Compartment offers primarily firearm and archery deer hunting opportunities.

Fire Protection:

The Compartment is comprised of mostly lowland hardwoods and is wet most of the year. It therefore poses a lower wildfire risk. However, given the Compartment's limited access and organic soils, a wildfire could prove difficult to rapidly suppress and may require significant mop up to extinguish ground fires.

Additional Compartment Information:**The following reports from the Inventory are attached:**

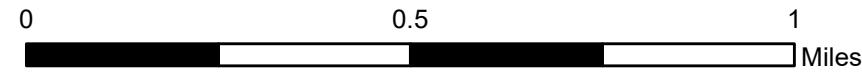
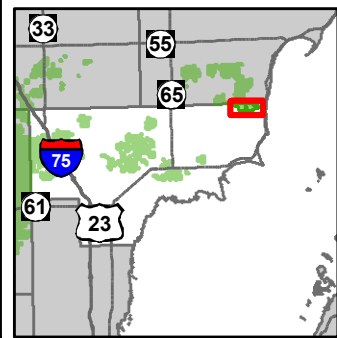
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

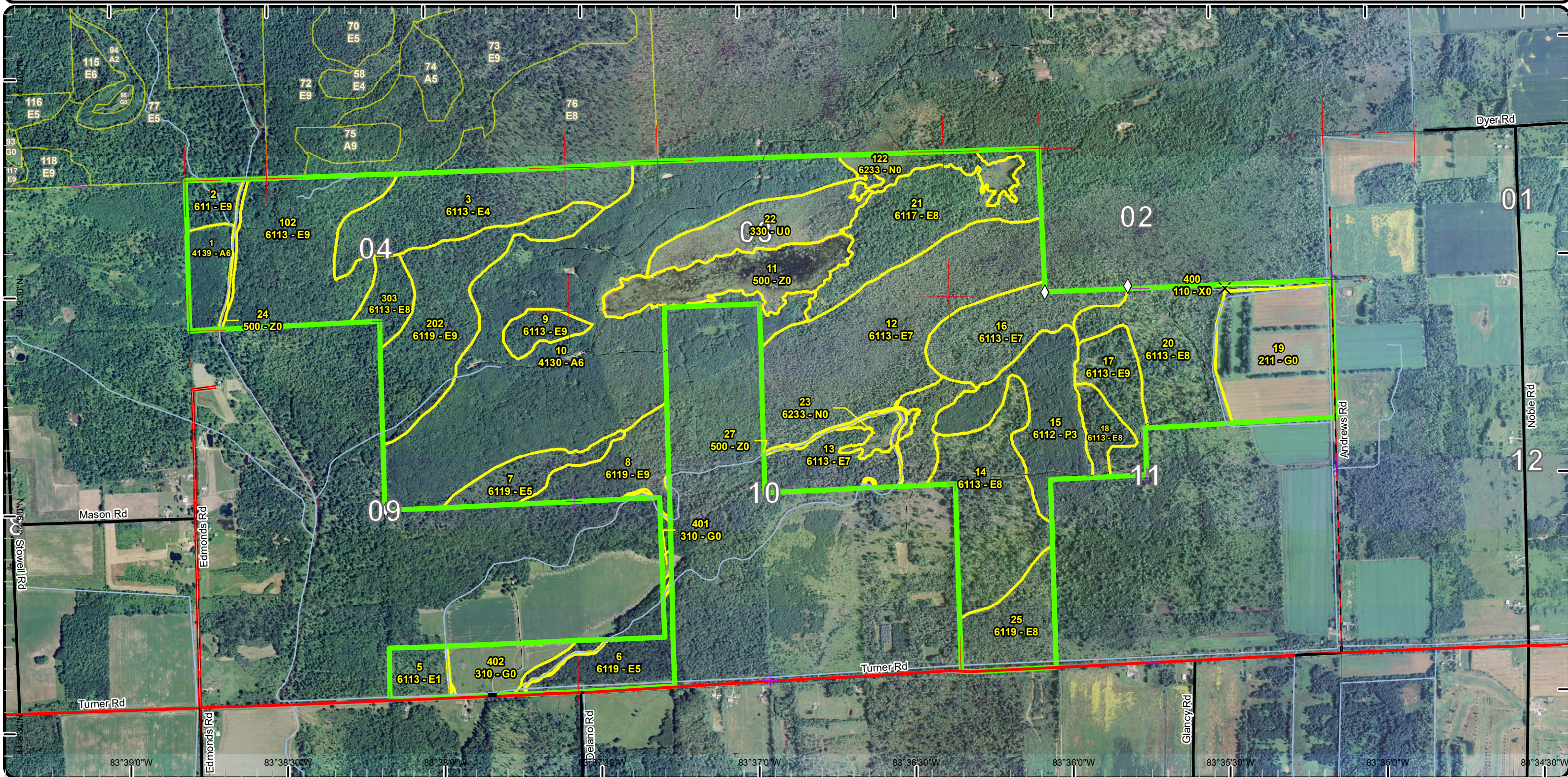
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Stand Boundary Map

Compartment: 138
 T20N R07E Sec. 2-4,9-11
 County: Arenac
 Unit: Gladwin
 Mgmt Area: Gladwin Lake Plain
 YOE: 2018
 Acres: 1385 GIS Calculated
 Examiner: Rick Myrick
 Map Revised: 6/10/2016
 Map Phase: Web-Post



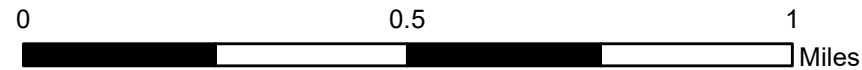
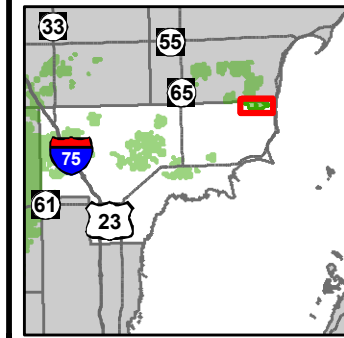
- Miris Corners
- + Remonumented Section Corners
- ◇ Field Grade GPS Corners
- X Gate
- ≡ Bridges
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Rivers
- ▭ Compartment Boundary
- ▭ Stand Boundaries
- 413 - Aspen Types
- 611 - Lowland Deciduous Forest
- 110 - Low Intensity Urban
- 211 - Cropland
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 623 - Emergent Wetland



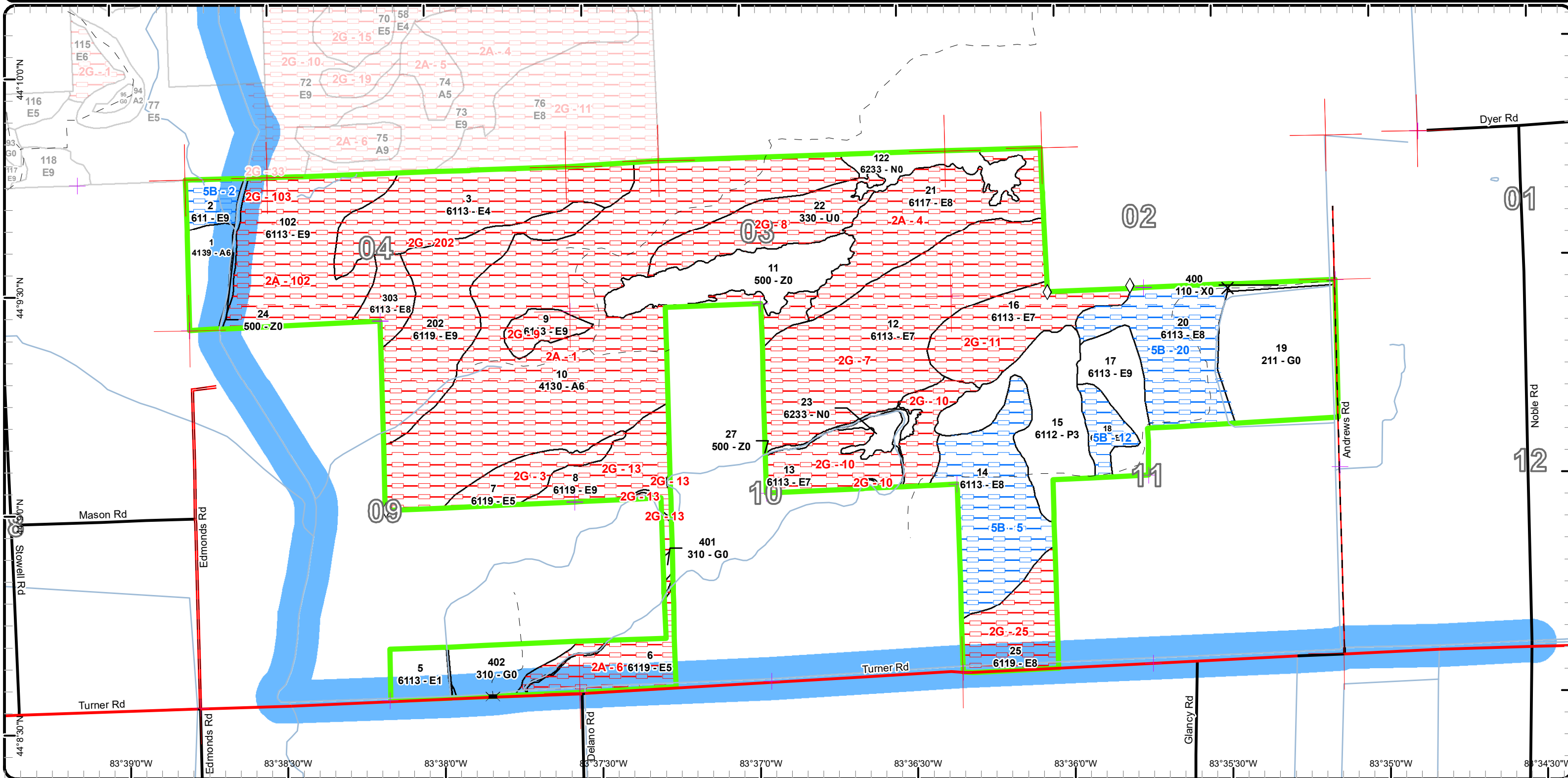
83°39'0"W 83°38'30"W 83°38'0"W 83°37'30"W 83°37'0"W 83°36'30"W 83°36'0"W 83°35'30"W 83°35'0"W 83°34'30"W

Special Conservation Areas & Site Conditions Map

Compartment: 138
 T20N R07E Sec. 2-4,9-11
 County: Arenac
 Unit: Gladwin
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- ≡ Bridges
- County Paved Roads
- Paved Roads
- County Gravel Roads
- - Poor Dirt Roads
- County Poor Dirt Roads
- Rivers
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes
- 2A: Adjacent landowner denied access
- 2G: Too wet (sensitive soils, does not include access issues)
- Stand Boundaries
- Special Conservation Areas
- Cold Water Streams
- High Priority Trout Stream Buffer



Report 1 – Total Acres by Cover Type and Age Class

Gladwin Mgt. Unit

Compartment 138 Year of Entry 2018

Rick Myrick : Examiner



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	0	277	0	0	0	0	0	0	0	0	0	0	0	0	0	0	277
Cropland	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Herbaceous Openland	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Low-Density Trees	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
Lowland Aspen/Balsam Poplar	0	0	0	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
Lowland Deciduous	0	0	13	0	0	0	31	0	26	33	651	88	0	0	0	0	0	0	842
Marsh	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
Urban	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Water	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
Total	209	0	13	331	0	0	31	0	26	33	651	88	0	0	0	0	0	0	1382



Report 2 – Treatment Summary

Gladwin Mgt. Unit
Year of Entry: 2018

Compartment 138
Total Compartment Acres: 1,385

Acres of Harvest

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



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
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#Type!

Habitat Cut:

Site Condition:

Prescription
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date:

**Total Treatment
Acreage Proposed: 0.0**

Report 4 – Site Conditions

Gladwin Mgt. Unit
Rick Myrick : Examiner

Compartment: 138
Year of Entry: 2018

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions		
		With Condition	Not Available		5B	2A	2G
277	19	0	259	Aspen		259	
67	67	1	0	Cropland	1		
21	21	0	0	Herbaceous Openland			
40	0	0	40	Low-Density Trees		0	40
54	54	0	0	Lowland Aspen/Balsam Poplar			
843	41	150	652	Lowland Deciduous	150	169	484
26	26	0	0	Marsh			
3	3	0	0	Urban			
52	51	0	1	Water		1	0
1,385	282	151	953	Total Forested Acres	151	429	524
	20%	11%	69%	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	Unavailable	2A: Adjacent landowner denied access	259	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
2	Available	5B: Maintain for regeneration purposes	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gladwin Mgt. Unit
Rick Myrick : Examiner

Compartment: 138
Year of Entry: 2018

4	Unavailable	2A: Adjacent landowner denied access	63	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
Comments: Stand is almost completely bounded on three sides by swamp and open water.							
5	Available	5B: Maintain for regeneration purposes	68	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2A: Adjacent landowner denied access	32	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	132	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This stand is a true swamp with water throughout. Thick tag alder. 100% ash mortality due to EAB.							
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	40	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	11	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gladwin Mgt. Unit
Rick Myrick : Examiner

Compartment: 138
Year of Entry: 2018

10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	44	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	44	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This stand was set up as part of the Division's ash salvage/harvest initiative. It was too wet to cut.							
12	Available	5B: Maintain for regeneration purposes	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments: To harvest species that meet age criteria at this time could cause stand to "swamp out" and not regenerate to forested.							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	33	2D: Portable Bridge Needed (Dept. bridge will be adequate)	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified
Comments:							
20	Available	5B: Maintain for regeneration purposes	60	Unspecified	Unspecified	Unspecified	Unspecified
Comments: To remove species that meet age criteria at this time could cause stand to "swamp out" and not regenerate as forested.							
25	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	35	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gladwin Mgt. Unit
Rick Myrick : Examiner

Compartment: 138
Year of Entry: 2018

102	Unavailable	2A: Adjacent landowner denied access	74	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
Comments:							
103	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	2A: Adjacent landowner denied access	Unspecified	Unspecified	Unspecified
Comments:							
202	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	157	2E: Road needed	2A: Adjacent landowner denied access	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
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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
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	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4139 - Aspen, Mixed Deciduous	Poletimber Well	18.4	28	Immature	OPIC - FMD: The stand is regenerating well and is heavy to trembling aspen with a fair amount of bigtooth. The soils under the stand is Tonkey, which is a fine sandy loam with up to 12" of muck at the surface. The regen is thick and should be a pole stand in 10 years.
2	611 - Lowland Deciduous Forest	Sawtimber Well	10.7	95	51-80	Stand was thinned with compartment 146 Sale Number 73-019-02-01 Riverside Harvest in 2003. It is not ready for another thinning at this time.
3	6113 - Lowland Maple	Poletimber Poor	72.6	95	1-50	The stand is on a very wet Carbondale Muck soil. The over story has many snags, and trees with broken or dead tops and significant rot. Most of these standing dead are mature size ash trees that have succumb to EAB. There is also many wind thrown trees. As such the stand is now only just over 25% forested. True swamp. The brush in the stand is heavy to tag alder with some dogwood and Michigan holly.
5	6113 - Lowland Maple	Sapling Poor	13.3	10	Immature	This stand has been harvested (Whitney Drain - Sale 73-015-05-02) sale closed 4/2/06. The ground is heavily disturbed but not rutted heavily. Currently there are tops scattered all around the stand. The stand looks sparse after the harvest because it consisted of many larger diameter trees that were removed.
6	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	31.4	50	51-80	The soils under the stand shift from Willette Muck in the east end of the stand that is very wet with lots of stand water; to a Tonkey sandy loam in the west end of the stand that is some what moist but looks to dry out in late summer. 100% ash mortality due to EAB infestation. All the trees in the stand are flared at the base of the trunk indicating a shallow root system.
7	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	20.0	95	51-80	The stand is low and wet with a heavy ground cover of red osier dogwood and tag alder. Most of the stand is under water. The over story is in decline due to EAB. Not 100% mortality in ash yet.
8	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	33.1	84	81-110	Stand has many vernal ponds. Bear Creek runs through the southern edge. There are areas of large cottonwood in some of the wetter portions of the stand. There is some wind throw. EAB infestation, but there is not 100% ash mortality yet. Access to the stand is limited as there is private land to the north, south, and east of the stand and the Au Gres River to the west. Bear Creek would also have to be crossed coming from the south.
9	6113 - Lowland Maple	Sawtimber Well	10.9	96	81-110	The stand is in a wet depression with significant micro relief. It has suffered some wind throw and there are many downed trees. 100% ash mortality due to EAB.
10	4130 - Aspen	Poletimber Well	259.1	28	Immature	The stand is regenerating well with variability in pole dominance dependent on location. It has a good percentage of paper birch regeneration, especially in wetter soils. It has two major soil types, AuGres Soil in the N1/2 and Kawkawlin Soil S1/2. The species on these two soils are slightly different with AuGres Soil having less paper birch and swamp hardwood then on Kawkawlin soil.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
12	6113 - Lowland Maple	Sawtimber Poor	131.7	92	1-50	The stand is very wet ground, with standing water throughout and 20% ice coverage at the time of inventory. The stand appears to have 100% ash mortality due to EAB. The species that remain are very sparse comprising just over 25% canopy closure. The soils also change from east to west going from Willette to
13	6113 - Lowland Maple	Sawtimber Poor	44.3	101	1-50	This stand is very wet. Too wet to harvest. There is 100% ash mortality in the stand due to EAB. The dead ash is blowing over in abundance. Lots of wind thrown dead ash. There are a few openings of marsh grass. The remaining species are limited to mostly red maple and that at less than 50 BA.
14	6113 - Lowland Maple	Sawtimber Medium	68.1	96	51-80	As part of the Division's Ash Salvage/Harvest Initiative the stand was select harvested in 2014. There is lots of standing dead ash remaining as the stand was too wet to access all ash. 95% mortality of ash due to EAB.
15	6112 - Lowland Aspen	Sapling Well	53.7	28	Immature	The stand was harvested in 1988 and has regenerated into a dryer P-Type. Sap sized green ash and black ash are regenerating as this size class is generally too small to significantly host EAB at this time. The stand has some areas that are open and more like wet meadow or marsh, mainly on the inclusion of Deford muck soil in the stand. The stand is regenerating well.
16	6113 - Lowland Maple	Sawtimber Poor	43.9	102	1-50	This stand was set up as part of the Division's Ash Salvage/Harvest Initiative. Other stands near by were harvested in 2014. This stand was not as it was and is too wet. There is much wind thrown ash throughout the stand. Ash mortality is 100% due to EAB.
17	6113 - Lowland Maple	Sawtimber Well	26.1	74	51-80	The stand was select harvested in 2014 as part of the Division's Ash Salvage/Harvest Initiative. The stand is brushy with the main species of brush being tag alder and michigan holly. There is much wind thrown ash. Stand is very wet.
18	6113 - Lowland Maple	Sawtimber Medium	12.4	91	51-80	The stand is low and wet but has a fair amount of regeneration. The stand was select harvested in 2014 as part of the Division's Ash Salvage/Harvest Initiative. There is heavy deer browse on stump sprouts.
20	6113 - Lowland Maple	Sawtimber Medium	59.1	96	51-80	The stand was select harvested in 2014 as part of the Division's Ash Salvage/Harvest Initiative with a crawler tractor during the winter. The site has not regenerated well. Much of the regeneration is sparse and mainly ash. Much standing dead ash that was not harvested as the site was too wet. There is lots of wind throw and blow down; very wet stand.
21	6117 - Lowland Deciduous, Mixed Coniferous	Sawtimber Medium	64.0	96	51-80	The stand has a ridge that is heavy to pine. It could have typed out as a pine stand depending on where the plots fell. Access is blocked by true swamp and private land.
25	6119 - Mixed Lowland Deciduous Forest	Sawtimber Medium	34.6	96	1-50	The soil through much of the stand is Linwood muck and is too wet for harvest. 100% ash mortality due to EAB infestation. Lots of wind thrown ash. Factor limit, too wet.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
102	6113 - Lowland Maple	Sawtimber Well	81.7	95	111-140	This stand has many drainages. Overall it is heavy to red maple but there is a component of aspen. The ash mortality is 95%. The aspen in the stand is over mature and is very unsound due to rot. Access is a problem: being blocked by the Au Gres River to the west; private land to the north and south; and very wet soils to the east.
202	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	70.5	95	81-110	Stand is wet with large pockets of standing water. Numerous vernal ponds. There is evidence of EAB infestation but Ash mortality is not total. The access to the stand is difficult with private land to north and south; very wet blocking access from the east; and Au Gres River to the west. The soils in the stand are a mix of Roscommon and Maumee. Factor limited too wet.
303	6113 - Lowland Maple	Sawtimber Medium	14.3	95	1-50	The stand is on a wet Carbondale Muck soil. The ash has disappeared due to EAB. The brush in the stand is heavy to tag alder. There is also an area heavy to marsh grasses and sedges.



Stand	Cover Type	Acres	Managed Site	General Comments:
11	500 - Water	44.0	No	The stand is a large beaver flooding.
19	211 - Cropland	67.2	Yes	This stand has been share cropped in the past under the supervision of wildlife. Currently it is still in farm crops and has not been converted to any other cover as of
22	330 - Low-Density Trees	40.4	No	The stand is variable and appears to be periodically flooded by beavers. Factor limited too wet.
23	6233 - Wet Meadow	7.5	No	This area was a beaver flooding. It is now a wet meadow heavy to cattails, marsh grass, and sedges. The stand has many snags in it.
24	500 - Water	2.9	No	East Branch Au Gres River
27	500 - Water	5.5	No	Bear Creek
122	6233 - Wet Meadow	19.0	No	Intermittent beaver flooding. The stand has converted to a wet meadow with a variety of shrubs along the edges. The shrubs are a mix of button bush, tag alder and Michigan holly. The over-story that was there is dead.
400	110 - Low Intensity Urban	2.9	No	Old road easement (Bomaster Rd.) which is the main access into the compartment.
401	310 - Herbaceous Openland	1.0	No	This stand was part of a hay field to the east and west.
402	310 - Herbaceous Openland	20.5	No	This stand was part of a hay field that was being mowed by the private land owner to the west. This appears not to be occurring now.