

# **Compartment Review Presentation**

**Gladwin Forest Management Unit** 

Compartment 73111

Entry Year 2018

Acreage: 5,729

County Midland

Management Area: Midland-Isabella

Revision Date: 2016-05-31

Stand Examiner: Scott Shooltz

**Legal Description:** 

T14N R02W, Sections 1 - 6 10 - 12; T15N R01W, Section 31; T15N R02W, Sections 31 - 35.

### **Identified Planning Goals:**

Vegetation management in the Midland-Isabella management area and this compartment will provide forest products; maintain or enhance wildlife habitat; protect areas of unique character; threatened, endangered and special concern species; and provide for forest-based recreational uses. A significant portion of the compartment is lowland and therefore relatively inaccessible. Timber management for this 10-year planning period will focus on balancing the age-class distributions for aspen and oak. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation opportunity. Expected trends in this 10-year planning period will be the continued need to address illegal off-road vehicle use and trash dumping. Developing a forest road strategy in this compartment should help address these issues.

### Soil and topography:

The compartment is predominantly ridges surrounding broad wet areas and forested drains. Many of the stands have considerable micro relief in the form of hummocky ground or areas with complex drainage patterns. The main soil types are Pipestone Sand and Covert Sand, which makes up most of the ridges in the compartment, and Kingsville loamy fine stand that makes up much of the lowland. Also, the compartment has significant areas of Adrian muck and Kinross mucky sand that are components of the wetter lowland.

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

Overall the compartment is fairly contiguous state land with adjacent blocks of state ownership to the north and west. A smaller block of state ownership also lies to the east. There are several inclusions of private land throughout the compartment ranging from one acre parcels to large multiple ownership blocks. These private lands are mainly recreation properties, the properties to the east and south of the compartment are primarily permanent residences.

#### **Unique Natural Features:**

There were no threatened or endangered species located in the compartment on file.

There are reported species near the compartment, Red-shouldered hawks are to the east and south; Wood Turtle to the northeast, northwest, south and southwest; Snuffbox to the northeast and southeast; Riverine snaketail to the south, and an Eagle to the east of the compartment.

### Archeological, Historical, and Cultural Features:

One archeological site is located within this compartment.

#### **Special Management Designations or Considerations:**

### **Watershed and Fisheries Considerations:**

Carroll Creek Drain runs through the compartment which is a warm water stream roughly 12 feet wide. The drain is a tributary to the Tittabawassee. Although not recently surveyed, past surveys rated the stream habitat in poor to severely poor (1992, 1997) shape due mostly to shifting sand and impacted by channelization. Surveys indicate that a canopy cover was redeveloping and helping the system as was vegetation along the banks. Macro-invertebrates rated as acceptable and fish were rated as good to slightly impaired. Care should be taken to maintain immediate bank stability and canopy cover.

#### Wildlife Habitat Considerations:

Wildlife Habitat Considerations: Compartment #111 contains a variety of vegetative types from both upland and lowland systems, making it suitable for a number of wildlife species. Carroll Creek meanders its way across the compartment and contributes good riparian habitat. Game species likely to be present in this compartment include 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, redeyed vireo, white-throated sparrow, hermit thrush, red-breasted nuthatch and American woodcock. The compartment is easily accessible to hunters via McGrudder Road and W. Olson Road.

### Mineral Resource and Development Concerns and/or Restrictions

Chevron is currently conducting reclamation activities in sections 10 & 11.

#### **Vehicle Access:**

The primary access points to this compartment are from Coleman Rd., Magrudder Rd. (north and south), Olson and Geneva Rds., and Huckleberry Rd. Access is limited seasonably in this compartment with no roads passing completely through the compartment east to west or north to south. Most of these roads follow dry upland ridges where available but eventually cross through or end at low drainages resulting in degraded roads and resource damage. Without proper road construction and planning resource damage will continue in this compartment.

#### **Survey Needs:**

Survey work is needed to determine the boundary for most of the private inholdings and the western boundary of the compartment. Most of the corners located for this compartment were placed through private survey work on adjacent private property or county re-monument corners. This compartment would benefit from additional survey work as a large percentage of its boundary is adjacent to private land.

## **Recreational Facilities and Opportunities:**

No designated recreational facilities or trails are located in this compartment. The recreational use in this compartment is primarily hunting associated, vehicle traffic and hunting camps in the fall. Some equestrian use was observed on two tracks throughout the compartment.

#### **Fire Protection:**

There is limited access to the central portions of the compartment but there are multiple access points around the perimeter. The cover types throughout the compartment are not fire prone species however dispersed camping on dry upland ridges throughout the compartment combined with poor access could result in multiple ignitions with slow response times. The area is a mix of dry ridges intermixed with wetland and natural fire breaks so large fires will most likely not be common however because of the large amount of organic soils, there could be extensive mop afterwards. The access to the compartment could be greatly improved for fire suppression by implementing a road plan allowing year round access across the compartment east to west and north to south.

## **Additional Compartment Information:**

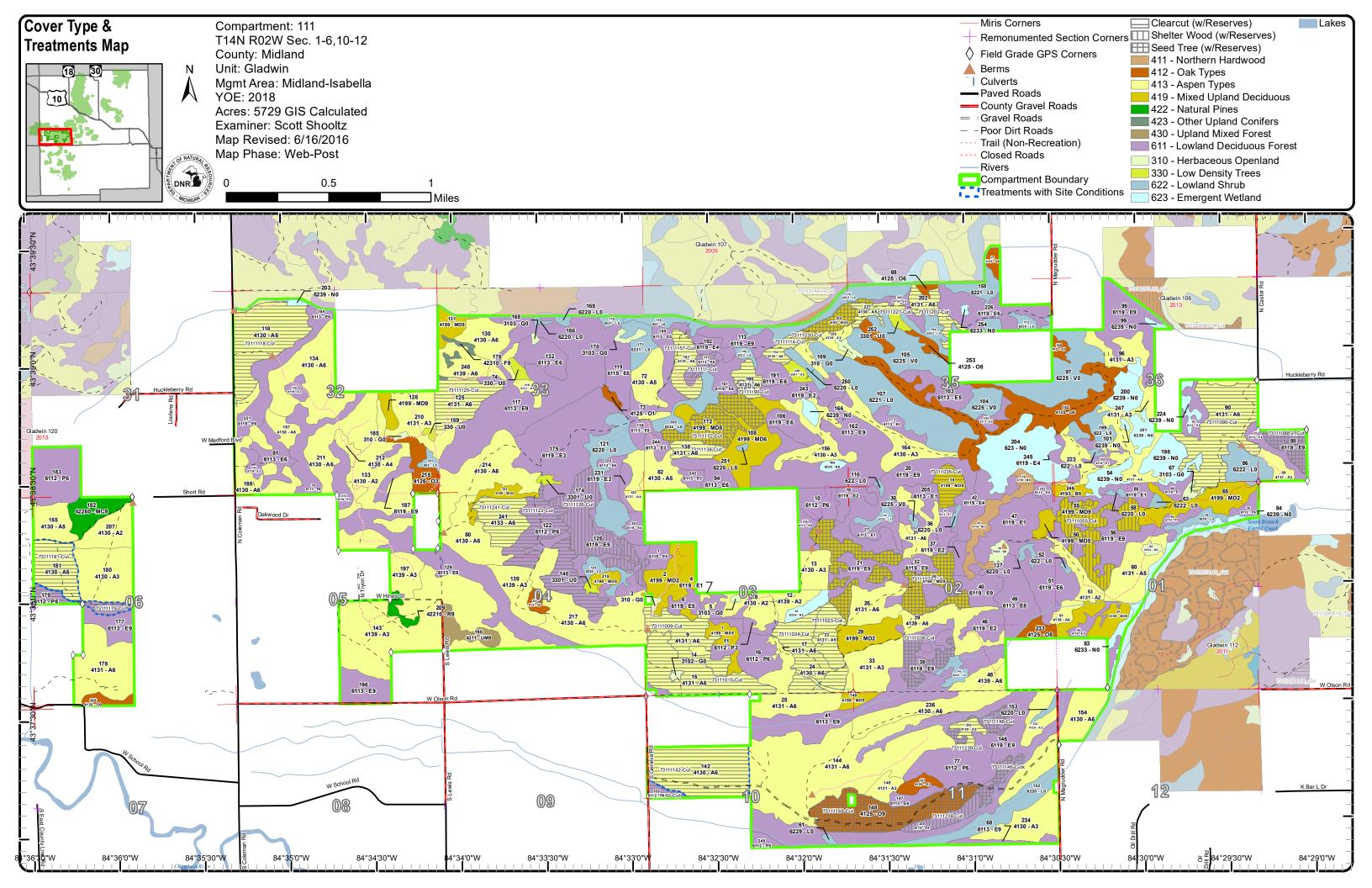
Several compartments were merged this YOE into what is now compartment 111, this included most of old compartment 109, 110, & 111 and portions of old compartments 112 & 117. The north border of the compartment follows Carrol Creek Drain.

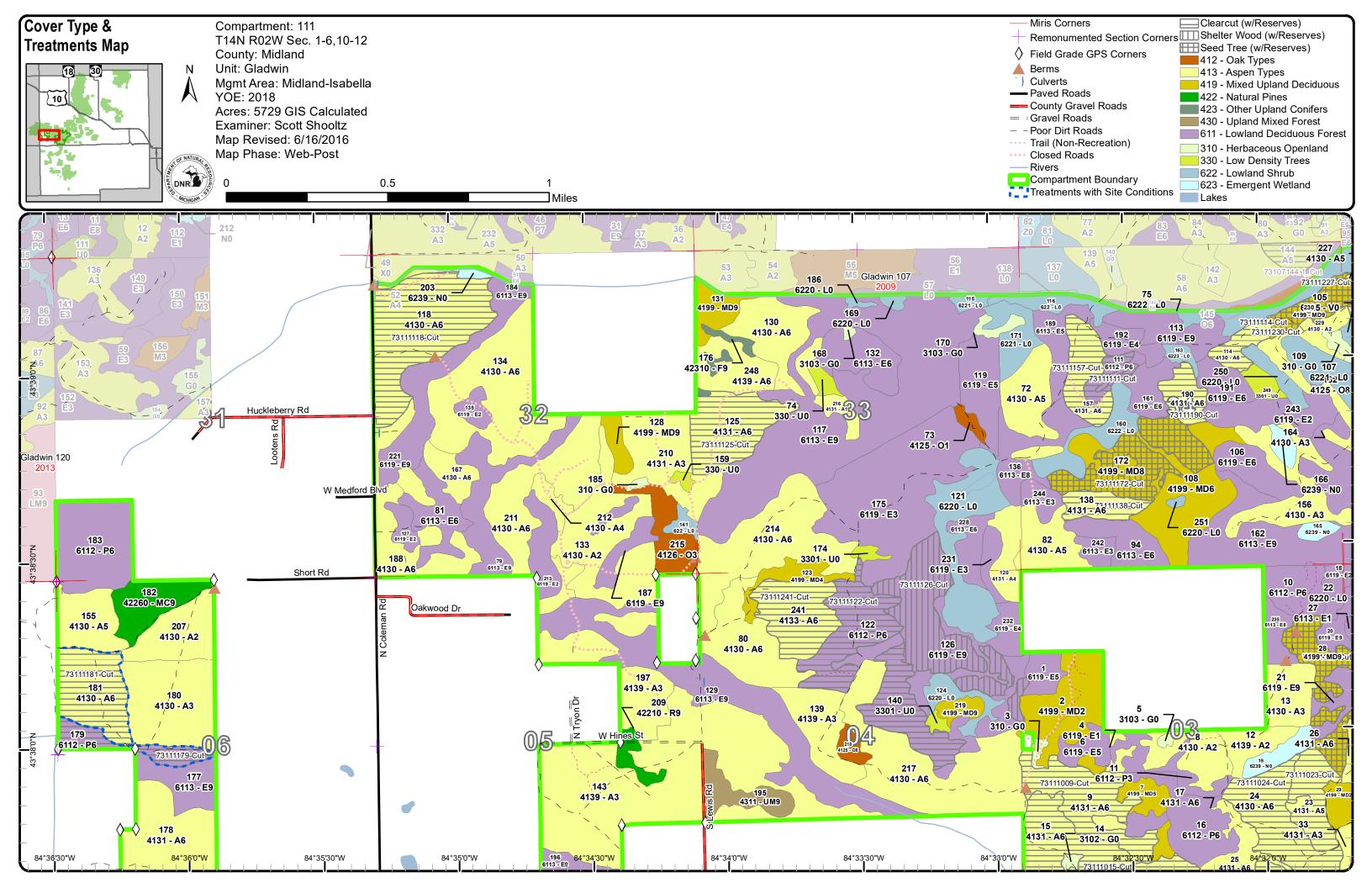
#### The following reports from the Inventory are attached:

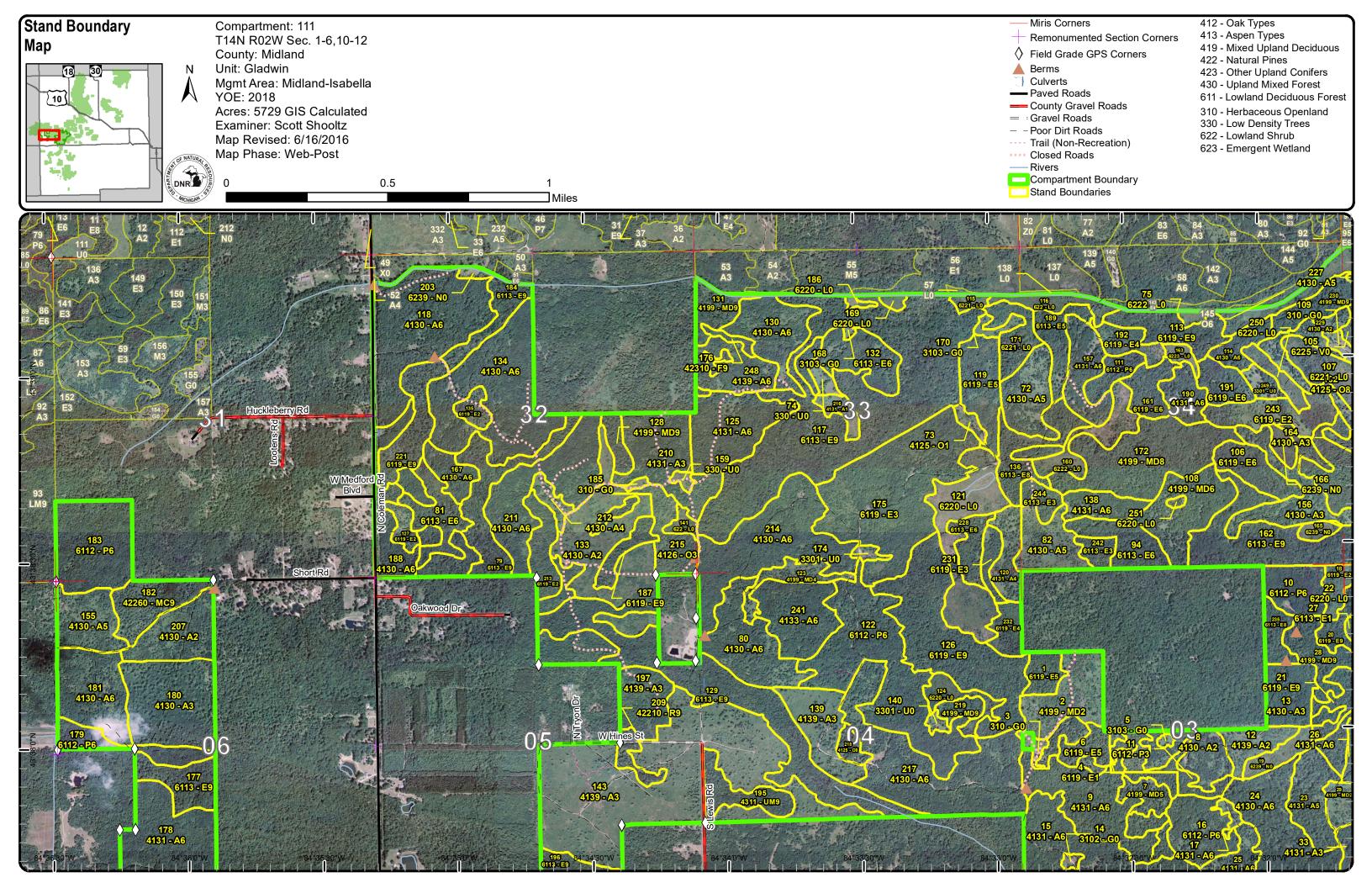
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

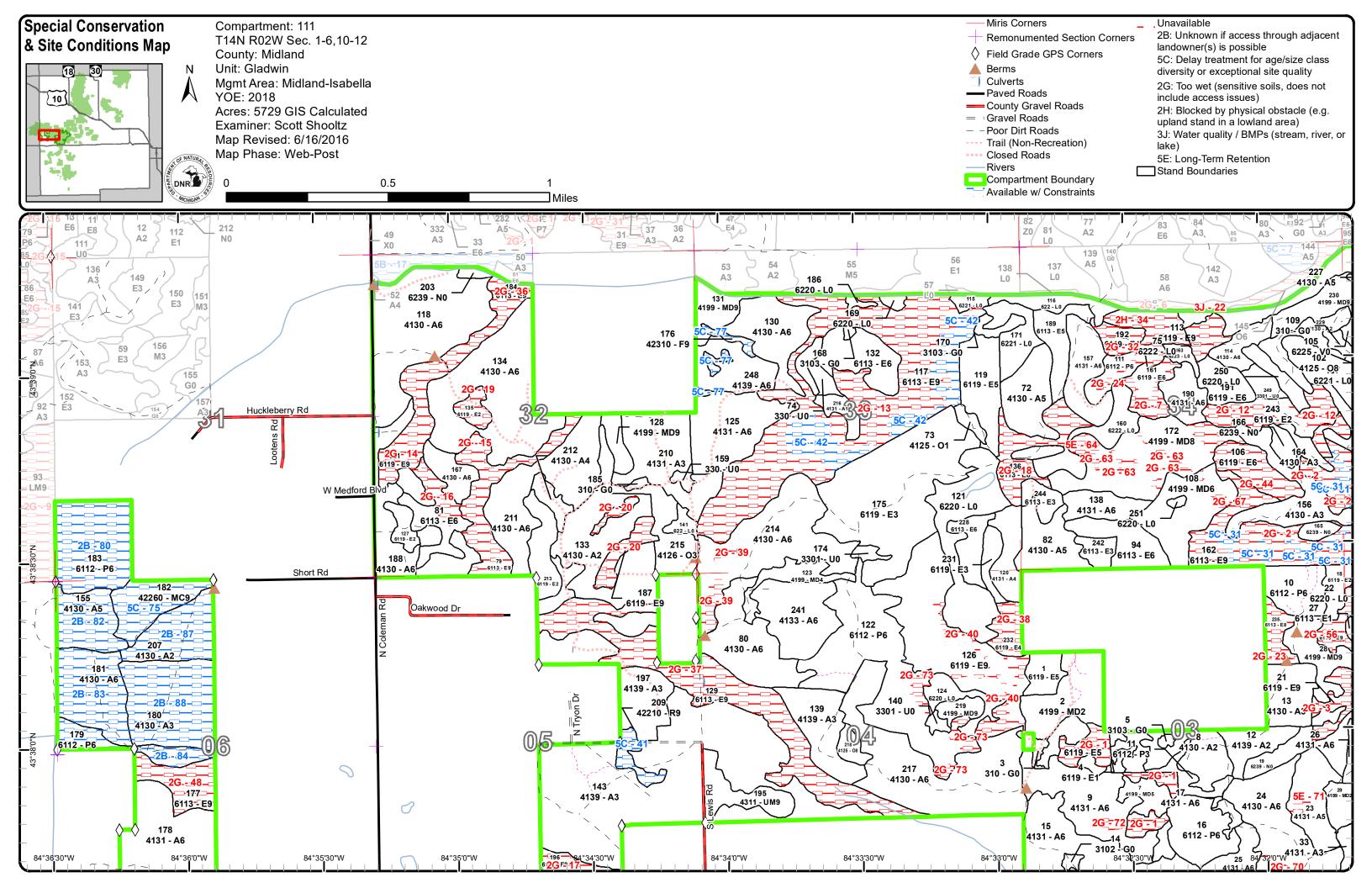
The following information is displayed, where pertinent, on the attached compartment maps:

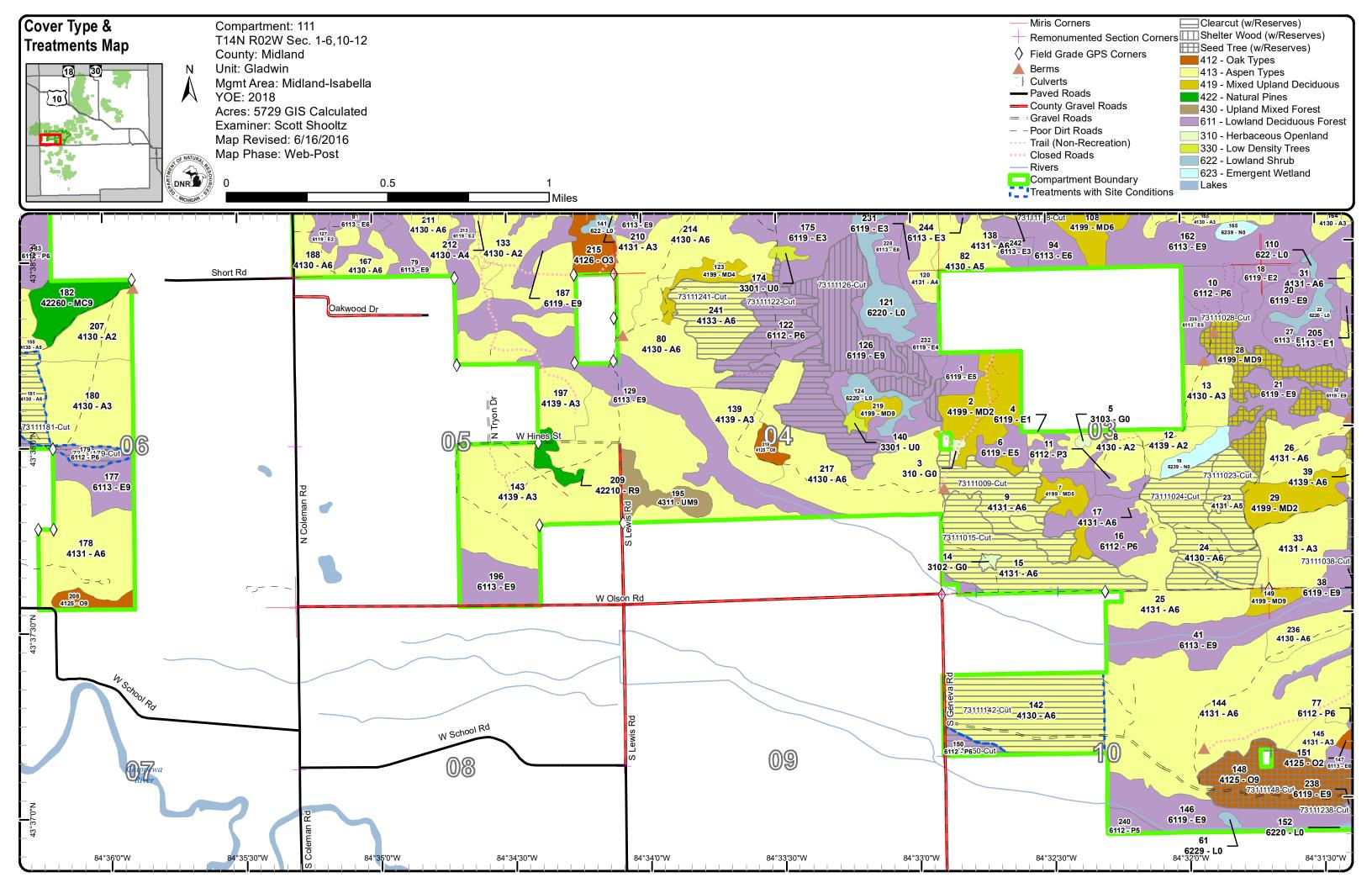
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

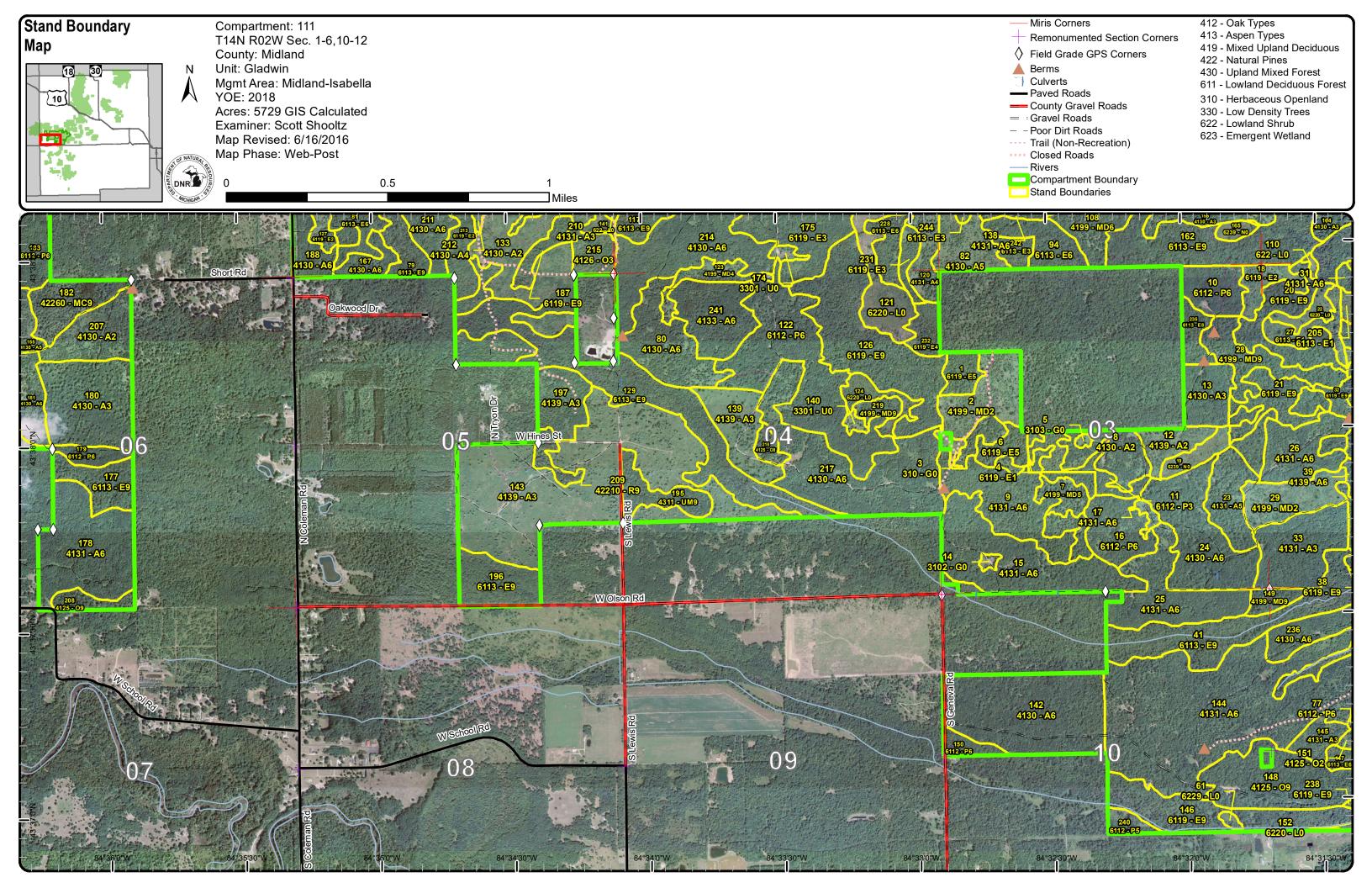


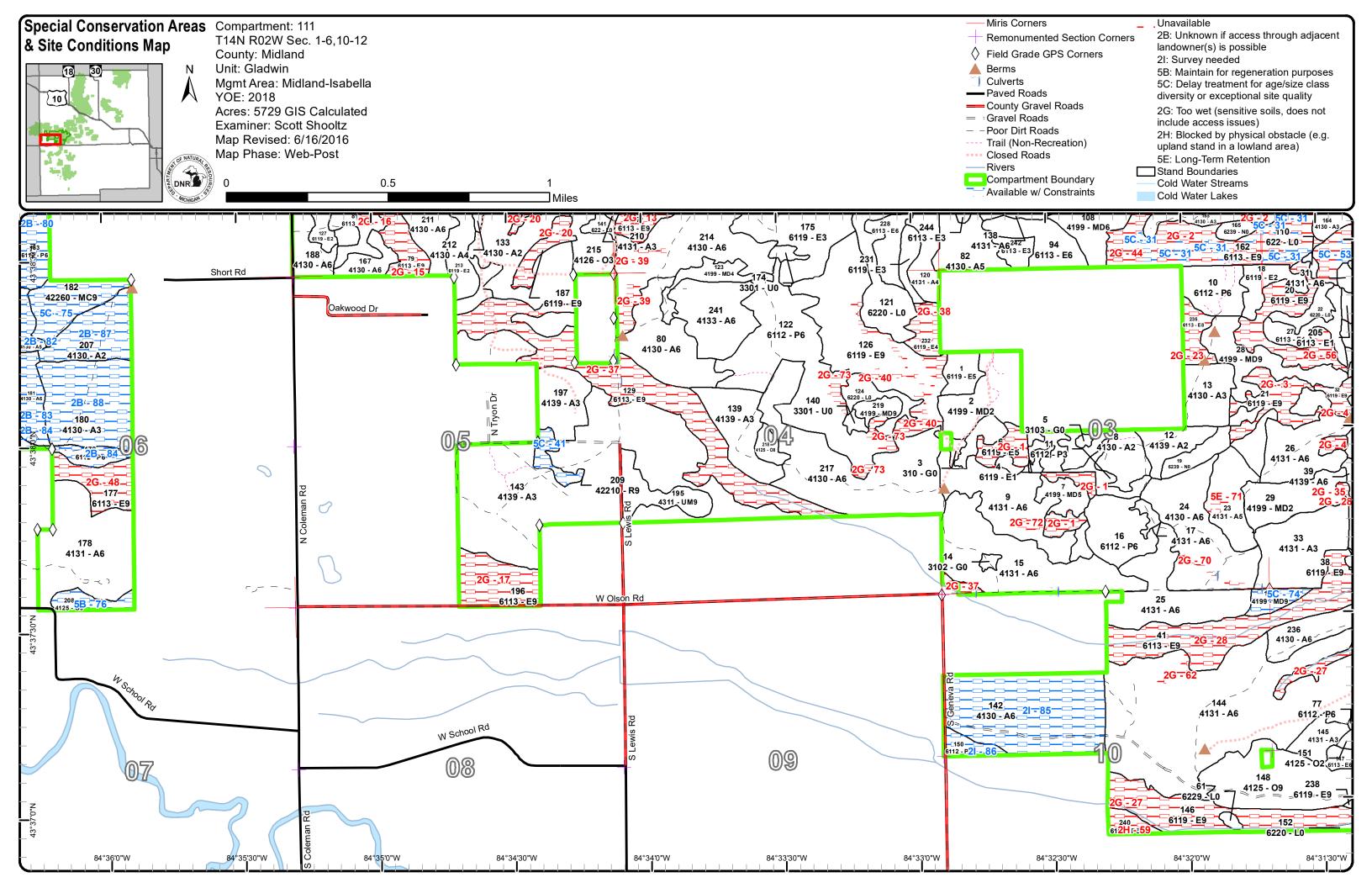


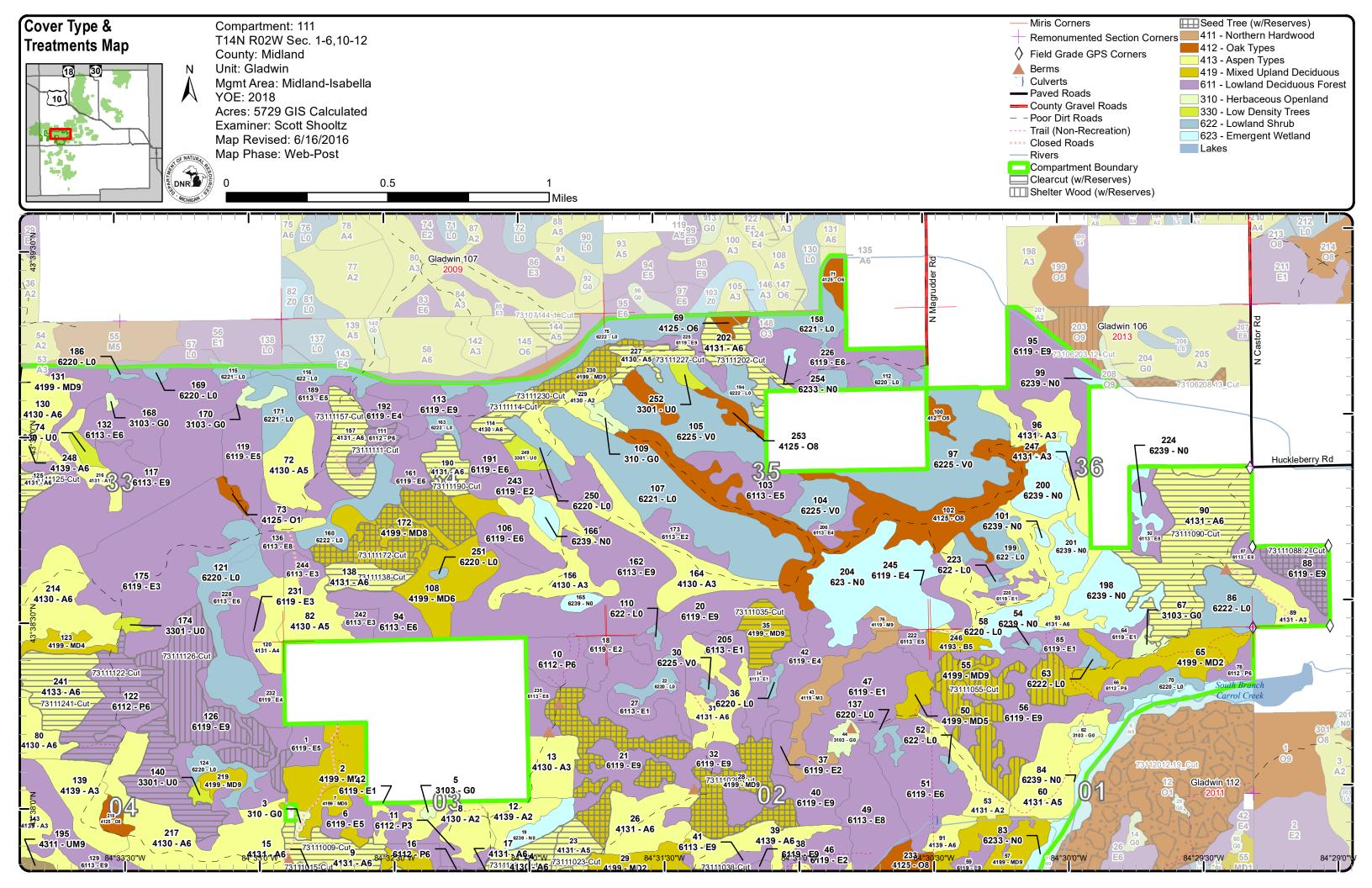


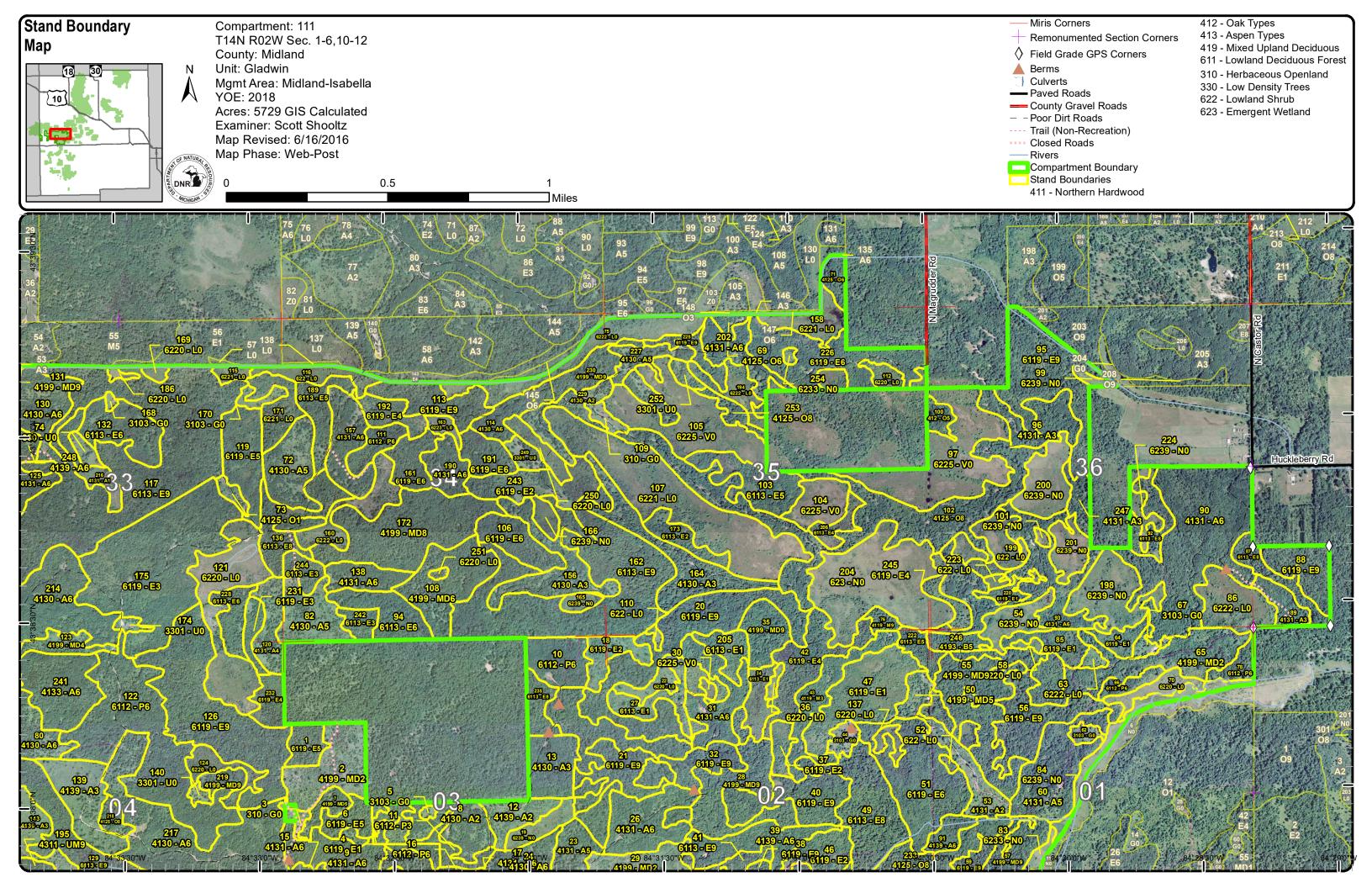


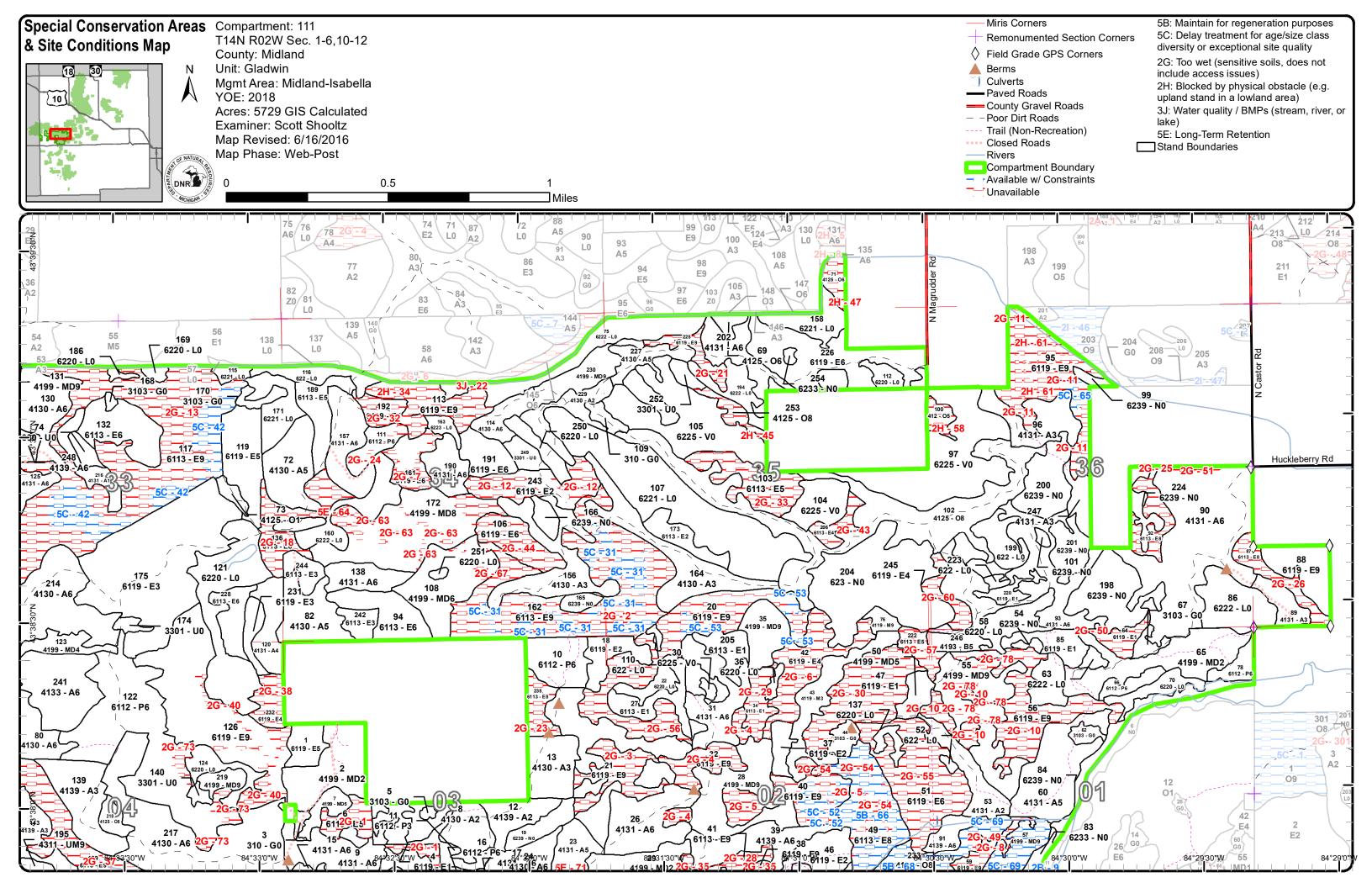


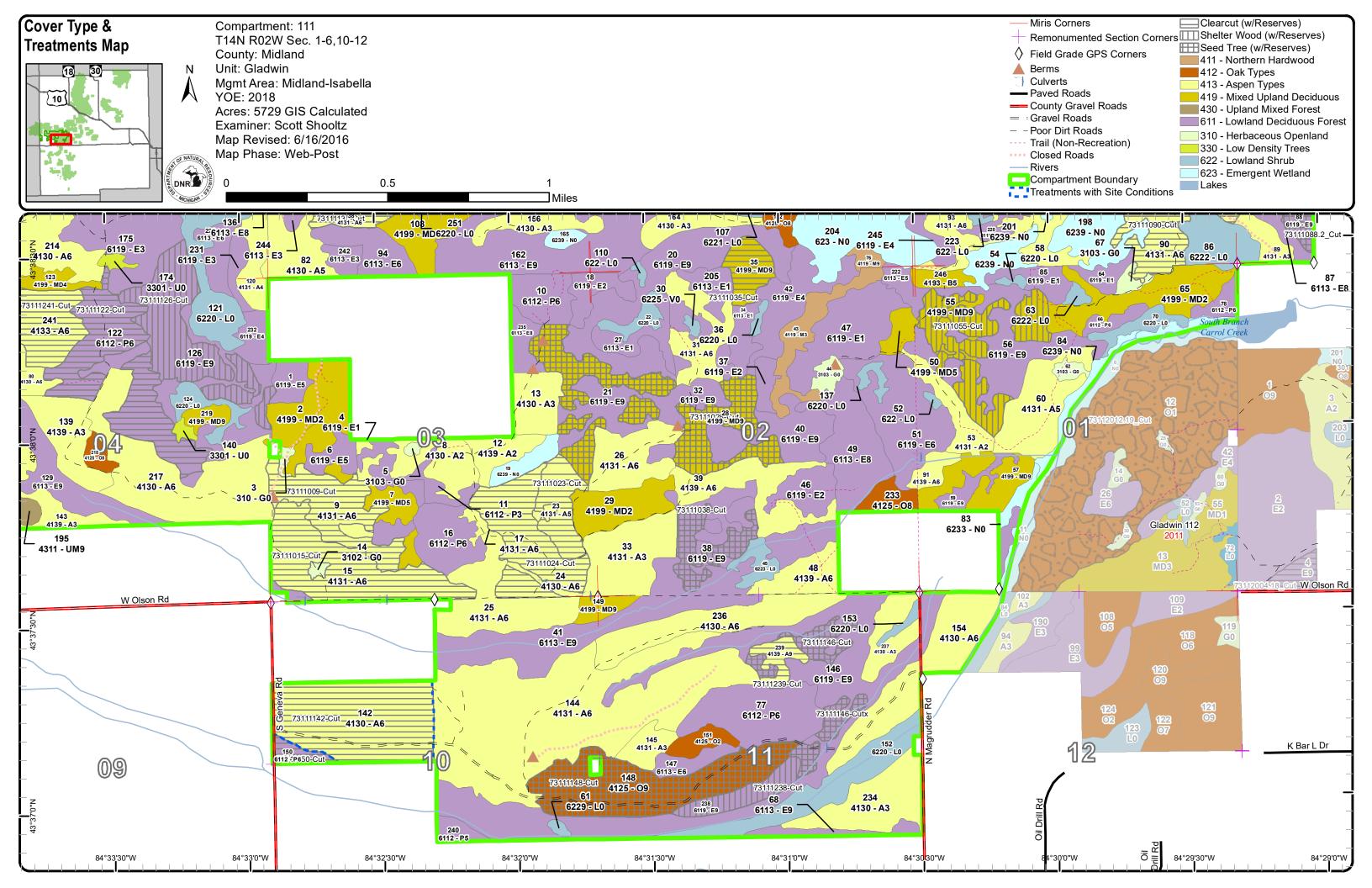


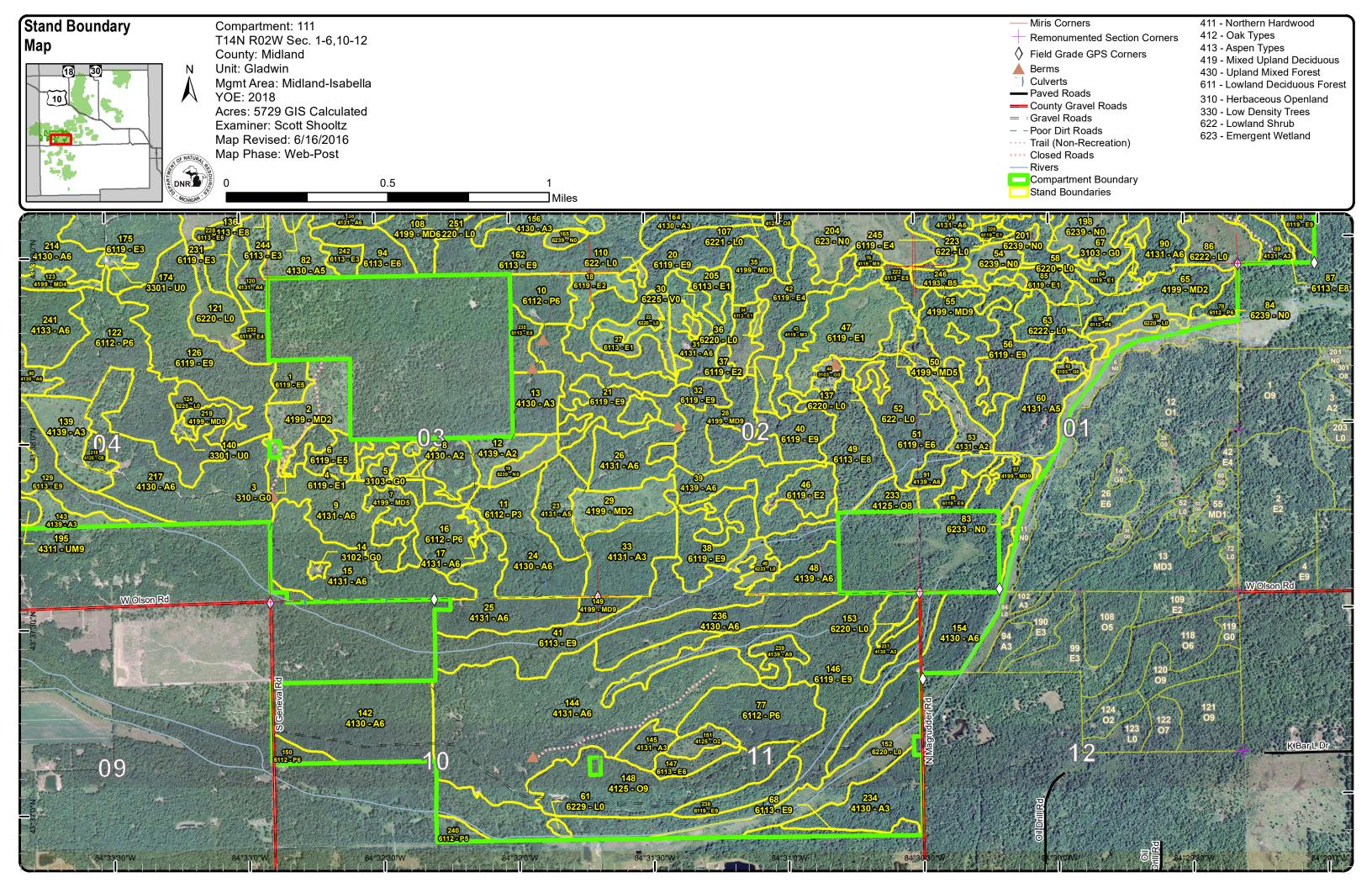


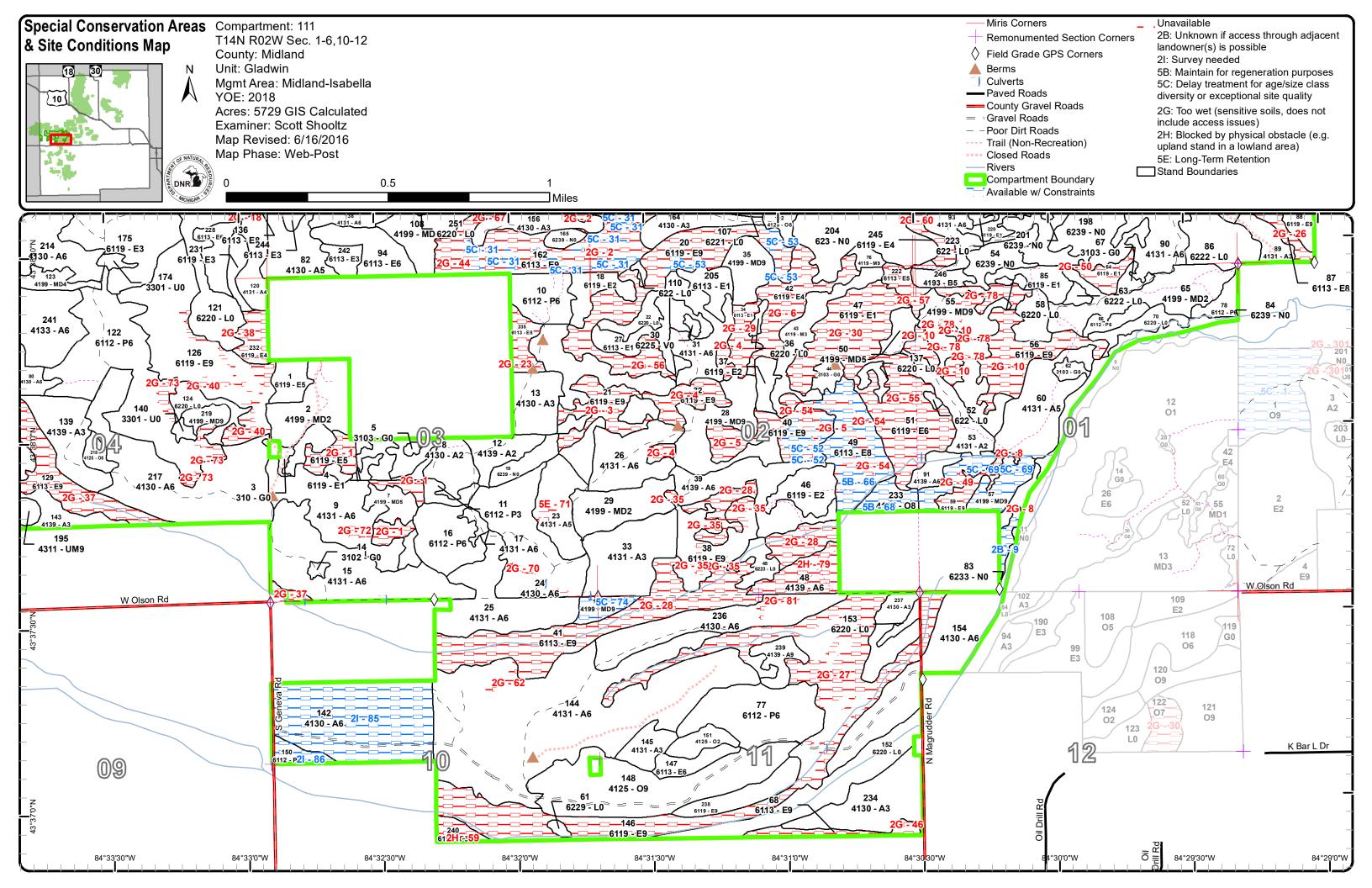












Compartment 111 Year of Entry 2018

Gladwin Mgt. Unit
Scott Shooltz: Examiner



## Age Class

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Aspen	0	179	229	1010	335	372	129	9	0	0	0	0	0	0	0	0	0	0	2263
Bog	113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113
Herbaceous Openland	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
Low-Density Trees	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Lowland Aspen/Balsam Poplar	0	0	0	31	94	124	6	0	0	0	0	0	0	0	0	0	0	0	255
Lowland Deciduous	0	0	33	265	123	153	60	227	27	432	224	88	0	0	0	0	0	161	1792
Lowland Shrub	361	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	361
Marsh	183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182
Mixed Upland Deciduous	0	0	51	42	11	38	35	17	0	214	0	0	0	0	0	0	0	0	408
Natural Mixed Pines	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	21
Northern Hardwood	0	0	0	21	0	0	0	4	0	0	0	0	0	0	0	0	0	0	25
Oak	0	0	0	14	5	12	91	0	72	17	0	0	0	0	0	0	0	18	229
Paper Birch	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Red Pine	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	7
Upland Mixed Forest	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	16
Upland Spruce/Fir	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5
Total	702	179	313	1389	568	720	342	257	99	670	224	88	0	0	0	0	0	179	5728



# **Report 2 – Treatment Summary**

# Gladwin Mgt. Unit Year of Entry: 2018

#### **Acres of Harvest**

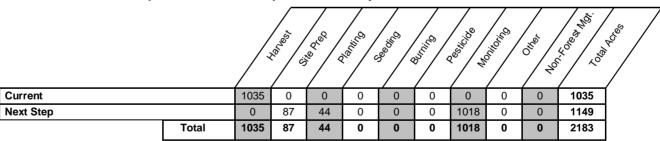
Compartment 111
Total Compartment Acres: 5,729

Commercial Harvest - 906 Harvests with Site Condition - 129 Next Step Harvest - 0 Habitat Cut - 0

## **Cover Type by Harvest Method**

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Aspen		569	0	0	0	0	0	0	0	0	569	ĺ
Lowland Aspen/Balsam Poplar		92	0	0	0	0	0	0	0	0	92	1
Lowland Deciduous		0	0	0	58	69	0	0	0	0	127	1
Mixed Upland Deciduous		14	0	0	123	43	0	0	0	0	181	1
Oak		0	0	0	67	0	0	0	0	0	67	1
	Total	675	0	0	248	112	0	0	0	0	1035	

## **Proposed and Next Step Treatments by Method**



Compartment: 111
Year of Entry: 2018

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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
9	73111009-Cut	36.9	4131 - Aspen, Oak	Poletimber Well	44	51-80	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Proposal

Habitat Cut: No Site Condition:

<u>Prescription</u> Harvest 2" end up marking scattered residual oak for mast. Standard island retention, focus around wet areas. Apply drumming log specification. Specs:

<u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

Acceptable Any mix of aspen, oak, and maple meeting minimum stocking levels.

Regen:

Other Dry/frozen harvest.

Comment:

Proposed Start Date: 10/01/2017

15 73111015-Cut 58.3 4131 - Aspen, Oak Poletimber 40 111- Harvest Clearcut with 4139 - Aspen, Even-Aged Proposal Well 140 Retention Mixed Deciduous

Habitat Cut: No Site Condition:

<u>Prescription</u> Harvest 2" and up. Leave all white pine. Standard island retention in addition mark scattered residual oak for mast. Apply drumming log specification.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any mix of maple, aspen, and oak meeting minimum stocking levels.

Regen:

Other Best access from Olson Rd. See compartment road plan.

Comment:

Proposed Start Date: 10/01/2017

23 73111023-Cut 19.7 4131 - Aspen, Oak Poletimber 54 1-50 Harvest Clearcut with 4131 - Aspen, Even-Aged Proposal Retention Oak

Habitat Cut: No Site Condition:

Prescription Harvest 2" and up marking scattered residual oak far mast. Leave wet area in the central portion of the stand for retention. Apply drumming log

Specs: specification.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any mix of aspen, oak and maple meeting minimum stocking levels.

Regen:

Other Dry/frozen specifications. Set up under C. 111. Boundary lines already in.

Comment:

Proposed Start Date: 10/01/2017

24 73111024-Cut 45.6 4130 - Aspen Poletimber 48 141- Harvest Clearcut with 413 - Aspen Even-Aged Proposal Well 170 Retention

Habitat Cut: No Site Condition:

Prescription Harvest 2" and up marking scattered oak for mast. Standard area retention. Exclude southern drainage from sale area. Apply drumming log

Specs: specification.

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

Acceptable Fully stocked aspen stand but will accept any mix of species meeting minimum stocking levels.

Regen:

Other Boundary line already in place. Dry/frozen harvest. See compartment road plan.

Comment:

Specs: residual in aspen pockets.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Any mix of the current species meeting minimum stocking levels. <u>Acceptable</u>

Regen:

**Other** Dry/frozen specifications. Stand already set up under C.111. Boundary, retention and residual changes required. Best access is from the south, see

Comment: compartment road plan.

Proposed Start Date: 10/01/2017

14.4 4199 - Other Mixed 73111035-Cut Sawtimber 86 51-80 Harvest Clearcut with 4121 - Oak, Proposal Even-Aged

**Upland Deciduous** 

**Habitat Cut:** No **Site Condition:** 

Prescription Harvest 2" and up marking scattered oak trees for mast. Standard area retention.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Full to medium stocking of oak, aspen and maple.

Regen:

Other Best access is from the north, crossing forested drain. See compartment road plan.

Comment:

Proposed Start Date: 10/01/2017

73111038-Cut 18.9 6119 - Mixed Sawtimber 78 81-110 Harvest Seed Tree 611 - Lowland Two-Aged Proposal Lowland Deciduous Well Deciduous

Forest

**Site Condition:** 

Retention

Aspen

Forest

Prescription Harvest 2" and up marking 20 BA of residual oak and maple in groups of 3-5. Reduce residual density around aspen pockets. Dry/frozen Specs: specifications

**Habitat Cut: No** 

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any mix of aspen, maple, and oak meeting minimum stocking levels.

Regen:

Other Best access is from the NW. Multiple forested drain crossings will be required in this stand. Locate landing outside of stand using old landing in stand

39. Stand previously set up under C.-111. Boundary lines in place but will need to be adjusted. Comment:

Proposed Start Date: 10/01/2017

43.2 4199 - Other Mixed 73111055-Cut 81 4199 - Other Sawtimber 81-110 Harvest Shelterwood Proposal Two-Aged **Upland Deciduous** Mixed Upland Well

Deciduous

**Site Condition:** 

**Habitat Cut: No** 

Prescription Harvest 2" and up. Mark stand to 50 BA concentrating residual in clumps of 3 - 5. In low areas focus residual on wind firm trees. Reduce residual Specs:

around aspen clumps to maximize sprouting.

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

<u>Acceptable</u> Any mix of aspen, maple, and oak meeting minimum stocking levels. Primary regeneration will be from stump sprouts.

Regen:

Other Goal of prescription is to open up large canopy gaps for regeneration while still maintaining the canopy for future seed source. Set up under C.-111,

Comment: boundary lines already in place. Best access is from the east, see compartment road plan. Multiple forested drains will need to be crossed.

Treatments:

Acceptable Fully stocked aspen and mixed deciduous. Will accept any mix of species meeting minimum stocking levels.

Regen:

Other Dry/frozen specifications. Remove forested drain from sale area.

Comment:

**Proposed Start Date:** 10/01/2017

114 73111114-Cut 44 9.4 4130 - Aspen Poletimber 111-Harvest Clearcut 413 - Aspen Even-Aged Proposal

> Well 140

**Habitat Cut: No Site Condition:** 

Prescription Clearcut 2" and up. No retention due to small stand size. Mark to leave a handful of oak for mast.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Full to medium stocked aspen but will accept any mix of species meeting minimum stocking levels.

Regen:

Other Best access is from the east. See compartment road plan. Part of stand boards an intermittent stream along the west boundary. Also an

intermittent stream bisects the stand in the eastern portion. Comment:

10/01/2017 Proposed Start Date:

Compartment: 111 Year of Entry: 2018

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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
118	73111118-Cut	66.5	4130 - Aspen	Poletimber Well	35	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal

**Habitat Cut: No Site Condition:** 

Prescription Clearcut 2" and up. Leave oak and white pine. Island retention and buffer Carrol Creek Drain 50 - 100 ft.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Full to medium stocking of aspen but will accept any mix of species meeting minimum stocking levels.

Regen:

Best access is at the north end of the stand just south of Carroll Creek Drain. See compartment road plan.

Other Comment:

Proposed Start Date: 10/01/2017

122 73111122-Cut 63.2 6112 - Lowland Poletimber 81-110 Harvest Clearcut with 6112 - Lowland Even-Aged Proposal Aspen Well Retention Aspen

**Habitat Cut: No Site Condition:** 

Prescription Clearcut 2" and up. Standard area retention, in addition leave all oak. Dry/frozen harvest only. Paint out areas too wet to harvest in and along

Specs: forested drains.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Full to medium stocked lowland aspen stand but will accept any mix of species meeting minimum stocking levels.

Regen:

Other Best access is from the south. Best landing location is in the NW portion. See compartment road plan.

Comment:

**Proposed Start Date:** 10/01/2017

125 73111125-Cut 34.8 4131 - Aspen, Oak Poletimber 81-110 Harvest Clearcut with 413 - Aspen Even-Aged Proposal Well Retention

Site Condition: **Habitat Cut: No** 

Prescription Clearcut 2" and up. Leave all white oak and mark a handful of residual black oak for mast. Standard area retention. Dry/frozen harvest only. Apply Specs:

drumming log specification.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

<u>Acceptable</u> Full to medium stocked aspen but will accept any mix of species meeting minimum stocking levels.

Regen:

Other Best access is from the west off Coleman Rd. See compartment road plan.

Comment:

**Proposed Start Date:** 10/01/2017

126 73111126-Cut 54.0 6119 - Mixed Sawtimber 60 51-80 Harvest Shelterwood 611 - Lowland Two-Aged Proposal **Lowland Deciduous** Well Deciduous

Forest

Forest

**Habitat Cut: No Site Condition:** 

Prescription Reduce BA focusing on removing aspen, ash (dead & alive), and poor formed trees across all size classes. Avoid marking in wettest pockets and Specs:

areas of dense maple poles which have reached the canopy. Heavy shelterwood lowland areas to 60 BA and seed tree upland areas to 30 BA

reducing BA more in aspen pockets.

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

Any mix of maple, oak, aspen, and birch meeting minimum stocking levels. Acceptable

Regen:

Other Best access is from the south. See compartment road plan. Harvest will require crossing several forested drains, designated crossings should be

Comment: established.

Treatments:

Acceptable Full to medium stocked aspen stand but will accept any mix of species of medium to full stocking

Regen:

Other Access from north. See compartment road plan.

Comment:

Proposed Start Date: 10/01/2017

142 73111142-Cut 73.6 4130 - Aspen Poletimber 52 81-110 Harvest Clearcut with 413 - Aspen Even-Aged Proposal Well Retention

Site Condition: Survey Needed **Habitat Cut: No** 

Prescription Clearcut 2" and up. Standard island retention, either boundary exclude or place towards the edges of the stand. In addition mark a handful of oak for

mast. Leave all red pine and white pine. If regeneration fails plant to red pine. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Full to medium stocked aspen but will accept any mix of species meeting minimum stocking levels.

Regen:

Other Apply drumming log specification.

Comment:

10/01/2017 Proposed Start Date:

146 73111146-Cut 11.7 6119 - Mixed Sawtimber 65 81-110 Harvest Seed Tree 611 - Lowland Even-Aged Proposal

> **Lowland Deciduous** Well Forest

Deciduous

Forest

**Habitat Cut: No Site Condition:** 

Prescription Mark 20 BA of residual timber in groups of 3 - 5 trees. Focus marking wind firm trees. Dry/frozen specifications.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any mix of aspen, maple, and oak meeting minimum stocking levels.

Regen:

<u>Other</u> No retention because only parts of the stand are prescribed for treatment. Use old lading for stand 144 located west.

Comment:

**Proposed Start Date:** 10/01/2017

10 4 6119 - Mixed 65 81-110 Seed Tree 146 73111146-Sawtimber Harvest 611 - Lowland Even-Aged Proposal Deciduous

Lowland Deciduous Well Cutx Forest

Forest

**Habitat Cut: No Site Condition:** 

Prescription Mark 20 BA of residual oak and maple in groups of 3 - 5. Focus on leaving wind firm trees. Dry/frozen harvest only.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Any mix of aspen, maple, and oak meeting minimum stocking levels.

<u>Acceptable</u> Regen:

Other No retention because only part of the stand is prescribed. SE is boundary is an intermittent stream. Best access for NE polygon would be to cross

Comment: forested drain at the narrow spot in between the two polygons.

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

Acceptable Fully stocked aspen stand but will accept any mix of species meeting minimum stocking levels.

Regen:

Other See compartment road plan.

Comment:

**Proposed Start Date:** 10/01/2017

172 73111172-Cut 38.7 4199 - Other Mixed Sawtimber 89 51-80 Harvest Seed Tree with 4199 - Other Two-Aged Proposal **Upland Deciduous** Medium Retention Mixed Upland Deciduous

**Site Condition:** 

Harvest 2" and up. Mark 20 BA of oak and maple for seed source. When marking in wet areas focus residual on wind firm trees in groups of 3 - 5. Prescription

Remove wettest drains from boundary. Leave NW upland knob for retention. Do not mark residual in dense understory areas. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

**Habitat Cut: No** 

Any mix of aspen, maple and oak meeting minimum stocking levels. Aspen has a sin chance of regenerating. <u>Acceptable</u>

Regen:

Best access from the south. See compartment road plan. Dory/frozen specification. Other

Comment:

**Treatments:** 

<u>Acceptable</u> Medium stocking of aspen but will accept any mix of species meeting minimum stocking levels.

Regen:

**Other** Best access is from the south, see compartment road plan.

Comment:

**Proposed Start Date:** 10/01/2017

202 73111202-Cut 16.7 4131 - Aspen, Oak Poletimber 41 81-110 Clearcut with 413 - Aspen Even-Aged Proposal Harvest

Retention

**Habitat Cut: No Site Condition:** 

Prescription Clearcut 2" and up. Standard island retention. Mark a handful of residual oak for mast.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Full to medium stocked aspen but will accept any mix of species meeting minimum stocking levels.

Regen:

Other Best access is from the east. See compartment road plan.

Comment:

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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
227	73111227-Cut	9.8	4130 - Aspen	Poletimber Medium	41	51-80	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal

**Habitat Cut: No Site Condition:** 

Prescription Clearcut 2" and up. No retention due to small and irregular stand size. Mark a handful of oak for mast.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory); SitePrep, Roller Chopping; SitePrep, Trenching; Planting, Initial Plant

Treatments:

Acceptable Full to medium stocked aspen but will accept any mix of species meeting full or medium stocking. If stand fails plant to red pine.

Regen:

Other Best access is from the east. See compartment road plan.

Comment:

Proposed Start Date: 10/01/2017

230 73111230-Cut 15.2 4199 - Other Mixed 4199 - Other Sawtimber 81-110 Harvest Seed Tree with Two-Aged Proposal Retention Mixed Upland

**Upland Deciduous** Well

Deciduous

Compartment: 111 Year of Entry: 2018

**Habitat Cut: No Site Condition:** 

Prescription Harvest 2" and up. Mark 20 BA of oak and maple to leave for seed source. Avoid marking residual near aspen clumps or areas of dense understory.

Variable BA is acceptable. Standard area retention. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any mix of aspen, maple and oak meeting minimum stocking levels. Goal is to increase density of aspen.

Regen:

Other Remove forested drain from boundary, will need to cross. See compartment road plan for road closures. Dry/frozen specification.

Comment:

**Proposed Start Date:** 10/01/2017

238 73111238-Cut 147 6119 - Mixed Sawtimber 81-110 Harvest Shelterwood 611 - Lowland Two-Aged Proposal Lowland Deciduous Well Deciduous

Forest

Forest

**Habitat Cut: No Site Condition:** 

Prescription Reduce BA to 60 marking oak and maple for residual. Mark residual in groups in order to maximize canopy openings.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

Acceptable Any mix of maple, oak and aspen meeting minimum stocking levels.

Regen:

Other Dry/frozen harvest.

Comment:

**Proposed Start Date:** 10/01/2017

239 73111239-Cut 9.1 4139 - Aspen, Mixed Sawtimber 65 111-Harvest Clearcut with 4139 - Aspen, Even-Aged Proposal Mixed Deciduous

Deciduous

Well 140 Retention

**Habitat Cut: No Site Condition:** 

Prescription Harvest 2" and up. Area retention around forested drain. Mark a handful of residual oak for mast.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any mix of aspen, oak, and maple meeting minimum stocking levels.

Regen:

Other Dry/ frozen harvest. Best access from south tail of stand. Use existing landing located in stand 144.

Comment:

Gladwin Mgt. Unit

Report 3 -- Treatments

Compartment: 111 Year of Entry: 2018

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
241	73111241-Cut	30.7 4	133 - Aspen, Mixed Pine	Poletimber Well	41	81-110	Harvest	Clearcut with Retention	4133 - Aspen, Mixed Pine	Even-Aged	Proposal

**Habitat Cut: No Site Condition:** 

Prescription Clearcut 2" and up with standard island retention. In addition mark to leave scattered 10 BA of pine and oak in patches. Leave all red pine. Apply Specs:

drumming log specification.

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable Full to medium stocked aspen and mixed pine but will accept any mix of species meeting minimum stocking levels.

Regen:

s

Other Best access is from the south. See compartment road plan.

Comment:

**Proposed Start Date:** 10/01/2017

**Total Treatment** 1034.7 Acreage Proposed:

Compartment: 111

Gladwin Mgt. Unit

Scott Shooltz : Examiner Year of Entry: 2018

Availa	ability for	Managemen	nt									
Total	Acres	Acres Avail	Acres	D	ominaı	nt Site	e Cond	ditions	S			
Acres	Available	With Condition	Not Available		2B	21	5B	5C	2G	2H	3J	5E
2262	2021	203	39	Aspen	128	74	1		20	17		2
113	113	0	0	Bog								
26	26	0	0	Herbaceous Openland								
19	19	0	0	Low-Density Trees								
255	175	63	16	Lowland Aspen/Balsam Poplar	57	6			11	6		
1794	522	105	1167	Lowland Deciduous	4		28	72	1,130	37		
361	361	0	0	Lowland Shrub							0	
183	182	0	0	Marsh			0					
408	356	29	22	Mixed Upland Deciduous				29	19			3
21	0	21	0	Natural Mixed Pines				21				
24	24	0	0	Northern Hardwood								
228	195	17	17	Oak			17			17		
6	6	0	0	Paper Birch								
7	0	7	0	Red Pine				7				
16	16	0	0	Upland Mixed Forest								
5	0	5	0	Upland Spruce/Fir				5				
5,728	4,018	450	1,260	Total Forested Acres	189	80	46	135	1,180	76	0	4
	70%	8%	22%	Relative Percent						•		

<sup>\*</sup>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	<b>Dominant Site Condition</b>	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	17	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
	Unavailable	2G: Too wet (sensitive	51	2H: Blocked by physical	2B: Unknown if access	Unspecified	Unspecified
2	Onavanable	soils, does not include access issues)		obstacle (e.g. upland stand in a lowland area)	through adjacent landowner(s) is possible		

Gladwin Mgt. Unit Scott Shooltz: Examiner

3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	18	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	17	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	21	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Some upland knobs	s may be accessible from adja	cent stan	ds.			
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	26	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions
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Compartment: 111

Gladwin Mgt. Unit

		hooltz : Examiner				Year of Entry: 20	
9	Available	2B: Unknown if access through adjacent landowner(s) is possible	4	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	44	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	25	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
12	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	18	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Stand is too wet ex	ccept sand ridge.					
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	121	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
14	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	22	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

Gladwin Mgt. Unit

Scott Shooltz : Examiner

15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	30	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
16	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	23	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
18	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	21	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
20	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	11	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						

Report 4 – Site Conditions
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Gladwin Mgt. Unit

Compartment: 111

	Scott SI	nooltz : Examiner				Year of Entry: 20	18
21	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
22	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	0	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
23	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
24	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
25	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
26	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
<u> </u>	comments:						

Gladwin Mgt. Unit

Scott Shooltz : Examiner

27	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	118	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Forested drains wi	th in this stand are too wet too I	narvest.				
28	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	88	Unspecified	Unspecified	Unspecified	Unspecified
•	Comments:						
29	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
30	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	37	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
31	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	24	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
32	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions
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Compartment: 111

Gladwin Mgt. Unit

Year of Entry: 2018 Scott Shooltz: Examiner 33 Unspecified Unspecified Unspecified Unspecified Unavailable 2G: Too wet (sensitive 22 soils, does not include access issues) Comments: 2H: Blocked by physical Unspecified Unspecified Unspecified 34 Unspecified Unavailable 20 obstacle (e.g. upland stand in a lowland area) Comments: Unspecified Unspecified Unspecified Unspecified 35 Unavailable 2G: Too wet (sensitive 9 soils, does not include access issues) Comments: 2G: Too wet (sensitive Unspecified Unspecified Unspecified Unspecified 36 Unavailable 13 soils, does not include access issues) Comments: 37 2G: Too wet (sensitive Unspecified Unspecified Unspecified Unspecified Unavailable 77 soils, does not include access issues) Comments: 2G: Too wet (sensitive Unspecified Unspecified Unspecified 38 Unavailable 9 Unspecified soils, does not include access issues) Comments:

Gladwin Mgt. Unit

Scott Shooltz : Examiner

39	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
40	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	15	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
41	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
42	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	33	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
43	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
44	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	38	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						

Compartment: 111

Gladwin Mgt. Unit

Comments:

Year of Entry: 2018 Scott Shooltz: Examiner Unspecified Unspecified 45 6 2B: Unknown if access Unspecified Unavailable 2H: Blocked by physical through adjacent obstacle (e.g. upland landowner(s) is possible stand in a lowland area) Comments: Wet spill way at north end blocks state access. Sand ridge runs into private. 2G: Too wet (sensitive Unspecified Unspecified Unspecified Unspecified 46 Unavailable 9 soils, does not include access issues) Comments: Unspecified Unspecified Unspecified 47 Unavailable 2H: Blocked by physical 6 2B: Unknown if access through adjacent obstacle (e.g. upland landowner(s) is possible stand in a lowland area) Comments: 2G: Too wet (sensitive Unspecified Unspecified Unspecified Unspecified 48 Unavailable 18 soils, does not include access issues) Comments: 49 Unspecified Unspecified Unspecified Unspecified Unavailable 2G: Too wet (sensitive 1 soils, does not include access issues) Comments: 50 Unavailable 7 Unspecified Unspecified Unspecified Unspecified 2G: Too wet (sensitive soils, does not include access issues)

Gladwin Mgt. Unit

Scott Shooltz : Examiner

51	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
52	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
	comments: come upland knob	s may be accessible from adjac	ent stand	ds.			
53	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
54	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
55	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	44	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
56	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	50	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						

Compartment: 111

Gladwin Mgt. Unit

Year of Entry: 2018 Scott Shooltz: Examiner Unspecified Unspecified Unspecified 57 7 Unspecified Unavailable 2G: Too wet (sensitive soils, does not include access issues) Comments: 2H: Blocked by physical Unspecified Unspecified Unspecified 58 Unavailable 5 2B: Unknown if access obstacle (e.g. upland through adjacent landowner(s) is possible stand in a lowland area) Comments: Unspecified Unspecified Unspecified Unspecified 59 Unavailable 2H: Blocked by physical 6 obstacle (e.g. upland stand in a lowland area) Comments: 2G: Too wet (sensitive Unspecified Unspecified Unspecified 60 Unavailable 7 Unspecified soils, does not include access issues) Comments: 61 2B: Unknown if access Unspecified Unspecified Unspecified 2H: Blocked by physical Unavailable 18 obstacle (e.g. upland through adjacent landowner(s) is possible stand in a lowland area) Comments: Forested drain to the south blocks state access. High ground continues through PVT. to Magrudder Rd. 62 Unavailable 2 Unspecified Unspecified Unspecified Unspecified 2G: Too wet (sensitive soils, does not include access issues) Comments:

Gladwin Mgt. Unit Scott Shooltz: Examiner

63	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
64	Unavailable	5E: Long-Term Retention	3	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
C	Comments:						
65	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	2	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
66	Available	5B: Maintain for regeneration purposes	29	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
67	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
68	Available	5B: Maintain for regeneration purposes	9	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

Gladwin Mgt. Unit Scott Shooltz: Examiner

69	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	22	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
70	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
71	Unavailable	5E: Long-Term Retention	2	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
С	comments:						
72	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
73	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
74	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						

Gladwin Mgt. Unit Scott Shooltz: Examiner

75	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	21	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
С	omments:						
76	Available	5B: Maintain for regeneration purposes	8	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
77	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
78	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						
79	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	17	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
С	omments:						
80	Available	2B: Unknown if access through adjacent landowner(s) is possible	42	2I: Survey needed	Unspecified	Unspecified	Unspecified
	omments:	ot developed. Maintained portion					

Compartment: 111

Gladwin Mgt. Unit

Year of Entry: 2018 Scott Shooltz: Examiner Unspecified Unspecified Unspecified 81 Unavailable 3 Unspecified 2G: Too wet (sensitive soils, does not include access issues) Comments: Unspecified Unspecified Unspecified Unspecified 82 **Available** 2B: Unknown if access 22 through adjacent landowner(s) is possible Comments: Short Rd. McNitt not developed. Maintained portion of Short Rd. ends before it touches State ownership. Unspecified Unspecified Unspecified Unspecified 83 **Available** 2B: Unknown if access 34 through adjacent landowner(s) is possible Comments: Short Rd. McNitt not developed. Maintained portion of Short Rd. ends before it touches State ownership. Unspecified Unspecified Unspecified 84 **Available** 2B: Unknown if access 15 Unspecified through adjacent landowner(s) is possible Comments: Short Rd. McNitt not developed. Maintained portion of Short Rd. ends before it touches State ownership. 85 Unspecified Unspecified Unspecified Unspecified Available 2I: Survey needed 74 Comments: Unspecified Unspecified Unspecified Unspecified 86 **Available** 2I: Survey needed 6 **Comments:** 

Compartment: 111

Gladwin Mgt. Unit

Scott Shooltz : Examiner Year of Entry: 2018

87	Available	2B: Unknown if access through adjacent landowner(s) is possible	26	Unspecified	Unspecified	Unspecified	Unspecified			
_	Comments: Short Rd. McNitt not developed. Maintained portion of Short Rd. ends before it touches State ownership.									
88	Available	2B: Unknown if access through adjacent landowner(s) is possible	47	Unspecified	Unspecified	Unspecified	Unspecified			
	Comments: Short Rd. McNitt not developed. Maintained portion of Short Rd. ends before it touches State ownership.									

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				

Gladwin Mgt. Unit Compartment: 111





#### **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.

Conservati Area	ion 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 oxyge stocked trout populations and those of other coldwater conditions for coldwater fishes may occur in Michigan groundwater inflows, or are located in colder (northern Director's action and designated as trout resources by	r fish species to persist from year to year. Suitable lakes if they are relatively deep, have substantial a reas of the state. Such lakes are established by
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved ox stocked trout populations and those of other coldwater year to year. Coldwater streams in Michigan typically p contributions of groundwater to their stream flows. Suddesignated as trout resources by Fisheries Order 210.	r fish species (e.g., slimy sculpin) to persist from provide these conditions due to substantial ch streams are established by Director's action and

S t	Gladwir	Gladwin Mgt. Unit				Stands Compartment: 111 Year of Entry: 2018	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
1	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	8.8	54	1-50	Two aged stand. Minimum piece utilization harvest left e high residual density of poles. A portion of the understory has succeeded into the canopy. As the stand progresses the understory will be featured as the canopy.	
2	4199 - Other Mixed Upland Deciduous	Sapling Medium	27.9	11	Immature	1/3 lowland: shallow moss/v depressions. Ground cover bracken, moss, V. Canopy closure has increased since last inventoried due to aspen filling in. Good O, M from stump sprouts, plus oak seedlings released. <10% supercan	
4	6119 - Mixed Lowland Deciduous Forest	Sapling Poor	6.1	28	Immature	Ground cov moss, highbush V, some sedge. Tr of W, bk tupelo (can). Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.	
6	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	17.3	51	1-50	Trace of white pine and blk tupelo in understory. Wet stand with knoll/ cradle topography. Sheet flow with in stand during wet periods.	
7	4199 - Other Mixed Upland Deciduous	Poletimber Medium	19.9	52	1-50	Trace of birch in canopy and sub. Stand is predominantly upland with lowland pockets. Multi - polygon stand. Areas of less dense regeneration and higher residual than surrounding stands.	
8	4130 - Aspen	Sapling Medium	23.0	28	Immature	Tr of serviceb (can) and willow (sub). Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.	
9	4131 - Aspen, Oak	Poletimber Well	39.1	44	51-80	Much denser maple saps at NW end, heavier to aspen also, and more dense. Tr of blk tupelo and white pine in canopy, blk tupelo in sub. Ground cover bracken in upland areas and moss/V in very shallow depressions. Previous harvest appears to have been a diameter limit cut leaving all oak. Older and larger stems of oak, aspen, and maple present throughout the stand.	
10	6112 - Lowland Aspen	Poletimber Well	17.3	28	Immature	Grnd cov royal fern, sens fern, forbs. Tr of elm in canopy. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.	
11	6112 - Lowland Aspen	Sapling Well	7.1	28	Immature	Grnd cov forbs, NY fern, moss, lowland sedge. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988. Stand has multiple forested drains bisecting it true P-type.	

4139 - Aspen, Mixed

Deciduous

4130 - Aspen

12

13

Sapling

Medium

Sapling Well

12.3

18.1

11

28

Immature

**Immature** 

Trace of sassafras. Stand is predominantly upland but gets

wetter towards south boarder. Decent stem density in spots but regeneration holes keep the canopy closure under 75%.

Grnd cover gracken, NY fern, forbs. Tr of SWO (can) and MI

holly (sub). Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.

S t	Gladwir	Gladwin Mgt. Unit			– Forested	Stands Compartment: 111 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
15	4131 - Aspen, Oak	Poletimber Well	58.3	40	111-140	Tr of black tupelo and white pine in canopy and subcanopy. Ground cover bracken, and moss/V in low areas. Bigtooth aspen diameter depends on site quality and residual oak density. Oak in this stand is two-aged at 40 and 69.
16	6112 - Lowland Aspen	Poletimber Well	23.1	41	51-80	Lowland aspen stand with a vein of higher ground running through the center. Aspen quality and diameter varies with in the stand depending on height of water table and soil fertility. Rutting visible in low areas from previous harvest.
17	4131 - Aspen, Oak	Poletimber Well	2.6	30	51-80	Upland stand with scattered depressions which hold water . in the spring. Best quality is to the south along Olson and decreases to the north.
18	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	11.2	11	Immature	Tr of BO, Elm (can). Grnd cov royal fern, sedge, borbs, iris, bracken, raspb.
20	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	56.3	89	111-140	
21	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	17.9	89	111-140	
23	4131 - Aspen, Oak	Poletimber Medium	21.2	54	1-50	Canopy closure closer to 75% which has allowed the understory to grow to pole size in many spots. Stand is primarily up and with scattered depressions.
24	4130 - Aspen	Poletimber Well	48.1	48	141-170	Decent quality aspen stand. Predominantly upland with several lowland drainages. Standing water in low cradles during wet seasons.
25	4131 - Aspen, Oak	Poletimber Well	39.9	34	51-80	True upland aspen. Oak varies from good quality black oak to loan quality n. pin.
26	4131 - Aspen, Oak	Poletimber Well	26.7	28	Immature	Grnd cov bracken. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988. Upland with lowland pockets.
27	6113 - Lowland Maple	Sapling Poor	12.1	11	Immature	Eastern polygon more solid upland at S end (15-20% of poly), but fairly sparse saps over dense Mi holly in the S 3/4. Overall 30-40% upland. Grnd cov bracken, wintergree, blue birch, lowland sedge, moss, V. Tr of Serviceb, RO (canopy) and W, Haz (sub). Part of sale cut in '05.
28	4199 - Other Mixed Upland Deciduous	Sawtimber Well	69.0	89	51-80	Total BA 80: RM 35, aspen 30, birch 7, pin oak 5, black tupelo 3.  Trace of WO and hem in canopy. Keep Rx. minus species specific retention.
29	4199 - Other Mixed Upland Deciduous	Sapling Medium	23.0	11	Immature	Tr of TA, haz in subcanopy. Grnd cover sedge, highb blueb, goldenrod, royal fern, bracken. < 10 BA residual supercanopy oak.

s t	Gladwii		Report 7	- Forested	Stands Compartment: 111 Year of Entry: 2018	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	4131 - Aspen, Oak	Poletimber Well	22.4	28	Immature	Good % of stand is dry ridges with bracken cover. 10-15% wetter areas. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
32	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	17.4	89	111-140	North small polygon was salvaged in 1991 with Jigsaw harvest.
33	4131 - Aspen, Oak	Sapling Well	36.0	28	Immature	Tr of elm (can), blue beech (sub). Grnd cov bracken, MI holly, royal fern, "goldenrod". Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
34	6113 - Lowland Maple	Sapling Poor	9.5	27	Immature	Tr of rose in subcan Grnd cov tall marsh grass, iris, royal fern.
35	4199 - Other Mixed Upland Deciduous	Sawtimber Well	14.4	86	51-80	Upland knob bordered by forested drain to the north. Aspen is beginning to fall out of the stand. Good mix of pole and sapling sized oak and maple in the canopy and sub-canopy.
37	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	6.1	28	Immature	Tr of blue beech, chokech in canopy. Grnd cover sedge, royal fern. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988. Very slow to regen. Has filled in some since last inventory.
38	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	27.4	78	81-110	Red tail hawk sighted in adjacent p.i. st 46: was also seen in 2003. Lowland stand with upland knobs at the north and south ends. 80 110 60
39	4139 - Aspen, Mixed Deciduous	Poletimber Well	31.5	28	Immature	Tr of raspberry in subcan. Grnd cov sensitive fern, royal frn, forbs, tr of iris, rose. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988. Stand is primarily upland tapering to lowland on the edges. Forested drain in the west end is very wet and bisects the stand. South end of stand is upland with scattered low depressions.
40	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	27.7	89	111-140	Stand is a mix of slightly elevated upland knobs separated by forested drains and swales. Stand has some what un-enenaged look but the presence of aspen and a fairly uniform canopy age suggests evenaged structure.
41	6113 - Lowland Maple	Sawtimber Well	87.7	107	111-140	Tr of PO, RO in can, elm in sub. Grnd cov bracken, sens fern, swamp grass.OPIC - FMD: The stand has an intermitten creek running through it with no well defined banks. The trees are shallow rooted and there are many wind thrown trees in the

shallow rooted and there are many wind thrown trees in the stand. There are pockets of hemlock along the edges of the stand as well as L-Types toward the center along the intermittent creek. The stand has lots of standing water in it. The ground cover is heavy to sensitive fern and cinnimon fern, also present is blue flag and marsh marigold. In the stand on some of the nurse log there are hemlocks regenerating. Habitat PArVCo

S t	Gladwi	Gladwin Mgt. Unit			<ul><li>Forested</li></ul>	Stands Compartment: 111 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	6119 - Mixed Lowland Deciduous Forest	Poletimber Poor	26.2	89	51-80	S end, W end of eastern polygon, and NE area, are sap/pole sized that seems to have succeeded more recently from L type. S 1/3 is sparser and wetter with heavy MI holly. Ground cover swamp grass in northern 2/3, royal fern, forbs and V at S end. NE has area of L too small to map. Canopy closure lowered because of ash mortality. Good stocking of sub-canopy poles throughout, should increase stocking over time.
43	4119 - Mixed Northern Hardwoods	Sapling Well	20.7	28	Immature	Sparser areas (about 50% crown cover) with mostly maple. Few somewhat low areas (5-10% of stand). Tr of WO in sub. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
46	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	14.3	28	Immature	Grnd cov royal fern and bracken, "goldenrod". Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988. Portion of stand didn't regen well because of prolonged high water table. Stand is slowly filling in however.
47	6119 - Mixed Lowland Deciduous Forest	Sapling Poor	36.9	28	Immature	Tr of B, elm (can), serviceb (sub). Grnd cover sedge, forbs. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
48	4139 - Aspen, Mixed Deciduous	Poletimber Well	16.9	28	Immature	General: Black tupelo is a small component of many stands in the E and S central part of compartment. Center and E-central portion sparser, wetter with heavy forbs. Tr of black tupelo, chk cherry in can, hazel in sub. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
49	6113 - Lowland Maple	Sawtimber Medium	36.3	86	51-80	Trace of black ash and black tupelo in canopy. Harvested in 2005 under contract # 73-003-03-01 321 Olson. Unit 6 reduced the BA to 60 s.f. on average, very little regen (what regen there is has been browsed by deer). Variable stocking of oak seedlings seem to be releasing; a percentage are now between one and two feet tall. Little regen currently due to heavy shrub/forb/grass competition, deer browse, and high BA of overstory. Harvest released michigan holly in low areas. North 1/4 wet with swamp grass, south 1/4 nearly upland with bracken. Forested drain in the center of the stand is in operable. Medium stocking of poles in the canopy and sub-canopy.
50	4199 - Other Mixed Upland Deciduous	Poletimber Medium	6.8	28	Immature	Tr of swmp white oak in subcan. Grnd cov bracken (60-70%) and V. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
51	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	44.4	38	51-80	Small drain through SE corner: runs E to larger drain in section 1. Wetter and more sparse, with more aspen and more L understory E of rd. Tr of Tam and B in canopy, hazel in sub.
53	4131 - Aspen, Oak	Sapling Medium	15.6	11	Immature	Tr of tag alder in subcanopy. Harvested in 2005 under contract # 73-003-03-01 321 Olson. Unit 7 2" clearcut with den trees marked to leave.
55	4199 - Other Mixed Upland Deciduous	Sawtimber Well	46.5	81	81-110	Stand is a mix of upland knobs, low pockets, and forested drains.  Much of the aspen has fallen out of this stand with canopy gaps being filled by red maple from the understory.

S t	Gladwin	Gladwin Mgt. Unit			– Forested	Stands Compartment: 111 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
56	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	43.6	86	51-80	Forested drain flows through this stand. In narrow spots a defined bed and bank becomes established.
57	4199 - Other Mixed Upland Deciduous	Sawtimber Well	23.2	86	81-110	Stand is predominantly upland with lowland pockets. East polygon of stand is bordered by lowland drains, primate, and an intermittent stream. The stream is located on the north boundary and connects the Maggruder ditch to Carroll Creek.
59	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	11.7	86	51-80	SE polygon is inaccessible, and is sparser, smaller timber with heavy L underst. Grnd cov swamp grass, sens fern, forbs. Tr of BC, B, QA in subcan.
60	4131 - Aspen, Oak	Poletimber Medium	34.0	28	Immature	Variable density: patches of dense forest and small clearings.  Trace of hybrid oak and rd map in canopy, TA, WO, HS and MI holly in sub. Forested drain bisects the stand flowing to south branch Carroll Creek. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer
64	6119 - Mixed Lowland Deciduous Forest	Sapling Poor	6.7	28	Immature	Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
65	4199 - Other Mixed Upland Deciduous	Sapling Medium	34.8	28	Immature	Pockets of L-type , high ridge along road and to W and NW. Tr of hazel and rose in subcan. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
66	6112 - Lowland Aspen	Poletimber Well	5.4	34	51-80	Aspen pocket on a slight ridge bordered by low ground. Old beaver activity present.Soil is mainly Covert Sand
68	6113 - Lowland Maple	Sawtimber Well	8.8	65	81-110	This stand is low and wet and was not cut when stand 18 was harvested. The stand is a mix of swamp white oak, red oak, red maple, and Ash. The main soil is Kingsville.
69	4125 - Black, N. Pin Oak	Poletimber Well	3.0	23	51-80	This stand is and oak pocket that has regenerated fairly well and is mainly n. pin oak. The stand is against Carrol Creek and the soil under the stand is Pipestone Sand. Harvested under Carroll Creek Grouse.
71	4125 - Black, N. Pin Oak	Poletimber Well	6.1	44	81-110	The stand is a mix of knolls, ridges, swales and draws. The stand goes from O6 to E6 with some of the oak is reaching close to sawlog size. The stand is a fairly even mix of oak and maple. The soil is Kingsville loamy fine sand.
72	4130 - Aspen	Poletimber Medium	25.0	23	51-80	The soils under the stand are mainly Pipestone Sand in the west end and Covert sand in the east end. Part of sale #73-045-89-01 Carroll Creek Access harvested Feb. of '93. West end is more dense than east. Overall medium density stand of aspen with no understory. Bracken fern ground cover. Knoll/cradle topography.

73

4125 - Black, N. Pin Oak Sapling Poor

3.2

24

1-50

Dry upland ridge which was part of Lewis Road Block harvested in '92. Stand is filling in with oak.

s t	Gladwir	n Mgt. Unit		Report 7	– Forested	Stands Compartment: 111 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
76	4119 - Mixed Northern Hardwoods	Sawtimber Well	3.6	65	51-80	Stand sits or an upland knob. Aspen is starting to fall out of the stand. Medium stocking of oak and maple in the understory.
77	6112 - Lowland Aspen	Poletimber Well	41.3	32	111-140	Stand is predominantly lowland with scattered upland knobs. Bigtooth and n. pin oak located on higher knobs. Some of the low areas of the stand are dominated by lowland brush. Some of these pockets are too wet to cut as well. Minor rutting visible from previous harvest.
78	6112 - Lowland Aspen	Poletimber Well	6.5	28	Immature	Tr of willow and pin oak in subcan.
79	6113 - Lowland Maple	Sawtimber Well	29.5	95	111-140	Drainage runs through stand into Carroll Creek parts of which appear to be man made. Maple ranges from 95+ to 42 years and younger. Dead ash component throughout in low quantities.
80	4130 - Aspen	Poletimber Well	34.9	34	51-80	Fairly good stand with pin oak and red maple in understory, a little wetter and hummocky in places, but vast majority is upland. A5 at SE end. 1990 notes: 3 sales cut within 5 years of each other, 1978-1983. Regeneration good to poor, spotty. A3-A1. SE 25 acres were part of sale name Leaky Radiator Sale harvested in 1982. Cut all aspen, birch, maple, ash, & oak that yielded a 100" pulp stick. Left all oak 12" and larger.
81	6113 - Lowland Maple	Poletimber Well	18.0	33	1-50	Lowland portion of sale # 73-102-80-01, Waterwing Sale. Minimum piece utilization of red oak, white oak, red pine, paper birch, red maple, black cherry, aspen, and ash, harvested in 1983. Scattered pockets and individual large diameter trees left from '83 harvest. Approximately 50% of the ash poles are dead. Standing water throughout with marsh grass present in pockets.
82	4130 - Aspen	Poletimber Medium	20.6	23	Immature	Stand is a sparse aspen pole stand. Knoll/cradle topography throughout with areas of low ground scattered. Historic fire charred pine stumps indicate this area burned fairly hot reducing the soil productivity. Harvested February of 1993 under contract number 73-007-88-01 Carroll Creek Grouse.
85	6119 - Mixed Lowland Deciduous Forest	Sapling Poor	10.1	28	Immature	Nearly impassable: sparse new stand over mature L. W end with larger (4-5"D) timber at E end, even heavier L toward W end, also a bit wetter. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
87	6113 - Lowland Maple	Sawtimber Medium	11.5	94	1-50	Broken out of stand to the NE, much wetter with swamp grass and sensitive fern. Much higher % ash. Too wet to harvest.
88	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	17.0	94	111-140	Much of stand is operable, wet area broken out. Harvest dry/frozen, dormant NON-NEGOTIABLE. Aspen and ash removal (ash pre-salvage). Mark additional trees with orange paint for operability. Private line posted 300 ft N of line on state.

4131 - Aspen, Oak

89

Sapling Well

23

**Immature** 

8.7

Dry aspen/oak ridge and adjacent oak/ash aspen lowland. Bermed 500 ft west of stand: holding. Clearcut in 1993. TS# 33-'91. Ground cov bracken on ridge, swamp grass in lowland.

S	Gladwin	Gladwin Mgt. Unit			– Forested	Stands Compartment: 111 Year of Entry: 2018
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
90	4131 - Aspen, Oak	Poletimber Well	81.7	44	111-140	The stand is regenereating fairly well with some variablility in the covertypes. There are areas of wetter soils and in these areas the stand is more of an E6. There are also some droughty ridges and these are more of and O6, but overall the stand is an A6. Soil is mainly Covert Sand.
91	4139 - Aspen, Mixed Deciduous	Poletimber Well	6.9	38	51-80	Small drain through NE corner: runs to larger drain in section 1. Stand is a mix of upland and lowland ground.
92	6113 - Lowland Maple	Sawtimber Medium	11.5	89	1-50	The stand is low and very wet and is mainly made up of black ash with some red maple. The red maple is mainly along the edges of the stand and in the south end of the stand. The ash is dead standing. The soil is Belleville loamy sand.
93	4131 - Aspen, Oak	Poletimber Well	46.0	27	Immature	Stand is mainly an A5 O5 mostly of it is on a ridge of Pipestone Sand. Harvested February of 1989 under contract number 73-007-88-01 Carroll Creek Grouse.
94	6113 - Lowland Maple	Poletimber Well	18.2	57	81-110	Lowland stand with wettest ground in the center. Oak increases in the north part to Oak increases in the north portion.
95	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	44.7	89	51-80	This stand is variable with dryer ridges, areas of standing water ad forested drains. Only harvestable ground is in the western portion. This portion was not harvested during Donut Trail Sale because it is separated by a very wet forested drain. The soils are a mix of Kingsville loamy fine sand, Pipestone sand with areas of Belleville loamy sand. Heavy ash mortality throughout. A portion of ash logs and poles appear healthy with no signs of stress or stripped bark. Canopy closure closer to 75%.
96	4131 - Aspen, Oak	Sapling Well	19.3	18	Immature	The stand is on a high ridge around a bog with an area of lower ground to the east that is dry. The soils are Pipestone sand under the ridge and Covert sand under the area near the adjacent low stands. Part of sale number 73-015-97-01 Donut Trail Sale.  Minimum piece utilization harvested late summer 1998.
100	412 - Oak Types	Poletimber Medium	4.9	37	1-50	This stand is an Island of Pipestone soil in stand 53 that is right off McGrudder Road ROW. The stand is regenerating well and is mainly oak with pockets of aspen. Also in the stand some residual pine was left.
102	4125 - Black, N. Pin Oak	Sawtimber Medium	90.9	56	1-50	The featured stand is comprised of oak sawlogs and oak poles. The oak poles when bored are showing sign of response to being released. The oak in the upper log classes and XL class, which are older and less prevalent, are showing signs of decline. The overall stocking is an O8 but the actual stand is more of an O7O2A2. The featured stand is the residual left by the harvest in 1998. The stand is on a ridge of Pipestone Sand. Part of sale number 73-015-97-01 Donut Trail Sale. Minimum piece utilization except did not cut oak.
103	6113 - Lowland Maple	Poletimber Medium	22.1	47	51-80	This stand is filling in with maple, ash and oak. The oak in the stand is on a slight ridge. Overall the stand is an E4/L.

S t	Gladwir	Gladwin Mgt. Unit			– Forested	Stands Compartment: 111 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
106	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	16.0	44	81-110	Stand appears to have been cut with adjacent stand to the west. Included upland ridge on the east side. Stand is a primary flowage for water to reach Carroll Creek.
108	4199 - Other Mixed Upland Deciduous	Poletimber Well	31.2	44	51-80	The stand is a mix of ridges and draws. Stand is variable ranging from O6 or A6 on the ridges and E6 in the draws. The soil under the stand is a mix of Kingsville loamy fine sand and Pipestone sand. A forested drain runs south to north bisecting the stand in the eastern portion.
111	6112 - Lowland Aspen	Poletimber Well	8.8	44	81-110	Low depression tapering to higher ground on the north and south sides, to rest and drain runs through the center of the stand flowing water to the east. Good ash regeneration most still healthy.
113	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	19.7	44	81-110	East end and southern edge sit on a sand ridge. The rest of stand is lowland. Heavy ash mortality reducing canopy closure to under 75%. Inclusion of older non-harvestable E-type in the west end, under 5 acres. Intermittent stream along east boundary. Forested drain flows through the center of the stand.
114	4130 - Aspen	Poletimber Well	9.4	44	111-140	Dense aspen stand sitting on an upland ridge. Scattered large diameter white oak and black oak which were left during previous harvest. Good quality aspen for this area. Two forested drains boarder this stand on the west and east side connecting the southern lowland complex to Carroll Drain.
117	6113 - Lowland Maple	Sawtimber Well	153.6	95	81-110	Southwesternmost 10 ac and 15 ac at northeast edge are drier and operable: manage these areas on selection system in future. Northwester 25 ac is E5/L. '98 comments: Most of the aspen is gone now, fully converted to E. Very wet. Drainages into Carroll Creek. Aspen, n. pin oak, and white oak located on edges and ridges of the stand. Sheet flow present throughout stand at time of inventory. 10 BA of dead ash.
118	4130 - Aspen	Poletimber Well	68.8	35	51-80	Sale number 99-80A Oil Slick Sale #1, minimum piece utilization of red oak, white oak, paper birch, red maple, black cherry, aspen, and ash. Primary specie removed was aspen pulp and sawlogs. Old pine stumps present. Primarily upland with occasional low pockets concentrated towards the drain to the east. Red maple is a mix of 34 yr. old stems and old stems which where un-merchantable during last harvest. Scattered pole/log white pine throughout as well.
119	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	22.4	31	1-50	Very dense tag alder and willow 10 ft tall giving the stand the appearance of full stocking. Actual stocking of trees species under 75%. Heavy lowland brush throughout. Sale number 73-032-84-01 Baby Coon Sale, removed all species 4" and up. Forested drain flows through the north portion of the stand. Primarily lowland with a couple upland ridges. Stand nearly swamped out after harvest. Areas of marsh grass and lowland brush only.
120	4131 - Aspen, Oak	Poletimber Poor	13.8	32	1-50	Site did not regen well. Western 1/4 is M3/A3. Stand is the eastern 14 ac of '83 habitat cut (W73-188). Currently is understocked with oak, birch, red map, aspen with low pockets heavier to maple, aspen, and lowland brush. Was an A4 stand with BA=50 sq. ft. Knoll/cradle topography with numerous fare charred pine stumps. This area appears to have experienced sever historic fire resulting in low soil fertility.

S	Gladwir	Gladwin Mgt. Unit			– Forested	Stands Compartment: 111 Year of Entry: 2018
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
122	6112 - Lowland Aspen	Poletimber Well	76.6	41	81-110	Lowland stand with islands and ridges of higher ground. Low areas hold water during wet seasons. Several forested drainages bisect the stand flowing west to east. Knoll/cradle topography throughout the stand. Scattered log size white and northern pin oak along with paper birch under 2%.
123	4199 - Other Mixed Upland Deciduous	Poletimber Poor	10.9	36	1-50	Part of stand to the north that didn't regenerate well. Upland. Red map 40%, oak 30%, aspen 20%, trace of black tupelo, cherry and 10% birch. Red pine is natural and concentrated along the south boundary.
125	4131 - Aspen, Oak	Poletimber Well	34.8	52	81-110	Overall stand is upland, wettest area located in the SW, approximately 25% low ground. Driest area is in the north central portion, this area has low stocking. Scattered residual white oak. Poorer quality trembling aspen toward north end.
126	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	69.4	60	51-80	Lowland stand with upland knobs and ridges. Driest to the west and slowly grades down towards the east. Primary age is 60 with older and younger stems present in the canopy. Sub-canopy is dominated by sapling/pole single stem red maple. Significant portion of dead ash not reflected in BA measurements.
127	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	5.7	25	1-50	Upland grass opening located in the SW corner which currently has some natural pine filling in. The rest of the stand is lower with standing water in the cradles. Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991, left all red pine.
128	4199 - Other Mixed Upland Deciduous	Sawtimber Well	6.7	47	1-50	Stand not harvested in 2000 to reserve for oak management. Aspen not removed last YOE because adjacent stand to the west didn't meet greenup requirements. Oak/red maple stand and aspen mostly gone as predicted last YOE. Understory is dominated by red maple which are succeeding into the canopy. Ground cover bracken, blueberry, moss: fairly wet knoll/cradle topography with standing water throughout at time of inventory.
129	6113 - Lowland Maple	Sawtimber Well	77.1	72	141-170	Stand is part of a larger drainage complex. Parts of the stand have been selectively harvested in the past, primarily to the east and along the edges. This resulted in a diverse age structure. The canopy maple ranges from under 60 to 125 years old with additional maple succeeding into the canopy. All aspen and paper birch in the stand is concentrated along the edges. Determined to be un-even aged because of the diversity of DBH measurements and 3+ canopy age classes.
130	4130 - Aspen	Poletimber Well	31.1	24	51-80	Part of sale number 73-54-90-01 Lewis Road Block harvested winter of 1992. Several low drainages bisect the stand running west to east, 25% lowland with winterberry/moss. Ground cover bracken, winterberry, moss. Stem density varies across stand with the lowest density on higher sand ridges and low hummocky ground. Stand just makes 75% canopy closure.
131	4199 - Other Mixed Upland Deciduous	Sawtimber Well	11.5	60	51-80	Formerly part of adjacent stand cut under 73-054-90-01, separated by clearcut. 45% at S end is upland. North end is upland ridges and lowland bottoms. Stand boarders Carroll Creek to the north. Aspen are tipping over throughout the stand and ash in bottoms as died. Canopy gaps are naturally forming throughout the stand.

S	Gladwir	Gladwin Mgt. Unit			<ul><li>Forested</li></ul>	Stands Compartment: 111 Year of Entry: 2018
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
132	6113 - Lowland Maple	Poletimber Well	21.2	36	51-80	Habitat cut in 1980 under FTP # W73-104. Stand was previously typed out as a P-type but comments indicated E-type. Aspen is in fact sparsely spread across the stand. A drainage bisects the stand north to south. The center of the stand is a small alder/willow type which the drainage runs through. Stand increases in elevation on either side of the drainage. Most of the oak was left during the '80 cut.
133	4130 - Aspen	Sapling Medium	57.3	16	Immature	Part of sale number 73-011-00-01 Lewis Hines, 2" clearcut, harvested November of 2000. Heavy mortality of aspen was noted at the time. This along with proximity to the water table negatively affected regeneration throughout the stand. The lowest density is at the north end of the stand and slowly increases southward. Knoll/cradle topography with blueberry/bracen fern ground cover. Scotch pine present along road in the SW corner.
134	4130 - Aspen	Poletimber Well	68.4	25	51-80	Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. Knoll/cradle topography with water standing in some low spots through the center of the stand running NE/SW. Scattered 8" red maple and oak which were residual from '91 harvest. Future stand will have a heavier oak component as the understory reaches the canopy. Birch present under 2% and concentrated in lower areas.
135	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	5.8	25	1-50	Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. Lower area with standing water. Poor growing conditions resulted in slow, sparse regeneration. Stand will fill in over time as the understory matures.
136	6113 - Lowland Maple	Sawtimber Medium	21.2	89	51-80	Lowland stand with significant portion of dead ash resulting in 4 reduced canopy closure. Stand in too wet to harvest and contains multiple forested drains. Marsh grass ground cover in lowest canopy closure areas.
138	4131 - Aspen, Oak	Poletimber Well	12.1	44	51-80	Upland sand ridge tapering to lowland on either side. Stand is dominated by bigtooth aspen with scattered n. pin oak ranging form sapling to log size. Log size oak are residual from previous harvest.
139	4139 - Aspen, Mixed Deciduous	Sapling Well	25.0	5	Immature	The stand was harvested in the winter of 2011/2012 as a 2" spec final harvest retaining oak. The retention is about 11 BA and the damage to it during the harvest was miniimal. The sale was Huckleberry Aspen, sale # 73-024-10-01. Left all oak during harvest both pole and log size trees.
142	4130 - Aspen	Poletimber Well	73.6	52	81-110	Stand is doing quite well there are areas that are heavy to red maple and pockets of pine in the stand. Aspen also declines in vigor towards the east. Higher density log size residual oak as well farther east.
143	4139 - Aspen, Mixed Deciduous	Sapling Well	153.9	5	Immature	Excellent red pine regen in clearing near road at SE end. TS#44-90-1. Fairly poor regeneration. Part of sale number 73-024-10-01 Huckleberry Aspen clearcut in fall of 2011. All red and white pine were left west of Lewis Rd. and south of W. Hines St. (Unit 1). All red pine, white pine, and oak were left in the rest of the sale. Good mix of oak, maple, aspen, and pine. Additional white and red pine will most likely seed in.

S	Gladwin	Gladwin Mgt. Unit			<ul><li>Forested</li></ul>	Stands Compartment: 111 Year of Entry: 2018
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
144	4131 - Aspen, Oak	Poletimber Well	176.7	25	Immature	Harvest left scattered oak and pine. Residual oak is now a mix of poles and logs. Red pine is concentrated in pockets, white pine is more scattered. Some of the quaking aspen is off site and not growing as well as the big tooth aspen. 11 1/2 acres along the west boundary of this stand burned in 2014 due to a wildfire killing most of the aspen.
145	4131 - Aspen, Oak	Sapling Well	9.9	23	Immature	Stand is a mix of trembling aspen, oak, and red maple. The stand is typed as an A3 but is more of an A2E2. The soil is mainly Pipestone. Two low drainages flow through this stand west to east. Knoll/cradle topography.
146	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	140.1	65	81-110	The stand has multiple forested drains running through it with no well defined banks. The trees located in these drains are shallow rooted with many of them wind thrown. They are also older and larger with un-even aged characteristics. The majority of the stand is harvestable lowland consisting of low pockets of standing water and upland knobs. Aspen is present in the stand but a large portion has already fallen out. There are pockets of hemlock along the edges of the stand as well as L-Types toward the south. The ground cover is heavy to sensitive fern and cinnimon fern, also present is blue flag and marsh marigold. In the stand on some of the nurse log there are hemlocks regenerating. Habitat PArVCo
147	6113 - Lowland Maple	Poletimber Well	8.5	59	111-140	Stand was thinned in 1997. The harvest did very little dammage to the residual trees and the is very little evidence of rutting.  Minimal regeneration from harvest. Stand is now mostly comprised of released poles. Minor sheet flow through the stand.  The soil in the stand is mainly Kingsville.
148	4125 - Black, N. Pin Oak	Sawtimber Well	67.4	71	81-110	Stand is mainly 2 aged there is an overstory of poor quality pin and black oak with an understory of oak poles and red maple saplings. The stand is actually O9O5. The grasses in the stand is mainly proverty grass.
149	4199 - Other Mixed Upland Deciduous	Sawtimber Well	6.9	88	111-140	The stand is on a ridge and can be harvested. Remove all the aspen, red maple pulp as well as some of the red oak and red maple sawlogs concentrating on the larger diameter trees. Set up as a norther hardwood site cutting the stand back to 70 BA. Reserves all the hemlock and the beech. The soil is mainly Kingville. The stand was set up for harvest and was not cut. The sale was Carl Drain Mix sale # 73-022-06-01.
150	6112 - Lowland Aspen	Poletimber Well	6.3	52	81-110	Stand is doing quite well there are areas that are heavy to red maple. Part of stand 142 that dips down to lower ground. Wettest to the south.
151	4125 - Black, N. Pin Oak	Sapling Medium	8.1	23	Immature	OPIC - FMD: Stand is on an Oakville knoll and is regenerating heaviest to oak. Overall the stand is an O2A2 with the stocking level of a 2. The regeneration is a little patchy and a mix of residual and regeneration from '93 harvest. Regeneration is more prevalent so featured as the canopy.
154	4130 - Aspen	Poletimber Well	48.8	28	Immature	Stand is regenerating well to a mix of trembling and bigtooth aspen with pockets of red maple and oak in it. The soil in the stand is mainly Pipestone.

S	Gladwir	Gladwin Mgt. Unit			– Forested	Stands Compartment: 111 Year of Entry: 2018
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
155	4130 - Aspen	Poletimber Medium	22.0	31	1-50	Was originally set up under Short Road Sale # 103-80A but this portion was never cut. Re-sold under sale number 73-022-84-02, harvested all tree yielding a 100" pulp stick. Off site aspen, poor formed with black canker. Low stocking throughout with variable diameters depending on micro climate. Bigtooth aspen is doing better than quaking.
156	4130 - Aspen	Sapling Well	29.4	18	Immature	OPIC - FMD: The stand has regenerated as an A3O2 with the west end of the stand being more of an O2A2. The soils under the stand are mainly Pipestone Sand in the west end and Covert sand in the east end. Part of sale number 73-015-97-01 Donut Trail Sale which was harvested late summer 1998. Minimum piece utilization. Harvest crossed a low forested drain in the northern portion of the stand.
157	4131 - Aspen, Oak	Poletimber Well	20.4	44	81-110	The stand has regenerated as an A6O5 with the west end of the stand being more of an O5A5. The soils under the stand are mainly Pipestone Sand in the west end and Covert sand in the east end.
161	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	12.4	44	81-110	Stand is primarily lowland with higher knobs scattered throughout. Forested drain flows through the stand, almost an intermittent stream.
162	6113 - Lowland Maple	Sawtimber Well	90.9	89	81-110	Stand is a mixture of harvestable lowland, upland knobs and non- harvestable lowland forested drains. Water flows through the stand west to east. Dead ash component throughout but not yet snapping.
164	4130 - Aspen	Sapling Well	31.2	18	Immature	Part of donut trail sale harvested in '98. Minimum piece utilization left all oak. Stand hits on a sand ridge. Regenerated heavy to aspen than ridge to the north with less residual oak.
167	4130 - Aspen	Poletimber Well	26.4	33	51-80	Part of sale number 73-102-80-01 Waterwing Sale, minimum piece utilization of red oak, white oak, red pine, paper birch, red maple, black cherry, aspen, and ash, harvested in 1983 (most of sale was cut). Stand consists of the upland portions of the previous sale. Trace of red oak throughout the stand.
172	4199 - Other Mixed Upland Deciduous	Sawtimber Medium	54.4	89	51-80	Stand used to be heavy to aspen but most of the aspen has since tipped over. Understory maple are growing in dense pockets but void in others. Last Y0E this stand was typed out as lowland. Up on review of satellite imagery and field observations this stand was switched to upland. The topography in this stand is upland knobs with low drainages surrounding. Water spills out of the beaver pond to the north and flows SE through the stand.
173	6113 - Lowland Maple	Sapling Medium	10.0	18	Immature	Lowland portion of Donut Trail Sale. Portions of this stand flooded out but a tech that regenerated grew in thick.
175	6119 - Mixed Lowland Deciduous Forest	Sapling Well	88.3	24	1-50	Part of sale number 73-54-90-01 Lewis Road Block harvested winter of 1992. Unit was a 2" clearcut of all species. The majority of the stand is low and wet with standing water during wet seasons. Trail road follows a high ridge for the most part. Dense understory of lowland brush in the lowest areas has reduced stem density.

S t	Gladwir	n Mgt. Unit		Report 7	– Forested	Stands Compartment: 111 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
176	42310 - Planted Spruce	Sawtimber Well	5.2	53	111-140	Planted spruce stand not sure if planted by DNR or previous owner. Stands are located on small upland ridges.
177	6113 - Lowland Maple	Sawtimber Well	17.9	90	141-170	Trace of yellow birch. Large diameter timber. Heavy blow down throughout, mostly cottonwood. Most likely caused by age of timber. Canopy gaps are filling in nicely with maple, basswood, and ash. Dead ash component in this stand is minor.
178	4131 - Aspen, Oak	Poletimber Well	55.6	25	51-80	Part of sale number 73-055-90-01 Coleman Road West, 2" clearcut, harvested during the winter of 1991. Primarily an upland stand with low veins running west and east. Water table is close to the surface throughout. Trace of elm and basswood.
 179	6112 - Lowland Aspen	Poletimber Well	15.3	40	141-170	West portion of stand is a true P-Type. Southern PVT boundary of this portion is E 6 to E 9. Eastern portion of the stand sits higher on a ridge and contains more bigtooth aspen. SW PVT corner witnessed (LS & E 46677).
180	4130 - Aspen	Sapling Well	46.9	25	51-80	Dense stand of upland aspen. SI higher than stands to the north and considerably denser. Scattered residual oak and maple of good quality. Ground cover is bracken fern with some sparse blueberry, dogwood, serviceberry. Quaking aspen and birch are concentrated in veins of slightly lower elevation with possible perched water table. This parcel was acquired in May of 1998 by way of exchange acquisition. Stand was already harvested.
181	4130 - Aspen	Poletimber Well	33.8	40	81-110	Medium stocked aspen stand. True upland aspen. Scattered oak throughout and mostly 40 yrs. old. Some older stems present.
182	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	21.4	40	141-170	Small planted red pine inclusion carrying 200 + BA located in the eastern portion of the stand. Small crowns, beginning to self thin. Annual rings showed impressive growth before crown closure. Stand varies from more open grown pine around perimeter to denser pine towards the interior. Dry cradle/knoll with a few wet pockets to the east.
183	6112 - Lowland Aspen	Poletimber Well	41.5	35	51-80	Primarily a lowland stand with several upland ridges. North end of this stand is wet. Cradle/knoll topography with cradles full of water at time of inventory. Part of sale number 103-80A Short Road Sale, cut all aspen, oak, maple, ash, white pine, cottonwood, and birch, harvested winter of 1981. Did not cut all the way to north PVT line.
184	6113 - Lowland Maple	Sawtimber Well	13.4	78	111-140	Drainage runs through stand into Carroll Creek. Stand is to wet to harvest. Red maple varies in size from 13 to 36 inches. Stand was most likely harvested through 70 to 80 years ago, leaving behind the multi-stemmed red maple and poor formed trees. Ash component has died out resulting in a 50 BA reduction in the canopy.

6119 - Mixed Lowland

**Deciduous Forest** 

187

Sawtimber

Well

11.2

47

51-80

canopy.

Low drainages/depressions left when surrounding stand was

harvested, 73-011-00-01 Lewis Hines. Heavy knoll/cradle topography with standing water. Dense understory of lowland hardwood and lowland brush. Scattered older/larger stems of maple and oak.

s	Gladwir	Gladwin Mgt. Unit			<ul><li>Forested</li></ul>	Stands Compartment: 111 Year of Entry: 2018
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
188	4130 - Aspen	Poletimber Well	21.5	25	51-80	Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. Red pine was not cut in this unit. Primarily upland except where stand pinches in between Coleman Rd. and stand 221. Quaking aspen and red maple concentrated here. Only a trace of red pine in this stand.
189	6113 - Lowland Maple	Poletimber Medium	14.0	44	51-80	Drainage cut with adjacent aspen. Shallow depressions throughout. Doesn't flow much water. Scattered large diameter oak.
190	4131 - Aspen, Oak	Poletimber Well	12.0	44	51-80	Upland knob dominated by aspen of medium stocking. Sparsest in the center of the stand.
191	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	11.5	44	81-110	The stand is a mix of ridges and draws. So the stand is variable ranging from O6 or A6 on the ridges and E6 in the draws. The soil under the stand is a mix of Kingsville loamy fine sand and Pipestone sand. Stand is lowest in the center. Upland ridges and knobs surrounded by lowland drainages. Slightly more lowland. SE portion primarily lowland. The west boundary is an intermittent stream.
192	6119 - Mixed Lowland Deciduous Forest	Poletimber Poor	10.1	23	Immature	Harvested in February of 1993 under contract number 73-007-88-01 Carroll Creek Grouse. Two inch spec. clearcut with notes indicating a clean cut but extensive rutting occurred. Sit and is close to 25% canopy closure. Almost flooded out. Heavy tag alder and marsh grass throughout.
195	4311 - Pine, Aspen Mix	Sawtimber Well	16.1	56	111-140	Dominant age is 56 with younger and older stems of white pine present. White pine has good form. Sub-canopy white pine varies in height, many have already succeeded into the canopy. Central portion of stand is dominated by 40 year old aspen and pockets of red pine.
196	6113 - Lowland Maple	Sawtimber Well	23.3	90	141-170	Hemlock, white pine, yellow birch along north edge of the stand. Even aged E 9 but moving towards un-even aged as cottonwood and maple naturally succumb to wind throw.
197	4139 - Aspen, Mixed Deciduous	Sapling Well	32.9	25	51-80	Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. Canopy closure closer to 75% than 100%. Decent aspen stand but will never be super dense. Stand has several low areas which are closer to E-types and are located in the SE and NW of this stand.
202	4131 - Aspen, Oak	Poletimber Well	16.7	41	81-110	The soils under the stand are mainly Pipestone Sand in the west end and Covert sand in the east end. West half of the stand sits on a sand ridge with higher stem density. East half is on a dry sand plain with lower stem density.
205	6113 - Lowland Maple	Sapling Poor	15.9	28	Immature	Eastern polygon more solid upland at S end (15-20% of poly), but fairly sparse saps over dense Mi holly in the S 3/4. Overall 30-40% upland. Grnd cov bracken, wintergree, blue birch, lowland sedge, moss, V. Tr of Serviceb, RO (canopy) and W, Haz (sub). Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.

S	Gladwin	Gladwin Mgt. Unit			– Forested	Stands Compartment: 111 Year of Entry: 2018
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
206	6113 - Lowland Maple	Poletimber Poor	6.5	47	1-50	Low density pole stand because of high water table year round and ash mortality. Oak finger ridge in center of the stand. Marsh grass and lowland brush ground cover.
207	4130 - Aspen	Sapling Medium	25.6	25	51-80	Stand density has been reduced due to off site aspen, canker, and heavy browse. Stand is closer to 75% canopy closure.  Scattered residual stems of big tooth aspen, red maple, and oak. Heavy knoll/cradle topography throughout. North end of this stand is wet. Part of sale number 73-055-90-01 Coleman Road West, 2" clearcut, harvested during the winter of 1991.
208	4125 - Black, N. Pin Oak	Sawtimber Well	7.7	89	51-80	Labeled as an O5 during '91 cut. Stand was recently thinned, not much regeneration to speak of.
209	42210 - Natural Red Pine	Sawtimber Well	6.6	84	171-200	Part of sale number 73-024-10-01 Huckleberry Aspen clearcut in fall of 2011. All red and white pine where left west of Lewis Rd. and south of W. Hines St. (Unit 1). Stand is a dense portion of residual red and white pine.
210	4131 - Aspen, Oak	Sapling Well	36.3	25	51-80	Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. Knoll/cradle topography with primarily dry cradles. Solid aspen regeneration with oak occupying much of the sub-canopy. A couple large diameter white pine where left as residual from harvest. Will most likely increase the pine component over time.
211	4130 - Aspen	Poletimber Well	51.4	25	81-110	Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. Stand is predominantly A6 with pockets of A5. Canopy and understory white pine are concentrated in the SW portion of the stand. Some low pockets present but predominantly upland. Paper birch under 2%.
212	4130 - Aspen	Poletimber Poor	5.6	25	1-50	Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. Area was used as a landing resulting in a low density.
213	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	14.4	25	1-50	Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. Low area with poor growing conditions resulting in slow regeneration. Stand will fill in over time as understory matures. Blueberry/bracen fern ground cover on knolls, water and marsh grass in depressions.
214	4130 - Aspen	Poletimber Well	61.1	34	81-110	Part of sale number 73-025-81-01 Backache Sale, minimum piece utilization red maple, ash, white birch, and oak (most of sale was cut). Primarily an upland ridge which tapers to low ground along the north edge. Vanes of low ground run through the stand in the center and western portions. Aspen is least dense in the SE corner.
215	4126 - White, Black, N. Pin Oak	Sapling Well	17.8	25	51-80	Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. More upland than lowland but not far from 50/50. Lowland portions of the sale are concentrated around adjacent lowland stand 141. Knoll/cradle topography throughout the entire stand.

S t	Gladwin	n Mgt. Unit		Report 7	– Forested	Stands Compartment: 111 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
216	4131 - Aspen, Oak	Sapling Poor	5.8	16	Immature	Part of sale number 73-011-00-01 Lewis Hines, 2" clearcut, harvested November of 2000. Heavy mortality of aspen was noted at the time. The lowest density is at the north end of the stand and slowly increases southward. Knoll/cradle topography with bracen fern ground cover. No standing water this stand is 100% upland. All of the oak under 5 ft is being heavily browsed but should fill in some over time.
217	4130 - Aspen	Poletimber Well	76.0	24	51-80	OPIC - FMD: Fairly good stand with pin oak and red maple in understory, a little wetter and hummocky in places, but vast majority is upland. A5 at SE end. Part of sale number 73-54-90-01 Lewis Road Block harvested winter of 1992. Unit was cut 4" and up all species. Stand diameter was inflated across all species because this residual. This in turn bumped the stand up to a pole stand even though the 24 year old stems are still in the sapling class for the most part.
218	4125 - Black, N. Pin Oak	Sawtimber Medium	4.9	72	1-50	Part of sale was Huckleberry Aspen, sale # 73-024-10-01. Area of dense residual oak. Understory regeneration from harvest is extremely heavy to red maple with oak stems here and there. Harvest removed all species but oak from this area. Stand is currently three aged with two ages in the canopy. The two ages in the canopy are parent stems from original logging (72 yrs. old) and stems from '68 harvest (48 yrs. old).
219	4199 - Other Mixed Upland Deciduous	Sawtimber Well	5.4	60	51-80	Dominant canopy age is 60. Co-dominant age is 45. All species accept paper birch and aspen are represented in both the dominant and co-dominant canopy structure. Most likely a result of habitat cutting of aspen or a natural decline of aspen which allowed the sub-canopy maple, birch, and oak to succeed into the canopy.
220	6119 - Mixed Lowland Deciduous Forest	Sapling Poor	7.7	27	Immature	Harvested February of 1989 under contract number 73-007-88-01 Carroll Creek Grouse. Lowland portion of harvest which did not regenerate well. Densl lowland brush understory. Portions of this stand may be too wet to harvest in the future.
221	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	21.9	83	51-80	Drainage runs through the stand and into Carroll Creek. This stand has substantially more standing water than the stand to the north. This appears to be a result of several roads placed across the drain during historic logging. Dead ash component throughout. Primary stand age is 83 with a 60 yr. old age class present but not substantial. Older stems present as well. Stand is approaching un-even aged.

6113 - Lowland Maple

6119 - Mixed Lowland

**Deciduous Forest** 

222

225

Poletimber

Medium

Sawtimber

Well

7.3

7.3

89

51

1-50

81-110

Intermittent stream flows through the stand from north wetland.

Reduced canopy closure due to ash mortality. Medium density poles will increase future at and canopy closure.

Low spill way between two sand ridges connecting southern lowland complex to Carroll Creek Drain. Intermittent stream flows

the length of the stand. Older stems of oak and maple scattered throughout. Aspen concentrated to the north. Density decreases as stand juts out into non-forested lowland.

S t	Gladwin	Mgt. Unit		Report 7	– Forested	Stands Compartment: 111 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
226	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	39.5	41	81-110	Stand is comprised of dry ridges and wet depressions running NW to SE connecting the southern lowland complex to Carroll Creek Drain. North edge of the stand tapers down to an E-type in spots. The soils under the stand are mainly Pipestone Sand in the west end and Covert sand in the east end. Most of the stand experiences seasonal flooding. Aspen is concentrated primarily in one or two pockets along the trail road.
227	4130 - Aspen	Poletimber Medium	9.8	41	51-80	Several pockets of this stand were harvested February of 1993 under contract number 73-007-88-01 Carroll Creek Grouse. Stand sits on an upland ridge separating the southern lowland complex from Carroll Creek Drain. Medium to poor density aspen.
228	6113 - Lowland Maple	Poletimber Well	11.0	38	111-140	Nice pole sized E-type. Not a lot of standing water present in the stand.
229	4130 - Aspen	Sapling Medium	14.0	23	1-50	Stand sits on a sand ridge tapering to lower elevations on all sides. Harvested February of 1993 under contract number 73-007-88-01 Carroll Creek Grouse. Regeneration is patchy in places primarily where residual aspen stems were left.
230	4199 - Other Mixed Upland Deciduous	Sawtimber Well	15.2	56	81-110	Upland stand with low pockets. Old stems present across all species. Forested drain flows through the western end of the stand into Carroll Creek. Understory in also thicker at the west end.
231	6119 - Mixed Lowland Deciduous Forest	Sapling Well	6.2	32	51-80	Stand is lower than the adjacent stands to the west and east. Knoll/cradle topography and fire charred historic pine stumps. Standing water throughout the stand in the cradles. Habitat cut in '84 with stand 120 (W73-188) but with better success because of closer proximity to the water table and presumed less intense historic burning.
232	6119 - Mixed Lowland Deciduous Forest	Poletimber Poor	9.1	60	1-50	Significant dead ash component. Marsh grass and cattail ground cover along with standing water. Dense lowland shrub layer.
233	4125 - Black, N. Pin Oak	Sawtimber Medium	8.9	86	51-80	Trace of black ash and black tupelo in canopy. Harvested in 2005 under contract # 73-003-03-01 321 Olson. Unit 6 reduced the BA to 60 s.f. on average. U re comments from stand 49.
234	4130 - Aspen	Sapling Well	34.4	18	Immature	Sapling stand over all. Oak was left in previous harvest resulting in mixed ages and size classes. Stand transitions to P-type a long it's southern boarder.
235	6113 - Lowland Maple	Sawtimber Medium	9.1	89	111-140	Connected to eastern lowland stands by a forested drain at the north end. Dead ash component throughout reducing canopy closure.

4130 - Aspen

236

Poletimber

Well

38.8

32

81-110

closure.

Stand is doing quite well there are areas that are heavy to red maple and pockets. East 1/3rd low and wet p-type with a forested drain bisecting stand connecting southern e-type to Olson ditch along north boundary.

S	Gladwii	Gladwin Mgt. Unit			<ul><li>Forested</li></ul>	Stands Compartment: 111 Year of Entry: 2018
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
237	4130 - Aspen	Sapling Well	16.2	18	Immature	Upland stand with lowland pockets. Minor knoll/ cradle topography.
238	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	14.7	71	81-110	Lowland stand transitioning to upland along it's north boundary.  Larger diameter trees present here than in E-type to the south.  Uneven aged stand. Oak is primarily 115 but maple ranges from  115-71 and younger.
239	4139 - Aspen, Mixed Deciduous	Sawtimber Well	9.1	65	111-140	Stand sits on an upland knob with scattered lowland pockets. Southern tail of stand is separated by a forested drain. Heavy maple and oak understory ranging from mostly saplings in the south to mostly poles in the north. This change is attributed to a less dense canopy.
240	6112 - Lowland Aspen	Poletimber Medium	5.7	35	51-80	Lowland stand with pockets of marsh grass and lowland brush. Aspen in stand appears to be the result of clearing the adjacent pipeline to the south.
241	4133 - Aspen, Mixed Pine	Poletimber Well	30.7	41	81-110	Previous harvest left scattered log to pole size oak and all red pine and white pine. White pine is more prevalent than red. The red pine is concentrated in two small patches which appear to have been planted. Aspen varies 1 -2 inches DBH depending on site quality. Density follows the same pattern.
242	6113 - Lowland Maple	Sapling Well	6.0	23	Immature	The soils under the stand are mainly Pipestone Sand in the west end and Covert sand in the east end. Harvested February of 1993 under contract number 73-007-88-01 Carroll Creek Grouse.
243	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	22.4	23	Immature	Harvested February of 1993 under contract number 73-007-88-01 Carroll Creek Grouse. Center portion of the stand sits on a sand ridge and is dominated by an aspen clone. West end is lowland with multiple drains bisecting. East end is lowland with higher stem density than the west. West end of the stand is close to 25% canopy closure in spots with most of the stems being residual oak from harvest.
244	6113 - Lowland Maple	Sapling Well	6.6	23	Immature	Harvested February of 1993 under contract number # 73-045-89- 01 Carroll Creek Access harvested Feb. of '93. This area regenerated better than the rest of the cut unit most likely due to its proximity to the water table. Tapers to upland toward the south.
245	6119 - Mixed Lowland Deciduous Forest	Poletimber Poor	7.3	26	1-50	Harvested February of 1989 under contract number 73-007-88-01 Carroll Creek Grouse. Stand is a transition area between upland said ridge and true wetland. Knoll/cradle topography with dense lowland brush understory. Stand is predominantly lowland with scattered knobs high enough to rescuescattered knobs high enough to regenerate trees.
246	4193 - Birch, Aspen	Poletimber Medium	6.2	26	Immature	Stand is mainly an A2O2 mostly and it is on a ridge of Pipestone Sand. Stand should be a pole stand in 10 years. Harvested February of 1989 under contract number 73-007-88-01 Carroll Creek Grouse.
247	4131 - Aspen, Oak	Sapling Well	7.5	18	Immature	Part of sale number 73-015-97-01 Donut Trail Sale. Minimum piece utilization except did not cut oak. Forested drain bisects stand east and west.

S t a n d	Gladwin Mgt. Unit			Report 7	– Forested	d Stands Compartment: 111 Year of Entry: 2018
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
248	4139 - Aspen, Mixed Deciduous	Poletimber Well	19.3	32	51-80	Several low drainages bisect the stand running west to east, 25% lowland with winterberry/moss. Ground cover bracken, winterberry, moss. Habitat cut (W73-216) completed December of 1984. BA was 50 sq. ft. Stem density varies across stand with the lowest density on higher sand ridges and low hummocky ground.
<b>253</b>	4125 - Black, N. Pin Oak	Sawtimber Medium	5.7	48	51-80	Stand sits on a sand ridge surrounded by low ground. A spill way in located at the north end of the stand connecting adjacent low areas. Trace of aspen.



Stand	Cover Type	Acres	Managed Site	General Comments:
3	310 - Herbaceous Openland	1.8	No	Cover type should be 3140: Mixed non-forested. Small portion of st 2 that didn't regen in '05. Bracken, willow, sedge, "goldenrod".
5	3103 - Rubus-Fern	1.1	No	Scattered A, PO, RM. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
14	3102 - Grass	1.5	No	35-40% bracken. Litter.
19	6239 - Mixed Emergent Wetland	8.5	No	Harvested '05 with stand 13: about 10% tree cover (RM, A, bk tupelo, tr of ash). Grnd cov grass, cattail, sedge, rush, willow
22	6220 - Alder/willow	6.7	No	Harvested sept '05. 70% marsh, rest saplings (5-10% total cover). Also raspberry and lowland shrubs.
30	6225 - Bog	1.4	No	Leatherleaf with Blueb, MI holly, RM, PO, B
36	6220 - Alder/willow	1.9	No	Tall willow with trees on edge.
44	3103 - Rubus-Fern	4.9	No	Pin, white O and RM. No aspen. Grnd cov bracken, little bit of royal fern, grass, sedge, forbs. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988. Shallow forested drain bisects the stand.
45	6223 - Inundated Shrub Swamp	7.7	No	About 55% marsh, 45% dogwood, buttonbush and willow. Dead trees.
52	622 - Lowland Shrub	1.1	No	
54	6239 - Mixed Emergent Wetland	12.4	No	Tall swamp grass and iris and cattails with scatered TA and willow.
58	6220 - Alder/willow	1.5	No	Mature TA, willow over tall swamp grass. Scattered maple and ash.
61	6229 - Mixed lowland shrub	1.5	No	
62	3103 - Rubus-Fern	3.2		Regenerating slowly to 1) SWO, 2) PO. Upland with bracken, 20% lowland with TA and Dogwd. 15% tree cover. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
63	6222 - Shrub-Carr	2.5	No	Bracken, sweet fern, O, B, CC 60-70%. L with B, SWO 30-40%. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
67	3103 - Rubus-Fern	3.5		Bracken with scattered BO, cherry and B. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.



Stand	Cover Type	Acres	Managed Site	General Comments:
70	6220 - Alder/willow	8.4	No	15% ash/SWO at NE edge: very wet area associated with drain. Sedges, rushes, dogwood, white ppine, TA.
74	330 - Low-Density Trees	3.7	No	Part of sale # 73-054-90-01 Lewis Road clearcut which did not regenerate to minimum stocking levels.
75	6222 - Shrub-Carr	26.9	No	Carroll Creek Drain flood plain. Open areas of marsh grass mixed with clumps of lowland brush.
83	6233 - Wet Meadow	6.6	No	Pure wet meadow with drain through middle, tall wet meadow grass.
84	6239 - Mixed Emergent Wetland	14.6	No	Marsh with areas of floating aquatic, and willow/dogwood on edges.
86	6222 - Shrub-Carr	21.6	No	OPIC - FMD: This stand is a long depression between ridges and is a mix of leather leaf, blueberry, michigan holly and tag alder. Overall the stand is more of a V-Type than an L-Type.
97	6225 - Bog	53.5	No	This stand is an L-Type that consist of mainly blueberry and leather leaf with some tag alder. There are also inclusion of N-Type and some widely scattered trees. The main soil is Kingsville loamy fine sand
99	6239 - Mixed Emergent Wetland	2.2	No	This stand was originaly formed by a tresspass from the private owner to the south who was haying this area. The owner appears to not be haying it now for there is high herb and brush (blackberry) and some trees are filling in. The stand is along Carrol Creek.
101	6239 - Mixed Emergent Wetland	1.3	No	Marsh grass with blueberry and scattered birch trees.
104	6225 - Bog	14.1	No	This stand is a long depression between ridges and is a mix of leather leaf, blueberry and tag alder. Overall the stand is more of a V-Type than an L-Type.
105	6225 - Bog	43.9	No	Marsh grass pockets surrounded by short blueberry/leatherleaf and lowland brush.
107	6221 - Fen	73.4	No	Large lowland brush area with scattered lowland hardwood along the perimeter and interior pockets. One pockets of sawlog maple located in the western portion of the stand.
109	310 - Herbaceous Openland	3.9	No	This stand is open with very little in the way of trees. Historic landing site which was expanded after '93 Donut Trail Sale was harvested and the portion bordering the opening did not regenerate. Some trees starting to encroch in the stand but for the most part it is still a grass/fern stand.
110	622 - Lowland Shrub	1.2	No	



Stand	Cover Type	Acres	Managed Site	General Comments:
112	6220 - Alder/willow	9.6	No	This stand is low and wet and made up of mainly brush 2-4'. The brush is mainly tag alder, red osier dogwood, and salix brush there is also some blueberry and leather leaf.  The main soil is Kingsville loamy fine sand.
115	6221 - Fen	3.1	No	OPIC - FMD: Flooded area along drain. Dense dogwood with marsh grass.
116	622 - Lowland Shrub	9.8	No	OPIC - FMD: The stand is mainly an L-Type of red osier dogwood and tag alder. At one time the stand was flooded by beavers but the dam went out approximently 10 years ago and now it has been filled in with brush. Stand contains a Carroll Creek Crossing which was done under permit # 89-08-0015 which was used to haul wood for Carroll Creek Access and Carroll Creek Grouse.
121	6220 - Alder/willow	41.8	No	OPIC - FMD: Floating aquatic in portions of N end. Large snags scattered through stand mostly ash. N in places, especially narrow N-S channel connecting N and S portions. Dry along trail through N end. Patch of phragmites in the SW corner.
124	6220 - Alder/willow	9.7	No	Stand switched from forested to non-forested because of ash die off. Late successional L: very tall tag alder, willow, dogwood, honeysuckle. Red map, ash, swamp wh oak, birch, elm coming in around perimeter.
137	6220 - Alder/willow	3.6	No	Tr of B, elm (can), serviceb (sub). Grnd cover sedge, forbs. Part of sale number 73-020-85-01 Jigsaw, minimum piece utilization all species, harvested late summer 1988.
140	3301 - Low Density Deciduous Trees	2.1	No	Trees encroaching. Poor regeneration area from surrounding harvest.
141	622 - Lowland Shrub	3.6	No	Scattered black tupelo, red map. Succeeding to E type. SPart of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991.
152	6220 - Alder/willow	36.2	No	The stand is low and wet and lies along the south branch of Carrol Creek. The stand is mainly tag alder and willow brush.
153	6220 - Alder/willow	2.8	No	Stand is a draw in stand 45 that is mainly tag alder, pussy willow, red osier dogwood, and swamp willow. The soil in the stand is mainly Kingsville.
158	6221 - Fen	12.7	No	Flood plain of Carroll Creek Drain.
159	330 - Low-Density Trees	1.9		Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. Most likely a landing area which did not regenerate.
160	6222 - Shrub-Carr	17.0	No	Low drainage are a. Flows water to Carroll Creek Drain.
163	6223 - Inundated Shrub Swamp	3.4	No	An intermittent stream flows into this stand from the south and flows out through an old beaver dam where stand 113 and 191 meet. Additional water flows into this stand from a forested drain flowing through stand 192.



Stand	Cover Type	Acres	Managed Site	General Comments:
165	6239 - Mixed Emergent Wetland	3.8	No	Marsh stand with alder perimeter and scattered hardwood.
166	6239 - Mixed Emergent Wetland	4.7	No	Low tag alder/lowland brush pockets. Drains to the NW to Carroll Creek Drain.
168	3103 - Rubus-Fern	1.1	No	Bracen fern knob with a couple cherries and a red maple.
169	6220 - Alder/willow	2.0	No	Alder willow stand. Stand is an area where water backs up before flowing into Carroll Drain.
170	3103 - Rubus-Fern	3.6		Poor regeneration area. Stand sits on a sand ridge between low areas. Ground cover is bracken fern and sweet fern.
171	6221 - Fen	14.3		Cut the same time as stand to the south but this portion was lower. 3 acre inclusion of mature timber along west edge. Forested drain flows through the southern 1/3rd of the stand. Part of sale # 73-045-89-01 Carroll Creek Access harvested Feb. of '93. Stand is below 25% canopy closure of tree species. Potential exists for this stand to grow into an E 5 next YOE.
174	3301 - Low Density Deciduous Trees	2.4		Landing for Lewis Road Block 73-054-90-01 which was cut winter of '92 This area did not regenerate well.
185	310 - Herbaceous Openland	1.1		Part of sale number 73-044-90-01 Coleman Road East, 2" clearcut, harvested fall of 1991. Landing area which didn't regenerate.
186	6220 - Alder/willow	1.4	No	Alder willow stand. Stand is an area where water backs up before flowing into Carroll Drain.
194	6222 - Shrub-Carr	11.8	No	Blueberry/leather leaf east side.
198	6239 - Mixed Emergent Wetland	26.4	No	This stand is low and wet and is mainly an L-Type with scattered swamp hardwood on slight ridges. The soil under the sand is mainly Kinross mucky sand with inclusion of Adrian muck.
199	622 - Lowland Shrub	14.3	No	This stand is low and wet and is mainly an L-Type with scattered swamp hardwood on slight ridges. The soil under the sand is mainly Kinross mucky sand with inclusion of Adrian muck. Western portion was harvested February of 1989 under contract number 73-007-88-01 Carroll Creek Grouse.
200	6239 - Mixed Emergent Wetland	19.0	No	Marsh stand.
201	6239 - Mixed Emergent Wetland	11.1	No	This stand is primarily marsh grass and cattail with scattered swamp hardwood on slight ridges. The soil under the sand is mainly Kinross mucky sand with inclusion of Adrian muck. Approximately 1/3 of the stand is blueberry bog.
203	6239 - Mixed Emergent Wetland	2.1	No	Old beaver flooding currently drained. Filling in with lowland shrubs and grasses.



Stand	Cover Type	Acres	Managed Site	General Comments:
204	623 - Emergent Wetland	62.3	No	Marsh grass stand with pockets of michigan holly.
223	622 - Lowland Shrub	1.5	No	
224	6239 - Mixed Emergent Wetland	6.5	No	
249	3301 - Low Density Deciduous Trees	5.4		Stand was harvested with stands to the north and west. Did not regenerate. High sand ridge.
250	6220 - Alder/willow	7.2		The soil under the stand is a mix of Kingsville loamy fine sand and Pipestone sand. Harvested February of 1993 under contract number 73-007-88-01 Carroll Creek Grouse. Stand swamped out after harvest but appears to be slowly filling in.
251	6220 - Alder/willow	1.0	No	Low depression surrounded by upland ridges. Standing water present at time of inventory.
252	3301 - Low Density Deciduous Trees	3.5		Harvested February of 1993 under contract number 73-007-88-01 Carroll Creek Grouse. Only oak regenerated.
254	6233 - Wet Meadow	1.1	No	Low grass area.