Compartment Review Presentation

Grayling Forest Management Unit

Compartment 72213
Entry Year 2022
Acreage: 915
County Crawford
Management Area: Grayling Ice Contact

Revision Date: 2020-06-23

Stand Examiner: John St. Pierre

Legal Description:

T28N-R03W, Sections 4, 5 and 6, Crawford County

Identified Planning Goals:

To provide for the protection, integrated management and responsible use of a healthy, productive and undiminished forest resource base for the social, recreational, environmental and economic benefit of the State of Michigan.

Soil and topography:

The terrain is flat to gently rolling. The main soil type present within this compartment is Rubicon Sand. This soil type is classified as being excessively well drained and is common on outwash plains and stream terraces. There is little risk of both surface erosion and windthrow in this soil
series. Blue Lake Loamy Sand and Dawson –Loxley Peat are the other two soil types that are well represented within this compartment. Blue Lake Loamy Sand is classified as being well drained and is typical of moraine landforms. Within this soil type, erosion and windthrow possibilities are slight. Dawson-Loxley Peat is classified as being very poorly drained and is common on closed depressions on lake plains. The chance for erosion is negligible and wind throw possibility is high depending on exposure to
winds.

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

State ownership is interrupted within sections 4 and 5 by the Crawford-Otsego landfill. Active groundwater testing wells associated with the landfill are present in section 4. Private ownership is found on the northern and southern boundary of section 4, west of Sherman Rd. Currently, sections 4 and 5 house nine active well pad sites and one pump station facility. Interstate 75 and its associated right-of-way fence line dissects western portions of the compartment (section 5). Section 5 (west of I-75) accommodates an underground high-pressure gas pipeline corridor, above ground powerline corridors, N Roberts Rd and day use/public access to Horseshoe and Blue Gill Lakes. Privately owned parcels increase quite dramatical within section 6. Most of these parcels and homes are located on or near Horseshoe and Blue Gill Lakes.

Unique Natural Features:

The water bodies in the western portion of the compartment have groundwater flow influence into headwater tributaries of the Au Sable River. Bradford Creek is one of these tributaries and is located just west across Old-27. The Au Sable River is a designated wild and scenic river, it's also classified under the Natural Rivers Act. No other known unique natural features are currently present within this compartment.

Archeological, Historical, and Cultural Features:

No known archeological, historical, or cultural features are present within this compartment.

Special Management Designations or Considerations:

No known special management designations or considerations are present within this compartment.

Watershed and Fisheries Considerations:

Blue Gill and Horseshoe Lakes lie in the western portion of the compartment. Each lake has a designated access site on it which are currently managed by Parks and Recreation Division. These lakes are noted for generally having good fishing opportunities.

Wildlife Habitat Considerations:

Wildlife utilization was commonly observed throughout the compartment. The major species observed during field data collection were; whitetail deer, wild turkey and ruffed grouse. There's a larger presence of raptor species near the landfill. Forest management in the compartment has provided suitable habitat for species that depend upon early and mid-successional forest cover-types.

Mineral Resource and Development Concerns and/or Restrictions

No known potential exists for commercial metallic mineral production in this part of the state. The closest active

sand/gravel pit is just over three miles to the southwest. Sand & gravel potential appears to be good in the compartment. The compartment lies within Antrim Shale gas play. Most of the compartment is producing Antrim gas, and there is little potential for additional Antrim wells. The compartment is on the southern edge of the Guelph (Niagaran) reef trend. Multiple wells have been drilled in the compartment to test for reef reservoirs, and all were dry holes. There may be potential for future reef discoveries beneath compartment, but probability is low. Nearly all the State-owned mineral rights in the compartment are currently leased and held by production.

Vehicle Access:

Access to the compartment is generally good yet some areas of section 5 can be more challenging to reach. N Sherman, Hartwick and N Petersen are the primary access roads for sections 4 and 5. From these roads extend a series of forest access routes leading to many of the gas wells located in sections 4 and 5. Gates restrict access to some state lands located near the landfill, requiring access be obtained by crossing state land from the south and/or the north. N Roberts Rd provides primary access into the portions of the compartment west of I-75 (sections 5 and 6). Forest access routes are limited in this area and 'on foot' travel is generally the most reliable mode of transportation.

Survey Needs:

Currently no survey needs.

Recreational Facilities and Opportunities:

Horseshoe and Blue Gill lakes and their associated access sites provide a great deal of recreational possibilities. There's ample opportunity for various forms of hunting. Leisurely walking, hiking and snowshoeing are activities that could be enjoyed within this compartment.

Fire Protection:

Wildland fire suppression for this compartment and surrounding area is provided by local VFD's and DNR resources based out of Grayling and Gaylord field offices.

Additional Compartment Information:

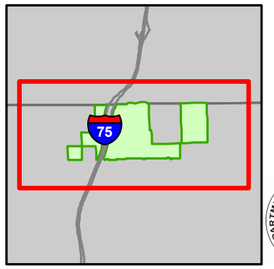
The following reports from the Inventory are attached:

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

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

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

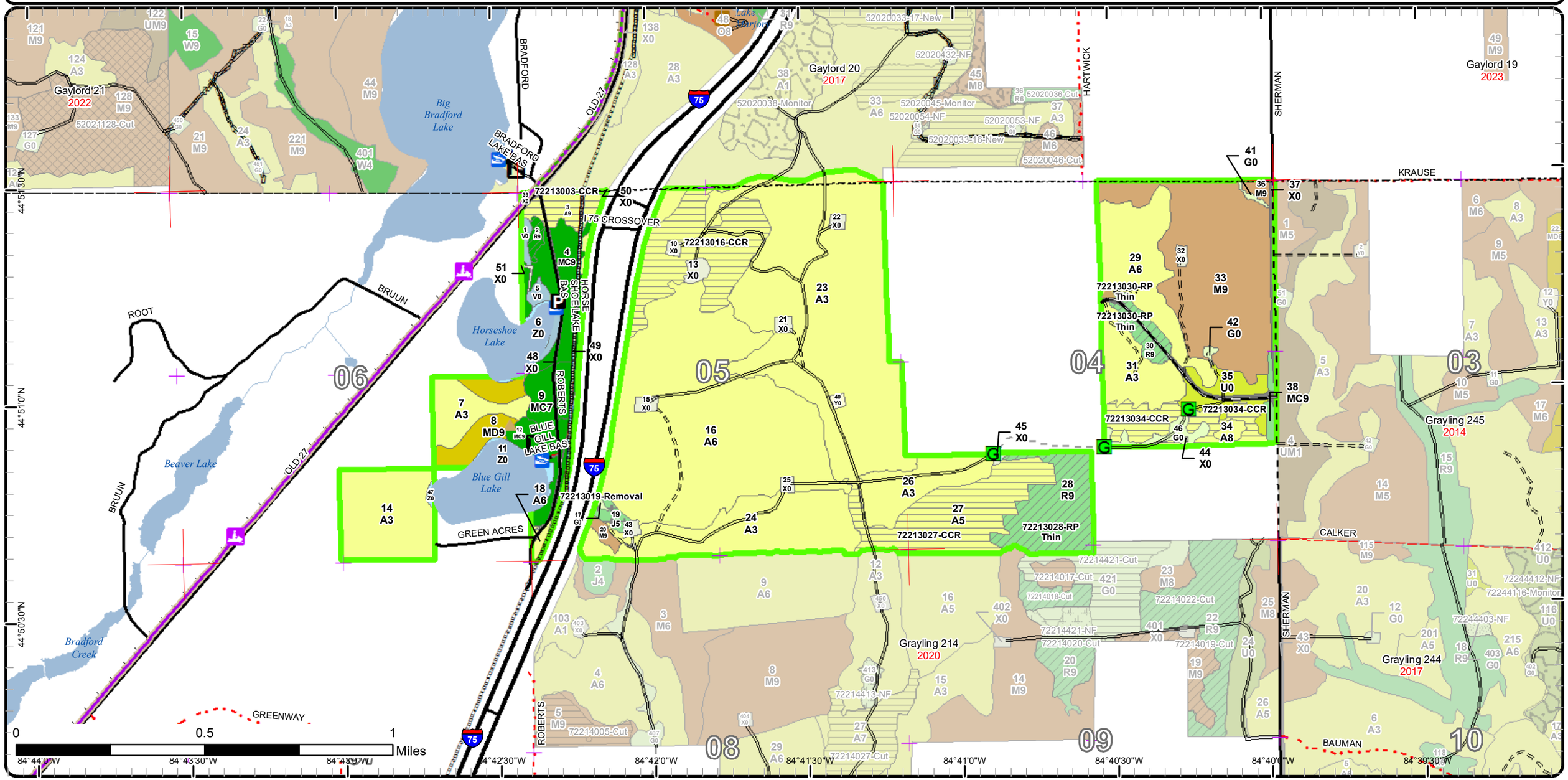
Cover Type & Treatments Map



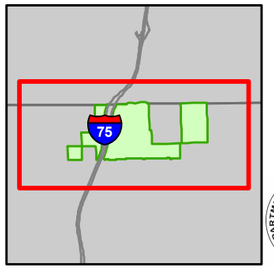
N

Compartment: 213
T28N R03W 04-06
County: Crawford
Unit: Grayling
Mgmt Area: Grayling Ice Contact
YOE: 2022
Acres: 916 GIS Calculated
Examiner: John St. Pierre
Map Revised: 9/1/2020
Map Phase: Review

- Miris Corners
- Remonumented Section Corners
- Counties
- DNR - Primary Forest Road
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State Highway
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Active Railroads
- Snowmobile Trails
- Designated Hiking Trails
- Designated Bicycle Trails
- Designated Snowmobile Trails
- Designated RailTrail
- Toilet
- Berms
- Gate
- Boating Access Site
- Parking Lot
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Pipeline
- Compartment Boundary
- Clearcut (w/Reserves)
- Harvest, Overstory Removal
- Thinning (Crown, Low, Systematic)
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 710 - Sand/Soil
- 790 - Other Bare/Sparsely Vegetated



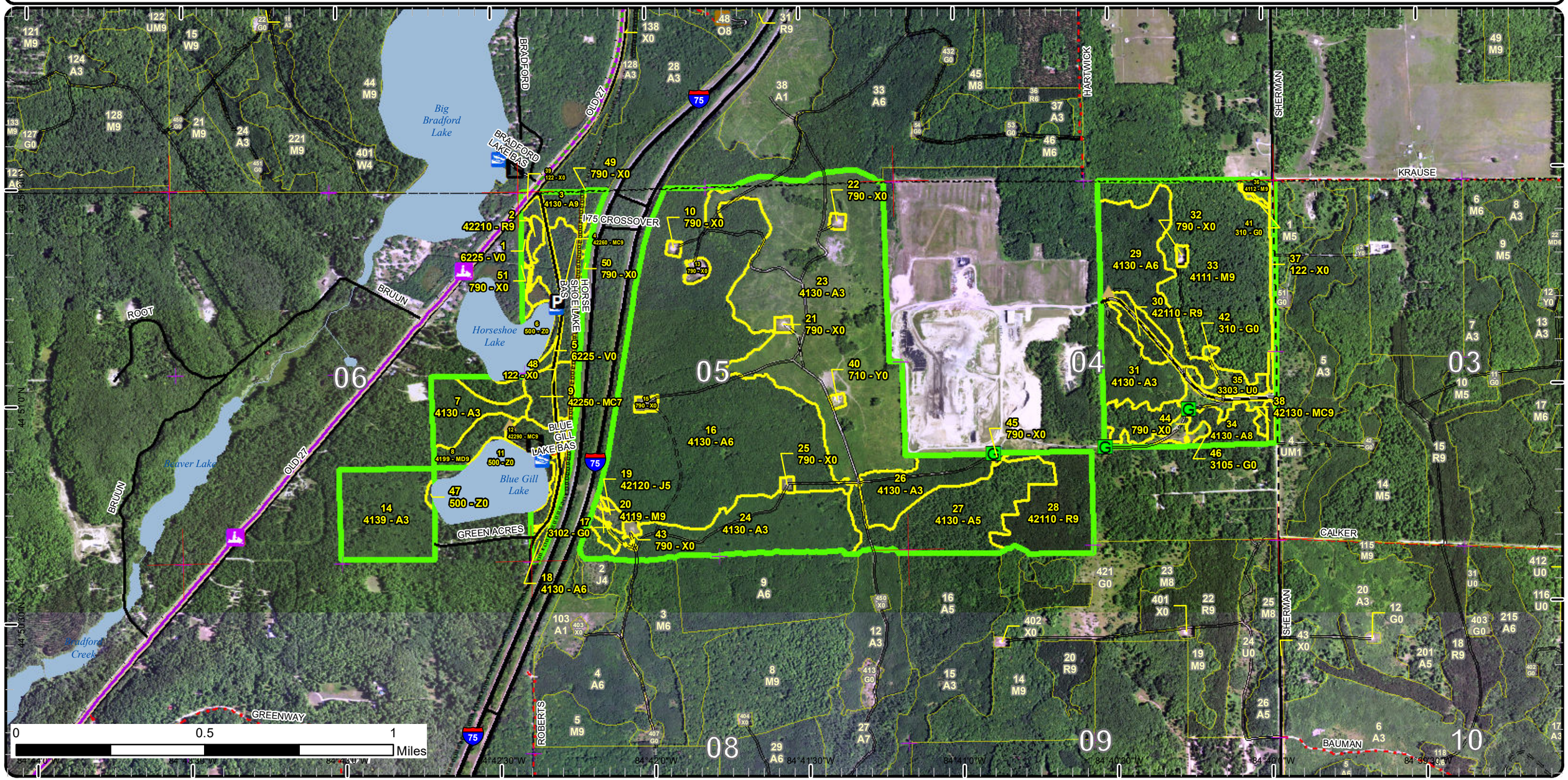
Stand Boundary Map



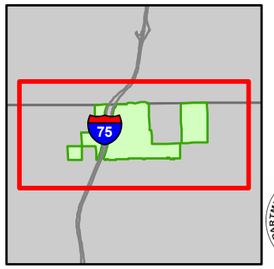
N

Compartment: 213
T28N R03W 04-06
County: Crawford
Unit: Grayling
Mgmt Area: Grayling Ice Contact
YOE: 2022
Acres: 916 GIS Calculated
Examiner: John St. Pierre
Map Revised: 9/1/2020
Map Phase: Review

- Miris Corners
- Remonumented Section Corners
- Counties
- DNR - Primary Forest Road
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State Highway
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Active Railroads
- Snowmobile Trails
- Designated Hiking Trails
- Designated Bicycle Trails
- Designated Snowmobile Trails
- Designated RailTrail
- Toilet
- Berms
- Gate
- Boating Access Site
- Parking Lot
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Pipeline
- Compartment Boundary
- Stand Boundaries
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 710 - Sand/Soil
- 790 - Other Bare/Sparsely Vegetated



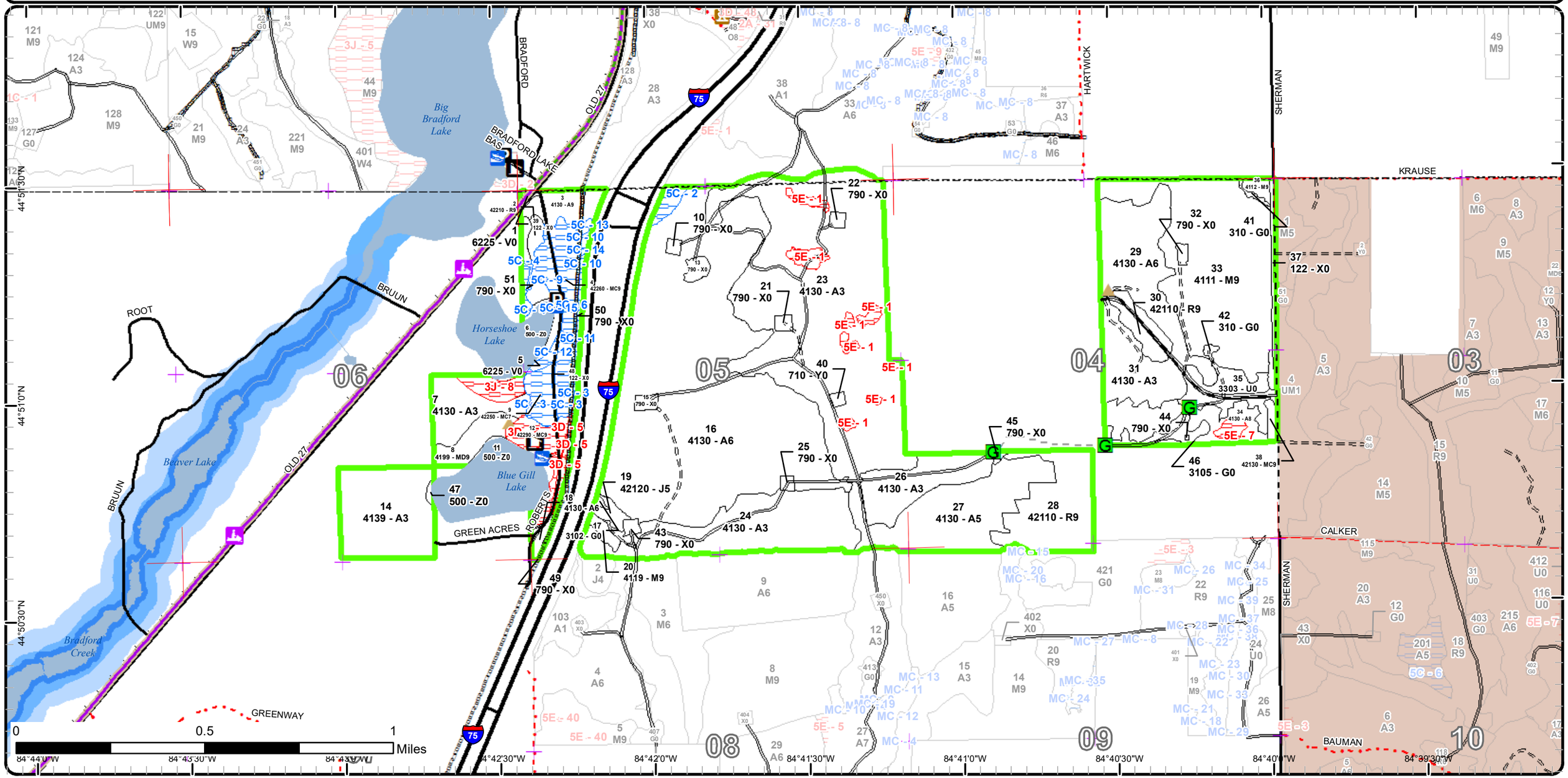
Special Conservation Areas



N

Compartment: 213
T28N R03W 04-06
County: Crawford
Unit: Grayling
Mgmt Area: Grayling Ice Contact
YOE: 2022
Acres: 916 GIS Calculated
Examiner: John St. Pierre
Map Revised: 9/1/2020
Map Phase: Review

- Miris Corners
- Remonumented Section Corners
- Counties
- DNR - Primary Forest Road
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State Highway
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Active Railroads
- Snowmobile Trails
- Designated Hiking Trails
- Designated Bicycle Trails
- Designated Snowmobile Trails
- Designated RailTrail
- Toilet
- Berms
- Gate
- Boating Access Site
- Parking Lot
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Pipeline
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 3D: Recreational / Scenic values
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Research, Development, and Military Lands



Report 1 – Total Acres by Cover Type and Age Class

Grayling Mgt. Unit **Compartment 213 Year of Entry 2022**

John St. Pierre : Examiner

Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	166	0	150	248	0	47	32	0	0	0	0	0	0	0	0	0	0	**643**
Bare/Sparsely Vegetated	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Bog	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Herbaceous Openland	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
Jack Pine	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
Low-Density Trees	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	**15**
Natural Mixed Pines	0	0	0	0	0	0	0	21	23	0	0	0	0	0	0	0	0	0	**44**
Northern Hardwood	0	0	0	0	0	0	0	0	0	90	0	0	0	0	0	0	0	0	**90**
Planted Mixed Pines	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	**2**
Red Pine	0	0	0	0	0	0	40	2	0	0	0	0	0	0	0	0	0	0	**42**
Sand, Soil	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Urban	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
Water	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**19**
Total	**76**	**166**	**0**	**150**	**248**	**0**	**90**	**57**	**38**	**90**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**914**

Report 2 – Treatment Summary

Grayling Mgt. Unit

Year of Entry: 2022

Acres of Harvest

Compartment 213

Total Compartment Acres: 915

Commercial Harvest - 164

Harvests with Site Condition - 0

Next Step Harvest - 0

Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	119	0	0	0	0	0	0	0	0	**119**
Jack Pine	0	0	0	0	0	0	3	0	0	**3**
Red Pine	0	0	0	0	0	42	0	0	0	**42**
Total	**119**	**0**	**0**	**0**	**0**	**42**	**3**	**0**	**0**	**164**

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	164	0	0	0	0	0	0	0	0	**164**
Next Step	0	90	90	0	0	45	212	0	0	**438**
Total	**164**	**90**	**90**	**0**	**0**	**45**	**212**	**0**	**0**	**603**

Proposed Treatments:

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
2	72213002-RP Thin	2.2	42210 - Natural Red Pine	Sawtimber Well	65	171-200	Harvest	Crown Thinning	42210 - Natural Red Pine	Even-Aged	No

Prescription Specs: Crown Thin. Target 120BA
- Maintain the diversity of this natural stand. Do not 'spec out' species for removal. In areas with a broad mixture of species, favor leaving the 'best tree in place'.
- Retain relic xlog/super-canopy red pine
- Focus marking red pine stems with defect
- Some walk-through areas likely

Next Step Treatments:

Acceptable Regen:

Other Comment: Sign and protect Roberts Rd during harvest operations.

Site Condition

Proposed Start Date: 10/1 /2021

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
3	72213003-CCR	9.3	4130 - Aspen	Sawtimber Well	66	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No

Prescription Specs: Clearcut w/Retention.- Capture some healthy canopy oak when establishing one or more small retention areas. Consider visual aesthetics during prep.- Leave red and white pine (per 9/1/10 pre-review management agreement)- Protect white pine and red oak regen in specs - Include drumming log, gas pipeline and powerline/utility specs

Next Step Treatments: Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Any stocking level of aspen with components of red maple, red oak, pine and paper birch.

Other Comment: Sign and protect Roberts Rd during harvest operations.

Site Condition

Proposed Start Date: 10/1 /2021

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
16	72213016-CCR	45.0	4130 - Aspen	Poletimber Well	37	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No

Prescription Specs: Clearcut w/Retention.
- Use stand topography/contour to creatively establish boundary lines near the I-75 corridor. Rx layer lines are meant to provide ~general guidance.
- Capture oak within some island retention
- Leave the incidental conifer component
- Use drumming log and gas well protection specs

Next Step Treatments: Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Any stocking level of aspen with components of red maple, red oak, paper birch, black cherry and pine.

Other Comment: Treatment created to break-up the age class of this large aspen stand.

Site Condition

Proposed Start Date: 10/1 /2021

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
19	72213019-Removal	2.8	42120 - Planted Jack Pine	Poletimber Medium	50	51-80	Harvest	Overstory Removal	42260 - Natural Pine, Mixed Deciduous	Even-Aged	No

Prescription Specs: Overstory Removal.
- Leave incidental white and red pine. To provide a current/future seed source and vertical structure/wildlife cover.
- Protect white pine and oak saplings
- Include gas well protection spec(s)

Next Step Treatments: Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Release of the current sub-canopy white pine saplings mixed with regenerating aspen, red maple, black cherry and jack pine. Any stocking level mixture of the aforementioned species is acceptable.

Other Comment: Package with adjacent red pine thinning sale(s).

Site Condition

Proposed Start Date: 10/1 /2021

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
27	72213027-CCR	45.2	4130 - Aspen	Poletimber Medium	54	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No

Prescription Specs: Clearcut w/Retention.
- Consider placing some island/boundary excluded retention in the extreme west/northwest 'panhandle' area. It holds more white pine than remainder of stand.
- Leave incidental red/white pine, spruce and fir. Residual conifer will provide current/future seed source and vertical structure/wildlife cover.
- Protect hawthorn/juneberrry shrubs and white pine saps
- Include drumming log and well pad protection spec(s)

Next Step Treatments: SitePrep, Roller Chopping; Pesticide, Skidder - Site Prep; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr); Planting, Replant; Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen:
- Any stocking level of aspen with minor components of maple, black cherry, paper birch and conifer species.
- If regen fails (unlikely), Grayling Wildlife Biologist supports planting this site to red pine.

Other Comment: Best access is south off Hartwick Rd, then travels through landfill property. The segment of road on landfill property is gated/usually locked. Contact the landfill manager prior to harvesting operations to facilitate possible access. Other access options are available.

Site Condition

Proposed Start Date: 10/1 /2021

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
28	72213028-RP Thin	32.6	42110 - Planted Red Pine	Sawtimber Well	53	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No

Prescription Specs: Crown Thinning. Target 120BA
- Focus marking red pine stems with defect and some of the larger log sized stems
- Only mark canopy deciduous if it looks like they'll impede equipment mobility
- 'Walk through' areas likely in east/southeast, where RP was outcompeted
- Include gas well protection spec(s)

Next Step Treatments:

Acceptable Regen:

Other Comment: Best access is south off Hartwick Rd, then travels through landfill property. The segment of road on landfill property is gated/usually locked. Contact the landfill manager prior to harvesting operations to facilitate possible access. Other access options are available.

Site Condition

Proposed Start Date: 10/1 /2021

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
30	72213030-RP Thin	7.5	42110 - Planted Red Pine	Sawtimber Well	53	171-200	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No

Prescription Specs: Crown Thinning. Target 120BA- Focus marking red pine stems with defect and some of the larger log sized stems- Only mark canopy deciduous if it looks like they'll impede equipment mobility- 'Walk through' areas likely in south polygon, where RP was outcompeted

Next Step Treatments:

Acceptable Regen:

Other Comment: Hartwick Rd is busy with truck traffic going to/from the Otsego-Crawford Co. landfill. Notify the landfill manager prior to the start of harvesting operations and post Hartwick Rd with caution signs.

Site Condition

Proposed Start Date: 10/1 /2021

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
34	72213034-CCR	19.7	4130 - Aspen	Sawtimber Medium	69	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No

Prescription Specs: Clearcut w/Retention.
- A retention island has already been delineated around advanced sugar maple regen found in the east polygon. Establish this island during prep.
- Leave incidental conifer (except any scotch pine) and oak
- Protect hawthorn/juneberry shrubs and white pine saps
- Protect the water testing well head located along the secondary forest road (see OFS points)
- Use drumming log and gas well/pipeline protection specs

Next Step Treatments: Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Any stocking level of aspen with components of red/sugar maple, black cherry, oak and pine.

Other Comment: Hartwick Rd is busy with truck traffic going to/from the Otsego-Crawford Co. landfill. Notify the landfill manager prior to the start of harvesting operations and post Hartwick Rd with caution signs.

Site Condition

Proposed Start Date: 10/1 /2021

Total Treatment Acreage Proposed: 164.3

Report 4 – Site Conditions

Grayling Mgt. Unit

John St. Pierre : Examiner

Compartment: 213

Year of Entry: 2022

Availability for Management

Total Acres	Acres Available	*Acres Avail With Condition*	Acres Not Available		Dominant Site Conditions *5C*	3D	3J	5E
643	629	***4***	11	**Aspen**	***4***			11
17	17	***0***	0	**Bare/Sparsely Vegetated**				
5	5	***0***	0	**Bog**				
7	7	***0***	0	**Herbaceous Openland**				
3	3	***0***	0	**Jack Pine**				
12	12	***0***	0	**Low-Density Trees**				
15	9	***0***	6	**Mixed Upland Deciduous**			6	
44	0	***31***	12	**Natural Mixed Pines**	***31***	12	0	
90	90	***0***	0	**Northern Hardwood**				
2	2	***0***	0	**Planted Mixed Pines**				
42	42	***0***	0	**Red Pine**				
1	1	***0***	0	**Sand, Soil**				
15	15	***0***	0	**Urban**				
19	19	***0***	0	**Water**			0	
915	852	***35***	28	Total Forested Acres	***35***	12	6	11
	93%	***4%***	3%	Relative Percent				

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

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	**Unavailable**	**5E: Long-Term Retention**	8	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
2	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	3	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Consider harvesting this small portion of Stand 16 (Gray C213) with Stand 33 (GLYD C020) in future. Or leave for visual along I-75. Currently excluded from the proposed harvest occurring within Stand 16, to serve as topography following visual alleviation along the I-75 corridor.						

3	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	11	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Harvested mid-00's, left white pine and oak. Age of understocked canopy residuals from harvest are tripping the 'meets criteria' button. Regenerating nicely, continue to delay/hold.

4	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	2	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Site condition encompasses Stand 4. A public boat launch/day use area providing access to Horeseshoe Lake is located in the stand. Legacy white pine and relic red pine are present, most to east of Horseshoe Lake. Good mix of healthy canopy species, areas of desirable regen present too. See stand comments/draft treatment notes for possible management ideas. guidance/ideas.

5	**Unavailable**	**3D: Recreational / Scenic values**	12	5B: Maintain for regeneration purposes	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified

Comments:

This site condition encompasses Stand 12. Within the stand is Blue Gill Lake boat launch/day use area. The stand offers a diverse mix of canopy and sub-canopy species, some being difficult to regenerate (hemlock, natural red pine, red oak, etc). Recommend that management be limited to actions such as hazard tree removal, improvements related to the day use area, etc..

6	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	11	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Site condition encompasses Stand 4. A public boat launch/day use area providing access to Horeseshoe Lake is located in the stand. Legacy white pine and relic red pine are present, most to east of Horseshoe Lake. Good mix of healthy canopy species, areas of desirable regen present too. See stand comments/draft treatment notes for possible management ideas. guidance/ideas.

7	**Unavailable**	**5E: Long-Term Retention**	2	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Pre-designated island LTR for the timber sale occurring within this stand. Captures an area of advanced sub-canopy hard maple regeneration. Many stems 10-20ft or greater (some less than 10ft).

8	**Unavailable**	**3J: Water quality / BMPs (stream, river, or lake)**	6	3D: Recreational / Scenic values	5B: Maintain for regeneration purposes	Unspecified	Unspecified

Comments:

Some fisheries guidance/influence with respect to maintaining shoreline conditions along both lakes. A visible area that's highly recreated by surrounding private and public. Both polygons featured favorable regeneration and a desirable mixture of canopy/sub-canopy species. See stand and draft comments for additional info.

9	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	5	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Site condition encompasses Stand 4. A public boat launch/day use area providing access to Horeseshoe Lake is located in the stand. Legacy white pine and relic red pine are present, most to east of Horseshoe Lake. Good mix of healthy canopy species, areas of desirable regen present too. See stand comments/draft treatment notes for possible management ideas. guidance/ideas.

10	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	1	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Small segregated polygons belonging to Stand 3. Include these with any future management that occurs/may occur within Stand 4.

11	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	2	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Site condition encompasses Stand 4. A public boat launch/day use area providing access to Horeseshoe Lake is located in the stand. Legacy white pine and relic red pine are present, most to east of Horseshoe Lake. Good mix of healthy canopy species, areas of desirable regen present too. See stand comments/draft treatment notes for possible management ideas. guidance/ideas.

12	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	1	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Site condition encompasses Stand 4. A public boat launch/day use area providing access to Horeseshoe Lake is located in the stand. Legacy white pine and relic red pine are present, most to east of Horseshoe Lake. Good mix of healthy canopy species, areas of desirable regen present too. See stand comments/draft treatment notes for possible management ideas. guidance/ideas.

13	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	1	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Site condition encompasses Stand 4. A public boat launch/day use area providing access to Horeseshoe Lake is located in the stand. Legacy white pine and relic red pine are present, most to east of Horseshoe Lake. Good mix of healthy canopy species, areas of desirable regen present too. See stand comments/draft treatment notes for possible management ideas. guidance/ideas.

14	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	0	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Site condition encompasses Stand 4. A public boat launch/day use area providing access to Horeseshoe Lake is located in the stand. Legacy white pine and relic red pine are present, most to east of Horseshoe Lake. Good mix of healthy canopy species, areas of desirable regen present too. See stand comments/draft treatment notes for possible management ideas. guidance/ideas.

15	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	0	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Site condition encompasses Stand 4. A public boat launch/day use area providing access to Horeseshoe Lake is located in the stand. Legacy white pine and relic red pine are present, most to east of Horseshoe Lake. Good mix of healthy canopy species, areas of desirable regen present too. See stand comments/draft treatment notes for possible management ideas. guidance/ideas.

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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres

Comments

Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.

Stand 1

6225 - Bog | Nonstocked | 1.7 Acres | Unspecified | No

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low		Sapling

Some scattered white pine, mainly in south. Leatherleaf is abundant with thick tag alder populating the perimeter.

Stand 2

42210 - Natural Red Pine | Sawtimber Well | 2.2 Acres | 65 Stand Age | 171-200 BA Range | N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Pole/Log	8	
Quaking Aspen	2	Pole/Log	9	
Red Oak	2	Log/Pole	12	
White Pine	2	Log/Pole	12	
Red Pine	74	Log/Pole/XLog	14	65
Bigtooth Aspen	15	Log/Pole	11	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Medium	Variable	Sapling
Red Oak	Medium	Variable	Sapling
Red Maple	Medium	>20 feet	Sapling
Beech	Low	5 - 10 feet	Sapling
Serviceberry (Juneberry)	Low	5 - 10 feet	Tall Shrub
Witch Hazel	Low	5 - 10 feet	Tall Shrub

Small natural red pine stand, RP is fairly good quality, variable diameters. Northern half had a lower stocking of RP and a greater mix of deciduous. Entire east boundary features a broad mixture of species (mixing w/Stands 3/4). Stocking of nearly pure RP in south half and west boundary near bog. Older relic xlog RP scattered throughout. BTA common until core RP areas, RM sap/pole stump sprouts present (from a likely past decid removal), single stem logs too. Some WP near bog and other locations, trace PB.

Stand 3

4130 - Aspen | Sawtimber Well | 10.2 Acres | 66 Stand Age | 81-110 BA Range | N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	6	Pole/Log	9	
Bigtooth Aspen	62	Log/Pole	11	66
White Pine	8	Log/Pole	11	
Red Pine	8	Log/XLog/Pole	14	
Quaking Aspen	8	Log/Pole	10	
Red Oak	6	Log/Pole	11	
Paper Birch	2	Pole	9	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Medium	10 - 20 feet	Sapling
Witch Hazel	Medium	5 - 10 feet	Tall Shrub
Black Cherry	Low	5 - 10 feet	Sapling
Serviceberry (Juneberry)	Low	5 - 10 feet	Tall Shrub
Red Maple	Medium	Variable	Sapling
Red Oak	Medium	10 - 20 feet	Sapling

Variable aspen stem sizes throughout. Poles mixed w/log and vice versa. Enough logs across all species to call that size dominant yet not fully stocked with sawtimber. Consistent canopy WP/RP component, generally picked up 10BA of one or the other during plot swings (2-swings had 10BA of both). Most WP hovering near larger pole or small log sizes. RP generally larger, some xlogs. Scattered PB in canopy. Somewhat consistent sub-can mix of WP, RO and RM.

Stand 4

42260 - Natural Pine, Mixed Deciduous | Sawtimber Well | 20.7 Acres | 67 Stand Age | 111-140 BA Range | N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	16	Pole/Log	8	
Red Oak	6	Log/XLog/Pole	15	
Paper Birch	5	Pole/Log	9	
Quaking Aspen	3	Log/Pole	12	
White Pine	40	Log/Pole/XLog	15	67
Red Pine	20	Log/XLog/Pole	14	
Bigtooth Aspen	10	Log/Pole	11	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	Variable	Sapling
White Pine	Medium	10 - 20 feet	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Red Oak	Medium	Variable	Sapling
Beech	Low	Variable	Sapling
Red Pine	Trace	10 - 20 feet	Sapling
White Pine	Low	< 5 feet	Seeding
Serviceberry (Juneberry)	Medium	5 - 10 feet	Tall Shrub
Hazelnut (Beaked)	Low	< 5 feet	Tall Shrub

Mixed pine w/areas stronger to deciduous. WP prevalent but more presence in southern areas, radiating out from Horseshoe Lake. Quite a few legacy WP east of lake (some +30"). RP generally scattered but present in a few prominent clumps in center and north. Aspen healthy, ranged larger pole to smaller log sizes, more common in north. RM common, PB present and scattered RO (usually L/XL). Areas of good sub-can WP regen, RO too. Other areas heavier to RM. Numerous utility corridors present and some variation in stocking/BA density. Areas had signs of a past deciduous removal.

Stand 5

6225 - Bog | Nonstocked | 3.6 Acres | Unspecified | No

Bog that may be a part of the lake during times of high water. White pine, larch and some spruce present within stand area. Some wildlife use throughout. Leatherleaf present in relatively high/uniform coverage. Tag alder on perimeter.

Stand 6

500 - Water | Nonstocked | 7.4 Acres | Unspecified | No

Southern and eastern areas of Horseshoe Lake. Includes shoreline areas populated with lowland shrubs and some tree species.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
7	4130 - Aspen	Sapling Well	15.4	26	1-50	N/A	Sale closed '93 (Between the Lakes), regenerating well. Left some RO, WP and RP. Red oak poles - xlog are scattered, (MiFI wouldn't allow RO poles to be represented in canopy), regenerating single stem RO saps not uncommon too. Residual heavier in a few areas (mainly in west), hasn't affected success of regen. Some sub-can 'from a seed source' WP hanging out at 5-10ft. In areas, aspen and some of the other deciduous in midst of conversion to reliable pole sizes. Most other areas still larger sap sized (3-4+"). Conversion to A6 likely by '30/'32.

Canopy Species	% Cover	Size Class	DBH	Age
Red Oak	6	Sapling	3	
Paper Birch	4	Sapling/Pole	3	
Quaking Aspen	16	Sapling/Pole	4	26
White Pine	4	Log	14	78
Red Maple	10	Sapling/Pole	3	
Black Cherry	4	Sapling	3	
Red Oak	4	Log/XLog	17	
Red Pine	2	Log	15	
Bigtooth Aspen	50	Sapling/Pole	4	26

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Medium	5 - 10 feet	Sapling
Red Maple	Medium	5 - 10 feet	Sapling
Beech	Low	10 - 20 feet	Sapling
Witch Hazel	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
8	4199 - Other Mixed Upland Deciduous	Sawtimber Well	14.7	78	81-110	N/A	Stand is result of leaving a ~250ft visual along lakes during '93 cut. South polygon had less canopy closure than majority of north poly (50-75 vs 75-100). BA swings ended up being quite similar between the two (south: 120,60,50 north: 140,20,80). Low end of 75-100 canopy closure was common. Canopy RO ranged from pole to legacy (some quite likely older than 78yrs). Both ends had medium to high RO regen (seedling to 20ft+). Decent WP regen too. Most stems looked quite healthy yet some decline across aspen stems.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	20	Log/Pole	11	
Red Oak	30	Log/Pole	12	78
Paper Birch	5	Pole/Sapling	7	
Quaking Aspen	2	Log	13	
White Pine	16	Log/Pole	14	78
Bigtooth Aspen	24	Log/Pole	15	
Red Pine	2	Log	16	
Beech	1	Log	11	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Medium	10 - 20 feet	Sapling
Serviceberry (Juneberry)	Medium	5 - 10 feet	Sapling
Red Oak	High	Variable	Sapling
Red Pine	Low	Variable	Sapling
Red Maple	Low	Variable	Sapling
Bigtooth Aspen	Low	>20 feet	Sapling
Ironwood	Low	< 5 feet	Seeding
Striped Maple	Low	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
9	42250 - Pine, Oak	Sawtimber Poor	10.7	78	1-50	N/A	Cut mid-00's, left WP and RO. Residuals acting as a good seed source (saw reliable WP seeds/saps and some RO regen at variable heights), vertical structure and visual for this higher use area. Most aspen regen ranged +-2-3". Other deciduous present was slightly smaller (DBH) on average. Regen looks like it's doing just fine. Didn't observe decline in any of the residual RO or WP, looked quite healthy. My BA swings ranged 0-60, saplings are the dominant canopy in areas.

Canopy Species	% Cover	Size Class	DBH	Age
Red Oak	40	Log/Pole/XLog	12	
White Pine	60	Log/Pole/XLog	14	78

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Medium	Variable	Sapling
White Pine	Medium	< 5 feet	Seeding
Red Pine	Trace	5 - 10 feet	Sapling
Hazelnut (Beaked)	Medium	< 5 feet	Tall Shrub
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Bigtooth Aspen	Full	>20 feet	Sapling
Quaking Aspen	High	>20 feet	Sapling
Red Maple	Medium	10 - 20 feet	Sapling
Red Oak	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
10	790 - Other Bare/Sparsely Vegetated	Nonstocked	0.9		Unspecified		Gas well, Riverside Energy, STATE MAPLE FOREST #A2-5.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
11	500 - Water	Nonstocked	10.6		Unspecified	No	Northeast portion of blue gill lake. Day use park/boat launch area located within Stand 12. Stand includes some intermittent wet/dry shoreline areas populated with lowland shrub species as well as a few tree species (saw some paper birch).

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
12	42290 - Natural Mixed Pine	Sawtimber Well	12.3	78	111-140	N/A	Nice mix of WP/RP w/components of deciduous (RO, aspen, RM). Extreme south holds a nice pocket of canopy hemlock w/good hemlock regen too. Density and sizes vary upon location. The various corridors (Blue Gill Lake, Roberts Rd, powerline, gas line, and I-75) that dissect this stand are all playing a role in the variations. The higher end of 111-140BA range is a good fit (BA's=230,180,90,110,90,160. 143BA avg). Xlog examples of WP, RP, RO and hemlock generally common (saw legacy WP/RO). Good WP, RP, RO numbers in sub-canopy. Overall health looked pretty good.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Pole/Log	9	
Quaking Aspen	2	Pole/Log	8	
White Pine	40	Log/Pole/XLog	12	78
Red Pine	36	Log/Pole/XLog	14	64
Hemlock	3	Log/XLog/Pole	17	
Paper Birch	2	Log/Pole	10	
Bigtooth Aspen	7	Log/Pole	14	
Red Oak	5	Log/Pole/XLog	12	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	High	Variable	Sapling
Hazelnut (Beaked)	Low	< 5 feet	Tall Shrub
Honeysuckle (spp.)	Trace	5 - 10 feet	Tall Shrub
Ironwood	Low	Variable	Sapling
Red Oak	Medium	Variable	Sapling
Black Cherry	Low	5 - 10 feet	Sapling
Red Maple	Low	Variable	Sapling
Red Pine	Medium	Variable	Sapling
Paper Birch	Medium	Variable	Sapling
Hemlock	Low	Variable	Sapling
Beech	Low	5 - 10 feet	Sapling
Balsam Fir	Trace	< 5 feet	Seeding
White Pine	Medium	< 5 feet	Seeding

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
13	790 - Other Bare/Sparsely Vegetated	Nonstocked	2.2		Unspecified	No	Gas well plugged 1977. No lease obligations. Larger opening (no gas wells present) with some vegetation creeping in around edges. Deep snow when visited. Site likely held oil/gas surface equipment in the past.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
14	4139 - Aspen, Mixed Deciduous	Sapling Well	37.9	22	1-50	N/A	Harvested '98 (Isolated Aspen) out of YOE. Left pine, oak and a few RM. Aspen/some other deciduous regen doing well, most stems 3-4". Areas of heavier residual, almost always WP (some Legacy). Not many RO residuals. WP saps more numerous where seed source is present. Left a1/2-1chain buffer along Blue Gill Lake. Buffer greater in northeast near PVT (heavy WP component). Some PVT 'influence' from sub-division to east. There's a yellow painted, flagging marked walking path that begins where Greenacres Dr. dead ends. Travels west through center of stand.

Canopy Species	% Cover	Size Class	DBH	Age
Red Oak	6	Sapling/Pole/Log	4	
Quaking Aspen	14	Sapling/Pole	3	22
White Pine	12	Log/XLog/Pole	14	
Red Pine	3	Log/Pole/XLog	14	68
Jack Pine	2	Pole/Log	8	
Balsam Fir	1	Pole/Log	9	
Hemlock	1	Log/Pole	12	
Red Maple	10	Sapling/Pole/Log	3	
Black Cherry	8	Sapling	2	
Paper Birch	3	Sapling/Pole	3	
Bigtooth Aspen	40	Sapling/Pole	4	22

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Medium	Variable	Sapling
Beech	Low	5 - 10 feet	Sapling
Ironwood	Low	5 - 10 feet	Sapling
Red Pine	Trace	10 - 20 feet	Sapling
Serviceberry (Juneberry)	Medium	>20 feet	Sapling
Witch Hazel	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
15	790 - Other Bare/Sparsely Vegetated	Nonstocked	1.5		Unspecified		Gas well, Riverside Energy, STATE MAPLE FOREST #C2-5.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
16	4130 - Aspen	Poletimber Well	210.3	37	51-80	N/A	SEE DRAFT NOTES regarding '32YOE management strategy for this stand. Discussed during pre-review on 6/18/20. HISTORY: ~North of Stand 15 (X0) had an aspen removal in '72 (~68ac). In '73 the residual was clearcut (except some pine, cut stems left as food/habitat). ~South of Stand 15 was clearcut (~109ac) in '82. There was a younger horseshoe shaped area of A3 that was left in the center of the '82 cut. Found numerous TCR's from the 60's-70's for small/some larger sales, appears some were cut/some weren't. VARIABLE stem ages. Southern 1/4-1/3 tended to hold the smaller DBH/less merch aspen (S/P, P/S). Still held pockets of merch. Average DBH (and merchantability) tended to increase (or hold steady) throughout remainder of stand. Some aspen stems converted to small log sizes. BTA dominant, QA a common companion. NE holds a small area stronger to NHWD species. WP component heaviest/radiates out from/around gas well Stand 15 (legacy WP observed). More WP saps present there. WP much less prevalent/more scattered outside that area. A second age class of L/XL (older) multi/single stem RO present yet very limited (most in what I believe was the A3 horseshoe area in middle of '82 cut). Most WP was older too (65+yrs). Residual WP/RO from previous cuts did not impede regen...

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	8	Pole/Sapling	7	
Red Oak	8	Pole/Log/XLog	9	
Quaking Aspen	12	Pole/Sap/Log	7	47
White Pine	6	Log/Pole/XLog	13	65
Red Pine	2	Log/Pole	11	
Bigtooth Aspen	60	Pole/Sap/Log	7	37
Paper Birch	3	Pole/Sapling	6	
Beech	1	Log/Pole	11	

Sub-Canopy Species	Density	Avg. Height	Size
Red Oak	Low	>20 feet	Sapling
White Pine	Low	Variable	Sapling
Red Maple	High	>20 feet	Sapling
Beech	Low	5 - 10 feet	Sapling
Sugar Maple	Low	>20 feet	Sapling
Black Cherry	Low	Variable	Sapling
Serviceberry (Juneberry)	Low	10 - 20 feet	Sapling
Beech	Low	< 5 feet	Seeding
Red Oak	Low	< 5 feet	Seeding
Witch Hazel	High	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
17	3102 - Grass	Nonstocked	0.4		Unspecified	No	Small grassy opening in low spot near I-75. Sapling WP/JP on perimeter, some canopy sized stems too.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
18	4130 - Aspen	Poletimber Well	1.6	58	51-80	N/A	Influence of I-75 corridor, underground gas pipeline corridor, powerline corridor and Roberts Rd has created some differing ages and size structure(s). My eyes saw a 50/50 mix of poles and logs. BA's (and DBH's) higher within the narrrow I-75 ROW strip which is excluded (and now deleted) from this stand by the I-75 ROW fence. Remainder of stand was running ~50-80BA. Some decent hemlock and red oak regen, some large canopy hemlock as well.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	10	Log/Pole	11	
Quaking Aspen	5	Pole/Log	9	
White Pine	6	Log/Pole	11	65
Hemlock	6	Log/Pole/XLog	14	
Bigtooth Aspen	65	Log/Pole	11	58
Beech	2	Log	11	
Red Oak	4	Pole/Sap/Log	7	
Paper Birch	2	Pole	8	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	Variable	Sapling
White Pine	Medium	Variable	Sapling
Witch Hazel	Medium	5 - 10 feet	Tall Shrub
Bigtooth Aspen	Low	Variable	Sapling
Hemlock	Medium	10 - 20 feet	Sapling
Sugar Maple	Low	10 - 20 feet	Sapling
Ironwood	Low	Variable	Sapling
Red Oak	Medium	>20 feet	Sapling
Balsam Fir	Low	Variable	Sapling
Red Maple	Low	10 - 20 feet	Sapling
Hazelnut (Beaked)	Low	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
19	42120 - Planted Jack Pine	Poletimber Medium	2.8	50	51-80	N/A	Apparently planted. Quite a few JP standing dead or 'snapped' in many areas, especially in center of stand. This causing variable canopy closure, ranges on either side of 50-75 for most part. Living JP DBH's still running quite small, limited merch. Good WP regen, 5-10ft in N1/2 and 10-20ft in S1/2. Variety of other tree and shrub species in sub-canopy too. Extreme NW was split/merged into Stand 16. It held/holds a small slug of natural WP w/scat RM, RO, some BTA and RP (large charred stumps in this slug too).

Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	3	Log	12	
Jack Pine	85	Pole	7	50
Quaking Aspen	3	Pole	8	
Red Pine	2	Log/Pole	14	
White Pine	5	Log/Pole	12	
Red Oak	1	Log	13	
Red Maple	1	Pole/Log	9	

Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	Low	Variable	Sapling
Jack Pine	Low	5 - 10 feet	Sapling
White Pine	High	5 - 10 feet	Sapling
Ironwood	Medium	Variable	Sapling
Sugar Maple	Low	Variable	Sapling
Red Maple	Medium	Variable	Sapling
Beech	Low	Variable	Sapling
Balsam Fir	Low	10 - 20 feet	Sapling
Red Oak	Low	Variable	Sapling
Quaking Aspen	Low	10 - 20 feet	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Honeysuckle (spp.)	Trace	< 5 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
20	4119 - Mixed Northern Hardwoods	Sawtimber Well	2.2	80	81-110	N/A	Stand resides on steeper north facing slope, was excluded when Stand 24 was cut. Some aspen/mixed NHWD saps mixing in on south and west boundary. Far west not as steep, Stand 24 harvest extended into this area a little bit (2-aged there). Residual RM, WP, some BTA in west. Canopy WP somewhat lines the northern/western boundary.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	10	Log/Pole	11	
Red Maple	50	Log/Pole	11	80
Beech	10	Log/Pole	12	
Red Oak	2	XLog/Log	19	
Bigtooth Aspen	15	Log	15	
Ironwood	3	Pole/Sapling	7	
White Pine	4	Log/Pole	14	
Paper Birch	5	Pole/Log	9	
Jack Pine	1	Pole	7	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	High	5 - 10 feet	Sapling
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Sugar Maple	Low	>20 feet	Sapling
Bigtooth Aspen	Low	>20 feet	Sapling
Red Maple	Low	>20 feet	Sapling
White Pine	Low	Variable	Sapling
Balsam Fir	Trace	Variable	Sapling
Paper Birch	Trace	>20 feet	Sapling
Ironwood	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
21	790 - Other Bare/Sparsely Vegetated	Nonstocked	1.2		Unspecified		Gas well, Riverside Energy, STATE MAPLE FOREST #B3-5.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
22	790 - Other Bare/Sparsely Vegetated	Nonstocked	1.1		Unspecified		Gas well, Riverside Energy, STATE MAPLE FOREST #A4-5.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
23	4130 - Aspen	Sapling Well	165.5	6	Immature	N/A	Barnes: Stand was harvested in winter of 2014/15 under 72-005-12-01 Dumpy Aspen. Site has regenerated nicely.JSP in '20: Concur w/Tom's regen comment. Did not see all of the stand. Some lighter stocked/patchy areas. Some areas heavier to beech seed and sap sized regen. A few scattered/non-merch 'skip/uncut' trees. Usually WP, believe a few hemlock and a handful of deciduous (RM). Feel comfortable saying this stand passes its regen check.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Sapling	1	
Red Oak	4	Sapling	1	
Bigtooth Aspen	45	Sapling	1	6
Black Cherry	4	Sapling	1	
Paper Birch	3	Sapling	1	
Beech	7	Sapling	1	
Quaking Aspen	22	Sapling	1	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Medium	< 5 feet	Seeding
Blackberry/Raspberry	Medium	< 5 feet	Tall Shrub
Witch Hazel	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
24	4130 - Aspen	Sapling Well	52.3	20	Immature	N/A	Majority of interior aspen stems running 2-3", stems on an edge not much larger. RM/BC 1-2". Very minimal number of residuals left (log WP/RO) until you reach the far western area near I-75. More residual RM, JP, WP, BTA, and other species near 75, hasn't affected sapling success there. Small inclusion of grassy opening w/saplings in west too. Noticeable lack of drumming logs/horizontal structure (not sure drum logs were standard Rx spec when cut). Did watch a grouse pop-out from under a log RO that had blown down.

Canopy Species	% Cover	Size Class	DBH	Age
Black Cherry	4	Sapling	2	
Red Maple	10	Sapling	2	
Red Oak	2	Sapling	2	
Quaking Aspen	20	Sapling	3	20
White Pine	3	Log/Pole	14	
Red Oak	2	Log/XLog	17	
Hemlock	1	Pole	8	
Red Maple	2	Log	11	
Jack Pine	1	Pole/Log	8	
Bigtooth Aspen	55	Sapling	3	20

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	5 - 10 feet	Sapling
Serviceberry (Juneberry)	Low	10 - 20 feet	Sapling
Witch Hazel	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
25	790 - Other Bare/Sparsely Vegetated	Nonstocked	0.9		Unspecified		Gas well, Riverside Energy, STATE MAPLE FOREST #D3-5.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
26	4130 - Aspen	Sapling Well	22.6	28	1-50	N/A	Sale closed '92 (Landfill Aspen). Majority of interior aspen stems are just shy of 5", some interior stems did measure 5-6". Corridor along E/W forest rd and landfill fence line holds pockets that have converted to reliable pole sizes. BTA dominant, QA clones present too (mainly in south). A few residual WP left during harvest. Expect aspen to convert to a more uniform pole stand by '30 inventory season.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	12	Sapling	3	
Bigtooth Aspen	65	Sapling/Pole	4	28
White Pine	2	Log/XLog	14	
Black Cherry	6	Sapling	3	
Quaking Aspen	15	Sapling/Pole	4	28

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	Medium	< 5 feet	Seeding
White Pine	Trace	5 - 10 feet	Sapling
Red Maple	Medium	5 - 10 feet	Sapling
Beech	Trace	5 - 10 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
27	4130 - Aspen	Poletimber Medium	45.2	54	51-80	N/A	Generally lower stocked (40BA avg)/poor quality QA stand. Some areas w/more log sizes. Canopy open enough to allow a medium to high QA sap layer. Southern areas of stand offer a can-closure closer to 75-100%. Stand has appearance of suffering from some kind of event? Perhaps burned over extra hard (large/charred stumps prevelant) or grazed in the past. QA appears offsite, almost all poor quality w/defect and small DBH given age. Quite a few QA stems hovering just short of 10". Scattered L/XL WP present, most as singles, some rarely in clumps of two. Saw 2-RP (log/xlog), 1-BF (log), 1-WS (log).

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	81	Pole/Log	9	54
White Pine	5	Log/XLog/Pole	14	
Bigtooth Aspen	10	Log/Pole	12	
Red Maple	1	Log	12	
Paper Birch	1	Pole	7	
Jack Pine	1	Pole/Log	9	
Sugar Maple	1	Log	11	

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	Variable	Sapling
Red Maple	Medium	Variable	Sapling
Quaking Aspen	High	10 - 20 feet	Sapling
Bigtooth Aspen	Low	10 - 20 feet	Sapling
Black Cherry	High	Variable	Sapling
Balsam Fir	Trace	10 - 20 feet	Sapling
Black/Red (Hybrid) Oak	Trace	10 - 20 feet	Sapling
Hawthorn (spp.)	Low	Variable	Tall Shrub
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Serviceberry (Juneberry)	Medium	>20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
28	42110 - Planted Red Pine	Sawtimber Well	32.6	53	141-170	N/A	Planted in '69, row thin completed '04 (Refuse Red Pine). Overall decent/better quality self-pruned RP. Usual defect present (doubles, forks, crook, sweep, and likely porky/weevil damage from the past) but not excessive. Sap layer is quite excessive in areas (SW, SE, North) then null in spots (center and western locals). A somewhat failed area in the SE, has a mix of canopy RP, QA and RM (RP BA's ran ~70sqft there). Area just south of center was a bit 'stubby', likely result of past porky/weevil. Average BA of 170 for all species (9-swings,110 low/250 high), just below 'meets criteria'. Most commonly swung 150-170BA (+-) for RP stems.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	92	Log/Pole	11	53
Quaking Aspen	4	Log/Pole	11	
Red Maple	3	Log/Pole	11	
Bigtooth Aspen	1	Log	16	

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	Low	5 - 10 feet	Sapling
Beech	Medium	10 - 20 feet	Sapling
Red Maple	High	Variable	Sapling
Quaking Aspen	Low	10 - 20 feet	Sapling
Ironwood	Low	Variable	Sapling
Black/Red (Hybrid) Oak	Low	5 - 10 feet	Sapling
Black Cherry	Medium	Variable	Sapling
White Oak	Trace	5 - 10 feet	Sapling
Hazelnut (Beaked)	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
29	4130 - Aspen	Poletimber Well	38.1	36	81-110	N/A	Sale closed '84 (Block 248 cut). Impressive growth given age. Consistent pole sized aspen w/some stems converted to small log. Extreme SE area appears to of been left uncut (larger DBH's). West 1/2 w/seemingly more QA, east w/more BTA. VERY ENCOURAGING amount of HM regen, both off the stump 20ft+ and another layer 5-10ft of single stems perhaps from soil seed bank. Variety of other desirable (non-aspen) regen present too. Minimal IW/BE regen. Trace canopy BE/RO. Extreme south holds small pine component.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	7	Pole/Sap/Log	6	
Red Maple	6	Pole/Sap/Log	7	
Paper Birch	3	Pole/Log/Sap	7	
Bigtooth Aspen	50	Pole/Sap/Log	8	36
Black Cherry	4	Sapling/Pole	3	
Quaking Aspen	25	Pole/Sap/Log	7	
White Pine	3	Log/Pole	13	
Red Pine	2	Log	16	

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	High	>20 feet	Sapling
Ironwood	Medium	Variable	Sapling
Beech	Low	5 - 10 feet	Sapling
Red Maple	Medium	>20 feet	Sapling
Serviceberry (Juneberry)	Trace	>20 feet	Sapling
White Pine	Low	Variable	Sapling
Yellow Birch	Trace	>20 feet	Sapling
Sugar Maple	Medium	< 5 feet	Seeding
Beech	Low	< 5 feet	Seeding
Ironwood	Medium	< 5 feet	Seeding

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
30	42110 - Planted Red Pine	Sawtimber Well	7.5	53	171-200	N/A	Planted in '69, 3rd row thin completed '04 (Refuse Red Pine). Similar to R9 Stand 28, most stems pretty nice with the usual doubles, forks, 'knuckles', etc. DBH's a bit larger overall and RP seemed taller on average (than Std.28). BA swings in polygon north of Hartwick Rd were a bit higher (narrrower, not as much HM competition in canopy). Southern poly had a bit more canopy 'intrusion' from mult-stem sugar maple. Average BA for RP was 160. BA average including all species was 174 (110 lowest, 240 high). A lot of HM regen, BE regen was 'high' in areas.

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	92	Log/Pole	12	53
Sugar Maple	6	Log/Pole	12	
Beech	1	Log	11	
Quaking Aspen	1	Log	12	

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	High	10 - 20 feet	Sapling
Beech	Medium	10 - 20 feet	Sapling
Ironwood	Medium	10 - 20 feet	Sapling
Red Maple	Medium	10 - 20 feet	Sapling
Sugar Maple	High	< 5 feet	Seeding
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Hazelnut (Beaked)	Medium	< 5 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
31	4130 - Aspen	Sapling Well	22.5	20	Immature	N/A	Aspen regenerating pretty good. Some lighter stocked/patchy areas throughout. Most aspen stems running 3-4". BTA and QA mix. Fairly impressive sugar maple regen, similar to it's older sibling to the north (Stand 29). Hard maple in canopy positions, quite a few stems ranging 5-20ft and a decent seedling layer (some were browsed). Small slug of sap WP in very north, near landfill entrance. Water quality/testing well in north too.
32	790 - Other Bare/Sparsely Vegetated	Nonstocked	1.0		Unspecified		Gas wells, Riverside Energy, STATE MAPLE FOREST #A4-4, #A3-4, and #B3-4.
33	4111 - S.Maple, Hard Mast Association	Sawtimber Well	85.7	85	81-110	N/A	Thin (+cut all merch aspen) completed '04 (Landfill Hardwoods). Some of the best NHWD I've seen, and some of the worst beech/ironwood regen too. Very 'maplelized'. Most HM is extremely clean, straight, tight barked, some w/6+ logs. Beech really the only other canopy companion observed. Minor inclusions of BW (also very clean) and RM, a few YB, saw one large multi-stem RO, trace BTA (in south) and a token WP too. BA still running low from recent Rx in mid-00's (102BA average). Quality decreases in south near boundary. Some aspen saps along southern boundary and around Stand 42. A 0.5ac inclusion of A8 (QA) in very S.E..

Stand 31

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	15	Sapling	2	20
Red Maple	8	Sapling	3	20
Bigtooth Aspen	45	Sapling	3	20
Black Cherry	5	Sapling	2	
Ironwood	3	Sapling	2	
Quaking Aspen	24	Sapling	3	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Low	5 - 10 feet	Sapling
Sugar Maple	High	10 - 20 feet	Sapling
Honeysuckle (spp.)	Low	5 - 10 feet	Tall Shrub
Red Maple	Low	10 - 20 feet	Sapling
Serviceberry (Juneberry)	Low	10 - 20 feet	Sapling
Striped Maple	Low	10 - 20 feet	Sapling
Sugar Maple	Medium	< 5 feet	Seeding
Blackberry/Raspberry	Low	< 5 feet	Tall Shrub
Hazelnut (Beaked)	Medium	< 5 feet	Tall Shrub
White Pine	Low	10 - 20 feet	Sapling

Stand 33

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	72	Log/Pole/XLog	12	85
Yellow Birch	3	Log	14	
Basswood	5	Log/XLog	15	
Beech	15	Log/Pole/XLog	13	
Red Maple	5	Log	14	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	Full	10 - 20 feet	Sapling
Ironwood	Full	10 - 20 feet	Sapling
Sugar Maple	Medium	>20 feet	Sapling
Bigtooth Aspen	Low	>20 feet	Sapling
Quaking Aspen	Low	>20 feet	Sapling
Striped Maple	Trace	>20 feet	Pole
Beech	Medium	< 5 feet	Seeding
Ironwood	High	< 5 feet	Seeding

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
34	4130 - Aspen	Sawtimber Medium	21.9	69	51-80	N/A	A fairly complex stand. Distinct second age class in sub-can as well as differing aspen ages where stems reclaimed former openings. Log sizes tended to be more prevelant but not well stocked as a whole (mix of A8/9 and A5/6). QA dominant, BTA scattered. Most aspen stems showing decline, many were ok/marginal quality, some stems snagged out. Some larger single/multi-stem RM and HM in west polygon. HIGH sugar maple regen (20ft+) in portions of east poly, some RM regen too. West poly had a medium/high mix of RM/HM regen. Called ages an estimate, had trouble counting rings on cores taken.

Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	8	Pole/Log/XLog	8	
Quaking Aspen	71	Log/Pole	11	69
Black Cherry	3	Log/Pole	13	
Bigtooth Aspen	8	Log/Pole	12	
Sugar Maple	8	Log/Pole/XLog	10	
Red Oak	1	Log	11	
White Pine	1	Log	12	

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	High	>20 feet	Sapling
Red Maple	High	>20 feet	Sapling
White Pine	Low	Variable	Sapling
Beech	Low	10 - 20 feet	Sapling
Red Pine	Trace	10 - 20 feet	Sapling
Quaking Aspen	Medium	10 - 20 feet	Sapling
Black Cherry	Low	Variable	Sapling
White Oak	Trace	>20 feet	Sapling
Hazelnut (Beaked)	High	< 5 feet	Tall Shrub
Hawthorn (spp.)	Trace	10 - 20 feet	Tall Shrub
Blackberry/Raspberry	Low	< 5 feet	Tall Shrub
Serviceberry (Juneberry)	Low	>20 feet	Sapling
Sugar Maple	Medium	< 5 feet	Seeding
Ironwood	Low	5 - 10 feet	Sapling
Striped Maple	Medium	>20 feet	Sapling
Witch Hazel	Medium	5 - 10 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
35	3303 - Mixed Low Density Trees	Nonstocked	11.9		Unspecified	No	Ranges from low density/scattered tree/shrub to what could be split out and called forested. Highest density of trees is along the eastern boundary, up against Stand 38. This area has very dense scotch pine saps (some poles). as well as some other conifer/deciduous. Outside this area you generally see mixed clumps primarily containing QA, Blk Cherry, and Scotch. Almost every tree species listed above is present as a sapling on up to log size (some xlog). Scotch pine is slowly radiating out westward.

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Low	Variable	Sapling
Quaking Aspen	High	Variable	Sapling
Black Cherry	High	Variable	Sapling
Scotch Pine	High	Variable	Sapling
Ironwood	Low	10 - 20 feet	Sapling
Red Pine	Low	>20 feet	Log
Basswood	Trace	>20 feet	Log
Hawthorn (spp.)	Medium	5 - 10 feet	Tall Shrub
Honeysuckle (spp.)	Low	< 5 feet	Tall Shrub
Witch Hazel	Medium	10 - 20 feet	Tall Shrub
Red Maple	Low	10 - 20 feet	Sapling
Hazelnut (Beaked)	Low	< 5 feet	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
36	4112 - Maple, Beech, Cherry Association	Sawtimber Well	2.1	85	81-110	N/A	Cotant in '10: mixed hdwd stand with hemlock present along northern edge. overall poor quality, especially compared to Stand 33. JSP in '20: Wasn't thinned/acted as a visual during most recent thin in Stand 33. I agree w/Cotant. PVT to north parking campers very close to State ownership. Do not believe they're onto state but something to be mindful of during '30 inventory. Some 'stuff' close to line as well (pallet, debris, etc). Found 2-corners, one in Sherman Rd and a concrete monument w/rebar just west of Sherman. Verify which is correct (note to self).

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	50	Log/Pole	11	85
Red Maple	15	Log/Pole	11	
Beech	26	Log/Pole/XLog	13	
Hemlock	3	XLog/Log	20	
Yellow Birch	3	Log/Pole	14	

Sub-Canopy Species	Density	Avg. Height	Size
Beech	High	Variable	Sapling
Ironwood	Medium	Variable	Sapling
Sugar Maple	Low	>20 feet	Sapling
Red Maple	Medium	>20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
37	122 - Road/Parking Lot	Nonstocked	9.1		Unspecified	No	Hartwick Rd access to Waste Management landfill and road right of way along this access. also includes portions of right of way along Sherman Rd. two entrance signs for waste management are located at intersection with Sherman rd.
38	42130 - Planted Scotch Pine	Sawtimber Well	2.3	64	171-200	N/A	Majority of stand is Scotch Pine dominant, some are surprising large. Throughout are slugs of WP, then RP to a lesser extent (Xlog of both are very common). North end of north polygon is mainly WP (w/scat scotch and RP). Powerline runs along the eastern boundary. Scotch pine saps (some poles) are heavily established along most western boundary locations (east boundary of Std.35 too). Scotch have seeded in on Stateland across Sherman Rd (C245, Std.04).

Canopy Species	% Cover	Size Class	DBH	Age
White Pine	25	Log/XLog/Pole	15	
Red Pine	10	Log/XLog	15	
Scotch Pine	60	Log/Pole/XLog	13	64
Quaking Aspen	2	Log	12	
Sugar Maple	3	Log/Pole/XLog	11	

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	Medium	10 - 20 feet	Sapling
Beech	Medium	10 - 20 feet	Sapling
Ironwood	Medium	10 - 20 feet	Sapling
Scotch Pine	Medium	10 - 20 feet	Sapling
White Pine	Trace	< 5 feet	Seeding
Balsam Fir	Trace	5 - 10 feet	Sapling
Hazelnut (Beaked)	High	< 5 feet	Tall Shrub
Witch Hazel	Low	5 - 10 feet	Tall Shrub
Striped Maple	Low	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
39	122 - Road/Parking Lot	Nonstocked	0.9		Unspecified	No	Old 27, Snowmobile Trail and Railroad.
40	710 - Sand, Soil	Nonstocked	0.8		Unspecified		(Shut-In) Gas well, Riverside Energy, STATE MAPLE FOREST #C4-5 Pump station site with several sheds/structures present.
41	310 - Herbaceous Openland	Nonstocked	0.7	0	Unspecified	No	Grassy opening with some scattered wolfy maple, a few black cherry, one scotch pine and sugar maple saps lining the perimeter.
42	310 - Herbaceous Openland	Nonstocked	0.6	0	Unspecified	No	Appearance of being an old landing (earthen mounds along edge). Perimeter lined with some aspen/NHWD saps, some black cherry too.
43	790 - Other Bare/Sparsely Vegetated	Nonstocked	1.3	0	Unspecified		Gas well, Riverside Energy, STATE MAPLE FOREST #D1-5 Well pad site. Southern 'tail' is a natural/grassy opening with some deciduous seeds/saps.
44	790 - Other Bare/Sparsely Vegetated	Nonstocked	0.1		Unspecified		Gas well, Riverside Energy, STATE MAPLE FOREST #C4-4 and #D3-4.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
45	790 - Other Bare/Sparsely Vegetated	Nonstocked	0.6	0	Unspecified		Gas wells, Riverside Energy, STATE MAPLE FOREST #D1-4 and #C2-4 Well pad site and heavily used exit/entry point along the landfill. Saplings along perimeter.
46	3105 - Mixed Upland Herbaceous	Nonstocked	5.6		Unspecified	No	Far fewer trees than its neighbor to the north Stand 35. Edges still populated with scatterd clumps of primarily QA and Blk Cherry, sapling through log sizes. Access road to well pad Stand 44 and pads south and west of the landfill travels through this opening. That road is currently (in winter) gated/locked at the landfill fence line.
47	500 - Water	Nonstocked	0.8	0	Unspecified	No	West portion of Blue Gill Lake. Stand includes shoreline populated with some lowland shrubs as well as some tree species.
48	122 - Road/Parking Lot	Nonstocked	4.5	0	Unspecified	No	Primarily delineates North Roberts Rd. Also captures the entrances into the day use parks/boat launch areas for Horseshoe and Blue Gill Lakes. South end captures a small portion of Greenacres Dr.
49	790 - Other Bare/Sparsely Vegetated	Nonstocked	4.2	0	Unspecified		Corridor for an underground high pressure gas pipeline.
50	790 - Other Bare/Sparsely Vegetated	Nonstocked	1.9	0	Unspecified		Powerline corridor. I-75 ROW fence is on the east boundary of this stand/corridor. Until the powerline turns SW and cuts through Stand 12.
51	790 - Other Bare/Sparsely Vegetated	Nonstocked	0.3	0	Unspecified		Powerline corridor. Feeds PVT homes on north end of Horseshoe Lake

Stand 46 sub-canopy species:

Sub-Canopy Species	Density	Avg. Height	Size
White Pine	Trace	Variable	Sapling
Quaking Aspen	Medium	Variable	Sapling
Black Cherry	Medium	>20 feet	Pole
Hawthorn (spp.)	Low	< 5 feet	Tall Shrub
Red Pine	Trace	>20 feet	Pole
Scotch Pine	Trace	Variable	Sapling
Blackberry/Raspberry	Low	< 5 feet	Tall Shrub