GRAYLING FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 26 ENTRY YEAR: 2012

GIS Compartment Acreage: 2295 County: Oscoda

Revision Date: 9/2/2010

Stand Examiner: Lucas Merrick

Legal Description: Oscoda County - Elmer Township, T28N R02E Sections 1, 2, and 12.
West Clinton Township, T28N R03E Sections 6 and 7.

Management Goals: To maintain forest health, productivity, sustainability, and diversity throughout the compartment while providing for multiple use within the area.

Soils and Topography: Topography has rolling hills to very steep terrain. Soils consist of various sand associations in the upland areas.

Ownership Patterns, Development, and Land Use in and Around the Compartment: An isolated 40 acre parcel breaks up an otherwise contiguous state ownership. Large private parcels make up the western boundary. State ownership continues north, south, and east. There is still active gas exploration throughout the area. The northwest portion of this compartment is found within the Hunt Creek Research Area boundaries.

Unique, Natural Features: "Bushman Swamp" is known to contain species of orchid such as Amerochis rotundifolia and Cypripedium arietinum. The southern portions of this compartment have been impacted by a large wind event in 1999.

Archeological, Historical, and Cultural Features: Potions of this compartment contain the "Hill Settlement" area.

Special Management Designations or Considerations: The Hunt Creek Research Area is a designated Special Conservation Area (SCA). See the "Dedicated & Proposed Special Conservation Area Map" for location within the compartment.

Watershed and Fisheries Considerations: Hunt creek and several small ponds are found throughout.

Wildlife Habitat Considerations: Make attempts to expand aspen component where possible during harvest operations. This compartment contains a diverse array of mast producing shrubs found throughout the understory. Enhance the swamp conifer edges with dead and down specifications during timber operations. Three maintained wildlife openings are found in this compartment.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel, postglacial alluvium and end moraines of medium-textured till (uplands). The glacial drift thickness varies between 400 and 800 feet. Beneath the glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. The nearest gravel pit is two miles to the south, and gravel potential is thought to be good on the upland areas. Most of the State land in the compartment has been leased for oil and gas. The Antrim Shale is the producing formation in the area and additional drilling is possible.

Vehicle Access: The compartment can be accessed using county roads. Oil and gas right-of-ways provide multiple access opportunities for wheeled vehicles and foot traffic.

Survey Needs: The southwest corner of the private 40 encompassed by state land was not located during field review. The other three corners which identify the boundary have been located. It is expected the missing corner is set and could be located during a closer inspection. No survey requests should be needed.

Recreational Facilities and Opportunities: The Hunt Creek ORV trail is located in the western portion. Dispersed recreation occurs throughout. This area provides excellent hunting and gathering opportunities.

Fire Protection: Terrain will limit many water units during suppression activities. This compartment contains very little "high hazard" fuel types.

LOTS Compartment Acreage: 2,299 acres

- **The following reports are available:**
  - **Cover Type by Age Class**
  - **Proposed Treatment Summaries**
  - **Dedicated Conservation Area Details**
  - **Listing of Forested Stands**
  - **Listing of Non-Forested Stands**
  - **Proposed Treatments – No Limiting Factors**
  - **Proposed Treatments – With Limiting Factors**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - **Base feature information, stand numbers, cover types, recreation trails and facilities**
  - **Proposed treatments**
  - **Proposed road access system**
  - **Special Conservation areas**
-

Cover Type & Treatment Map

Compartment 026
T28N, R02E, Sec. 01, 02, 12
T28N, R03E, Sec. 06, 07
County: Oscoda
Unit: Grayling
YOE: 2012
Acres: 2,295 GIS Calculated
Stand Examiner: Lucas Merrick
Map Revised: 9/08/2010
Map Phase: Pre-Review

Stand # 23 — Stocking Density
(412)0) - A7
Level 3 / Level 4 / OI Code
Cover Type Code

Legend

- RIs Corners
- Miris Corners
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- Pipe
- Intermittent Stream/Drain
- Stream
- Trails
- Motorcycle Trails
- Snowmobile Trails

Treatments
- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Selection (Group, Single Tree)

Forest Stands
Level 3
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands
Level 3
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 790 - Other Bare/Sparsely Vegetated

1 **6117**-E6 · 2 **6117**-E6 · 3 **6120**-C6 · 4 **4319**-UM6 · 5 **6127**-W9 · 6 **4221**-R9 · 7 **4191**-MD9 · 8 **4130**-A6 · 9 **4319**-UM6 · 10 **310**-G0 · 11 **310**-G0 · 12 **310**-G0 · 13 **4221**-R9 · 14 **4123**-O9 · 15 **4110**-M8 · 16 **310**-G0 · 17 **4130**-A6 · 18 **4136**-A6 · 19 **310**-G0 · 20 **330**-U0 · 21 **310**-G0 · 22 **4199**-MD9 · 23 **310**-G0 · 24 **4130**-A6 · 25 **320**-U0 · 26 **500**-Z0 · 27 **4130**-A6 · 28 **790**-X0 · 29 **310**-G0 · 30 **330**-U0 · 31 **310**-G0 · 32 **4131**-A9 · 33 **500**-Z0 · 34 **790**-X0 · 35 **4123**-O7 · 36 **4130**-A6 · 37 **4133**-A1 · 38 **790**-X0 · 39 **4199**-MD3 · 40 **4130**-A6 · 41 **790**-X0 · 42 **310**-G0 · 43 **310**-G0 · 44 **4130**-A3 · 45 **310**-G0 · 46 **310**-G0 · 47 **4110**-M9 · 48 **310**-G0 · 49 **4199**-MD4 · 50 **4130**-A3 · 51 **790**-X0 · 52 **790**-X0 · 53 **4119**-M4 · 54 **4221**-R8 · 55 **310**-G0 · 56 **622**-L0 · 57 **4133**-A1 · 58 **790**-X0 · 59 **4132**-A2 · 60 **4110**-M7 · 61 **4222**-J6 · 62 **4110**-M9 · 63 **4199**-MD3 · 64 **790**-X0 · 65 **4222**-J6 · 66 **4130**-A6 · 67 **320**-U0

Hunt Creek · Hunt Creek · Hunt Creek · E Fish Lake Rd · Hunt Creek Rd · Eberl · Boiling Springs Rd · Harder Rd · N Mount Tom Rd · Hill Rd · First Lake · Second Lake

84°9'0"W · 84°8'0"W · 84°7'0"W · 84°6'0"W · 44°5'10"N · 44°5'0"N

1 2 6 12 7

N

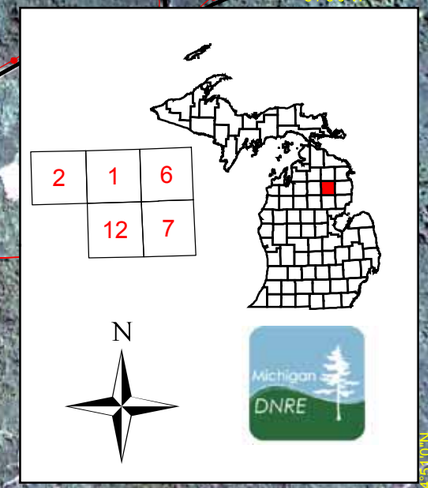
Michigan DNRE

1 0 0.5 1 Miles

Stand Boundary Map

Compartment 026
T28N, R02E, Sec. 01, 02, 12
T28N, R03E, Sec. 06, 07
County: Oscoda
Unit: Grayling
YOE: 2012
Acres: 2,295 GIS Calculated
Stand Examiner: Lucas Merrick
Map Revised: 9/08/2010
Map Phase: Pre-Review

Stand # 23 — Stocking Density
(412)0) - A7
Level 3 Level 4 — OI Code
Cover Type Code



Legend

- Rls Corners
- Miris Corners
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- Pipe
- Trails
- Motorcycle Trails
- Snowmobile Trails
- Stand Boundaries

Forest Stands

Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 790 - Other Bare/Sparsely Vegetated

1 Miles

Dedicated & Proposed Special Conservation Area Map

Compartment 026
T28N, R02E, Sec. 01, 02, 12
T28N, R03E, Sec. 06, 07
County: Oscoda
Unit: Grayling
YOE: 2012
Acres: 2,295 GIS Calculated
Stand Examiner: Lucas Merrick
Map Revised: 9/08/2010
Map Phase: Pre-Review

Stand # 23
Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code

Legend

- Miris Corners
- Stand Boundaries

Dedicated Special Conservation Areas
- Cold Water Streams
- Research, Development, and Military Lands

Forest Stands
Level 3
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
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- 422 - Natural Pines
- 431 - Upland Mixed Forest
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Non-Forest Stands
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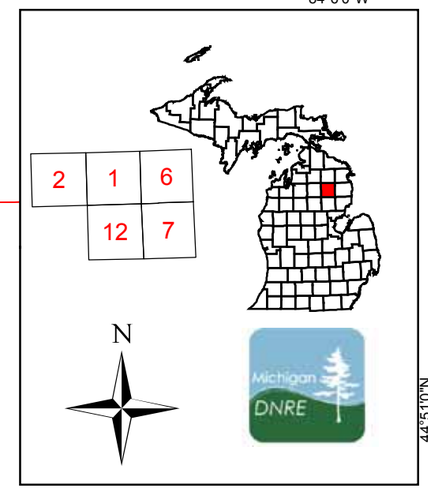

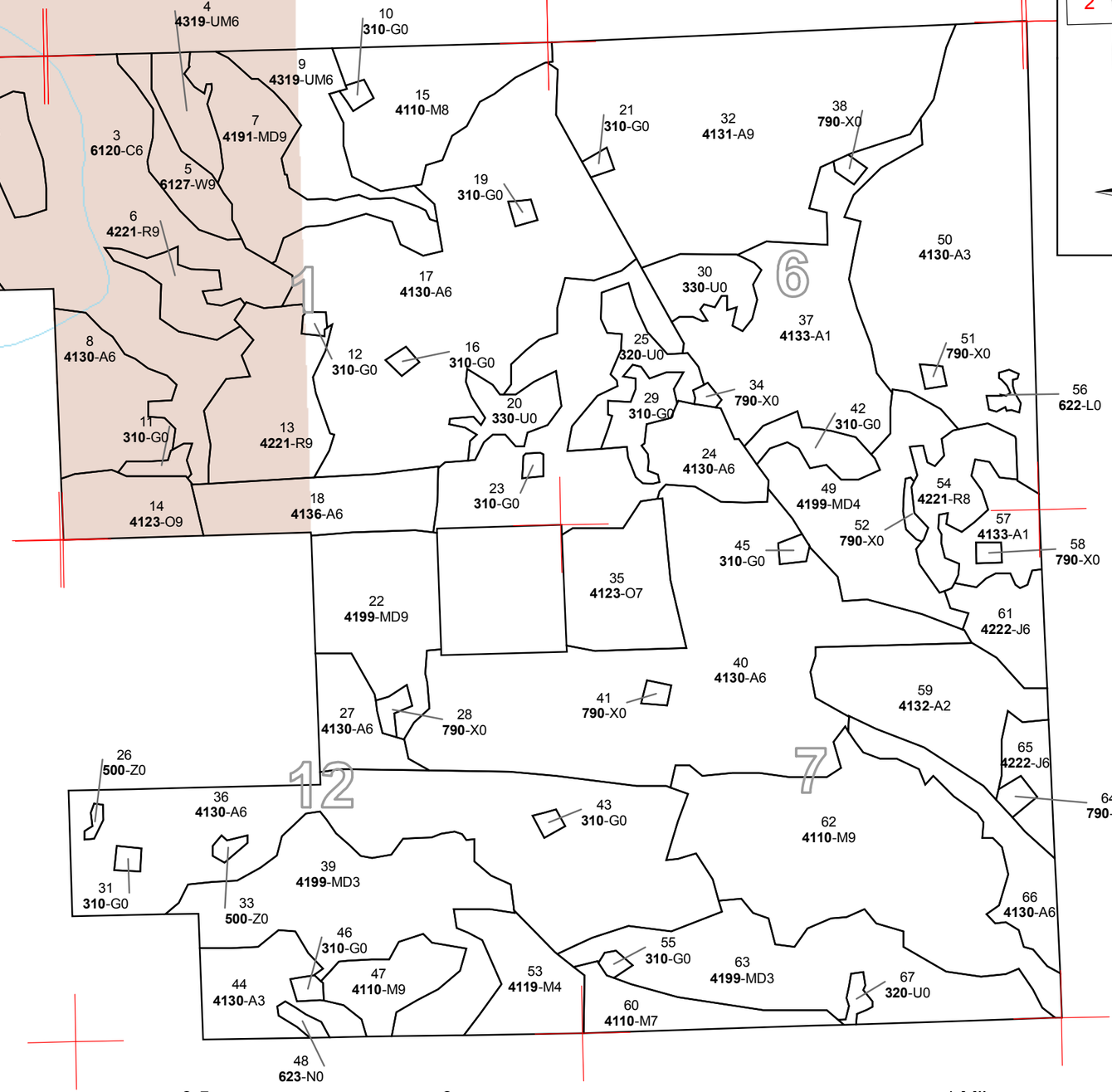

84°10'0"W 84°9'0"W 84°8'0"W 84°7'0"W 84°6'0"W
44°5'10"N 44°5'0"N

1 0.5 0 1 Miles

Table 1 – Total Acres by Cover Type and Age Class

Grayling Mgt. Unit **Compartment 026 Year of Entry 2012**

Data updated before 2:00 PM

Age Class

	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	Total
Aspen	0	0	28	546	0	467	27	0	0	0	164	0	0	0	0	**1232**
Bare/Sparsely Vegetated	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**
Cedar	0	0	0	0	0	0	0	0	0	0	0	142	0	0	0	**142**
Herbaceous Openland	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**41**
Jack Pine	0	0	0	0	0	12	19	0	0	0	0	0	0	0	0	**31**
Low-Density Trees	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	**16**
Lowland Deciduous	0	0	0	0	0	0	0	0	0	39	0	0	0	0	0	**39**
Lowland Shrub	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Marsh	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Mixed Upland Deciduous	0	0	166	52	0	0	0	0	0	0	47	43	0	0	0	**308**
Northern Hardwood	0	0	0	0	26	0	0	20	0	19	47	131	0	0	0	**245**
Oak	0	0	0	0	0	0	0	0	0	21	0	36	0	0	0	**57**
Red Pine	0	0	0	0	0	0	22	0	0	42	0	14	0	0	0	**77**
Upland Mixed Forest	0	0	0	0	0	12	0	0	0	28	0	0	0	0	0	**40**
Upland Shrub	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**19**
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**107**	**0**	**194**	**598**	**26**	**491**	**68**	**20**	**0**	**150**	**259**	**366**	**16**	**0**	**0**	**2295**

Table 2 – Proposed Treatment Summaries

Data updated before 2:00 PM

Grayling Mgt. Unit
Year of Entry 2012

Compartment 026
Total Compartment Acres: 2295

Acres by Treatment Type

Commercial Harvest - 617	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	400	0	0	0	0	0	**400**
Jack Pine	19	0	0	0	0	0	**19**
Lowland Conifers	0	16	0	0	0	0	**16**
Mixed Upland Deciduous	99	0	0	0	0	0	**99**
Oak	9	12	0	0	0	0	**21**
Red Pine	0	0	22	0	0	0	**22**
Upland Mixed Forest	12	0	28	0	0	0	**40**
Total	**539**	**28**	**50**	**0**	**0**	**0**	**617**

Table 3 -- Treatments Prescribed with No Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
4	72026004-Cut	12.4	4319 - Mixed Upland Forest	High Density Pole	40	Harvest	Clearcut	Aspen	Cmpt. Review Proposal

Prescription Specs: Remove all trees 2" and up. Mark a handfull of oak or red pine for mast and vertical green structure. Leave a couple high stumps throughout the sale area for wildlife benefits.

Other Comments: A few overgrown trails in sale area, make sure these remain close after harvest. The management objective is aspen, with mixed conifer and hdwds. A moderately stocked stand of natural regeneration with aspen being the majority species should be considered a success. If natural regen fails, plant this stand to red pine in the open areas.

Next Steps: Monitor regen per guidelines.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	72026005-Cut	15.7	6127 - Lowland Pine	High Density Log	115	Harvest	Group Selection	Pine, Aspen Mix	Cmpt. Review Proposal

Prescription Specs: Remove all species 2" and up except for red pine, white pine, and cedar. Individually mark minor amounts of pine for removal i.e. quality, spacing, and equipment assistance. Protect cedar. Mark trees along western edge to drop into the conifer swamp for horizontal structure. Identify any benificial wildlife trees and mark to leave or protect.

Other Comments: This will be a stand containing super canopy pine with a mixed lowland decidous/conifer understory.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
9	72026009-Cut	28.0	4319 - Mixed Upland Forest	High Density Pole	80	Harvest	Seed Tree	Oak, Pine	Cmpt. Review Proposal

Prescription Specs: Leave 10 - 20 BA of mixed pine, oak, and mixed hdwd. Final harves all other species 2" and up. Try to expand the aspen clones by not leaving residual immediately adjacent to pockets of mostly aspen.

Other Comments: Management objective for this stand is a natural regeneration of dry mesic forest types with an oak component. If moderate stocking is not met the stand sould be planted with red pine.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
14	72026014_small-Cut	9.0	4123 - Red Oak	High Density Log	88	Harvest	Clearcut	Oak, Aspen	Cmpt. Review Proposal

Prescription Specs: Final harvest all trees 2" and up. There were a couple hemlock, protect these and the trees around them by marking to leave. Leave some nurse logs around hemlock if suitable trees are present.

Other Comments: A drainage runs along western boundary of this cut area. Mangement objective is oak/aspen with minor components off mixed pine and hdwds. A moderately stocked stand primarily consisting of oak and aspen will be considered a success. If regeneration is not adequate plant the open areas to red pine.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
14	72026014-Cut	12.4	4123 - Red Oak	High Density Log	88	Harvest	Single Tree Selection	Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Thin stand to 70 BA. Favor sugar maple and the healthier oak to leave. Create large canopy gaps for the oak and basswood.

Other Comments: A small stand. Recommend that this not be set up by contractors. There should not be a need for new roads.

Next Steps: Monitor health of stand and success regen.

Table 3 -- Treatments Prescribed with No Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
17	72026017-Cut	182.5	4130 - Aspen	High Density Pole	45	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Final harvest 2" and up. Leave approx 10% of stand in retention islands. Mark a minor amount of individual leave trees throughout for vertical structure.

Other Comments: Management objective is aspen with a component of dry -mesic forest species. A moderately stocked stand consisting of primarily aspen should be considered a success. If natural regeneration is not adequate plant open areas to red pine. Chase some of the aspen and jack pine along the stand 13 boundary.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
18	72026018-Cut	34.0	4136 - Aspen, Mixed Conifer	High Density Pole	44	Harvest	Clearcut	Aspen, Mixed Pine	Cmpt. Review Proposal

Prescription Specs: Final harvest all trees 2" and up. Do not leave retention in this stand.

Other Comments: Management objective is aspen and mixed pine. Moderate stocking is acceptable. If regeneration is not adequate, plant open areas to red pine

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
22	72026022-Cut	47.1	4199 - Other Mixed Upland Deciduous	High Density Log	93	Harvest	Clearcut with Reserves	Aspen, Oak	Cmpt. Review Proposal

Prescription Specs: Final harvest 2" and up. Leave retention in islands. A few hemlock found in stand, protect these with islands or leave trees. If suitable nurse logs are present have spec to drop around the hemlock.

Other Comments: Did not locate the SW corner of the pvt 40 during walk through. The other 3 corners are in so a good chance that it is there. Management objective is an oak aspen mix with minor components of mixed hdwd and conifer. A moderately stocked stand containing mostly aspen and oak will be a success. If stocking is not met, the open ares should be planted to red pine.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
32	72026032-Cut	164.5	4131 - Aspen, Oak	High Density Log	96	Harvest	Clearcut with Reserves	Aspen, Oak	Cmpt. Review Proposal

Prescription Specs: Final harvest all trees 2" and up. Leave 10% of stand in retention islands. Mark out individual leave trees throughout the sale area for vertical structure. Protect at least one of the red pine pockets found in the north east with an island.

Other Comments: The management objective is a mixed aspen/oak stand with a mixed pine and hdwd component. A moderately stocked stand containing primarily aspen and oak will be considered a success. If natural regeneration is considered inadequate, plant the open areas to red pine.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
49	72026049-Cut	52.0	4199 - Other Mixed Upland Deciduous	Low Density Pole	25	Harvest	Clearcut	Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Final harvest all trees 2" and up. This stand may need to be bid out on a per/acre basis. Much of stand is unmerch.

Other Comments: Management objective is to expand the current aspen pockets. Open areas of upland brush are acceptable. The ORV Trail running through the stand should be re-routed or buffered.

Next Steps:

Table 3 -- Treatments Prescribed with No Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
54	72026054-Cut	21.7	42210 - Natural Red Pine	Medium Density Log	57	Harvest	Seed Tree	Natural Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Mark 20 - 30 BA of red and white pine to leave. There a couple nice pockets where higher BA 70-90 can be left if size and quality allows. Remove all other species from the stand.

Other Comments: Aspen is expected to expand into the stand, red maple will be present in the understory in the north. A moderately stocked pine/ mixed decidous understory will be considered a success. Mixed pine will likely make up 1/4 of the understory. If standards are not met the stand should be planted with red pine.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
57	72026057-Cut	18.9	4133 - Aspen, Mixed Pine	Low Density Sapling	25	Harvest	Clearcut	Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Final harvest all trees 2" and up. This stand may need to be bid out by the acre, much of the stand is considered unmerch.

Other Comments: The managament objective for this stand is aspen and upland brush. Any expansion of the current aspen clones after harvest is a success. Leave all areas that do not regenerate with aspen as upland brush. The ORV Trail in stand should be re-routed or buffered.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
61	72026061-Cut	18.8	42220 - Natural Jack Pine	High Density Pole	50	Harvest	Clearcut with Reserves	Aspen, Jack Pine	Cmpt. Review Proposal

Prescription Specs: Final harvest all trees 2" and up. Leave a couple small islands and some individually marked red pine for retention. Make all efforts to expand the pockets of aspen found throughout the stand.

Other Comments: The management objective is a mixed aspen/pine stand. Natural regeneration meeting minimum stocking should be considered a success. Open u-pland brush types are expected to be created within the stand. These areas are expected to slowly fill in with jack pine in time. The ORV Trail should be re-routed or buffered.

Next Steps:

Total Treatment Acreage Proposed: **617.2**

Grayling Mgt. Unit

Data updated before 2:00 PM

Table 4 -- Treatments Prescribed with a Limiting Factor

Compartment: 026
Year of Entry 2012

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

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: **0**

Data updated before 2:00 PM

Out of YOE -- Treatments Prescribed with No Limiting Factor

Year of Entry: 2012

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

Prescription Specs:

Other Comments:

Next Steps:

Total Treatment Acreage Proposed: **0**

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	28.8	80		Lowland popple and mixed conifer. Portions of stand are very close to Hunt Creek.
2	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	10.5	85		A mixture of red maple, aspen and mixed conifer.
3	6120 - Lowland Cedar	High Density Pole	142.1	100		Orchids and a creek noted to be in stand.
4	4319 - Mixed Upland Forest	High Density Pole	12.4	40		Aspen and fir over topped by red pine and oak. The majority of this stand is on a hill with a western aspect.
5	6127 - Lowland Pine	High Density Log	15.7	115	81-110	New stand added. Very big red and white pine. Pockets of smaller fir, aspen, birch, and maple found throughout.
6	42210 - Natural Red Pine	High Density Log	13.5	102	200+	Active hawk nest. Beautiful red pine, 9-10 sticks in spots. Areas of heavy fir understory. Cedar and red maple can be found too. Hold long term for diversity.
7	4191 - Mixed Upland Deciduous with Conifer	High Density Log	43.3	106	51-80	A pine, oak, mixed hdwds stand. Very hilly. White pine and fir make up majority of understory. Mixed hdwds are present as well. Portions of stand removed in the 60's. These pockets are dense w/ fir, aspen, and pine.
8	4130 - Aspen	High Density Pole	35.7	43		Aspen stand with a fir understory. Old landing and road system still present. Many pockets of fir are competing w/ the aspen for canopy space. Some miscellaneous pine can also be found. The fir density increases along the edges.
9	4319 - Mixed Upland Forest	High Density Pole	28.0	80	51-80	Stand runs on a ridge. Large diameter oak and red pine w/ misc hdwds and conifer underneath.
13	42210 - Natural Red Pine	High Density Log	42.1	88	111-140	Natural red pine stand mixed with aspen, white pine, balsam fir, and a little bit of oak and maple. Large diameter seed trees with areas of dense pole size regen. Jack pine in southern portion. A good amount of aspen adjacent to the wetland.
14	4123 - Red Oak	High Density Log	21.5	88	111-140	Very nice looking oak with mixed hdwds in west, poorer quality in east. Quality declines significantly east of drainage. Aspen and ash found in drainage. In the east this stand starts to develop a mixed conifer understory and aspen is found throughout. A couple hemlock here and there.
15	4110 - Sugar Maple Association	Medium Density Log	47.5	94	81-110	An average quality hdwd stand. Several stems of sugar maple w/ excellent potential. In general stand is heavy to basswood and ash. EAB present in the area. Understory is mostly ironwood w/ raspberry in areas with less canopy.
17	4130 - Aspen	High Density Pole	182.5	45		A variable aspen stand with multiple age classes and kotar habitat types. Rolling hills in northern portions. Miscellaneous pine and northern hdwds throughout.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4136 - Aspen, Mixed Conifer	High Density Pole	34.0	44	81-110	Small diameter aspen and mixed conifer. Some unmerch. timber. Areas of dense mixed conifer pockets.
22	4199 - Other Mixed Upland Deciduous	High Density Log	47.1	93		Good looking oak/aspen stand. There is a ridge in southern portion of stand. A good variety of mast producing shrubs present. Looks like two pvt parcels access their property through this stand.
24	4130 - Aspen	High Density Pole	89.8	27		A poorer quality aspen stand. Around 35' tall. Red pine, jack pine, white pine and oak also present. The eastern portions of stand are very poor quality.
27	4130 - Aspen	High Density Pole	19.1	42	51-80	Variable stand, mixed in with the aspen are pockets of hdwd and low area w/ bam. There is a fairly thick hdwd understory present.
32	4131 - Aspen, Oak	High Density Log	164.5	96	81-110	Steep rolling hills. An excellent amount of mast producing shrubs. An oak aspen stand. The southern portion of this stand had the majority of the aspen removed about 50 years ago. Pockets of red pine can be found in the north
35	4123 - Red Oak	Low Density Log	35.8	109	1-50	Sawlog oak over pockets of aspen and mixed hdwd regen. A minor conifer component.
36	4130 - Aspen	High Density Pole	163.2	25		A big kettle hole found in south east portion of stand. A tornado went through eastern and southern areas. The size and quality of aspen varies with topo, aspect, storm damage. Mixed hdwds found throughout. Plenty of deer activity throughout the stand.
37	4133 - Aspen, Mixed Pine	Low Density Sapling	81.2	25		Poor quality pockets of TA, starting to fill in w/ miscellaneous pine. Areas of upland brush. A few large oaks mixed throughout. A few pockets of above average oak regen.
39	4199 - Other Mixed Upland Deciduous	High Density Sapling	87.2	10		Area salvaged after a tornado. Mostly saplings, a few pole and log size trees scattered about. Wet seeps present throughout. Areas where some blow down was left. A pipeline cuts the stand in 1/2.
40	4130 - Aspen	High Density Pole	195.2	41	1-50	A mixed aspen stand, varies from aspen/hdwds to aspen/pine. Some areas have rolling topo. Becomes more of a solid aspen type as you head west.
44	4130 - Aspen	High Density Sapling	27.8	17		Seasonal wet areas throughout the stand. Majority of aspen is TA. Stand looks fairly healthy.
47	4110 - Sugar Maple Association	High Density Log	19.4	85	81-110	Very hilly. A tornado has created natural canopy gaps throughout, this is where the best regen is establishing. Areas of damage to overstory. This stand has excellent wildlife quality- plenty of horizontal structure, den trees, nesting trees.
49	4199 - Other Mixed Upland Deciduous	Low Density Pole	52.0	25		Stand is made up of pockets of aspen with scattered cherry. A minor conifer component present.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
50	4130 - Aspen	High Density Sapling	142.3	25		Hills in the north. Mixed aspen with oak and red maple. Scattered sawlog size red pine. 30' + tall
53	4119 - Mixed Northern Hardwoods	Low Density Pole	26.3	38	1-50	Hill Settlement area. Majority of walnut was planted. Staghorn sumac throughout. A heavy ash component in over and understory. Rolling hills. Plenty of mast producing shrubs.
54	42210 - Natural Red Pine	Medium Density Log	21.7	57	81-110	A mixed red and white pine stand. Quality and size varies. Slightly rolling topo. The northern understory is heavily stocked w/ aspen and red maple adjacent to the cuts. Jack pine present in southern portion.
57	4133 - Aspen, Mixed Pine	Low Density Sapling	18.9	25	1-50	The stand is primarily cherry brush with pockets of aspen and some various pine mixed throughout. The aspen is below average quality.
59	4132 - Aspen, Jack Pine	Medium Density	51.0	26		Pockets of aspen with scattered jack pine and upland brush. The aspen varies in size and quality.
60	4110 - Sugar Maple Association	Low Density Log	20.2	68	1-50	The stand was salvaged after a tornado. Crop/seed tree. A dense understory of hdwds present. Some ash, basswood, beech, and aspen can also be found in overstory. EAB present in the area.
61	42220 - Natural Jack Pine	High Density Pole	18.8	50	51-80	Jack pine with scattered red pine and pockets of aspen. Some of the jack pine is already falling apart. Red pine in the S and E.
62	4110 - Sugar Maple Association	High Density Log	131.3	105	51-80	A good looking hdwd stand. Rolling hills. A fair ash component present. EAB present in the area. It has recently been treated. A diverse understory present throughout. Some yellow birch also in canopy.
63	4199 - Other Mixed Upland Deciduous	High Density Sapling	78.7	10		This stand did not have salvage work done after the wind event, it was used as a control area. A difficult stand to walk through. Height of canopy varies, avg around 20'. Some mature trees are still standing (super canopy).
65	42220 - Natural Jack Pine	High Density Pole	12.0	45	51-80	Jack pine with aspen pockets and scattered red pine.
66	4130 - Aspen	High Density Pole	27.1	52		ORV trail runs through this stand. QA & BT aspen. Mixed pine present in southern portion, mixed hdwds in the north.

Stand	Cover Type	Acres	Gen Cmts:
10	3102 - Grass	1.5	MPSC WELL 10743. No ownership sign. (Newer well, within last 10 yrs)
11	3102 - Grass	3.3	A maintained grassy opening. Cherry saps and one large open grown oak present.
12	3102 - Grass	1.3	Gas well. Breitburn C3-1W&N. 2 directional wells on site.
16	3102 - Grass	1.3	Knappweed present. Gas well. Terra Energy. State Elmer 10-1HD.
19	3102 - Grass	1.3	Terra Energy St. Elmer 8-1
20	3303 - Mixed Low Density Trees	12.0	Pockets of pole size pine and aspen clones approx. 7' tall. Cherry brush and sand willow present. Ground cover is sweet fern, blueberry, sedge, and bracken.
21	3102 - Grass	1.4	Merrit Energy Company. State Clinton B1-6. Knappweed present.
23	3102 - Grass	1.2	Gas well. Terra Energy. St. Elmer 16-1.
25	3204 - Mast Producing Shrub	16.9	Open stand with cherry shrubs of various sizes. Pockets of jack pine present. Sweet fern throughout. A couple aspen and red pine present.
26	50 - Water	0.9	New stand added. Turtles and ducks present.
28	790 - Other Bare/Sparsely Vegetate	2.4	Terra Energy State Clinton 7-12
29	3102 - Grass	10.9	Maintained grassy opening.
30	3303 - Mixed Low Density Trees	15.1	A red pine stand that was harvested but has not been planted. Pockets of pole size aspen and mixed pine. Some pine seedlings also present. Majority of stand is cherry brush.
31	3102 - Grass	1.5	Well, Atlas Gas & Oil Company C1-12
33	50 - Water	1.5	A small pond choked with vegetation. Watched a deer take a drink out of it. Frogs present.
34	790 - Other Bare/Sparsely Vegetate	1.1	Gas well. Merrit Energy company. State Clinton D2-6.
38	790 - Other Bare/Sparsely Vegetate	1.4	Merrit Energy State Clinton B3-6

Stand	Cover Type	Acres	Gen Cmts:
41	790 - Other Bare/Sparsely Vegetate	1.4	Terra Energy State Clinton 5-7
42	3105 - Mixed Upland Herbaceous	10.6	Maintained grassy opening. Pockets of cherry and pine scattered throughout.
43	3102 - Grass	1.3	Terra Energy State Elmer 9-12
45	3102 - Grass	1.8	Breitburn State Clinton A2-7
46	3102 - Grass	1.7	Terra Energy State Elmer 14-12
48	6230 - Cattail	2.2	A wet area with cattails.
51	790 - Other Bare/Sparsely Vegetate	1.2	Merrit Energy C4-6
52	790 - Other Bare/Sparsely Vegetate	1.9	Poorly vegetated, evidence of heavy ground disturbance.
55	3102 - Grass	1.4	New stand added. Breitburn well USA Elmer Clinton D1-7HDL. Building, communication tower on site.
56	6229 - Mixed lowland shrub	1.8	Areas of open water. Willow w/ blueberry, sedge, and cattails.
58	790 - Other Bare/Sparsely Vegetate	1.3	Terra Energy State Clinton 1-7.
64	790 - Other Bare/Sparsely Vegetate	2.4	Terra Energy CPF. Multiple buildings and equipment at site.
67	3205 - Mixed Upland Shrub	2.2	An opening w/ mixed deciduous trees and shrubs. Old landing.

7 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

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

Data updated before 2:00 PM

Stand	SCA Type	SCA Name	Acres	Comments

8 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

Data updated before 2:00 PM

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

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	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.