Shingleton Forest Management Unit
Compartment Review Presentation

Compartment #141 **Entry Year: 2014**
Compartment Acreage: 872 **County: Alger**

Revision Date: 08/17/2012

Stand Examiner: Jesse Bramer

Legal Description: T48N R15W Sections 22 and 27

RMU (if applicable): The compartment lies within the Danaher Kingston Outwash Management Area.

Management Goals: This compartment is located on the southern edge of the Kingston Plains, in an area designated for the management of wildlife production by an agreement written in 1954 between (now) Forest Resources Division and Wildlife divisions.

Soil and Topography: Rolling terrain and generally dry, sandy soils. Several small lakes and ponds are located in this compartment.

Ownership Patterns, Development, and Land Use in and Around the Compartment: There are numerous private parcels in the vicinity along the Adams Truck Trail. The area is popular for a variety of recreational pursuits, including hunting, hiking, berry picking, etc.

Unique, Natural Features: The Kingston Plains feature large expanses of open grassland.

Archeological, Historical, and Cultural Features: None known.

Special Management Designations or Considerations: The red pine plantations in this compartment were planted under the auspice of the Kingston Plains Project (see Management Goals).

Watershed and Fisheries Considerations: Unknown. We had never done surveys or active management on either Fishhook or Clyde Lakes, and now they are managed by Escanaba (Manistique River watershed).

Wildlife Habitat Considerations: This compartment is located in the Grand Marias Sandy End Moraine Outwash sub-subsection. The average growing season is approximately 120 days. The extreme winter temperature generally reaches approximately -35^{o} F. Snowfall in this compartment averages 200 inches or more annually. The compartment falls within the Danaher Kingston Outwash Management Area which highlights the following Featured Species: Eastern bluebird, Kirtland's warbler, red crossbill, sharp-tailed grouse and spruce grouse. General Land Office (GLO) Surveyor notes indicate that most of this compartment was dominated by upland sandy soils. Throughout the compartment, the 1851 forest contained extensive amounts of white pine, hemlock, beech, balsam fir, red maple, yellow birch, and spruce. Lowlands associated with the few kettle lakes and drainages held tamarack, spruce and cedar with an understory of maple, mountain ash, hemlock, balsam fir, and beech. Beaver ponding probably occurred along the drainages, but fire and windthrow were likely the primary forms of natural disturbance. Logging and extensive slash fires have substantially altered the landscape in this area. Most of the organic material and vegetation in the eastern portion of the compartment were destroyed. In 1954, Forestry and Game management divisions entered into a plan for experimental reforestation projects on the Kingston Plains. That plan called for a wood production area, a game production area, and a control. Within the control,

vistas displaying the stump fields were maintained for scenic and historic purposes. The majority of the State land within this compartment lies within the game production portion of the plan. The primary wildlife habitat objective in this compartment is to maintain the open character of the landscape. Merlin (Michigan threatened), and sharp-tailed grouse (Michigan special concern) have been recorded in compartment. Other wildlife species of interest may include kestrel, Canada geese, short-tailed shrew, and short-tailed weasel.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. There is insufficient data to determine the glacial drift thickness. The Ordovician Prairie du Chien Group subcrops below the glacial drift. The PdC could be used for stone. There are not any gravel pits in the area and potential appears limited. There is no commercial oil and gas production in the UP.

Vehicle Access: Access from the Adams Truck Trail (just north of the compartment boundary) is excellent.

Survey Needs: None

Recreational Facilities and Opportunities: The Fox River Pathway runs through this compartment from northwest to southeast. Hunting, fishing, hiking, and snowmobiling are some recreational opportunities within this compartment.

Fire Protection: Access for fire protection is excellent.

Additional Compartment Information:

- **The following reports from the Inventory are attached:**
  - **Total Acres by Cover Type and Age Class**
  - **Proposed Treatment Summary**
  - **Proposed Treatments – No Limiting Factors**
  - **Proposed Treatments – With Limiting Factors**
  - **Stand Details (Forested and Nonforested)**
  - **Dedicated and Proposed Special Conservation Areas**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - **Base feature information, stand boundaries, cover types, and numbers**
  - **Proposed treatments**
  - **Details on the road access system**

Table 1 – Total Acres by Cover Type and Age Class

Shingleton Mgt. Unit **Compartment 141 Year of Entry 2014**

Jesse Bramer : Examiner

Age Class

	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 +	Uneven Age	Total
Bare/Sparsely Vegetated	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Bog	10	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
Herbaceous Openland	44	0	0	0	0	0	0	0	0	0	0	0	0	0	**44**
Jack Pine	0	0	3	12	0	0	0	0	0	0	0	0	0	0	**15**
Low-Density Trees	445	0	0	0	0	0	0	0	0	0	0	0	0	0	**445**
Lowland Conifers	0	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
Lowland Shrub	17	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Lowland Spruce/Fir	0	0	0	3	0	0	0	0	0	0	0	0	0	0	**3**
Mixed Upland Deciduous	0	0	4	8	0	0	0	0	0	0	0	0	0	0	**12**
Natural Mixed Pines	0	0	0	4	37	0	0	0	0	0	0	0	0	0	**42**
Paper Birch	0	0	0	0	0	2	0	0	0	0	0	0	0	0	**2**
Red Pine	0	0	0	0	0	37	0	0	0	0	0	0	0	0	**37**
Treed Bog	33	0	0	0	0	0	0	0	0	0	0	0	0	0	**33**
Upland Conifers	0	0	0	27	0	0	0	0	11	0	0	0	0	15	**53**
Upland Mixed Forest	0	0	9	0	35	0	0	0	0	0	0	0	0	0	**45**
Water	32	0	0	0	0	0	0	0	0	0	0	0	0	0	**32**
White Pine	0	0	0	0	0	0	15	0	0	0	0	0	0	57	**73**
Total	**586**	**0**	**21**	**54**	**73**	**39**	**15**	**0**	**11**	**0**	**0**	**0**	**0**	**72**	**872**

Table 2 – Proposed Treatment Summaries

Shingleton Mgt. Unit
Year of Entry 2014

Compartment 141
Total Compartment Acres: 871.8

Acres by Treatment Type

Commercial Harvest - 0	Site Prep - 0	Tree Planting - 52	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
	#Error	#Error	#Error	#Error	#Error	#Error	
Total	**#Error**	**#Error**	**#Error**	**#Error**	**#Error**	**#Error**	**#Error**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
9	41141009-Plant	8.0	42110 - Planted Red Pine	High Density Pole	58	111-140	Tree Planting	Hand Plant	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: FTP # C41-1210. Regenerate Red Pine using approved cultivation methods.

Other Comments: [06/01/09] Stand was trenched and red pine seedlings were underplanted.
[05/12/10] 1st year regeneration check indicates 71.7% survival. 1/3 of these are yellowing. Needs a 3rd year regeneration check in 2012.

Next Steps: May need additional planting.

Proposed Start Date: 08/10/2012

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12	NF_41141012-Plant	40.6	310 - Herbaceous Openland				Tree Planting	Machine Plant	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: FTP # C41-1208. Regenerate Red Pine using approved cultivation methods.

Other Comments: [06/01/09] Trenched and red pine seedlings planted.
[05/12/10] 1st year regeneration survey indicates 63.4% survival. Next check should be in 2012. May need additional planting.

Next Steps: Regeneration check after 1 year of planting.

Proposed Start Date: 03/16/2012

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
13	NF_41141013-Plant	3.4	310 - Herbaceous Openland				Tree Planting	Machine Plant	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: FTP # C41-1209. Regenerate Red Pine using approved cultivation methods.

Other Comments: [05/12/11] Stand was trenched and needs to be planted.

Next Steps: Check with TMS to make sure this will be done.

Proposed Start Date: 08/10/2012

Total Treatment Acreage Proposed: 52.0

Table 4 -- Treatments Prescribed with a Limiting Factor

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

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Error

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: **0**

Data updated before 10:00 AM

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2014

Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
41009014-Cut1	5.2	6120 - Lowland Cedar	High Density Pole	141		Harvest	Patch or Strip Clearcut	6120 - Lowland Cedar	Cmpt. Review Proposal - Incomplete

Prescription Specs: patch cut app. 5 acres, determined at time of prep

Other Comments:

Next Steps: Monitor according to work instructions.

Proposed Start Date: 10/01/2011

41044_OutOfYOE-Cut	0.9					Harvest	Crown Thinning	42210 - Natural Red Pine	Cmpt. Review Proposal - Incomplete

Prescription Specs: Mark red pine and white pine to 80 sq.ft. where densities are high enough. Cut all other species except hemlock, oak, and cedar.

Other Comments: Retention will be a portion of the red pine and white pine trees remaining.

Next Steps: Possible regeneration harvest next year of entry.

Proposed Start Date: 10/01/2013

41172002-Cut	4.4	4112 - Maple, Beech, Cherry Association	High Density Pole	49		Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Specs: Treatment=Thin stand down to 80 BA on average while putting in regen gaps to promote species diversity and Sugar Maple. Put stand up with adjacent hardwood in comp 169 in 2014.
MO=Un-even aged hardwoods with quality Sugar Maple stems
Retention=Residual BA

Other Comments:

Next Steps: Natural regen survey to follow harvest during the next inventory cycle.

Proposed Start Date: 10/01/2014

Total Treatment Acreage Proposed: 10.5

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4140 - Other Upland Deciduous	High Density Pole	2.3	50	51-80	This is a birch stand experiencing high rates of mortality and encroachment of shade tolerant tree species.
2	4191 - Mixed Upland Deciduous with Conifer	Medium Density	7.8	30		This is a semi-open stand that is filling in with upland tree species.
4	42290 - Natural Mixed Pine	High Density Pole	4.4	30	1-50	This is a white pine stand with red pine and a few deciduous tree species mixed in. Tree size is mostly in the pole-sapling sized class but larger diameter trees are present.
5	42110 - Planted Red Pine	High Density Pole	3.1	58	111-140	This is a red pine stand on the south side of Fish Hook Lake.
6	42110 - Planted Red Pine	High Density Pole	4.3	58	141-170	This is a red pine stand on the northwest side of Fish Hook Lake.
8	42110 - Planted Red Pine	High Density Pole	5.4	58	81-110	This is a red pine stand on the north and east sides of Fish Hook Lake.
9	42110 - Planted Red Pine	High Density Pole	8.0	58	111-140	Inventory notes from last entry year indicated that this stand was thinned under TS # 039-04 around 2007. Past comments also stated that the area was trenched and red pine seedlings were underplanted as directed by FTP # C41-1210. 1st year regeneration check in 2010 stated 71.7% survival, but 1/3 of them were yellowing. Needs 3 year check in 2012. During inventory there was snow on the ground making it difficult to find planted areas. Check this area in spring without snow fall to make sure this area was cultivated and that regeneration is sufficient.
11	4319 - Mixed Upland Forest	Low Density Sapling	9.1	25		This is a semi-open area that was previously a grassland but is now filling in with various upland tree species.
14	42110 - Planted Red Pine	High Density Log	8.3	58	111-140	This is a red pine stand of mostly log - pole trees on the north side of Clyde Lake. This stand was under contract TS# 41-039-04-01 around 2006. The stand was thinned to around 120 sq. ft. of basal area per acre. FTP# C41-1209 addressed hand planted of red pine in the areas where illegal ATV use is creating erosion problems.
15	42110 - Planted Red Pine	High Density Pole	4.3	58	51-80	The is a red pine stand of mostly pole-sized trees on the west side of Clyde Lake. This stand was under contract TS # 41-039-04-01 around 2006. The stand was thinned down to around 120 BA.
19	4191 - Mixed Upland Deciduous with Conifer	Low Density Sapling	3.9	25		This stand is mostly red maple stump sprouts with upland brush and scattered conifer trees.
21	42110 - Planted Red Pine	High Density Pole	3.5	58	171-200	This is a red pine stand of mostly pole-sized trees on the east side of Clyde Lake.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4319 - Mixed Upland Forest	High Density Pole	28.0	46	51-80	The tree composition and density within this stand is highly variable. There are pockets of conifer species and areas with little conifer in the overstory. The understory is also a mix of conifer and hardwood species.
25	42220 - Natural Jack Pine	Medium Density Pole	12.4	37	51-80	This is mainly natural jack pine with a small white pine component that is reclaiming previous open ground.
26	42200 - Natural White Pine	High Density Pole	11.0	65	81-110	This stand is a mix of species and age classes dominated by white pine and residual paper birch in the overstory. The understory is a mix of various conifers and red maple.
28	42200 - Natural White Pine	Medium Density Log	4.4	68	51-80	Semi-open area that is filling in with conifers and deciduous trees.
30	4319 - Mixed Upland Forest	High Density Pole	7.4	46		This stand is a hardwood stand of dominately red maple with white pine, hemlock, spruce, and balsam fir mixed in. The understory is a mix of conifer and hardwood species. This stand was not visited due to poor access during the winter. Re-visit this area when accessible.
32	6126 - Lowland Jack Pine	Low Density Sapling	3.1	20		This is a lowland area that may fill with water and become a pond at certain points. Jack pine is growing on the slightly higher ground around the low areas.
33	429 - Mixed Upland Conifers	Low Density Log	11.0	86	1-50	This stand was partially cut in the mid 1990'S under the TS # 049-91-01. Scattered log-sized white pine and a variety of smaller trees are present.
35	429 - Mixed Upland Conifers	Low Density Sapling	15.0	Uneven Age		This area was partially cut in the 1990's under the contract TS# 049-91-01. Scattered log-sized white pine and a variety of smaller trees are present. A wildfire occurred in this area as a result of a firestrike around 2009. Suppression efforts have left visible signs such as equipment trails, pushed down plant species, and trenches. The actual burn area was probably less than an acre.
37	42290 - Natural Mixed Pine	Low Density Pole	37.5	45	1-50	This is a semi-open stand with red and white pine and other upland tree species present. The understory is highly variable from open ground to deciduous saplings and shrubs.
38	6124 - Lowland Spruce-Fir	Low Density Sapling	4.6	25		This is a lowland stand of sapling sized spruce and fir.
39	42200 - Natural White Pine	Medium Density Log	26.5	Uneven Age	1-50	This stand was seed tree harvested under the contract TS# 41-001-05-01, Adam's Trail Mix around 2005. The stand was managed for white pine and hemlock.
41	429 - Mixed Upland Conifers	Low Density Pole	26.8	30	1-50	This is a semi-open area that is being filled in by various upland tree species.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	42200 - Natural White Pine	Medium Density Pole	30.9	Uneven Age	1-50	This stand was harvested around 2005 under TS # 001-05-01, Adams Trail Mix. White and red pine, hemlock, cedar, and some yellow birch were retained from the harvest and now dominate the canopy.
43	6122 - Black Spruce	High Density Sapling	2.7	30		This stand is a lowland bog type composed mainly of submerchantable spruce and other lowland conifer species.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	330 - Low-Density Trees	1.3	N\A	Unspecified	
7	50 - Water	19.9	N\A	Unspecified	
10	330 - Low-Density Trees	23.0	N\A	Unspecified	
12	310 - Herbaceous Openland	40.6	N\A	Unspecified	
13	310 - Herbaceous Openland	3.4	N\A	Unspecified	
16	330 - Low-Density Trees	9.8	N\A	Unspecified	
17	6225 - Bog	1.3	N\A	Unspecified	
18	50 - Water	7.5	N\A	Unspecified	
20	790 - Other Bare/Sparsely Vegetate	5.4	N\A	Unspecified	
22	6225 - Bog	6.3	N\A	Unspecified	
24	330 - Low-Density Trees	411.3	N\A	Unspecified	
27	50 - Water	4.6	N\A	Unspecified	
29	6229 - Mixed lowland shrub	4.6	N\A	Unspecified	
31	6229 - Mixed lowland shrub	12.1	N\A	Unspecified	
34	6225 - Bog	2.2	N\A	Unspecified	
36	6224 - Treed Bog	4.7	N\A	Unspecified	
40	6224 - Treed Bog	28.2	N\A	Unspecified	

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.

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.

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

Conservation Area	Type	Description

Cover Type & Treatment Map

Compartment: 141
T48N R15W Sec. 22, 27
County: Alger
Unit: Shingleton
YOE: 2014
Acres: 872 GIS Calculated
Examiner: Jesse Bramer
Map Revised: 09/12/2012
Map Phase: Pre-Review

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

Legend

- DNR Survey Corner
- DNR Field Survey Corner
- Remonumented Section Corners
- Miris Corners
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Hiking Trails
- Snowmobile Trails
- Hiking Trail
- Bike Trail
- Snowmobile Trail
- Stream
- Lakes and Rivers

Forest Stands
Level 3
- 414 - Other Upland Deciduous
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

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

1 4140-B6
2 4191-MD2
3 330-U0
4 4229-MC6
5 4211-R6
6 4211-R6
7 500-Z0
8 4211-R6
9 4211-R6
10 330-U0
11 4319-UM1
12 310-G0
13 310-G0
14 4211-R9
15 4211-R6
16 330-U0
17 622-V0
18 500-Z0
19 4191-MD1
20 790-X0
21 4211-R6
22 622-V0
23 4319-UM6
24 330-U0
25 4222-J5
26 4220-W6
27 500-Z0
28 4220-W8
29 622-L0
30 4319-UM6
31 622-L0
32 6126-J1
33 429-MC7
34 622-V0
35 429-MC1
36 622-D0
37 4229-MC4
38 6124-Q1
39 4220-W8
40 622-D0
41 429-MC4
42 4220-W5
43 6122-S3

22
27

Birch Lakes
Ewatt Lake
Fishhook Lake
Clyde Lake
Mallard Lake
Wise Lake
Weasel Lake
Little Fox River
Forwall Lake

County Road 723
County Road 725

86°10'0"W
86°9'0"W
86°8'0"W
46°33'0"N
46°32'0"N
46°31'0"N

N

DEPARTMENT OF NATURAL RESOURCES · MICHIGAN · DNR

1 0.5 0 1 Miles

Stand Boundary Map

Compartment: 141
T48N R15W Sec. 22, 27
County: Alger
Unit: Shingleton
YOE: 2014
Acres: 872 GIS Calculated
Examiner: Jesse Bramer
Map Revised: 09/12/2012
Map Phase: Pre-Review

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

Legend

- DNR Survey Corner
- DNR Field Survey Corner
- Remonumented Section Corners
- Miris Corners
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Hiking Trails
- Snowmobile Trails
- Hiking Trail
- Bike Trail
- Snowmobile Trail
- Stream
- Stand Boundaries

Forest Stands

Level 3

- 414 - Other Upland Deciduous
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
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Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 790 - Other Bare/Sparsely Vegetated

22

27

N

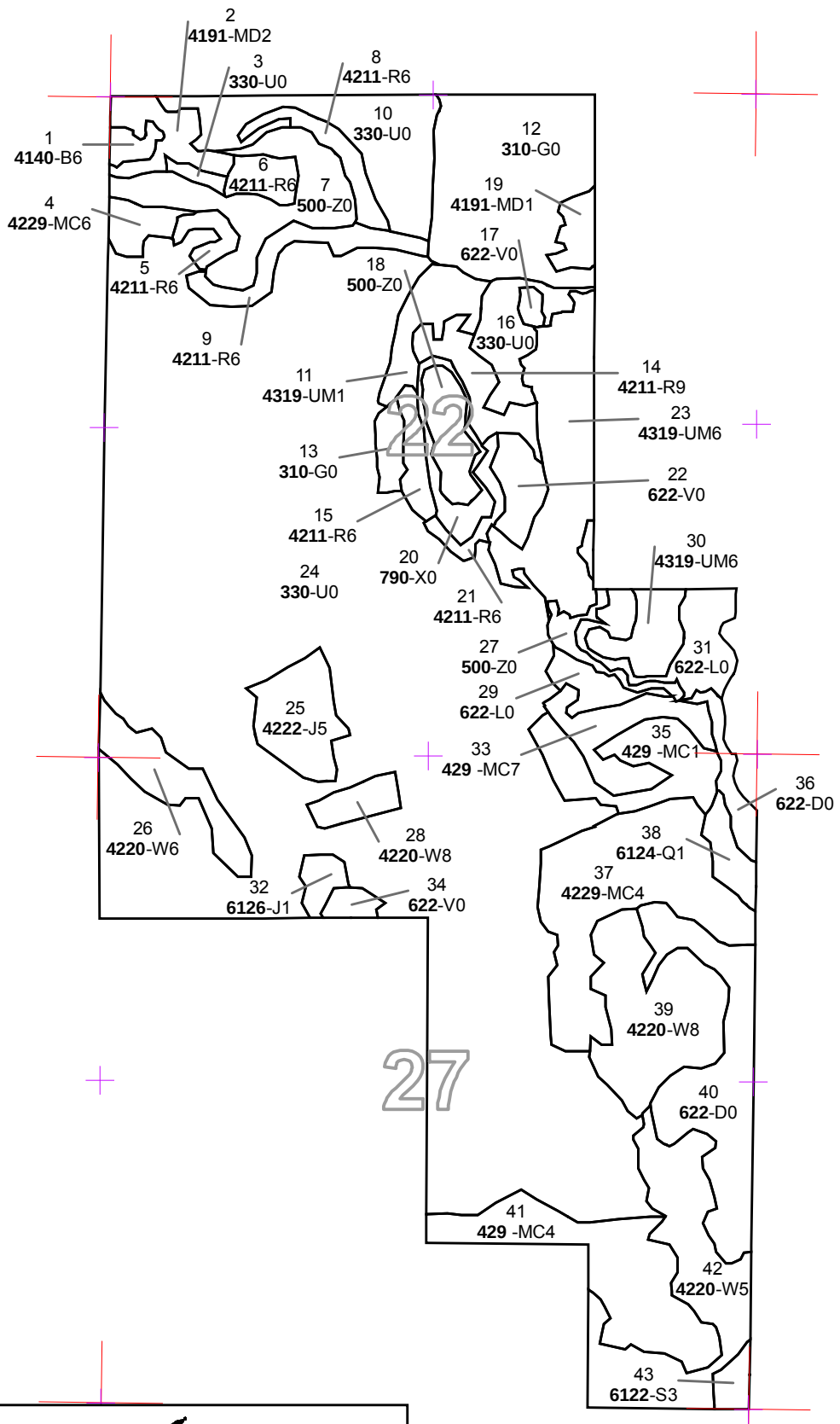
1 0.5 0 1 Miles

86°10'0"W 86°9'0"W 86°8'0"W 46°3'30"N 46°3'20"N 46°3'10"N

Dedicated & Proposed Special Conservation Area Map

Compartment: 141
T48N R15W Sec. 22, 27
County: Alger
Unit: Shingleton
YOE: 2014
Acres: 872 GIS Calculated
Examiner: Jesse Bramer
Map Revised: 09/12/2012
Map Phase: Pre-Review

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

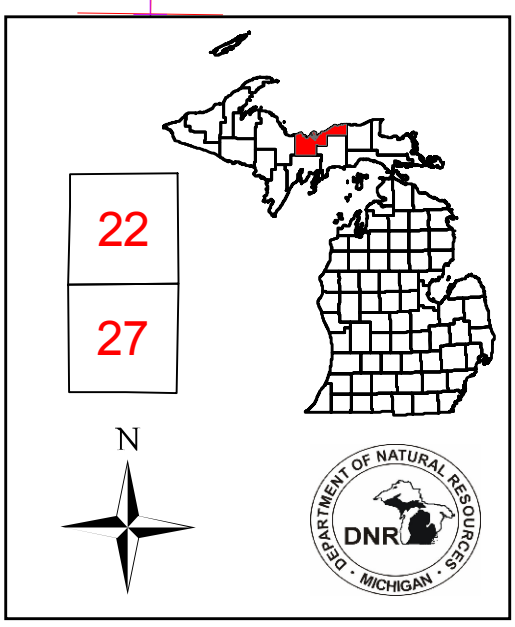


Legend
- Remonumented Section Corners
- Miris Corners
- Stand Boundaries

Forest Stands
Level 3
- 414 - Other Upland Deciduous
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

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

Dedicated Special Conservation Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Wildlife Management Areas



1 0.5 0 1 Miles

86°11'0"W 86°10'0"W 86°9'0"W 86°8'0"W
46°33'0"N 46°32'0"N 46°31'0"N