Shingleton Forest Management Unit
Compartment Review Presentation

Compartment # 92 **Entry Year: 2014**
Compartment Acreage: 1991 **County: Delta**

Revision Date: 8/13/2012

Stand Examiner: Tori Irving

Legal Description: T40N, R18W Sections 25, 26, 27 & 28

RMU (if applicable): Compartment 92 lies within the garden Thompson Plains Management Area.

Management Goals: Timber, wildlife, recreation, and fisheries are the main uses of this area. The goal is to manage for all uses simultaneously and to provide, enhance and perpetuate their uses through proper management. Proposed forest treatments will help ensure the sustainability of the forest resource and continue to enhance the quality of the wildlife habitat.

Soil and Topography: The topography within the compartment is flat to rolling. The soils are well drained sands on the uplands and organic soils on the lower ground. The entire compartment lies within the Thompson Plains Land Type Association. Soil types include: Rubicon Sand, Croswell Sand, Tawas Muck, AuGres Sand, Roscommon Mucky Sand, and Carbondale, Lupton, Rifle Sands.

Ownership Patterns, Development, and Land Use in and Around the Compartment: State ownership throughout the compartment is contiguous. The compartment is bordered by state ownership on the north and south and by private land on the east and west. There are two private parcels located in Section 25 that are surrounded by state land. The remaining private parcels are along the compartment borders. Most of the private land is used for hunting. A powerline runs through section 28. The line was recently brushed and widened to 100 feet to support the Garden Peninsula Wind Project. There is an old Township garbage dump in section 27 which has been closed for many years.

Unique, Natural Features: The area is currently under review by the Michigan Natural Features Inventory.

Archeological, Historical, and Cultural Features: There is an archeological site located within Section 27.

Special Management Designations or Considerations: None

Watershed and Fisheries Considerations: Unknown

Wildlife Habitat Considerations: This compartment is contained with the Escanaba/Door Peninsula ecological sub-subsection. The growing season is 140 days. Extreme minimum temperatures are around -35 degrees F. Annual average snowfall is70 inches. The compartment falls within the Garden Thompson Plains Management Area which highlights the following Featured Species: American woodcock, ruffed grouse, wild turkey and white-tailed deer. General Land Office (GLO) Surveyor notes show the circa 1850 upland forest were dominated by white birch, hemlock, and aspen. White pine, beech, and sugar maple were also present. Lowlands were dominated by cedar, tamarack and fir. Windthrow and fire remnants were noted across the compartment during the first survey. Beaver ponding was also likely a major form of natural disturbance. Current upland forests are substantially altered from pre-settlement conditions. White birch and hemlock has been reduced while aspen has increased. Lowlands are quite similar to conditions found circa

1850. The majority of the lowland conifer stands are nominated as potential old growth. Wildlife habitat objectives include promoting age-class diversity between aspen stands and maintaining closed canopy upland and lowland conifer stands. There are no known rare species within this compartment. Other wildlife species of interest that utilize this compartment include American toad, smooth green snake, red crossbill, brown creeper, deer mouse, northern flying squirrel.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel. The glacial drift thickness varies between 0 and 100 feet. The Silurian Manistique and Burnt Bluff Groups subcrop below the glacial drift. The Burnt Bluff is used for stone and was used for flux in iron making at Fayette. The nearest gravel pit is one-half mile to the southwest, but potential appears limited. There is no commercial oil and gas production in the UP.

Vehicle Access: The west side of the compartment can be accessed by Johnson Road. The Cooks-Garden Grade provides access to the east side. There are a few forest roads that provide access to the interior of the compartment.

Survey Needs: Corners will be needed in Sections 27 and 28 in order to conduct timber sale preparation and harvesting operations.

Recreational Facilities and Opportunities: Snowmobile Trail 415 which is also the cooks Garden Grade is within the Compartment. The trail once serviced the Village of Garden but was recently closed just south of the compartment due to the loss of permissions on private land. The trail is currently trying to be relocated in order to re-open access to Garden. There are several other recreational opportunities including hunting, fishing and ORV use. The abandoned roads offer excellent walk-in hunting opportunities.

Fire Protection: Response times to this area will be fairly quick with adequate detection efforts. The entire eastern portion of the compartment is fairly low which means low fire danger however, the soils in this area are mainly organic so if a fire was to occur suppression would be challenging. The western portion of the compartment is more upland but the fuel types are fairly low risk.

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**
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Table 1 – Total Acres by Cover Type and Age Class

Shingleton Mgt. Unit **Compartment 092 Year of Entry 2014**

Tori Irving : 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
Aspen	96	41	282	9	0	0	0	0	0	0	0	0	0	0	**428**
Cedar	0	0	0	0	0	0	0	0	77	10	137	13	0	0	**237**
Herbaceous Openland	15	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
Low-Density Trees	31	0	0	0	0	0	0	0	0	0	0	0	0	0	**31**
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	15	0	0	0	0	0	0	0	**15**
Lowland Conifers	0	0	7	0	0	0	0	209	29	87	66	0	0	0	**398**
Lowland Deciduous	0	5	0	0	0	0	0	0	13	0	0	0	0	0	**18**
Lowland Mixed Forest	0	0	0	0	0	0	0	25	0	24	97	0	0	0	**147**
Lowland Shrub	148	0	0	0	0	0	0	0	0	0	0	0	0	0	**148**
Lowland Spruce/Fir	0	0	0	0	0	0	0	9	0	0	0	0	0	0	**9**
Mixed Upland Deciduous	0	0	0	0	0	0	57	0	0	0	0	0	0	0	**57**
Northern Hardwood	0	0	0	0	0	0	16	19	24	0	0	0	0	0	**60**
Red Pine	0	0	0	0	0	92	10	21	17	0	0	0	0	0	**140**
Treed Bog	27	0	0	0	0	0	0	0	0	0	0	0	0	0	**27**
Upland Conifers	0	100	0	0	0	0	0	25	41	0	0	80	0	0	**246**
Upland Spruce/Fir	15	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
Total	**333**	**145**	**289**	**9**	**0**	**92**	**99**	**308**	**201**	**121**	**301**	**93**	**0**	**0**	**1991**

Table 2 – Proposed Treatment Summaries

Shingleton Mgt. Unit
Year of Entry 2014

Compartment 092
Total Compartment Acres: 1991

Acres by Treatment Type

Commercial Harvest - 196	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 57	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Mixed Upland Deciduous	0	57	0	0	0	0	**57**
Northern Hardwood	0	24	0	0	0	0	**24**
Red Pine	0	0	38	0	92	0	**130**
Upland Conifers	0	41	0	0	0	0	**41**
Total	**0**	**123**	**38**	**0**	**92**	**0**	**253**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
8	41092008-Cut	24.4	4112 - Maple, Beech, Cherry Association	High Density Log	86	81-110	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Thin stand to 70-80 BA and create good sized regeneration gaps in the canopy, especially around the advanced regeneration. Leave the oak and hemlock. Mark the beech according to the current BBD guidelines. Some of the areas have beech bark disease. If resistant trees are found, mark to leave. Also, leave some large mast producing beech with evidence of bear activity if they exist.

Other Comments:

Next Steps: Monitor stand for regeneration. Acceptable regeneration mix includes species that are represented in the canopy.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
9	41092009-Cut	12.6	42210 - Natural Red Pine	High Density Log	86	81-110	Harvest	Seed Tree with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal

Prescription Specs: Target residual BA 20-30. Exclude the hemlock pockets in the northern part of the stand with the red line. Leave the oak and hemlock.

Other Comments: Regeneration is too advanced for cultivation work.

Next Steps: Monitor the regeneration. Acceptable regeneration is defined by the current cover type.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
11	41092011-Cut	41.2	429 - Mixed Upland Conifers	High Density Pole	88	111-140	Harvest	Single Tree Selection	429 - Mixed Upland Conifers	Cmpt. Review Proposal

Prescription Specs: Mark paths (wide enough for logging equipment) through the stand to get to the harvestable pine. All species in the paths with be marked to cut, with the exception of hemlock, which will only be cut if needed.

Other Comments:

Next Steps: Monitor for regeneration. Acceptable regneration mix includes current canopy species with a dominant component of hemlock.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12	41092012-Cut	4.5	42210 - Natural Red Pine	High Density Log	86	111-140	Harvest	Seed Tree with Reserves	42210 - Natural Red Pine	Cmpt. Review Proposal

Prescription Specs: Harvest the stand. Target residual BA 10-20. Leave any oak and hemlock.

Other Comments:

Next Steps: Scarify after harvest is complete. If scarification fails, trench and plant red pine. Monitor for regeneration. Acceptable regeneration mix is a larger component of red pine and a small component of other current canopy species.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
19	41092019-Cut	92.1	42110 - Planted Red Pine	High Density Pole	50	111-140	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Cut every third or fourth row. Avoid oak if possible.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
20	41092020-Cut	20.8	42210 - Natural Red Pine	High Density Log	75	81-110	Harvest	Seed Tree with Reserves	42210 - Natural Red Pine	Cmpt. Review Proposal

Prescription Specs: Harvest all species in the stand. Leave red pine at a residual BA of 10-20. Do not cut oak.

Other Comments:

Next Steps: Scarify the site after harvesting is complete. Continue to monitor regeneration. If the site fails to regenerate, trench and plant red pine.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
21	41092021_tracks-Cut	57.2	4199 - Other Mixed Upland Deciduous	High Density Pole	64	111-140	Harvest	Single Tree Selection	4121 - Oak, Aspen	Cmpt. Review Proposal

Prescription Specs: Remove all aspen and birch from the stand. Mark some of the red pine, white pine, and maple. Residual BA 70-80 in the northern part of the stand. Mark the southern end heavier (Residual BA of 40-50). Create good quality canopy gaps around the advanced oak regeneration and throughout the stand. Include the regeneration protection spec the timber sale to protect the advanced oak regeneration.

Other Comments: When determining payment units in the sale, the southern half is heavier to aspen and the central and northern part is heavier to oak. Make the split between the two.

Next Steps: Monitor for regeneration. Acceptable species mix includes current canopy species.

Proposed Start Date: 10/01/2013

Total Treatment Acreage Proposed: 252.8

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	6128 - Lowland Coniferous, Mixed Deciduous	High Density Sapling	6.6	92		Limiting factored during the last entry period: Potential or designated old growith, Influence zone.
2	4130 - Aspen	High Density Sapling	19.1	7		Sale was cut as part of sale # 41-022-04-01 Valentine's Aspen. Sale was cut in the fall of 2005. TSI work was done under FTP W41-1186 and was completed and closed on 4/5/06.
3	4134 - Aspen, Spruce/Fir	High Density Sapling	2.3	22		
5	4130 - Aspen	High Density Pole	9.1	33		
6	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	17.5	92		Stand was factor lmited in the last entry year for potential or designated old growth and influene zones.
7	4130 - Aspen	High Density Sapling	20.1	22		
8	4112 - Maple, Beech, Cherry Association	High Density Log	24.4	86	81-110	Stand is almost two-aged. There are a lot of poles and saplings in the understory. There are scattered hemlock pockets. BA swings: 1) RM 70, BEE 10, SM 10 2) RM 50, HEM 10, BEE 30, SM 10 3) RM 20, SM 90, RO 20
9	42210 - Natural Red Pine	High Density Log	12.5	86	81-110	There is a lot of good hemlock regeneration in the stand. There are some XLog sized red oak and hemlock trees in the stand. BA Swings by Species: 1) RP 60, PB 20, WP 10; 2) RP 110, WP 10, Hem 10; 3) RP 80, WP 10, Hem 10
10	4136 - Aspen, Mixed Conifer	High Density Pole	88.0	28		Southern part of stand was cut in 1984.
11	429 - Mixed Upland Conifers	High Density Pole	41.2	88	111-140	
12	42210 - Natural Red Pine	High Density Log	4.5	86	111-140	
14	4136 - Aspen, Mixed Conifer	High Density Sapling	27.5	13		Residual cedar, hemlock, white birch, and red pine are scattered through the site.
15	4136 - Aspen, Mixed Conifer	Medium Density Pole	49.9	21	1-50	Canopy is on the lower end of the 75-100% cnopy cover. There are some scattered open spots.
17	4136 - Aspen, Mixed Conifer	High Density Sapling	26.0	6		Stand was harvested as part of Valentine's Aspen (41-022-04-01). Stand was cut in the winter of 2006. The northern half of the stand had a Q-type MO in the OI. Currently, the stand is fully stocked aspen. The northern half of the stand has some Q-species regenerating but it was too early to check. The stand will remain on the regeneration clock until the next entry.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	6120 - Lowland Cedar	High Density Pole	12.6	110		Part of the stand was strip cut.
19	42110 - Planted Red Pine	High Density Pole	92.1	50	111-140	
20	42210 - Natural Red Pine	High Density Log	20.8	75	81-110	
21	4199 - Other Mixed Upland Deciduous	High Density Pole	57.3	64	111-140	Additional BA Swings: 1) RO-20', RP-30', ASP-60', PB-20' 2) RO- 20', ASP-90'
22	6129 - Mixed Coniferous Lowland Forest	High Density Pole	28.6	86		
23	4136 - Aspen, Mixed Conifer	High Density Pole	56.4	22		There are patches of conifers scattered through the stand.
24	429 - Mixed Upland Conifers	High Density Log	25.2	73	81-110	
25	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	62.9	95		Stand was factor limited last entry year: Inferior quality, deer yard.
26	42210 - Natural Red Pine	High Density Log	10.2	68	81-110	Stand was cut as a part of sale #41-022-04-01 Valentine's Aspen. Sale was completed in the fall of the 2005.
27	4130 - Aspen	Medium Density Pole	23.6	22		Other canopy species include JP and RO but are not enough to be a part of canopy species.
28	4130 - Aspen	High Density Log	13.3	15		
30	4130 - Aspen	High Density Sapling	51.3	6		Stand was cut in the fall of 2005. Sale #41-022-04-01 Valentines Aspen.
31	6120 - Lowland Cedar	High Density Pole	9.7	90		Stand was factor limited during the last entry period: Too wet, Water quality/bmps.
32	429 - Mixed Upland Conifers	Low Density Sapling	99.6	15	1-50	This stand passed the regeneration walk through and has been closed on the regeneration timeclock.
33	6139 - Mixed Lowland Forest	Low Density Pole	25.0	72		Stand borders on non-productive, the understory is mainly tag alder. The fir is about 60 years old and the cedar is 100 years old.
35	4112 - Maple, Beech, Cherry Association	Low Density Pole	19.0	70	51-80	Stand was cut as sale #41-014-04-01 Garden Grade Split. Sale was complete in 2007. Inmates planted 4,000 white pine in 2009. This stand passed the regeneration walk through and has been closed on the regeneration timeclock.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	6122 - Black Spruce	High Density Pole	8.7	73		
37	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	147.3	72		
38	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	61.5	72		
39	42320 - Upland Spruce	Low Density Sapling	15.1	5		Stand cut as part of Sale # 41-014-04-01. Sale was closed in 2007.
40	4112 - Maple, Beech, Cherry Association	Low Density Log	16.4	60	1-50	Stand was cut as sale #41-014-04-01 Garden Grade Split. Sale was complete in 2007. Inmates planted 4,000 white pine in 2009. There is a good area of the retention in the center of the stand. This stand passed the regeneration walk through and has been closed on the regeneration timeclock.
41	42390 - Mixed Non-Pine Upland Conifers	High Density Pole	80.2	110		Stand was factor limited in the last entry year, potential or designated old growth.
42	4134 - Aspen, Spruce/Fir	High Density Sapling	14.4	27		Stand was cut in 1985.
43	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	13.0	86	81-110	Part of this stand was limiting factored for designated potential old growth and influence zones during the last entry year.
45	4134 - Aspen, Spruce/Fir	High Density Sapling	5.0	27		Stand was cut in 1985.
46	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	66.4	106		Stand was desiganted as potential old growth in the last entry year.
48	6128 - Lowland Coniferous, Mixed Deciduous	High Density Sapling	7.4	27		Stand was listed as potential old growth last entry year.
49	4130 - Aspen	High Density Sapling	21.9	29		
50	6120 - Lowland Cedar	High Density Pole	62.1	86		
51	6112 - Lowland Aspen	High Density Pole	15.0	64		
52	6120 - Lowland Cedar	High Density Log	137.4	106		This stand was listed as potential old growth during the last entry year.
54	6132 - Mixed Lowland Forest with Cedar	High Density Pole	19.5	95	51-80	Stand was factor limited for potential or designated old growth.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
55	6132 - Mixed Lowland Forest with Cedar	High Density Pole	97.4	109		Stand was listed as potential old growth last entry year.
56	6120 - Lowland Cedar	High Density Pole	15.1	86		
58	6131 - Hemlock, White Pine, Maple, Birch	High Density Log	4.6	95	81-110	Stand was listed as potential old growth.
62	6117 - Lowland Deciduous, Mixed Coniferous	High Density Sapling	5.1	15		Stand was cut in 1997.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
4	310 - Herbaceous Openland	6.2	No	Unspecified	
13	310 - Herbaceous Openland	3.0	No	Unspecified	
16	6229 - Mixed lowland shrub	11.7	No	Unspecified	
29	622 - Lowland Shrub	7.0	N\A	Unspecified	
34	622 - Lowland Shrub	3.0	N\A	Unspecified	
44	310 - Herbaceous Openland	6.2	N\A	Unspecified	
47	6229 - Mixed lowland shrub	13.1	N\A	Unspecified	
53	6229 - Mixed lowland shrub	32.9	No	Unspecified	
57	3302 - Low Density Conifer Trees	30.8	Natural Regen	Upland Spruce/Fir	Stand was cut as part of Garden Grade Split. Sale number 41-014-04-01. Sale was colsed in 2007. Stand was checked for regeneration in 2012. Stand is regenerating but was checked too early. The stand should be checked again during the next inventory cycle. The stand is on the regeneration timeclock under the OI stand number 57.
59	6224 - Treed Bog	27.1	No	Unspecified	
60	622 - Lowland Shrub	74.2	N\A	Unspecified	
61	6229 - Mixed lowland shrub	6.2	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
multiple - see	**SCA Removal**	41092_SCARemoval	557.4	Area does not meet current old growth criteria.

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.

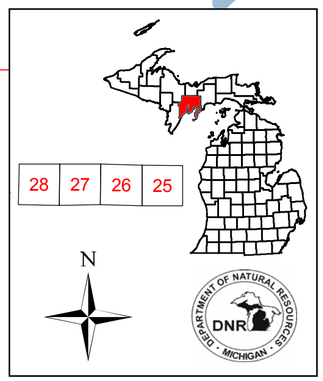
ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

Conservation Area	Type	Description

Cover Type & Treatment Map

Compartment: 092
T40N R18W Sec. 25 26 27 28
County: Delta
Unit: Shingleton
YOE: 2014
Acres: 1,991 GIS Calculated
Examiner: Tori Irving
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



Halfway Lake
Garden Grade Rd
20th Ln
19.5 Ln
N 25
18.5 Ln

1 6128-Q3
2 4130-A3
3 4134-A3
4 310-G0
5 4130-A6
6 6128-Q6
7 4130-A3
8 4112-M9
9 4221-R9
10 4136-A6
11 429 -MC6
12 4221-R9
13 310-G0
14 4136-A3
15 4136-A5
16 622-L0
17 4136-A3
18 6120-C6
19 4211-R6
20 4221-R9
21 4199-MD6
22 6129-Q6
23 4136-A6
24 429 -MC9
25 6128-Q6
26 4221-R9
27 4130-A5
28 4130-A9
29 622-L0
30 4130-A3
31 6120-C6
32 429 -MC1
33 6139-LM4
34 622-L0
35 4112-M4
36 6122-S6
37 6128-Q9
38 6128-Q6
39 4232-F1
40 4112-M7
41 4239-MC6
42 4134-A3
43 6117-E6
44 310-G0
45 4134-A3
46 6128-Q6
47 622-L0
48 6128-Q3
49 4130-A3
50 6120-C6
51 6112-P6
52 6120-C9
53 622-L0
54 6132-LM6
55 6132-LM6
56 6120-C6
57 330-U0
58 6131-LM9
59 622-D0
60 622-L0
61 622-L0
62 6117-E3

28 27 26 25

1 0.5 0 1 Miles

Legend

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

Treatments

- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)

Forest Stands
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands
Level 3

- 310 - Herbaceous Openland
- 622 - Lowland Shrub

86°33'0"W 86°32'0"W 86°31'0"W 86°30'0"W 86°29'0"W 86°28'0"W 86°27'0"W
45°51'0"N 45°50'0"N 45°49'0"N 45°48'0"N

Stand Boundary Map

Compartment: 092
T40N R18W Sec. 25 26 27 28
County: Delta
Unit: Shingleton
YOE: 2014
Acres: 1,991 GIS Calculated
Examiner: Tori Irving
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

28 27 26 25

N

DEPARTMENT OF NATURAL RESOURCES · MICHIGAN · DNR

Halfway Lake

20th Ln
19.5 Ln
18.5 Ln
N 25
RR 75 Rd

1 0.5 0 1 Miles

Legend

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

Forest Stands
Level 3
411 - Northern Hardwood
413 - Aspen Types
419 - Mixed Upland Deciduous
421 - Planted Pines
422 - Natural Pines
423 - Other Upland Conifers
429 - Mixed Upland Conifers
611 - Lowland Deciduous Forest
612 - Lowland Coniferous Forest
613 - Lowland Mixed Forest

Non-Forest Stands
Level 3
310 - Herbaceous Openland
622 - Lowland Shrub

Dedicated & Proposed Special Conservation Area Map

Compartment: 092
T40N R18W Sec. 25 26 27 28
County: Delta
Unit: Shingleton
YOE: 2014
Acres: 1,991 GIS Calculated
Examiner: Tori Irving
Map Revised: 09/12/2012
Map Phase: Pre-Review

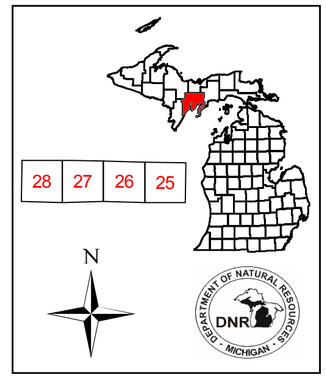
Stand # 23
Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code

Legend
- Remonumented Section Corners
- Miris Corners
- Stand Boundaries

Forest Stands
Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands
Level 3
- 310 - Herbaceous Openland
- 622 - Lowland Shrub

Proposed Special Conservation Areas
- SCA - Special Conservation Area
- SCA Removal



1 0.5 0 1 Miles