



**SHINGLETON FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 006 ENTRY YEAR: 2009

Compartment Acreage: 1175 County: Schoolcraft

Revision Date: 11/19/07

Stand Examiner: K. Matson

Legal Description: T45N, R13W, Sec. 25-28, 35

RMU (if applicable):

Management Goals: To provide sustainable forest eco-system management.

Soil and Topography: There is a wide variety of soil types within the compartment. The soil type for the majority of the upland is Neconish-Wainola-Kinross Complex 0-6% slopes, and the soil type for the majority of the lowlands is Dawson, Greenwood and Loxley soils.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The Seney National Wildlife Refuge borders the west side of the compartment; the south and east sides are bordered by privately owned land, and the north side of the compartment is mainly bordered by state owned land.

Unique, Natural Features (include only non-site specific and non-sensitive information): Currently under review by Michigan Natural Features Inventory (MNFI).

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):

Special Management Designations or Considerations: HCVA - Fox River

Watershed and Fisheries Considerations: This compartment has the Manistique River, Holland Ditch, and Holland Creek flowing through it. The Manistique River is classified as a non-trout water. The fisheries community consists of walleye, smallmouth bass, northern pike, sunfish, yellow perch, sucker spp., and minnow spp. Standard BMP's should be implemented to control sediment sources from adjacent uplands. Fine sediments such as silt and sand negatively affect natural reproduction of fish, decrease the diversity of aquatic invertebrate and fish taxa, and result in lower overall fish populations.

Wildlife Habitat Considerations: This compartment lies east of M-77 and north of Ten Curves Road. The Manistique River is the dominant feature coursing through the southeast portion of the compartment. Pre-settlement data indicates that the upland forest contained a mix of hemlock, white pine, and jack pine with lesser amounts of sugar maple, beech, basswood, and aspen. Lowland forests contained primarily black spruce and tamarack with smaller amounts of cedar and elm.

The current lowland forest contains basically the same species composition as the circa 1850 forest. The uplands show a significant increase in red pine and aspen.

The wildlife habitat management regime consists of facilitating the expansion of hemlock within the compartment, providing age and structural diversity within the aspen community, promoting naturally structured upland conifer stands and increasing hard mast availability.

Mineral Resource and Development Concerns and/or Restrictions:

Surface sediments consist of lacustrine (lake) sand and gravel, coarse-textured till and peat and muck. The glacial drift thickness varies between 10 and 100 feet. The Silurian Manitoulin Dolomite and Ordovician Queenston Shale and Big Hill Dolomite subcrop below the glacial drift. The Manitoulin and Big Hill could be used for stone. Gravel pits are not found in the general area and potential appears to be limited. There is no commercial oil and gas production in the UP.

Vehicle Access: A portion of the compartment is not accessible by vehicle, due to lack of bridges.

Survey Needs: Much of the proposed cutting cannot be completed without survey.

Recreational Facilities and Opportunities: There are no DNR recreational facilities within the compartment; but the area is heavily used for hunting.

Fire Protection: Portions of Sections 26 and 27 of this compartment lie within the Fox River Zone Dispatch Area. Lack of bridges makes access to fires in the east part of the compartment difficult.

Additional Compartment Information:

- **The following 5 reports from the Operations Inventory System (OIPC) are attached:**
 - ◆ **Cover Type by Age Class**
 - ◆ **Cover Type by Management Objective**
 - ◆ **Compartment Volume Summary**
 - ◆ **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**
 - ◆ **Proposed treatments**
 - ◆ **Proposed road access system**
 - ◆ **Suggested potential old growth**

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Michigan Department of Natural Resources - Operations Inventory System
Individual Compartment Report

LAKE SUPERIOR STATE FOREST

SHINGLETON FOREST AREA

SCHOOLCRAFT COUNTY

COMPARTMENT: 6

Table 3

(acres shown in boxes)

STAND AGE CLASS

COVER TYPE	Not Coded	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	150-159	All Aged	Total
Aspen			93	26	14	15	5	40											193
Black Spruce					53	20	2	103	34										212
Bog or Marsh	149																		149
Cedar									12										12
Grass	2																		2
Hemlock									3	13	14								30
Jack Pine			12		11	47	14	27											111
Lowlnd Brush	2																		2
Mx Swmp Cnfr						21	105	24											150
Non Stocked	7																		7
Red Pine							7	36	67	27									137
Spruce Fir							41												41
Swamp Hrdwds							8												8
Tamarack					3	32	2												37
Upland Brush	1																		1
Upland Hdwds							23	18										13	54
Water	29																		29
Total	190		105	26	81	135	207	248	116	40	14							13	1175

LAKE SUPERIOR STATE FOREST

SHINGLETON FOREST AREA

SCHOOLCRAFT COUNTY

COMPARTMENT: 6

Table 3A

(acres shown in boxes)

MANAGEMENT OBJECTIVE TYPE

COVER TYPE	A	S	V	C	G	H	J	I	L	P	N	Q	X	O	B	R	K	Y	F	E	T	D	U	M	Z	W	Total	
A Aspen	193																										193	
S Black Spruce		212																										212
V Bog or Marsh			149																									149
C Cedar				12																								12
G Grass					2																							2
H Hemlock						30																						30
J Jack Pine							111																					111
L LowInd Brush									2																			2
Q Mx Swmp Cnfr												150																150
X Non Stocked													7															7
R Red Pine															137													137
F Spruce Fir																		41										41
E Swamp Hrdwds																			8									8
T Tamarack																					37							37
U Upland Brush																								1				1
M Upland Hdwds	18																								36			54
Z Water																										29		29
Total	211	212	149	12	2	30	111		2			150	7		137			41	8	37			1	36	29		1175	

LAKE SUPERIOR STATE FOREST

SHINGLETON FOREST AREA

SCHOOLCRAFT COUNTY

COMPARTMENT: 6

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	4020 Cds	Hardwood	1986 Cds
Hardwood	55 Mbf	Hardwood	26 Mbf
Softwood	8110 Cds	Softwood	4214 Cds
Softwood	731 Mbf	Softwood	227 Mbf
Sum TotVol	13702 Cds	Sum CutVol	6706 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	346
1175			

SHINGLETON FOREST AREA

Proposed Treatments
With NO Limiting Factors

Compartment: 6

Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status	
28	A6	6	47	60	aspen (upland)	mature	final harvest	1	natural regeneration		
comnts Fmd : Adjacent to 10 Curves Rd. There is an old trail road into the stand. Mix of larger aspen and smaller conifers. Cut all trees except Cedar and Hemlock. In order to maintain this as an Aspen stand, no other trees will be left as retention. TSI where applicable. Aspen with a mix of conifers, similar to the current species mix, will be acceptable for regeneration. Soil=Finch-Spot Complex 0-3% slopes											
30	A6	20	62	55	aspen (upland)	mature	final harvest	1	natural regeneration		
comnts Fmd : A mix of large Aspen and smaller conifers. Cut all trees except Cedar and Hemlock. In order to maintain this as an Aspen stand, no other trees will be left as retention. TSI where applicable. Aspen with a mix of conifers similar to the current species mix will be acceptable for regeneration. Soil=Finch-Spot complex 0-3% slopes											
34	J6	2	54	50	jack pine	mature	final harvest	1	natural regeneration		
comnts Fmd : Cut all trees except white pine, red pine, oak, hemlock and cedar. Near Holland Ditch; follow BMP guidelines for buffer width (stand 39). The Holland Ditch buffer, in combination with the leave trees, will be used to satisfy the retention guidelines. Scarify or plant to regenerate jack pine; jack pine with a combination of other species currently on site would be acceptable regeneration. Soil=Neconish-Kinross-Wainola Complex 0-6% slopes											
44	A5	9	46	62	aspen (upland)	mature	final harvest	1			
comnts Fmd : This stand contains a large variety of tree species. Cut all trees except w.pine, r.pine, hemlock, oak and cedar. Follow BMP guidelines for Holland Ditch buffer (stand 39). The Holland Ditch buffer, in combination with the leave trees, will be used to satisfy the retention guidelines. Aspen with a combination of species currently on site is acceptable for regeneration. 91=cherry, r.pine, w.pine, b.fir, r.maple soil=Neconish-Kinross-Wainola Complex 0-6% slopes											
45	J6	4	52	50	jack pine	mature	final harvest	1	natural regeneration		
comnts Fmd : Cut all trees except r.pine, w.pine, oak, hemlock and cedar. Near Holland Ditch; follow BMP guidelines for buffer width (stand 39). The Holland Ditch buffer, in combination with the leave trees, will be used to satisfy the retention guidelines. Scarify or plant to regenerate jack pine; jack pine with a species mix similar to that currently on site is acceptable regeneration. soil=Neconish-Kinross-Wainola Complex 0-6% slopes											
46	S6	23	59	50	black spruce-swamp	mature	final harvest	2			
comnts Fmd : Mix of b.spruce, j.pine and tamarack with r.pine on higher ground. Cut all trees except Hemlock. May leave some red and white pine, and any other trees needed for retention. Cut with C. 005 s. 16 to the north. Most of the spruce regeneration is 1-3"DBH. Spruce with a mix of tree species similar to that currently on site is acceptable for regeneration. soil=Neconish-Kinross-Wainola Complex 0-6% slopes											
61	J6	22	64	50	jack pine	mature	final harvest	1	natural regeneration		
comnts Fmd : Partially visible from M-77. Cut all trees except r.pine, w.pine, hemlock, cedar and oak. Retention guidelines will be met by a combination of leave trees, and an irregularly shaped buffer along the marsh edge (stand 6). Jack pine with b.spruce similar to the current species mix is acceptable for regeneration. soil=Neconish-Kinross-Wainola Complex 0-6% slopes and Finch-Spot Complex 0-3% slopes Wld : WLD agrees with FMFMs prescription.											
62	S6	24	62	49	black spruce-swamp	mature	final harvest	1			
comnts Fmd : Cut all trees except r.pine, w.pine, hemlock, cedar and oak. Retention guidelines will be met by a combination of leave trees, and an irregularly shaped buffer along the marsh edge (stand 59). Adjacent to private property (to south), a survey request has been filed. Spruce with a mix of species similar to that currently on site will be acceptable for regeneration. 35=r.pine, w.pine soil=Neconish-Kinross-Wainola Complex 0-6% slopes and Markey Mucky Peat Wld : WLD agrees with FMFMs prescription											
63	J5	8	52	57	jack pine	mature	final harvest	1	natural regeneration		
comnts Fmd : Cut all trees except w.pine, r.pine, hemlock, cedar, oak, and any other trees needed for retention. Higher ground than adjacent stand 62. Jack Pine is the preferred species for regeneration, but inclusions of the other species presently on site will be considered acceptable. soil=Neconish-Kinross-Wainola Complex 0-6% slopes & Markey Mucky Peat Wld : This stand types out as PVE habitat. WLD agrees with FMFMs prescription. In addition, WLD and FMFM have agreed to underplant oak after the cutting is completed.											
Total Acres.....		118									

SHINGLETON FOREST AREA

Proposed Treatments
With Limiting Factors

Compartment: 6

Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
2	F6	13	57	50	spruce-fir (uplands-including upland black spruce)	mature	final harvest	2		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate) Land survey needed										
comnts Fmd : Conifer/hardwood mix on slightly higher ground. Cut all trees except cedar and hemlock. May also leave some red and white pine, and anything else necessary until retention is met. Difficult access: need a bridge over Holland Creek, or a road through private. East property line was put in by private surveyor; accuracy is unknown. Treat with C005 s 20 to the north. Regeneration of the same species mix is acceptable. Soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes habitat type=PVE										
5	S6	24	67	46	black spruce-swamp	mature	final harvest	2		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate)										
comnts Fmd : Cut all trees except cedar & hemlock. May leave some red and white pine. Place retention areas near leave trees and bogs. Spruce is the preferred regeneration species, but a mix of species similar to that currently on site is acceptable. Difficult access: needs bridge across Holland Creek, or road through private. Treat with C005 s 20 to the north. 35=red and white pine soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes; and 37 Dawson, Greenwood and Loxley soils										
8	R9	27	82	52	red pine	mature	shelterwood-prep	2		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate)										
comnts Fmd : Higher ground with a mix of red and white pine, lower ground contains more spruce. Mark red and white pine to 50-80 BA, cutting all other trees except hemlock and other trees needed for retention. Difficult access: needs a bridge over Holland Creek, or a road through private property. Treat with C005 s.20 to the north. Soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes										
Wld : This stand types out as a PVE habitat. WLD agrees with FMFM comments and prescription.										
12	M6	18	62	50	aspen (upland)	mature	final harvest	2		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate) Land survey needed										
comnts Fmd : Manage for mixed aspen; cut all trees except for Hemlock. Put retention areas near Hemlock and bogs. Mark some paper birch and white pine for retention, or incorporate into retention areas. East blue line was put in by private surveyor and accuracy is unknown. Difficult access: need bridge over Holland Creek or road through private. Regeneration of the same species mix is acceptable. 98=white pine, b.spruce, hemlock soil=525B Neconish-Wainola-Kinross complex 0-6% slopes										
Wld : This stand types out as a PArVAa habitat. In agreement with FMFM, retain some white birch and large white pine. Do not cut hemlock.										
13	S6	23	67	48	black spruce-swamp	mature	final harvest	2		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate) Land survey needed										
comnts Fmd : Cut all trees except hemlock. Leave some scattered red and white pine. Put retention areas near Hemlock, pine, and bogs. Manage for spruce; though regeneration of the same species mix currently on site will be acceptable. Difficult access: need bridge across Holland creek, or road through private. Adjacent to private property; survey needed. 98=white pine, cedar soil=525B Neconish-Wainola-Kinross Comple 0-6% slopes and 36 Carbondale, Lupton & Tawas soils										
14	Q6	12	67	48	mixed swamp conifer	mature	final harvest	2		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate) Land survey needed										
comnts Fmd : Cut all trees except cedar and hemlock. Put retention areas near Hemlock and cedar. Difficult access: bridge needed across Holland creek, or road through private. Adjacent to private property; survey needed. Regeneration of the same species mix is acceptable. Soil=36 Carbondale, Lupton and Tawas soils										
Wld : This stand types out as a PArVAa habitat. In agreement with FMFM, do not cut cedar or hemlock.										

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
15	M6	17	57	50	northern hardwood	immature	thinning	2	planting	
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate) Land survey needed										
comnts Fmd : Mark to 70-80 BA, making regeneration holes 1-2 times the tree height to favor cherry, yellow birch and hemlock regeneration. Do not mark trees around vernal ponds. Use BMP guidelines near the Manistique River. See WL comments for additional instructions. Difficult access: bridge across Holland Creek needed, or a road through private land far to the north. There is an old road through the stand. The east property line was put in by private surveyor; accuracy unknown. 98=b.fir, hemlock, white pine soil=34B Liminga Fine Sand 0-6% slopes and 34E 15-35% slopes										
Wld : This stand types out as an ATRD habitat. WLD and FMFMD have agreed to the following: 1.Hemlock will not be cut during the thinning of this stand. 2. Regeneration holes will be created in a manner that facilitates regeneration of Cherry. 3. The stand will be cut in a manner that promotes size class and species diversity. And 4. Hemlock will be underplanted after the cutting is completed. Also, there is a stick nest (FMFM has GPS coordinates) that may well be part of the territory of an active Goshawk pair currently nesting in stand 17. This nest should have a two chain no-cut buffer. If this nest is active at the time of the sale, there should be no cutting from March 1 through July 31.										
16	R9	19	67	52	red pine	mature	shelterwood-prep	2		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate)										
comnts Fmd : Thin red and white pine to 60-70 BA. Remove all other trees except for hemlock and oak, and anything else needed for retention. Difficult access: bridge over Holland Creek needed, or road through private land to the north. 35/2=jack pine and white pine soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes										
Wld : This stand types out as a PArV habitat. WLD agrees with FMFMs prescription for this stand.										
17	A6	20	67	70	aspen (upland)	mature	final harvest	2		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate) Land survey needed										
comnts Fmd : Large diameter bigtooth and trembling aspen, with a variety of other tree species present. Manage for mixed aspen; cut all trees except Hemlock and Yellow Birch. Regeneration of the same species mix that is currently on site is acceptable. Use BMP guidelines near the Manistique River. See WL comments for additional instructions. Difficult access: bridge across Holland Creek needed, or a road through private land far to the north. There is an old road through the stand. Adjacent to private property; survey needed. 98= Hemlock, Spruce, Cedar and White Pine soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes and 13D Kalkaska sand 6-15% slopes										
Wld : This stand types out as an ATRD habitat. The stand contains an active Goshawk nest (FMFM has GPS coordinates). WLD and FMFM have agreed to the following. 1. There will be no cutting between March 1 and July 31. 2. There will be a two chain no-cut buffer left around the nest tree. 3. In the zone from 2 to 5 chains around the nest, trees can be selectively marked for cutting/or leaving with an attempt to leave approximately 60% of the canopy. 4. Hemlock and yellow birch will be retained within the stand.										
19	R6	7	57	52	red pine	immature	shelterwood-prep	2		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate) Land survey needed										
comnts Fmd : Mix of tree species and densities. Thin the red and white pine and cut all other trees except hemlock and oak, and those needed for retention. Follow BMP guidelines along the Manistique River. Difficult access: bridge needed across Holland Creek, or a road across private from the north. Stand is adjacent to private property; survey needed. Soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes										
Wld : This stand types out as a PArV habitat. WLD agrees with FMFM prescription										
20	A6	5	57	55	aspen (upland)	mature	final harvest	2		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate)										
comnts Fmd : Aspen with a mix of other tree species. Cut all trees except Hemlock; also, leave large red and white pine. Leave other trees as necessary for retention. Regeneration of the same species mix is acceptable. Follow BMP guidelines near Holland Creek and the Manistique River. Difficult access; bridge needed over Holland Creek, or a road from the north. Soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes										
Wld : This stand types out as a PArV habitat. WLD has agreed with FMFM to retain scattered large red and white pine and to retain all hemlock.										

SHINGLETON FOREST AREA

**Proposed Treatments
With Limiting Factors**

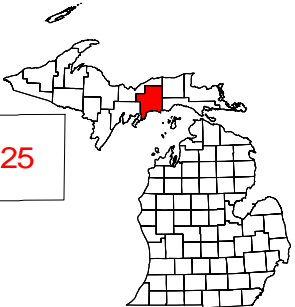
Compartment: 6

Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status	
21	S6	23	69	45	black spruce-swamp	mature	final harvest	2			
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate)											
comnts Fmd : Cut all trees except for Hemlock. Leave some of the red and white pine for retention. Place retention areas around hemlock/pine and bogs (such as stand 80). Spruce is the preferred regeneration species, but a mix other species similar to what is currently on site will be acceptable. Difficult access: bridge needed across Holland Creek, or a road through private to the north. Treat with C005 s 20 to the north. Soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes											
Wld : This stand types out as a PArV habitat. WLD agrees with FMFMs prescription.											
22	J6	5	67	55	jack pine	mature	final harvest	2	natural regeneration		
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate)											
comnts Fmd : Cut all trees except Hemlock. Leave some Red and White Pine for retention. Jack Pine is the preferred regeneration species, but a mix with other species similar to what is currently on site will be acceptable. Scarify or handplant to regenerate jack pine. Difficult access: bridge needed across Holland Creek, or a road through private to the north. Soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes											
Wld : This stand contains areas of both PVE and PArV habitat types. WLD agrees with FMFMs prescription											
23	S6	10	69	45	black spruce-swamp	mature	final harvest	2			
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate)											
comnts Fmd : Cut all trees except Hemlock; also leave some red and white pine for retention. Put retention areas around hemlock/pine, and around bogs. Spruce is the preferred regeneration species, but a mix with species similar to what is currently on site is acceptable. Difficult access: bridge over Holland Creek is needed, or road through private to the north. 35/2=red and white pine soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes											
36	S6	5	67	46	black spruce-swamp	mature	final harvest	2			
TREATMENT LIMITING FACTORS: Bridge needed (portable bridge not available or inadequate)											
comnts Fmd : Cut all trees except cedar & hemlock. May leave some red and white pine. Place retention areas near leave trees and bogs. Difficult access: needs bridge across Holland Creek, or road through private. Treat with C005 s 20 to the north. Regeneration of the same species mix is acceptable. 35=red and white pine soil=525B Neconish-Wainola-Kinross Complex 0-6% slopes; and 37 Dawson, Greenwood and Loxley soils											
Total Acres.....		228									



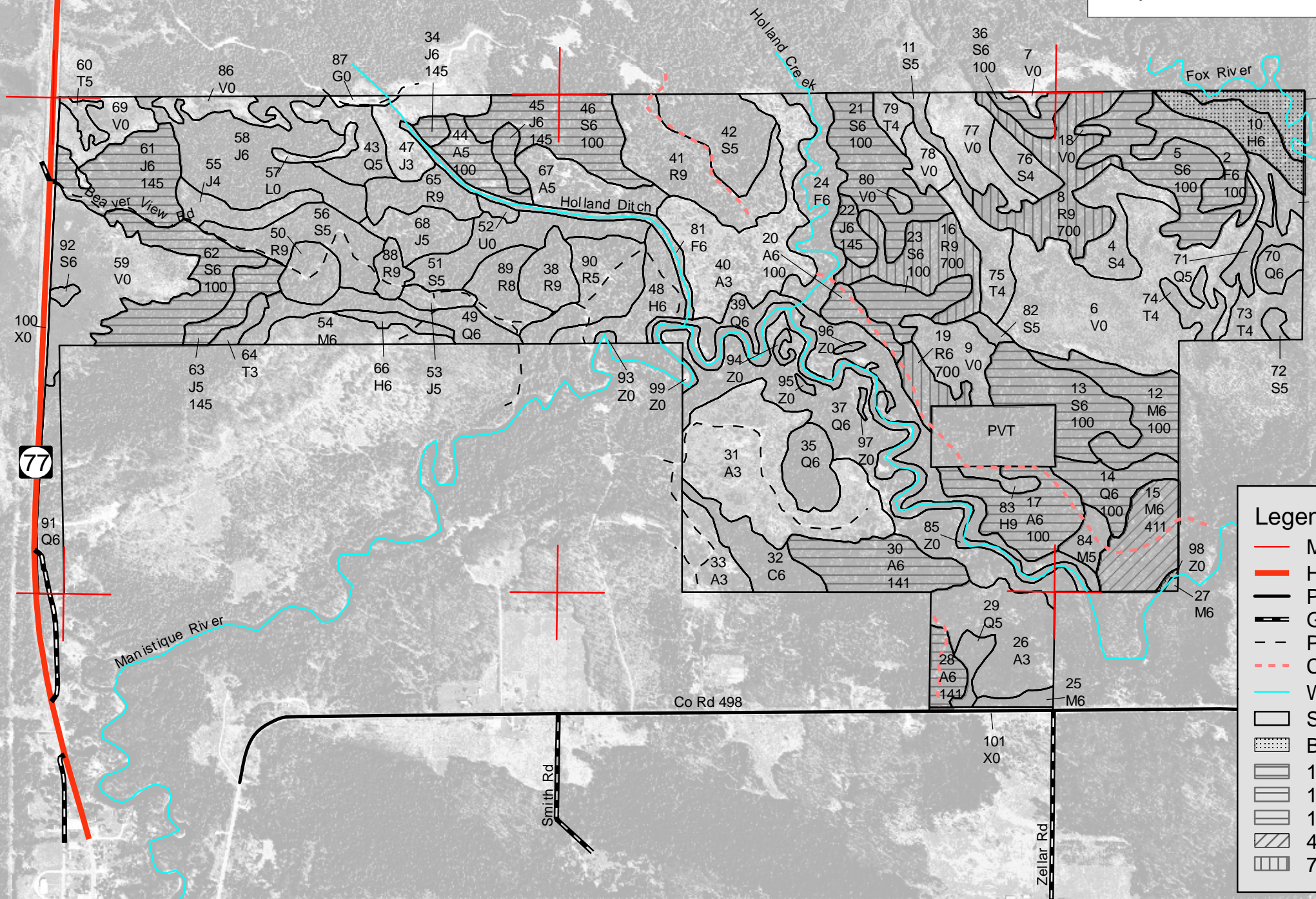
Field Map

Compartment 06
 T45N, R13W, Sec. 25-28, 35
 County: Schoolcraft
 Unit: Shingleton
 YOE: 2009
 Acres: 1,175 GIS Calculated
 Stand Examiner: Kristen Matson
 Map Revised: 7/09/2007
 Map Phase: Pre-review



28	27	26	25
		35	

N

Legend

- Miris Corners
- Highway
- Paved
- Gravel
- Poor Dirt
- Closed
- Water Features
- Stand Boundary
- Biodiversity/Old Growth Area
- 100 - Final Harvest
- 141 - Final Harvest/Natural Regeneration/Hand Tools
- 145 - Final Harvest/Natural Regeneration/Mechanical, Other
- 411 - Thinning/Planting/Hand Tools
- 700 - Shelterwood - prep

