



**FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 112 ENTRY YEAR: 2011

Compartment Acreage: 2259 County: Midland

Revision Dates: Draft 10-12-09, Draft 10-29-09.

Stand Examiner: Mark Reichel

Legal Description: T14N, R1W, Sections 4-6, 8, 9
T15N, R1W, Sections 28-33

Management Goals: This compartment is 42% oak and 21% swamp hardwoods. 12% is non-forested lowlands. Along with swamp hardwoods and aspen, lowland types comprise 1/3 of the compartment. There are only 312 acres of aspen, and only 58 acres of this (swamp aspen) is over 30 years old. There have been attempts at regenerating oak, which have been very marginally successful to date because of heavy deer browse and heavy shrub competition. Several stands were factor limited due to access and access will be very difficult in many of the prescribed stands. 134 acres of oak will be regenerated; 114 final harvested as it is the best option for regenerating oak. A prescribed fire is prescribed in one oak stand to attempt to stimulate regeneration. Fire would be very useful in this compartment to curtail shrub competition in oak, but not feasible due to vehicle access and a lot of adjacent private ownerships. Another 73 acres of operable E and M types will receive various regeneration cuts. A single, highly variable P type stand (alternating low oak ridges, dense swamp aspen, and lowland brush pockets) will be shelterwood/seed harvested, leaving the sparse oak on the ridges.

Soil and Topography: This compartment is in a nearly flat region drained by multiple drains and creeks. The south and west portions are slightly higher than the north and east as the terrain very gradually slopes northeast down to the Salt and Tittabawassee rivers. South Carl Drain, Carroll Creek and Durbin Drain run through or near various parcels of this compartment. 70% of this compartment (sections 4, 5 and 6 and the northern 2/3 of sections 29 and 30) is a mixture of poorly drained Kingsville loamy fine sand, interspersed with moderately well drained, low ridges of Covert sand (these ridges comprise 25% of the matrix). The remainder of the compartment (mostly section 28 and the southern 1/3 of sections 29 and 30) is a matrix of roughly equal amounts of poorly drained Kinross mucky sand, and somewhat poorly drained pipestone sand on low, "ridges". The Kingsville and Kinross soils are subject to frequent flooding; stands on these soils have low site indexes.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment consists of seven separate parcels of state land. These parcels border some state land to the west and north, but the majority of the parcels are surrounded by private land. 120 acres in section 9 has no access because it is surrounded by private land with no public roads adjacent to it. This parcel is in the disposal process and did not receive a field inventory; data from last year of entry was used. There are permanent residences along Huckleberry and 11 Mile Roads, and a few more along Nelson, Wackerly and Castor Roads. Most of the private land is forested, but there are a few farms. There are a few illegal dumping sites: in stands 36, 54 and 74.

Wildlife Habitat Considerations: This area is under-hunted due to limited public access to many of the parcels. Hunting opportunities (in some situations) are limited to adjacent private landowners. Consequently some oak stands have heavy damage from deer browsing. The shrub components in this

compartment are well known by avid grouse and woodcock hunters. Grouse have been trapped and relocated to other states from this compartment and those adjacent. Aspen over-stories with dogwood under-stories function as good grouse magnets. Wildlife structures do not exist within Compartment 112, such as gates or maintained openings.

Unique, Natural Features: None per MNFI.

Archeological, Historical, and Cultural Features: H.A.L. concerns in T14N, R1W, sections 4 and 5, per H.A.L. database.

Special Management Designations or Considerations: None

Watershed and Fisheries Considerations:

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel and dune sand. The glacial drift thickness varies between 200 and 400 feet. Beneath the glacial drift are the Pennsylvanian Grand River and Saginaw Formations. The Saginaw Formation is used for clay/shale for brick making in other areas of the State. This area is predominantly sand, and gravel potential in the compartment is considered limited. The pits in the area appear to be for dune sand. The Mt. Pleasant Field is located two miles to the south. The Field has produced over 29 MBO from the Dundee Formation since its discovery in 1928. The Compartment is leased for oil and gas. Section 30 is also part of a nonmetallic potash nomination.

Vehicle Access: Access is a significant issue in this compartment, due to both wet ground and the amount of adjacent private land. Very little of the compartment has access, with exception of T14N, sections 5 and 6; the two parcels in these sections have good access off 11 mile road. Sections T14N sections 29 and 31 through 33 have moderate unauthorized ORV activity.

Survey Needs: There are only a few places (stands 1, 14, 185) where private line is posted onto state.

Recreational Facilities and Opportunities: This compartment is lightly hunted due to poor public access. There is a low to moderate amount of unauthorized hunting stands and blinds.

Fire Protection:

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

AUSABLE STATE FOREST

GLADWIN FOREST MGT UNIT

MIDLAND COUNTY

COMPARTMENT: 112

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			30	130				6										12	178
Bog or Marsh	64																		64
Grass	2																		2
Hemlock																		46	46
Lowlnd Brush	170																		170
Lowlnd Poplr			10	49		58	21												138
Marsh	48																		48
Oak			89	34		26	64	75	58	347	108	11						136	948
Paper Birch			5				23												28
Red Pine																		11	11
Swamp Hrdwds			27	103	13	32	55	27	20	56		4						146	483
Upland Brush	6																		6
Upland Hdwds			67	14		10		14	5		13							13	136
White Pine							13												13
Total	290		228	330	13	126	176	122	83	403	121	15						364	2259

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

AUSABLE STATE FOREST

GLADWIN FOREST MGT UNIT

MIDLAND COUNTY

COMPARTMENT: 112

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	166																							12			178	
V Bog or Marsh			64																								64	
G Grass					2																						2	
H Hemlock						46																					46	
L Lowlnd Brush									170																		170	
P Lowlnd Poplr										138																	138	
N Marsh											48																48	
O Oak														926						22							948	
B Paper Birch															28												28	
R Red Pine																11											11	
E Swamp Hrdwds	9																			474							483	
U Upland Brush																								6			6	
M Upland Hdwds																									136		136	
W White Pine																										13	13	
Total	175		64		2	46			170	138	48			926	28	11				496				6	148		13	2259

AUSABLE STATE FOREST

GLADWIN FOREST MGT UNIT

MIDLAND COUNTY

COMPARTMENT: **112**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	9542 Cds	Hardwood	1616 Cds
Hardwood	3479 Mbf	Hardwood	842 Mbf
Softwood	381 Cds	Sum CutVol	3300 Cds
Softwood	428 Mbf		
Sum TotVol	17737 Cds		
Total Cmpt Acres		Acres Proposed For Cut.....	314
	2259		

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
4	E9	9	69	80	aspen (upland)	mature	final harvest	1		
comnts Fmd : Clearcut to pre-salvage 54 BA of nice green ash. Will get good oak and aspen regen. Mark 3 red or other oak per acre with green paint for retention. Use dry/frozen and dormant spec, non-negotiable. '99 Comment: Moderately wet mix of oak and lowland hardwoods. Insufficient basal area present at this time.										
Wld : comments from site visit 8-19-99: access to stand from private lane- walked in. Lowland oaks mixed with ash. Young frogs were very abundant along trail. SMB										
7	O7	12	16	50	oak	in process of regeneration	final harvest	2		
comnts Fmd : TS 34-91-01, cut in 1993. NW 2/3 of old stand 7 upland that has very little regen. Harvest rest of oak. Green mark 1 oak per acre for mast. Plant pine in 2019 if regen inadequate. Any mix of pine and oak is acceptable. 1999 comments: Poor to moderate aspen reproduction, except for good reproduction on higher ground in the southeast portion of the stand.										
Wld : no comments from site visit 8-18-99. SMB										
9	O8	40	16	55	oak	mature	final harvest	2		
comnts Fmd : Oak regen has progressed in 10 years. Remove overstory oak. Should release current oak and aspen regen (currently fair), and add 40 BA of stump sprouts. Use regen spec and be careful with aspen regen, also rutting caution; there is some wet areas. Green mark 1 oak/ac for mast; focus on marking trees surrounded by aspen regen. New stand expected to regenerate successfully; pine could be planted if regen fails; any combination of pine and oak acceptable. 1999 comments: ASPEN & DEAD OAK CUT. LIVE OAK LEFT. TS 34-91-01, cut in 1993. Poor to moderate aspen reproduction. Heavy ground cover and some deer browse. Limited oak regeneration.										
Wld : comments from site visit 8-18-99: Large oaks provide nice diversity in area for wildlife. Blackberry bushes are plentiful with good fruit production, but slightly past prime. SMB										
14	E9	17	87	80	swamp hardwoods	mature	shelterwood-prep	2		
comnts Fmd : Much of stand is operable, wet area broken out (stand 114). Harvest dry/frozen, dormant NON-NEGOTIABLE. Aspen and ash removal (ash pre-salvage). Mark additional trees with orange paint for operability. Private line posted 300 ft N of line on state.										
35	O9	19	87	63	oak	mature	final harvest	2		
comnts Fmd : Clearcut. Mark for retention with green paint all pine and one good red oak per acre. Almost 100% upland. Should get very good aspen, oak and maple regen, and slightly increased pine component. If regen failed, could plant red pine; any mix of pine and hardwoods acceptable. Lot of dead standing aspen (about 12 BA).										
Wld : comments from site visit 8-19-99: The declining aspen is providing an abundance of standing snags as well as downed course woody debris for wildlife use. Diverse understory regeneration in spite of med-high deer sign on trails. SMB										
41	O7	20	17	65	oak	in process of regeneration	shelterwood-seed	2		
comnts Fmd : Cut in 1992, sale #17-92-01. Enough residual left when harvested that aspen regen is fairly sparse. Fair amount of oak coming in. Stand (regen) is about 55% A, 45% O + trace of Rm, Wp. Small L type in center. Remove 1/2 of residual stand leaving about 20 BA: Mark with green for retention 2 good oak per ac plus a few white pine. New stand will be oak/aspen mix; succesful regen expected. Interplant red pine if regen is inadequate; any pine/oak/aspen mix is acceptable. Light ORV use of rd through stand. Will have to cross ditch.										
Wld : Site visit on 12-21-99: A good number of O7 trees with scattered WP. SMB										
57	O5	13	74	70	oak	mature	final harvest	2		
comnts Fmd : Clearcut with reserves: Will get oak, maple, aspen stand. Green mark 1 large oak per acre. Use 4" spec on oak. O8 overstory but enough pole sized maple that stand types as 5. Few small wet areas. Would have to put new fill over culvert over drain to access. Commercial removal in 1984, TS#39-82A. All oak was left. Stand is bisected by a drainage ditch. Good reproduction. Much of remaining oak is dead. If regen inadequate interplant with pine; any mix of pine, oak and other hardwoods is acceptable.										
Wld : Site visit on 12-13-99: There are a large number of acorns on the ground. Just off the trail at the start of Stand 57 there is a permanent tree stand on a large oak. The rail actually continues along the creek and comes out to the pipeline. SMB										
62	M6	13	88	70	northern hardwood	mature	final harvest	2		
comnts Fmd : Bit of stand around margins is E type. < 20 BA pole sized oak and not a lot of oak regen once you get into interior. Clearcut, reserving all non-merchantable oak (<5"D). This will give best chance of maintaining oak. Green mark 1 lg oak per ac for mast/retention. Wood poaching occurring in stand.										
Wld : Site visit on 12-13-99: Very open understory. Wind-fall of trees down along creek. Signs of heavy deer browse. Lot's of trash dumped along trail. SMB										

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status
69	O8	22	77	55	oak	mature		0	release	
<p>comnts Fmd : Fair oak regen but heavy shrub competition (hazel, bracken, honeysuckle and V). Burn to stimulate oak regen and harvest 1/2 of overstory or more next YOE. 1/4 of stand around E and S edge is E type with some ash.</p> <p>Wld : Site visit on 10-24-99: Young oak saplings show substantial browse pressure. Deer trails are heavily traveled. A number of large mature oaks have been wind thrown and are creating a good amount of downed CWD. Interesting landscape created by a finger of oaks on a small upland ridge surrounded by the lowland areas that finger out from stand 70. SMB</p>										
80	P6	58	44	55	balsam poplar & swamp aspen and swamp white birch	mature	shelterwood-seed	3		
<p>comnts Fmd : Patchwork of sparse oak uplands, dense swamp aspen, and lowland brush pockets. Harvest: cut all aspen and maple dormant/dry/frozen NON-NEGOTIABLE. Leave all oak and other species and use regen spec for oak seedlg/saps (4 inch on oak). Residual should be 30 to 40 BA. Drain is shallow where it goes through this stand. Access will be very difficult. Best bet looks like private to North, where there appears from photo to be road going all the way south to stand along ridge. Also 2% white oak, 2% black cherry, 3% paper birch and 2% green ash.</p> <p>Wld : Site Visit 10-24-99: heavy scrub/brush understory with lots of American Holly heavy with berries. A few good size red oaks along the N edge of stand. A very small N-S drainage ditch toward the N edge of stand was not marked on the map. The ditch was dry but the soil was still very moist. Droughty conditions. SMB</p>										
111	O9	17		65	oak	mature	final harvest	2		
<p>comnts Fmd : Upland oak/maple. Final harvest with reserves. Green mark 1 high quality red oak (hybrid) per acre for retention. Expect mixed oak, maple, aspen stand. Interplant with red pine if regen inadequate; any mix of pine and oak with maple and aspen acceptable. Would have to access from private to south. Clearcut best way to overcome blueberry/bracken (dense) competition.</p>										
211	O9	13		65	oak	mature	final harvest	2		
<p>comnts Fmd : Upland oak/maple. Green mark 1 high quality red oak (hybrid) per acre for retention. Would have to access from private to south. Clearcut best way to overcome blueberry/bracken (dense) competition. Expect succesful regeneration. If regen fails, interplant red pine; any pine/oak mix with maple component acceptable.</p>										
234	A9	12		70	northern hardwood	mature	selection	2		
<p>comnts Fmd : Mark 70 BA with orange for removal, keeping a uniform BA. Removal priorities: 1) aspen, 2) maple. All operable with large, nice aspen. This stand broken out of stand 34.</p>										
Total Acres.....		265								

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
32	O8	44	95	68	oak	mature	final harvest	1	other - specify in remarks	

TREATMENT LIMITING FACTORS: Retention of stand for regeneration purposes (ie. shelterwood)

comnts Fmd : Burn. There's road access, some issues with wet areas for equipment, continuous fuels but would be moderate to low intensity fire. Surface consist of diverse mix of bracken, raspberry, goldenrod and other forbs, upland and lowland grass, cinnamon and sensitive fern (limited areas), some oak regen, hardwood saps including cherry. If burn doesn't work this time, this stand will have to be clearcut in 2019 to get oak back. Worth trying burn because this is beautiful mostly single stem red oak. Shelterwood harvested 2004 Carroll Cr Oak #15-'01. Also Thinned in 1995, TS #27-'91. 90% upland. Areas, especially NW, with sensitive fern, swamp grass. Heavy deer browse and shrub competition has inhibited oak regen: maple is seeding in. Beautiful O9 is just beginning to decline but still good. '99 comments: Removed aspen and thinned oak and maple. Poor reproduction so far, fair amount of oak seedlings on ground. Shelterwood. Open canopy up 40-50% to encourage oak reproduction. Leave about 50 sq. ft./acre basal area.

Wld : comments from site visit 8-19-99: BW and I discussed changing the prescription to a shelterwood cut for this area to release the regeneration of young oaks - I will discuss this further with BW. There are a number of old (poor timber product quality) trees that should be left for wildlife dens - "wolf trees". SMB

88	A6	6	65	65	aspen (upland)	immature	final harvest	3		
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TREATMENT LIMITING FACTORS: Adjacent landowner denies access

comnts Fmd : Clearcut with reserves if access possible: would have to be via private. '99 comments: Clearcut. Difficult access. Low priority.

185	P6	21	53	55	balsam poplar & swamp aspen and swamp white birch	mature	final harvest	2		
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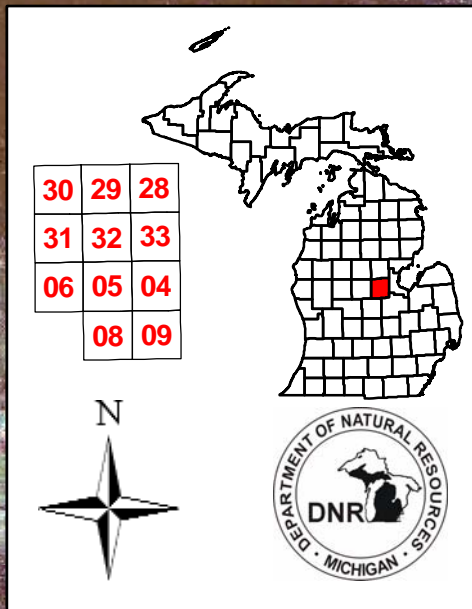
TREATMENT LIMITING FACTORS: Adjacent landowner denies access

comnts Fmd : Green mark 10 BA oak for mast and retention. Cut dry/frozen, NON-NEGOTIABLE. Access would have to be across private or would require a lot of effort to cross drain and/or low areas and possible build and improve roads. Private line falsely posted 200 feet in.

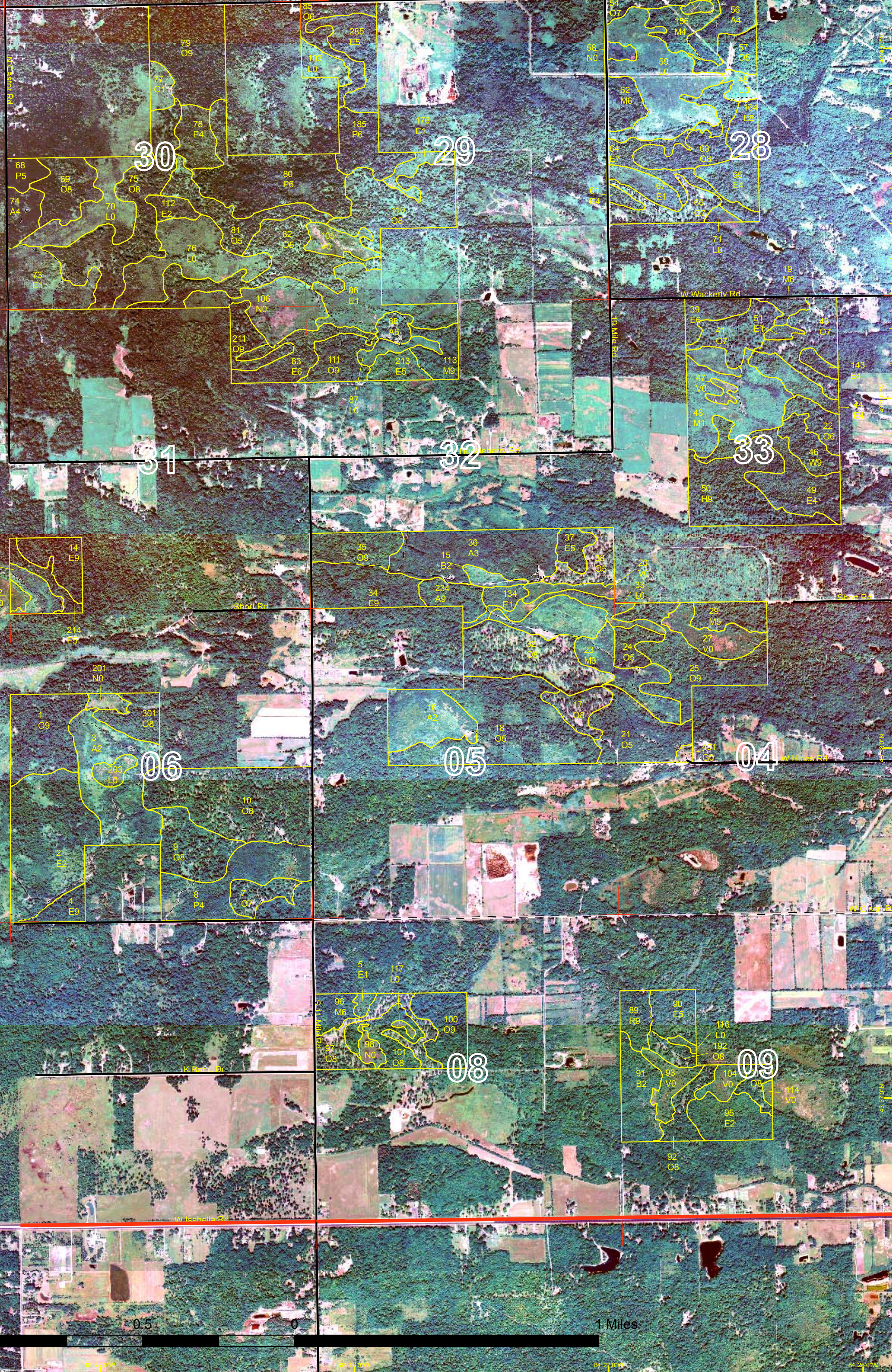
Total Acres..... 71

Stand Boundary Map

Compartment 112
T14N, R01W, Sec. 4-6, 8, 9
T15N, R01W, Sec. 28-33
County: Midland
Unit: Gladwin
YOE: 2011
Acres: 2,259 GIS Calculated
Stand Examiner: Mark Reichel
Map Revised: 10/30/2009
Map Phase: Pre-Review

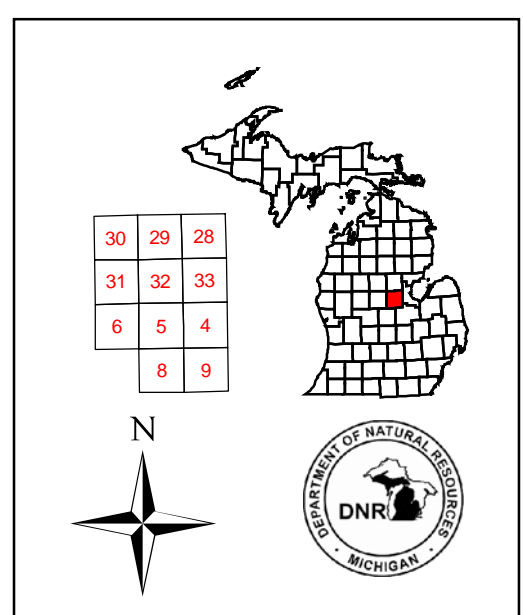


- Legend**
- Miris Corners
 - Highway Roads
 - Paved Roads
 - Gravel Roads
 - Poor Dirt Roads
 - Trails
 - Stand Boundaries

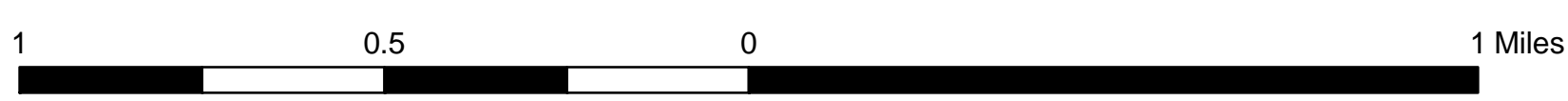
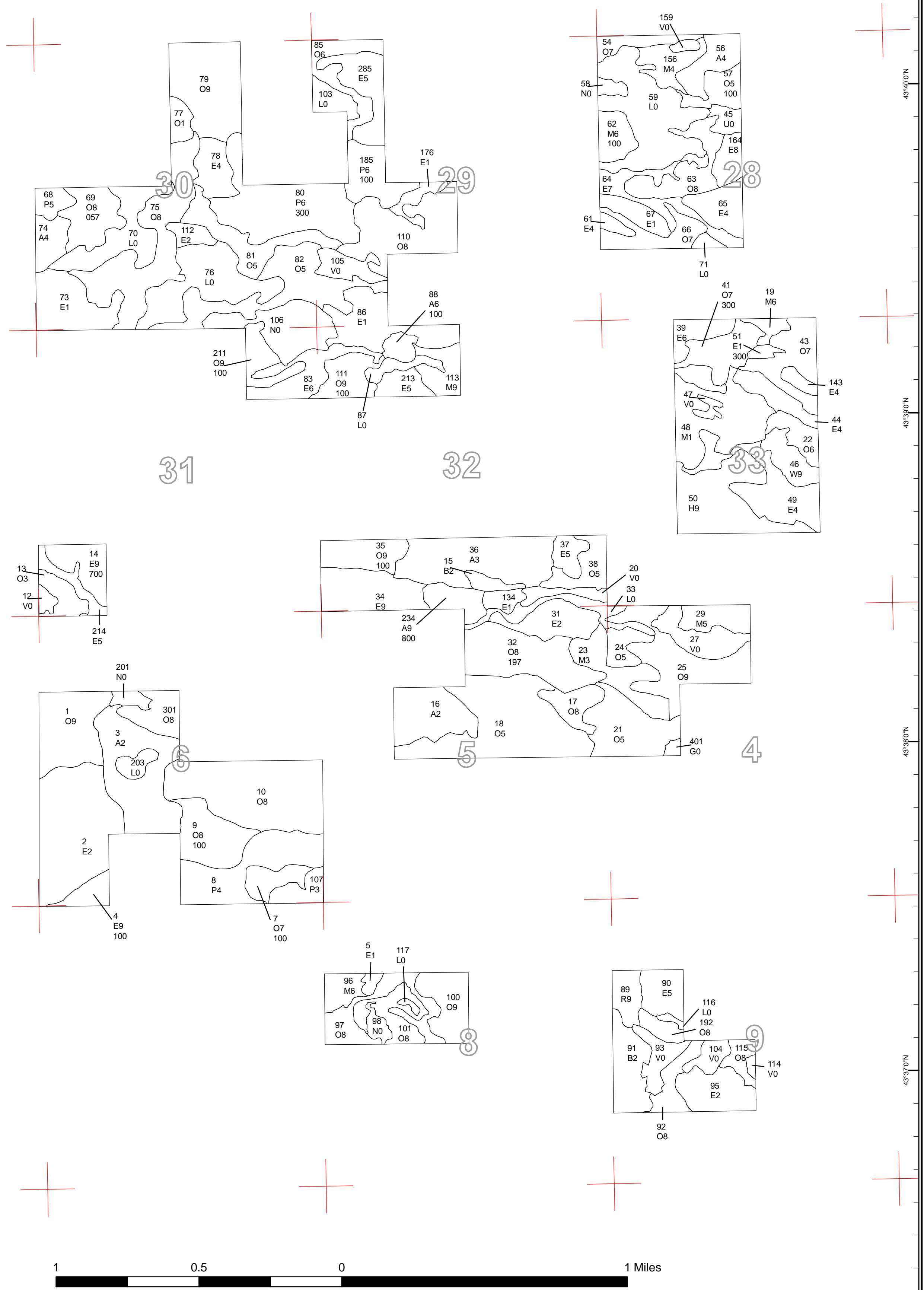


Compartment 112
 T14N, R01W, Sec. 4-6, 8, 9
 T15N, R01W, Sec. 28-33
 County: Midland
 Unit: Gladwin
 YOE: 2011
 Acres: 2,259 GIS Calculated
 Stand Examiner: Mark Reichel
 Map Revised: 10/30/2009
 Map Phase: Pre-Review

Dedicated & Proposed Special Conservation Area Map



Legend
 — Miris Corners
 □ Stand Boundaries



84°30'0"W 84°29'0"W 84°28'0"W 84°27'0"W 84°26'0"W

43°40'0"N
43°39'0"N
43°38'0"N
43°37'0"N

43°40'0"N
43°39'0"N
43°38'0"N
43°37'0"N



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
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.