



**FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 58 ENTRY YEAR: 2008

Compartment Acreage: 1,213 County: Gladwin

Revision Date: 11-2-06

Stand Examiner: Mark Reichel

Legal Description: T 19N, R 2E, Sec 29, 32

Management Goals:

Sustainable, even level of timber harvest. Wildlife habitat, especially deer and grouse. Protection of soils, wetlands and rivers. Protection against illegal roads and structures.

Soil and Topography:

25% of compartment is wetland. The molasses river and a few small tributaries run through the compartment; the river has steep bluffs in places. There is a lot of pit and mound topography in the compartment, as well as sandy uplands and a few sand ridges. Soils in the compartment include moderately well-drained Croswell and somewhat poorly drained Au Gres (1/2 of compartment), and poorly drained Roscommon (1/4 of compartment), which is usually flooded in winter and spring. About 1/4 of the compartment is a mixture of the above soils creating pit and mound topography with shallow drainages. Another 1/4 of the compartment is dry Rubicon soils in association with other soils.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

This compartment is in a large, solid block of state land, with the exception of an approximately 50 acre private parcel in section 32. This parcel has a mixture of all year residences, vacation homes and hunting cabins.

Unique, Natural Features:

In the last several years, Michigan Natural Features inventory has noted a bald eagle nesting near the compartment, and slippershell mussel in the Molasses River.

Archeological, Historical, and Cultural Features: None

Special Management Designations or Considerations: None

Watershed and Fisheries Considerations:

Seasonal restrictions will be used to mitigate damage to wet soils when stand 34 is harvested. This stand also will be harvested using single tree selection, which will maintain tree cover. Stand 75 will also be selection harvested. In addition, the steep drainages running into the Molasses river in this stand will not be harvested to prevent erosion.

Wildlife Habitat Considerations:

This compartment contains good deer and grouse habitat. Stand 29, an aspen stand, will be harvested specifically to maintain young aspen for these two species.

Mineral Resource and Development Concerns and/or Restrictions:

Surface sediments consist of lacustrine (lake) sand and gravel and fine-textured till. The glacial drift thickness varies between 100 and 200 feet. Beneath the glacial drift are the Pennsylvanian Grand River and Saginaw Formations. The Saginaw Formation is used for clay/shale in other areas of the State. This area is predominantly sand, and gravel potential in the compartment is considered limited. Very little oil and gas exploration has occurred in this area. North Buckeye Field is located six miles to the southwest. The field, discovered in 1936, has produced over 21 MBO from the Devonian Dundee Formation. There are no current State oil and gas leases in the compartment.

Vehicle Access:

The main roads in this compartment are Ridge Road and Mosquito Alley. A few dirt roads provide access to the Southwest and Southeast portions of the compartments and are passable year-round. One two-track accesses the center of section 29, otherwise there are few two tracks in this section. Wildwood Road is rarely passable due to wet soils.

Survey Needs: None

Recreational Facilities and Opportunities:

A small corner of the Gladwin ORV Route runs through the Southeast corner of the compartment. This compartment has good grouse and deer habitat and is used for hunting. The Molasses River is not a substantial fishery.

Fire Protection:

Hunting and hunting camps, as well as road access in the compartment could create potentially high fire danger.

Treatment Summary:

Vegetative cover in this compartment consists of 1/3 aspen, 1/4 swamp hardwoods and 1/4 wetlands, mostly lowland shrubs. Very little of the compartment will be cut this year of entry. Most of the aspen in the compartment is young, so little will be cut. 25 acres of red pine need to be thinned; 2 one acre stands will be regenerated using seed tree cuts. There is little oak in the compartment (28 acres). These oak stands had shelterwood cuts in 2000 to regenerate oak and have profuse oak regeneration. Bracken fern in these stands will be treated with an approved herbicide to release the seedlings. Most of the lowland hardwood stands are too wet or are not of merchantable size to harvest, but one stand will be selection harvested. Stand 75 is a mixed upland stand with quality red oak; it will be group selection harvested to regenerate red oak.



Stage 1 Acres Summary By Level 3 Cover Type By Age

Compartment: 73058

Date: 11/8/2006

	0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89	Uneven Age	Grand Total
Aspen Types	0	62.8	135.2	16.6	67.1	97.3	0	0	0	0	8.8	14.6	402.4
Herbaceous Openland	7.3	0	0	0	0	0	0	0	0	0	0	0	7.3
Low-Density Trees	28.4	0	0	0	0	0	0	0	0	0	0	0	28.4
Lowland Coniferous Forest	0	0	7.7	0	0	0	0	0	0	0	6.5	0	14.2
Lowland Deciduous Forest	0	43.7	65.7	23.6	70.6	11.7	0	12.1	14	37.5	24.8	59.2	362.9
Lowland Shrub	185.3	0	0	0	0	0	0	0	0	0	0	0	185.3
Mixed Upland Deciduous	0	44.9	0	0	0	26.7	0	0	0	0	0	4.9	76.5
Mixed non-forested wetland	3.1	0	0	0	0	0	0	0	0	0	0	0	3.1
Natural Pines	0	0	0	0	0	6.1	1.5	0	0	0	0	0	7.6
Northern Hardwood	0	0	0	0	8.4	0	0	0	3	0	0	13.9	25.3
Oak Types	0	0	0	0	0	0	6	0	8.6	8.8	0	4.7	28.1
Planted Pines	0	0	0	0	15	6.8	1	0	0	0	0	0	22.8
Upland Shrub	49.2	0	0	0	0	0	0	0	0	0	0	0	49.2
Grand Total	273.3	151.4	208.6	40.2	161.1	148.6	8.5	12.1	25.6	46.3	40.1	97.3	1213.1

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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Pg. 1
5 73058005-Cut	10.3	Aspen	5	36	0	Clearcut	Regeneration	Aspen	

Rev Stand should have been part of stand 10; the two stands are nearly identical, and are part of the same treatment area. SI = 56, age = 41, ave dbh = 5.
Cmnt: Stand is on Au gres soil, which is best suited to aspen but of low productivity. Stand is nearly pure quaking aspen except for higher inclusions of Crosswell and Rubicon soils with higher SI bigtooth aspen, and pin oak. This stand has poor growth and vigor and is a decade from rotation age.

Rev Final harvest, reserving oak for mast, to assure adequate regen before stand loses what vigor it has.
Spec

Next Expect to regen to aspen stand. Regen survey in 4 years. If stocking inadequate, interplant with jack pine (1st choice) or red pine.
Steps:

26 73058026-Cut	1.5	Natural Red Pine	9	55	0	Seed Tree	Regeneration	Aspen, Mixed Pine	
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Rev SI 62, 49 years old, BA = 200. Ave Diameter 12". Stand has never been thinned. Stand could be thinned, and does not meet age criteria for final
Cmnt: harvest. Courtney decided at pre-review that this stand is too small and isolated to warrant thinning.

Rev Seed tree harvest. Mark 15 BA red pine for retention.
Spec

Next Survey regen in 4 years. Expect aspen stand with red pine component.
Steps:

29 73058029-Cut	23.7	Aspen	6	31	0	Clearcut	Habitat Cut	Aspen	
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Rev 31 year old aspen stand with 20% red maple and pin oak. On dry Crosswell/Au Gres soils highly productive for aspen (75% of stand), and wet, infertile
Cmnt: Roscommon/Tawas soils at south and far north end of stand. Trace of red pine on dry areas and tamarack, ash and elm in low areas.

Rev Dick Shellenbarger nominated this stand for cutting. Final harvest, reserving trace of red pine, tamarack and elm. Consider marking for retention 10 BA
Spec of oak in dry areas for mast. May want to mark 10 BA of pole and sapling sized red maple in wet portion of stand for retention as pumps. Use dry/frozen and dormant cutting specs for the wet portion of stand.

Next Monitor for regeneration in 4 years. Southern 1/4 of stand should regenerate if cut during dry/frozen and dormant period, but would be difficult to replant
Steps: due to operability if regen fails due to wet soils.

31 73058031-Cut	1.0	Planted Red Pine	9	55	0	Seed Tree	Regeneration	Mixed Upland Deciduous with Conifer	
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Rev SI 62, Age 49, BA 245, Ave diameter 12. Stand has never been thinned. Stand could be thinned, and does not meet age criteria for final harvest.
Cmnt: Courtney decided at pre-review to seed tree harvest because stand is too small and isolated to warrant thinning.

Rev Seed tree harvest. Mark 15 BA red pine for retention.
Spec

Next Evaluate regen in 4 years. Interplant with red pine, jack pine or white spruce if regen inadequate. Expect mixed deciduous stand with red pine
Steps: component. Acceptable if stand is typed as red pine or mixed deciduous.

34 73058034-Cut	21.6	Mixed Lowland Deciduous Forest	6	80	0	Single Tree Selection	Regeneration	Mixed Lowland Deciduous Forest	
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Rev On Roscommon/Tawas soils. Wet; severe windthrow hazard. Treatable with dry/frozen spec. Treat higher portion of stand. Ave BA 82 in stand; up to
Cmnt: 180. Wetter, sparser portions of stand excluded from treatment, thus ave BA in treatment would be higher. Yield: about 10 chords/ac, 5 of it aspen. May require construction of roughly 12 ch long road north through A3 from red pine stand (50) proposed for thinning.

Rev Aspen removal, then orange mark additional trees for removal to BA of 90, favoring ash removal for EAB. If aspen patches are large, green mark aspen
Spec to keep BA up.

Next Do not expect type change. Expect maple, aspen and some ash regen in gaps. Favoring retention of maple may push stand toward lowland maple
Steps: instead of mixed lowland, which is acceptable.

**PROPOSED TREATMENTS
NO LIMITING FACTORS**

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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Pg. 2
38 73058038-Cut	6.8	Planted Red Pine	6	48	0	Crown Thinning	Intermediate Cut	Planted Red Pine	

Rev Cmmt: SI 50, Age 50, Ave diameter 8 to 9, BA 200. Stand has not been thinned before.

Rev Spec: Third row thinning. Single tree mark additional suppressed trees to 130 BA. Do not remove merchantable trees to access unmerchantable.

Next Steps: None.

50 73058050-Cut	15.0	Planted Red Pine	6	39	0	Crown Thinning	Intermediate Cut	Planted Red Pine	
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Rev Cmmt: SI 54, Age 50, BA 200, Ave diameter 8 to 9. Stand has not been thinned.

Rev Spec: Third row thin. Mark for removal additional suppressed trees to BA of 130. Do not remove merchantable trees for access to unmerchantable. No distinct rows; will have to mark rows.

Next Steps: None.

75 73058075-Cut	9.4	Aspen, Oak	8	79	0	Group Selection	Regeneration	Red Oak	
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Rev Cmmt: On Rubicon-Ocqueoc-Ingalls soil assn, which is moderately to highly productive for northern hardwoods. 1/4 of BA is mature red oak of good quality, and there is moderate to low stocking of evenly spaced red oak regen. Only a trace of sugar maple, so competition with oak regen not an issue. Small component of basswood, cedar, in steep drainages flowing into Molasses river, pin/black oak on uplands.

Rev Spec: Aspen/Birch removal. Mark for removal additional trees to create 60 x 60 regen gaps. Thin residual stand to 62 where aspen removal was light, to release red oak. Favor removal of pin and black oak. Do not cut in drainages to protect against erosion and to maintain basswood/cedar component. Mark out wet area with sparse ash at North end of stand.

Next Steps: Regen survey in 4 years.

79 73058079-Release	8.6	Red Oak	7	70	0	Other	Regeneration		
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Rev Cmmt: 40% red oak by canopy cover. Age 70. Stand has had one entry in 2000 reducing BA to 40. 812 oak seedlings/ac plus 851 non-oak (from survey). Walk through indicated inadequate stocking of oak seedlings >4 ft in height. Seedlings are under heavy bracken fern.

Rev Spec: Treat fern with Oust herbicide in July '07 to release oak seedlings. Hold overstory until next YOE, when regen will hopefully be viable (>4 ft high).

Next Steps: Schedule Oust treatment with Throop for July '07. Monitor stand for effectiveness of Oust treatment when appropriate. Determine if and when oust treatment needs to be repeated.

85 73058085-Release	4.7	Red Oak	7	87	0	Other	Regeneration		
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Rev Cmmt: 98% red oak by canopy cover. Age 87. Stand has had one entry in 2000 reducing BA to 30. 4,660 oak seedlings/ac (from survey). Walk through indicated inadequate stocking of oak seedlings >4 ft in height. Seedlings are under heavy bracken fern.

Rev Spec: Treat bracken fern with Oust herbicide in July '07 to release oak seedlings. Retain overstory until next YOE, when seedlings will hopefully be viable.

Next Steps: Schedule Oust treatment with Throop. Monitor treatment for effectiveness when appropriate. Determine if and when oust treatment needs to be repeated.

**PROPOSED TREATMENTS
NO LIMITING FACTORS**

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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Pg. 3
89 73058089-Cut	8.8	Mixed Oak	8	87	0	Clearcut with Reserves	Regeneration	Mixed Oak	

Rev Cmmt: 100% pin oak by canopy cover. Age 87. Portion of stand cut in 2000. BA variable, average 63. 1,500 oak seedlings/ac (from survey). Walk through indicated inadequate stocking of oak seedlings >4 ft in height. Seedlings are under heavy bracken fern.

Rev Spec: Final harvest, retaining 2 trees/ac for mast. Treat bracken fern with Oust in July '07 to release oak seedlings.

Next Steps: Expect some stump sprouting of oak. Schedule Oust treatment with Throop. Monitor treatment for effectiveness when appropriate. Determine if and when oust treatment needs to be repeated. Regen survey in 4 years. Interplant with red or jack pine if regen inadequate.

10 73c58s10-Cut	24.9	Aspen	5	42	0	Clearcut with Reserves	Regeneration	Aspen	
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Rev Cmmt: Hummocky west end of stand on same soil as Stand 5 (Au Gres). Stand is quaking aspen with poor vigor and growth form (SI 56), age 41. There are scattered good quality red oak and higher inclusions of Croswell and Rubicon soils. These high areas have more scrub oak and bigtooth aspen. East end of stand is denser, more productive aspen on losco-Brevort-Ingalls soils with higher maple component. An early harvest with Stand 5 will make vigorous sprouting and a denser stand more likely. Harvesting the west end of this stand (about 25 ac) will help even the aspen age distribution in compartment as well.

Rev Spec: Clearcut, reserving all oaks for mast and visual.

Next Steps: Stand will regenerate to aspen. Oak component may increase slightly due to scarification and reserved seed trees, which is desirable. Regen survey in 4 years. If stocking inadequate, interplant with jack pine (1st choice) or red pine.

C59S101_Out OfYOE-Cut	6.3					Seed Tree	Regeneration	Mixed Upland Deciduous with Conifer	
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Rev Cmmt: Same stand as stand 31, compartment 58. SI 62, age 49, BA 245. Stand has never been thinned, but could be. Stand does not meet age criteria for final harvest. Courtney decided at compartment review to seed tree harvest because stand is too small and isolated to warrant thinning.

Rev Spec: Seed tree harvest with stand 31 out of YOE this YOE. Leave 15 BA of red pine.

Next Steps: Monitor in 4 years for natural regen. Interplant red pine if stand is not adequately stocked. Expect mixed red pine/hardwood stand. Mixed hardwood, oak or aspen stand is acceptable.

**Total Treatment
Acreage Proposed: 142.5**

**PROPOSED TREATMENTS
WITH LIMITING FACTORS**S
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Name

Acres

Stage1
CovTypeSize
Density1st
Age2nd
AgeTreatment
MethodTreatment
PurposeCover Type
Objective

Pg. 1

Limiting Factor
and Comment:

Rev
Cmnt:

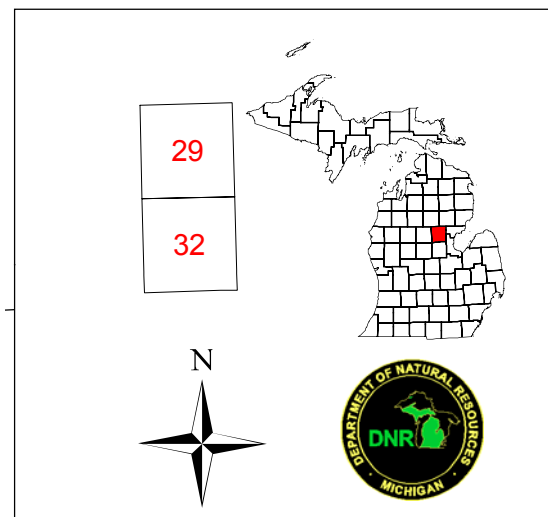
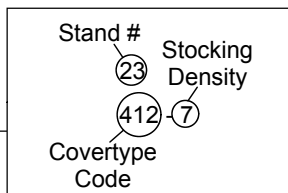
Rev
Spec:

Next
Steps:

**Total Treatment
Acreage Proposed: 0**

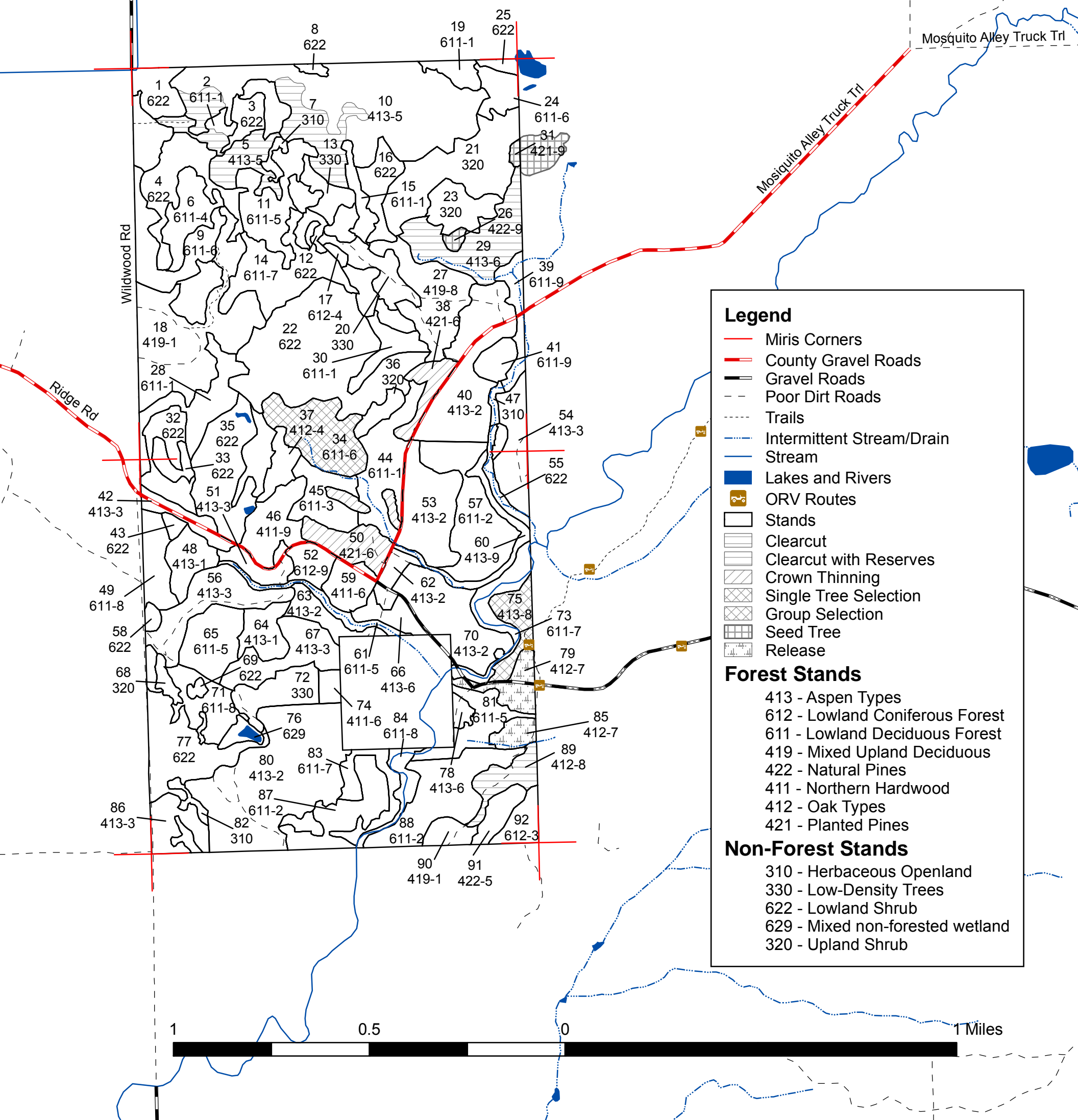
Compartment 58
 T19N, R2E, Sec. 29, 32
 County: Gladwin
 Unit: Gladwin
 YOY: 2008
 Acres: 1,213 GIS Calculated
 Stand Examiner: Mark Reichel
 Map Revised: 11/2/2006
 Map Phase: Pre-review

Field Map



Multi-part Stands:
 Stand 2, 2 parts, E side of stand 3
 Stand 10, 2 parts, between stands 13 and 20
 Stand 14, 2 parts, S of stand 9
 Stand 27, 2 parts, W side of stand 20
 Stand 28, 2 parts, E side of stand 35
 Stand 50, 3 parts, with in stands 44 and 45
 Stand 60, 2 parts, E side of stand 55
 Stand 68, 2 parts, with in stand 71
 Stand 71, 2 parts, W side of stand 68
 Stand 82, 2 parts, with in stand 86
 Stand 83, W side of stand 87

Stocking Density	Definition
1	Sapling low
2	Sapling medium
3	Sapling well
4	Pole timber low
5	Pole timber medium
6	Pole timber well
7	Saw timber low
8	Saw timber medium
9	Saw timber well



Legend

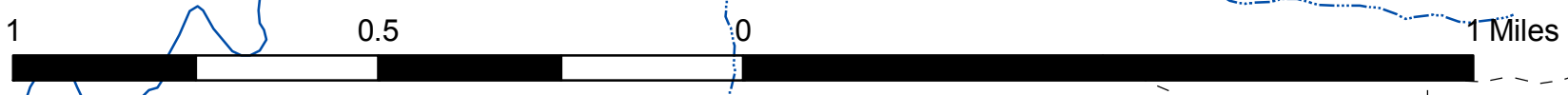
- Miris Corners
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Trails
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers
- ORV Routes
- Stands
- Clearcut
- Clearcut with Reserves
- Crown Thinning
- Single Tree Selection
- Group Selection
- Seed Tree
- Release

Forest Stands

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

Non-Forest Stands

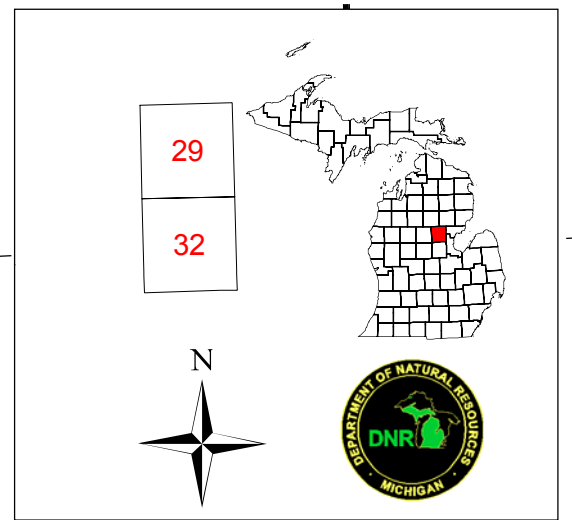
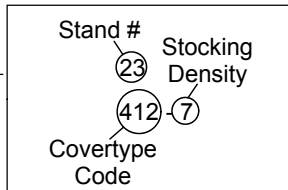
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 629 - Mixed non-forested wetland
- 320 - Upland Shrub



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Cover Type

Secord Dam Rd



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Hemer Rd

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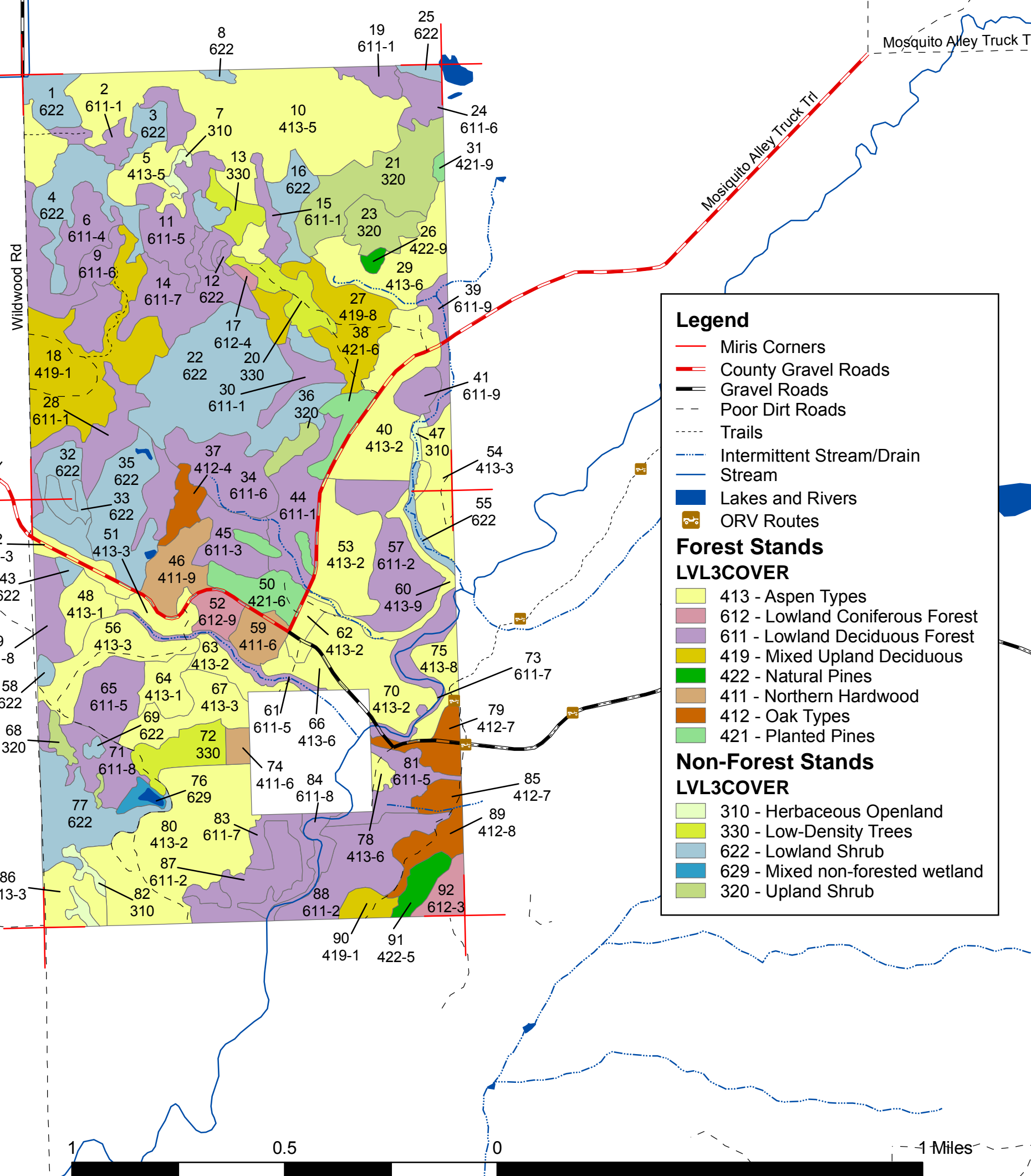
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Forest Stands LVL3COVER

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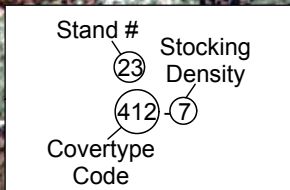
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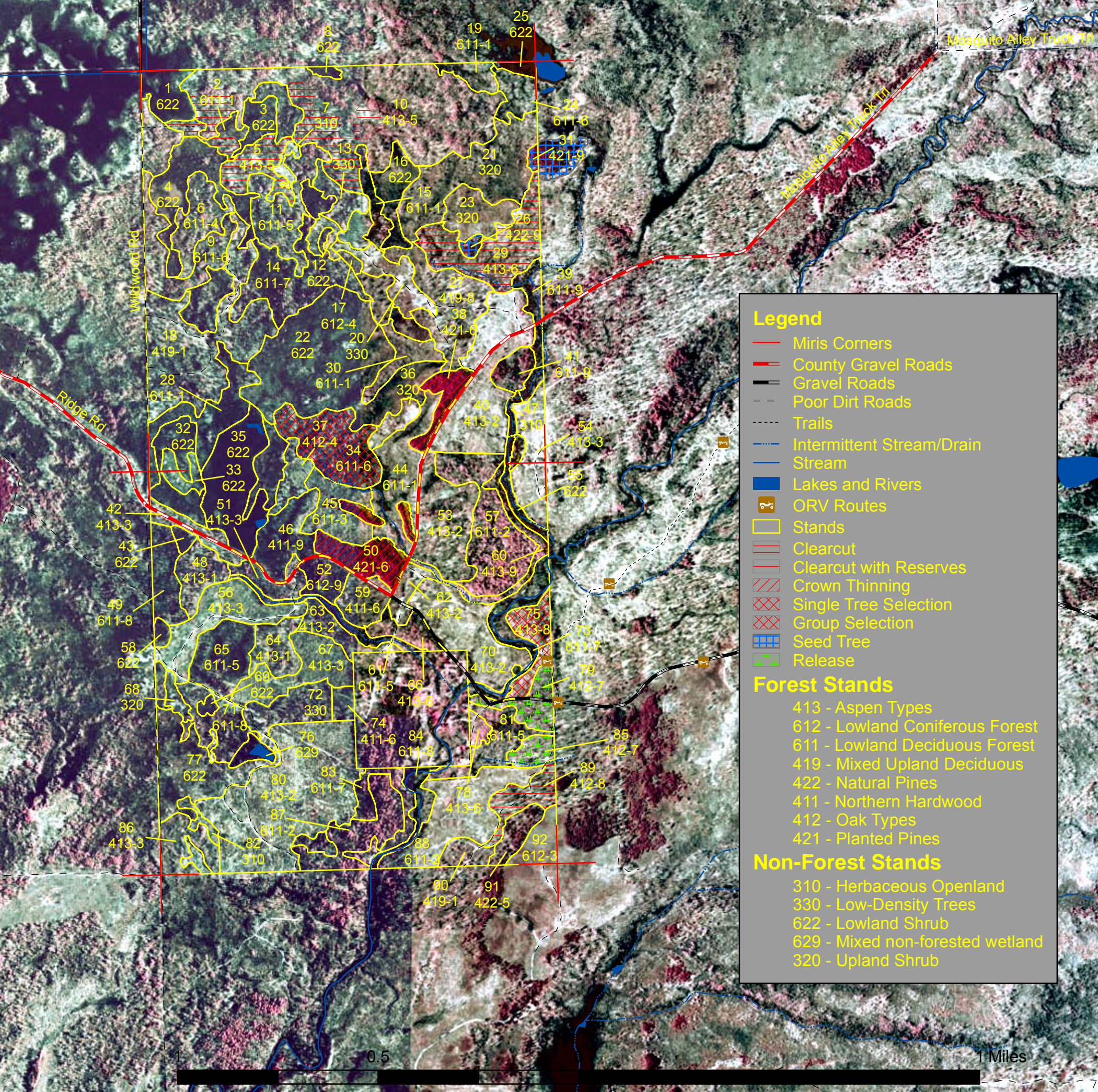
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