



**SAULT FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 174 ENTRY YEAR: 2007

Compartment Acreage: 1745 County: Mackinac

Revision Date: September 21, 2005

Stand Examiner: Amy Douglass

Legal Description: T43N-R10W Sections 27, 28, 33 & 34, Garfield Township.

RMU (if applicable):

Management Goals: The compartment location is the southeast corner of US-2 and M-117, south and east to Lake Michigan. Maintaining and enhancing the aspen age class diversity, in concert with the adjacent compartments, is planned for this entry period. The upland mixed conifer/hardwood stands will be cut to promote and enhance the mixed nature of these stands. The large cedar swamps, and wooded dune and swale complexes host wintering deer, and are to be left intact. This will also protect any endemic shoreline threatened and endangered species and communities. Working with the adjacent private landowners to provide access for management purposes will benefit the Rock River corridor from any adverse effects from a stream crossing.

Soil and Topography: The majority of the compartment consists of wooded dune and swale complexes. Lowlands primarily consist of Markey and Carbondale mucks, which occupy depressions on ground moraines, lake plains and outwash plains. Minor components of Eastport-Leafriver complex (dune-swale complexes), Markey-Spot-Finch complex (organic depressions; depressions and nearly level areas on lake plains), and Zela muck (swales and depressions on beach ridges) are present. The swale and ridge complex along Lake Michigan is primarily Leafriver-Croswell-Wainola complex. Other associated upland areas consist of Croswell-Wainola complex (nearly level and undulating areas on lake plains), and Eastport sand (nearly level to rolling to very steep areas on dune and beach ridges). The unusual outlier in this compartment is in the SENE of section 28. This corner consists of Amadon-Rock outcrop complex and occupies nearly level to rolling areas on bedrock controlled ground moraines.

Ownership Patterns, Development, and Land Use in and Around the Compartment: State lands are adjacent to the west and southwest. These are winter deer yarding areas. Ownership to the north is primarily state lands, including MDOT, and one private forty. This is also considered winter deer yarding areas. Highway US-2 runs along the north edge of the compartment. Two MDOT parcels of 40 acres each abut US-2 to the south. Two private in-holdings (seasonal camps) of 80 acres each also abut US-2 to the south. The adjacent lands to the east are part of the Hiawatha Sportsman's Club. The Hiawatha Club lands are not developed here, except for along the Lake Michigan shoreline to the east where houses are located. There is also a private access road along the eastern boundary of the compartment (Carnegie Trail), which leads to Lake Michigan. The road follows the shoreline to the southwest where high value, deed restricted homes dot the shoreline. This private area along the southern boundary of the compartment is part of the Carnegie Trail Association, with multiple landowners as well as some Nature Conservancy parcels. One of these parcels was recently gifted to the state as part of a wetland mitigation plan.

Unique, Natural Features (include only non-site specific and non-sensitive information): There is a known osprey nest within the compartment. With the lakeshore influences, there is potential for several rare, threatened and endangered plant and animal species and communities.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): None noted.

Special Management Designations or Considerations: Many treatment areas consist of ridges and swales associated with the old Lake Michigan shoreline. Efforts will be made to protect wetlands during harvesting operations. Vernal ponds will be identified and protected if present. Stand 38, H9, could be considered a Special Conservation Area (SCA). The prescribed burn recommended for stand 18 is intended to enhance the white pine/grassy opening mosaic. The area was burned in 1998, and tordoned in 1977 and 1978. All efforts will be made to identify and protect any threatened and endangered species and/or communities which may exist in treatment areas. BMP's will be applied where necessary.

Watershed and Fisheries Considerations: Fisheries Values: Fair. The Rock River hosts runs of steelhead, suckers, and smelt and brook trout can be found below Mud Lake. MDEQ rated habitat as good as according to the GLEAS procedure 51 quantitative biological survey.

Wildlife Habitat Considerations: This compartment lies within the St. Ignace sub-subsection. The growing season last approximately 130 days. Extreme winter low temperature approaches -46° F. Annual snowfall averages 100 inches.

The original surveyor's notes show that this area contained a diversity of tree species in the pre-settlement forest. The assemblage of tree species includes hemlock, white birch, yellow birch, sugar maple, black ash, aspen, elm, red maple, and cedar. Lowlands also contained spruce and tamarack. Wind throw, fire and beaver ponds were the likely forms of natural disturbance.

Conifer dominates this compartment with a major component of cedar, fir, white pine, and hemlock. Although hardwood is a minor element, it will become less of a factor in the future since it is expected that the hardwood clear cuts will result in a more diverse mixture which will promote species, age, and structural diversity within this compartment. This treatment will benefit wintering deer by increasing forage adjacent to mature conifer thermal cover, while at the same time, improve habitat conditions for several wood warblers. Likewise, retention of the mature conifer component will provide un-fragmented forest critical to migratory songbirds.

Gray wolves have been known to occur in this compartment. Wildlife species with the potential to benefit from the prescriptions include grosbeaks, woodpeckers, goldfinch, goshawk, white-tailed deer, snowshoe hare, and black bear.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel and peat and muck. The glacial drift thickness varies between 10 and 100 feet. The Silurian Engadine Group subcropps below the glacial drift. The Engadine is quarried for stone/limestone elsewhere in the UP. Gravel pits are not located in the area and potential appears to be limited. There is no current economic oil and gas production in the UP.

Vehicle Access: Highway US-2 runs along the northern boundary of the compartment, however, overall access is fair to poor. The primary access to all proposed harvest treatments is through two separate private landowners. Permission has been received to access the two stands in the SENE of section 28. This access road, however, is poor due to the shallowness to bedrock in the area. Permission to cross the other private

Compartment 174

land for harvesting activities is currently being sought. Non-commercial treatments and inventory purposes have been accessed this way in past year-of-entries with permission. A road system exists from US-2 south ½ mile through this private land to state land. An old road system exists from this point south to Rock River. The river crossing at Rock River no longer exists. Rock River Road, a fair dirt/gravel DNR road, runs from Big Knob Road up to this old crossing at Rock River. The potential to access this area from the south via Rock River Road is a last resort. Placing a portable bridge is feasible, but hauling would consist of 5 miles down Big Knob Road (accessing a campground at Lake Michigan), and 3 miles up Rock River Road to the bridge crossing. Either way the road system north of Rock River would have to be improved. It is currently very sandy and would possibly need some culverts in low lying areas for cross drainage. Carnegie Trail, a private gravel road, is located immediately adjacent on the eastern boundary of the compartment. The road was built in 1979 and is a relatively straight shot south towards Lake Michigan, crossing several ridges and swales along the way. Old, primarily winter roads, run on narrow, sandy ridges in the swamps in the southern half of the compartments. One old road in particular sees limited use from 4 wheelers, primarily during hunting season.

Survey Needs: Most needed corners for treatment purposes are currently in place. A timber trespass was noted in stand 19 (unsure of year, but prior to last entry year). The north line along the SENE will have to be run. Also, while trying to locate the corners along the east side of section 27, it was noted that some of the bearing trees were gone, or in poor shape. Unsure of condition of tee irons located here too.

Recreational Facilities and Opportunities: No permanent recreational facilities are located within the compartment. There is evidence of hunting/fishing camps at the old Rock River crossing. Abundant opportunities exist for hunting, trapping and fishing numerous wildlife/fish species. Blueberry, cranberry and mushroom picking is available for those willing to go out of the way. Big Knob campground is located to the southwest of the compartment via Big Knob road. Adjacent to the campground and this compartment are several nature trails.

Fire Protection: The potential for wildfires exists throughout the upland ridge areas. These areas are mixed stands by nature, but contain moderate to high components of conifer species. Lightning strikes would be the primary source of ignition. Other possibilities include human activities (adjacent homes, camps, and dispersed camping), motorist activities (along US-2, Carnegie Trail, and Rock River Road), and downed power lines. Where fires may occur in the lowlands, mop up may become extensive. Access to fires may be problematic.

Additional Compartment Information: This compartment is one of two IFMAP compartments undertaken this year of entry in the Sault Management Unit.

- **Cover Type details and proposed treatments are listed on the attached reports:**
 - ◆ **Cover Type by Age Class**

 - ◆ **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**



Stage 1 Acres Summary By Level 3 Cover Type By Age

Compartment: 45174

Date: 10/10/2005

	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	0	0	4.7	0	0	0	0	0	15.9	0	0	20.6
Emergent Wetland	29.5	0	0	0	0	0	0	0	0	0	0	0	29.5
Low-Density Trees	61.4	0	0	0	0	0	0	0	0	0	0	0	61.4
Lowland Coniferous Forest	0	0	0	0	0	0	55.7	17.8	25.6	14.9	658.8	36.4	809.2
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	11.1	42.2	0	53.3
Lowland Shrub	113.8	0	0	0	0	0	0	0	0	0	0	0	113.8
Mixed Upland Conifers	0	0	0	0	0	0	0	0	0	0	133.8	0	133.8
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	37.8	0	0	37.8
Natural Pines	0	0	0	0	0	0	0	50.4	0	0	10.9	45.2	106.5
Northern Hardwood	0	0	0	0	0	0	0	0	4.5	0	0	0	4.5
Other Upland Conifers	0	0	0	0	0	0	22.2	0	0	48.4	89.5	97.2	257.3
Upland Mixed Forest	0	0	0	0	0	0	0	9.2	38.4	44.4	15	0	107
Water	10.7	0	0	0	0	0	0	0	0	0	0	0	10.7
Grand Total	215.4	0	0	4.7	0	0	77.9	77.4	68.5	172.5	950.2	178.8	1745.4

**PROPOSED TREATMENTS
NO LIMITING FACTORS**

Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Follow Up Activities After Treatment	Pg. 1
45174011-Cut	15.9	Aspen, Mixed Pine	8	89	0	Clearcut with Reserves	Regeneration	Aspen, Mixed Pine		

Rev Cut all trees except WP and RP. Regeneration will be mixture of aspen and white pine, with red maple, white birch and red pine possibly associated after cut.
Spec:

Rev Very hilly with several small openings. Twin oak located on south facing slope on edge of opening.

Cmnt: Steep sandy hills. Access is questionable thru private or bridge across Rock River. Crossing Rock River would entail at least 8 miles of gravel road, of which 5 is a campground road, crossing the river, and reopening some old roads. Most of the area between the private and Rock River is sandy steep hills. In reality it's only 0.5 miles south of US-2.

45174016-Cut	34.5	Non Pine Upland Conifer, Mixed Deciduous	9	247	0	Group Selection	Regeneration	Mixed Upland Forest		
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Rev Group selection was the best description for this stand. I would like to encourage the hemlock and white pine by conducting a summer cut with scarification from the harvesting equipment. Hemlock and white pine will be retained. Cedar may be left where the ground is low. The other more shade intolerant species (aspen, birch, balsam, spruce, red maple) will regenerate in the larger openings created.
Spec:

Rev Groves of Hemlock interspersed with Mackinac Mix. Lots of ridges.

Cmnt: Some steep ridges with wet swales. Access is questionable thru private or bridge across Rock River. Crossing Rock River would entail at least 8 miles of gravel road, of which 5 is a campground road, crossing the river, and reopening some old roads. Most of the area between the private and Rock River is sandy steep hills. In reality it's only 0.5 miles south of US-2.

45174017-Cut	9.2	Mixed Upland Forest	6	68	0	Clearcut	Regeneration	Mixed Upland Forest		
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Rev Regenerate naturally to mixture of aspen, balsam fir, birch, spruce, red maple. Leave oak tree(s). Must be careful logging due to bedrock and fissures.
Spec: May be best to log in summer due to fissures.

Rev Very shallow to bedrock with fissures. Stand gradiates from hwd to swamp. More hwd (maples, WB) towards hwd stand and thicker to balsam towards swamp. 26" red oak on edge of hwd stand.
Cmnt: Access is OK thru private.

45174018-Burn	15.2	Natural White Pine	4	62	0	Prescribed Burn	Habitat Management		May need to burn every xx years.	
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Rev Prescribed burn to maintain white pine/opening mosiac.

Spec:

Rev Area had been tordoned by wildlife in 1970's. Burned by FMFM in 1998. Was to be an opening, but has nice white pine. Burn to maintain white pine/opening mosiac.
Cmnt:

45174019-Cut	4.5	Sugar Maple Association	9	75	0	Single Tree Selection	Regeneration	Sugar Maple Association		
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Rev Thin to 80 BA. May be best to harvest in summer only due to fissures.

Spec:

Rev Access is OK thru private. Shallow to bedrock. Old timber trespass along N. line.

Cmnt: Last part of road, and thru stand is shallow to bedrock with fissures.

45174024-Cut	21.1	Mixed Upland Deciduous with Conifer	6	85	0	Clearcut with Reserves	Regeneration	Mixed Upland Deciduous with Conifer		
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Rev Regeneration of aspen is foremost in this stand. In some areas regeneration will consist of mixed upland species (red maple, white birch, balsam and spruce. White pine, red pine and hemlock will be left for seed trees. These may seed in naturally, and if summer cut (depending on access), areas may be scarified enough from equipment to promote these species.
Spec:

Rev Clones of aspen scattered thru mixed stand.

Cmnt: Access is questionable thru private or bridge across Rock River. Crossing Rock River would entail at least 8 miles of gravel road, of which 5 is a campground road, crossing the river, and reopening some old roads. Most of the area between the private and Rock River is sandy steep hills. In reality it's only 0.5 miles south of US-2.

**PROPOSED TREATMENTS
NO LIMITING FACTORS**

Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Follow Up Activities After Treatment	Pg. 2
45174026-Cut	38.4	Mixed Upland Forest	6	71	98	Clearcut with Reserves	Regeneration	Mixed Upland Forest		

Rev Regeneration to be same as existing species - mixture of red maple, birch, spruce, balsam, and aspen. White pine and hemlock to be left. Possible seed
Spec: sources in some areas. Cedar will be mostly left as it is generally in the lower lying lands. Rutting should be kept to a minimum. Most areas should be able to be harvested in summer months (access depending). Ridges may be difficult to access, but most areas can be worked around.

Rev High sandy ridges with low wet swales. Some scattered RP logs.

Cmnt: Access is questionable thru private or bridge across Rock River. Crossing Rock River would entail at least 8 miles of gravel road, of which 5 is a campground road, crossing the river, and reopening some old roads. Most of the area between the private and Rock River is sandy steep hills. In reality it's only 0.5 miles south of US-2.

45174036-Cut	7.7	Mixed Upland Deciduous with Conifer	8	87	0	Clearcut	Regeneration	Mixed Upland Deciduous with Conifer		
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Rev Regeneration to be mixture of same species (aspen, red maple, birch, spruce and balsam). White pine and hemlock to be retained (possible seed
Spec: source in areas).

Rev High sandy ridge.

Cmnt: Access is questionable thru private or bridge across Rock River. Crossing Rock River would entail at least 8 miles of gravel road, of which 5 is a campground road, crossing the river, and reopening some old roads. Most of the area between the private and Rock River is sandy steep hills. In reality it's only 0.5 miles south of US-2.
Old access road exists, but has grown in over the years.

NF_45174032- Other	61.4	Unspecified	0	0	0	Other	Other - Specify			
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Rev This stand needs a regeneration check.

Spec:

Rev This stand was harvested in 2003. While doing stage 1 it was classified as non-forested. When I went back to do a level 4 call, I believe it to be forested
Cmnt: now. MO had been aspen. Is currently aspen, red maple, cherry, balsam with white pine residual overstory.

**Total Treatment
Acreage Proposed: 208.0**

**PROPOSED TREATMENTS
WITH LIMITING FACTORS**

Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Follow Up Activities After Treatment	Pg. 1
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Limiting Factor
and Comment:

Rev
Spec:

Rev
Cmnt:

**Total Treatment
Acreage Proposed: 0**

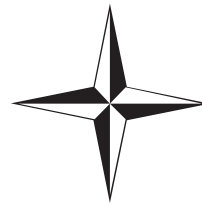
Field Map

Country Ave

Compartment 174
 T43N, R10W, Sec. 27, 28, 33, 34
 County: Mackinac
 Unit: Sault Ste. Marie
 YOE: 2007
 Acres: 1,745 GIS Calculated
 Stand Examiner: Amy Douglass
 Map Revised: 10/06/2005
 Map Phase: Pre-Review

28	27
33	34

N

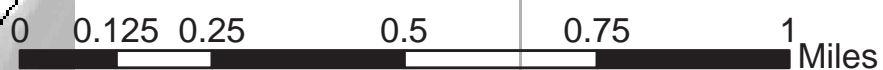


Legend

- State/Federal Highway
- Street/Local Road
- Lakes and Rivers
- Intermittent Stream/Drain
- Stream
- Stand Boundaries

Treatments

- Prescribed Burn
- Clearcut
- Clearcut with Reserves
- Group Selection
- Single Tree Selection
- Other

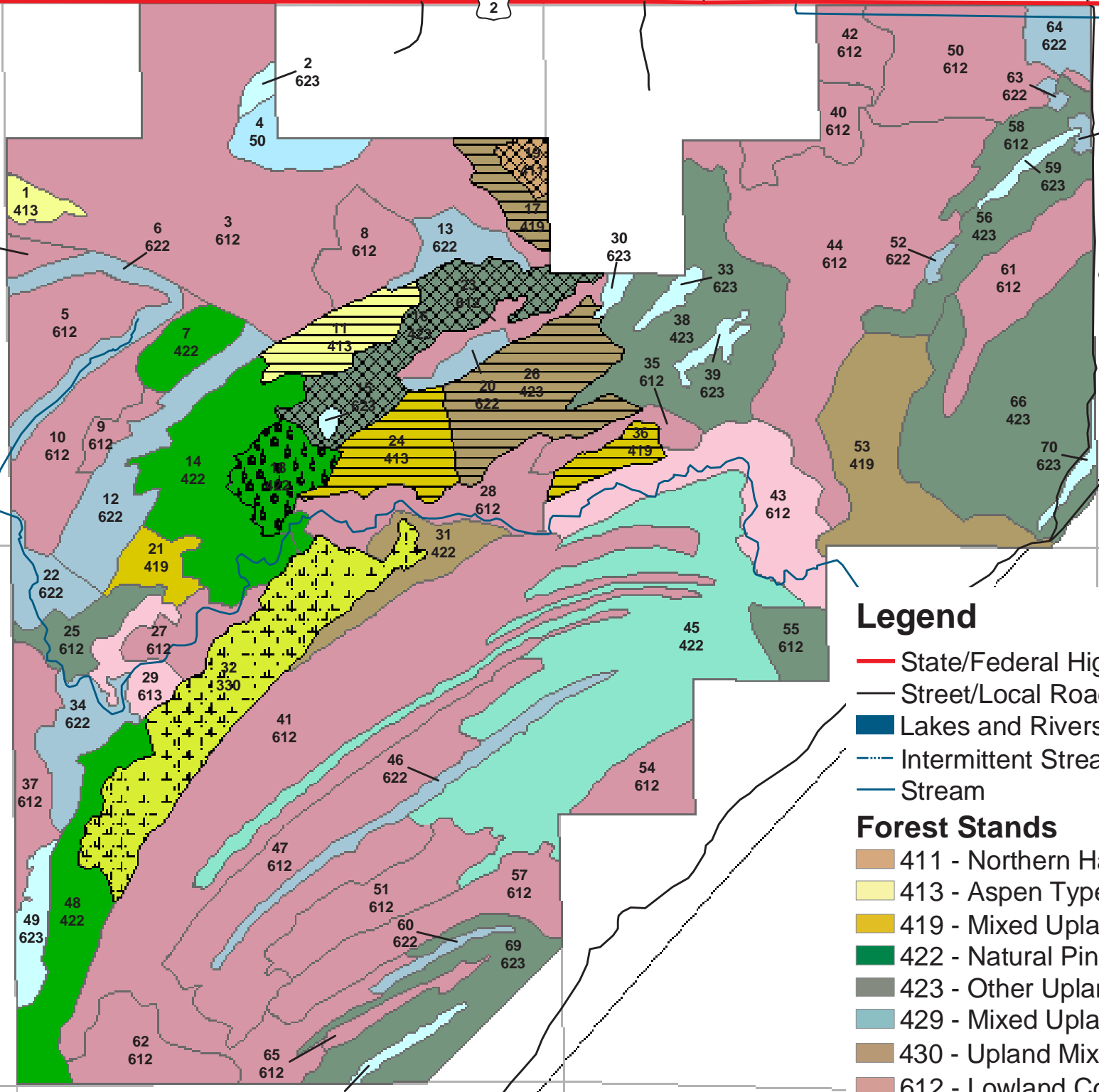


Cover Type & Treatment

Country Ave

Compartment 174
 T43N, R10W, Sec. 27, 28, 33, 34
 County: Mackinac
 Unit: Sault Ste. Marie
 YOE: 2007
 Acres: 1,745 GIS Calculated
 Stand Examiner: Amy Douglass
 Map Revised: 10/06/2005
 Map Phase: Pre-Review

28	27
33	34



Legend

- State/Federal Highway
 - Street/Local Road
 - Lakes and Rivers
 - Intermittent Stream/Drain
 - Stream
- Forest Stands**
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 429 - Mixed Upland Conifers
 - 430 - Upland Mixed Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
- Non-Forest Stands**
- 330 - Low-Density Trees
 - 50 - Water
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland
- Treatments**
- Prescribed Burn
 - Clearcut
 - Clearcut with Reserves
 - Group Selection
 - Single Tree Selection
 - Other

