

Chapter 4 - Land Use Patterns

Overview

The purpose of this chapter is to present the existing land uses, the status of planning and zoning and potential hazardous land uses in the county. Vulnerable populations can be identified using the existing land use map, zoning maps, and future land use maps combined with hazardous areas and land uses.

To recognize and mitigate potential hazards, the community must have an accurate assessment of existing land uses. The process identifies urban built-up land uses such as residential and commercial along with natural land cover types like farmlands, forests, and wetlands. The map presented in this chapter is a hybrid that combines land cover and land use.

Planning and Zoning are the principal tools that local communities have to manage growth, preserve community character, protect property values and enhance the economic viability of the area. Planning helps establish and focus the desired future of the community and zoning ordinances are used as one of the primary ways to implement the community master plan and achieve the goals of the community. It is not the intention to compare the strengths and weaknesses of zoning regulations among the various zoning ordinances but to give a comprehensive perspective on planning and zoning in the county. Until recently, the potential to use these tools for hazard mitigation has been largely ignored.

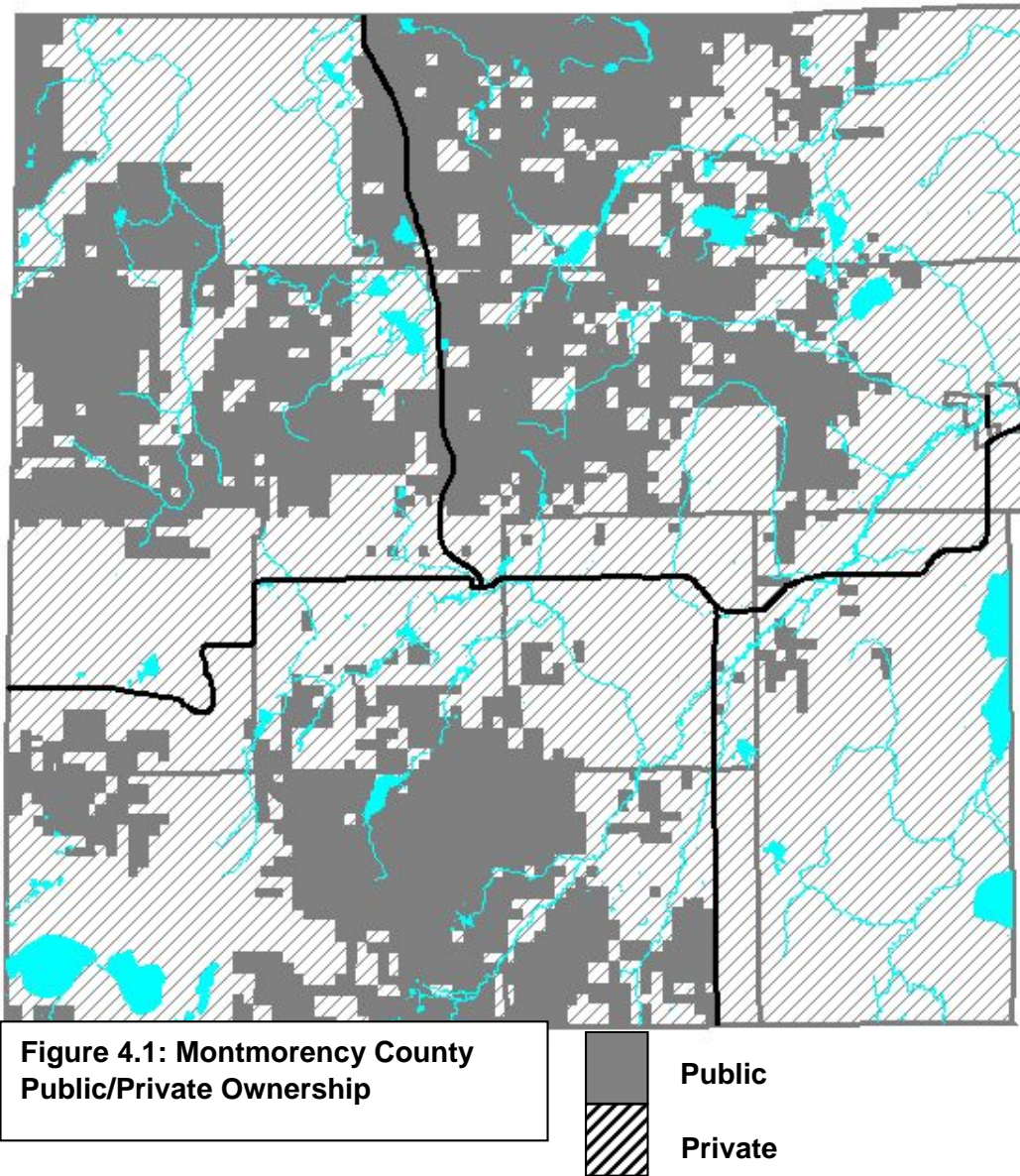
Land Division Patterns

As in other parts of the state, the trend in Montmorency County is for larger tracts of land to be subdivided into smaller parcels. However, unlike rapidly developing urban fringe communities where subdivisions and site condominium developments are the norm, the trend here is for parcels 40 acres and larger to be split into 2 to 10 acre parcels. Though not as visually apparent as high density, there are still issues as far as providing transportation, public safety and emergency services to this dispersed population.

A large portion Montmorency County is in public ownership and the State of Michigan owns approximately 37 percent of the land (**Figure 4.1**). Given current conditions, it is safe to assume these lands will remain in public ownership and therefore remain in larger tracts.

Private land division patterns for the County indicate the most intensive development has occurred within the communities of Atlanta, Hillman, Lewiston and Canada Creek Ranch. Residential subdivisions and small tracts, both commercial and residential, are found in these communities. Similarly, smaller platted lot development has occurred around the many lakes and is primarily used for residential and seasonal homes.

Land divisions for the remainder of the County are a mixture of sizes generally ranging from two acre parcels to tracts greater than 300 acres. Clearly the most prevalent, non-subdivision, parcel sizes in private ownership are the five to ten acre parcels. A review of plat books from 1984, 1973 and 1962 shows much of the parcelization into five and ten acre parcels has occurred since 1960. Prior to 1960 much of the private ownership was 40 acre or larger parcels with some individuals owning several sections of land.



Existing Land Uses

The existing land use as shown in **Figure 4.2** and **Table 4.1** illustrates the distribution of land uses throughout Montmorency County. Michigan Resource Information Systems (MIRIS) land cover/use classification categories were used to map the existing land use. The map represents several updates to the 1978 MIRIS land cover/use map. Hillman and Albert Townships were updated in 1996, the west half of Montmorency Township and Avery and Briley Townships were updated in 1997, and Vienna Township was the most recent update in 1999. The 1978 data was used for the remaining areas. The MIRIS map was updated through aerial photographs and extensive field checking. **With the economic downturn in 2007, minimal development has occurred in the county. Therefore, no significant changes in development have occurred since the previous plan was completed.**

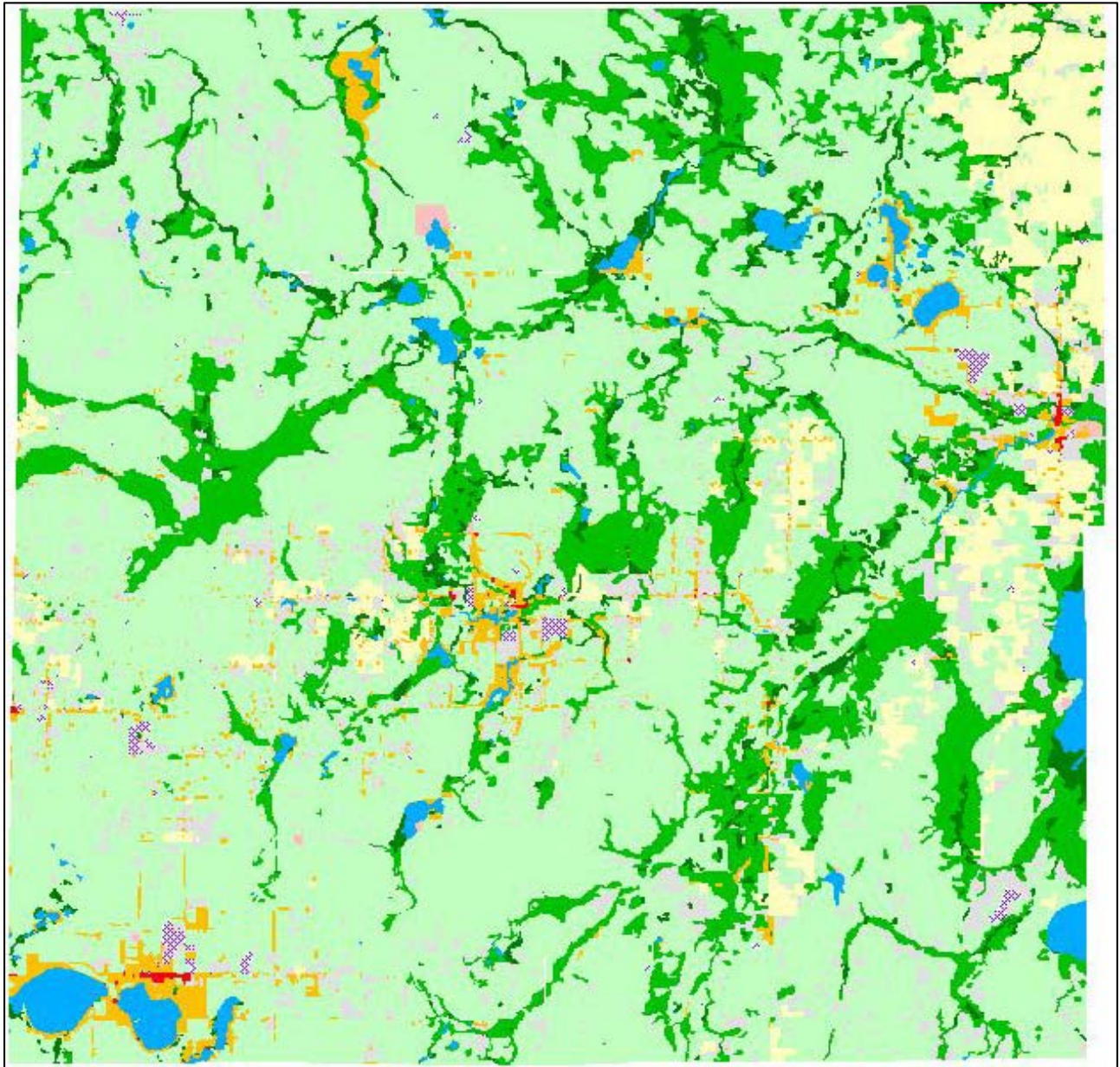


Figure 4.2: Montmorency County Existing Land Use

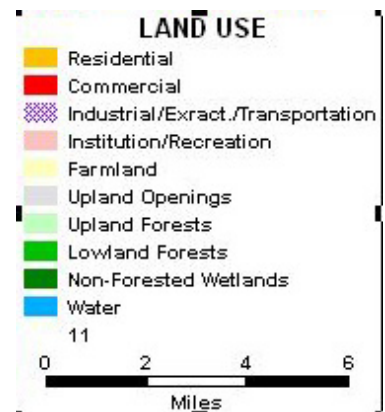


Table 4.1 Existing Land Use Statistics - Montmorency County		
Land Use Category	Number of Acres	Percent of Township
Residential	10,149	2.8
Commercial	324	Less than 0.1
Industrial/Extractive/Transportation	1,525	0.4
Institutional/Recreational	610	0.2
Agricultural	20,349	5.7
Non-forested Uplands	23,659	6.6
Upland Forests	228,572	63.6
Lowland Forests	53,760	15.0
Wetlands	11,667	3.3
Water	8,830	2.5
TOTAL	359,445	100

Source: Michigan Resource Inventory System and NEMCOG photo interpretation field verification and map updating.

Residential

As can be seen on the Existing Land Use Map and table, residential use occupies almost three percent (10,149 acres) of the land in the county. The highest concentrations of residential development are located in the communities of Atlanta and Hillman and around the East and West Twin Lakes in Lewiston. In addition to the Twin Lakes, several other lakes in the county have significant residential development around their shorelines. Lake Geneva, Avalon Lake, Long Lake, Ess Lake, Rush Lake and Little Brush Lake have the heaviest concentrations of residential development. Much of the housing around the lakes and in the county was originally seasonal and, as is the case with much of northern Michigan, over time the seasonal housing has transitioned into year-round dwellings. Residential development can also be found in the central portion of the county scattered along M-32, M-33, and the primary county roads.

Commercial

The largest concentrations of commercial uses are found in the in the communities of Atlanta, Hillman, and Lewiston. Most of the commercial land uses are service and retail in nature and are intended for local residents. Small pockets of commercial uses can be found in several rural locations around the county. These rural commercial uses are typically convenience retail uses that serve the rural residents. Lands used for commercial purposes comprise less than one tenth of one percent of the county's area.

Industrial/Extractive

Land in this use category covers four tenths of one percent (1,525 acres) of the county. The majority of this area is made up of the light manufacturing businesses and airports located in Atlanta, Hillman and Lewiston.

Agricultural

Agricultural lands comprise approximately 20,349 acres or 5.7 percent of the county. Farming activities include hay production, pasture land, and row crops. The majority of the land area being farmed is located in the northeast corner of the county. Smaller concentrations of farms are located south of Hillman and west of Atlanta.

Institutional/Recreational

This land use includes such uses as schools, churches, cemeteries and recreational areas. This category accounts for 610 acres or 0.2 percent of the land area in the county. The majority of the land area in this category is comprised of the 12 parks and campgrounds located throughout the county. The 290 acres of Clear Lake State Park located at the north end of Clear Lake in Montmorency Township accounts for almost half of the Institutional/Recreational land area in the county. Other recreational areas included in this category are Thunder Bay Golf Course located in Hillman and Sheridan Valley ski hill located in Albert Township. Approximately 37% of Montmorency County is in public ownership, most of which is in the Thunder Bay River State Forest. While these lands are not classified as recreational, the considerable amount of public land does offer residents and visitors ample area for a wide range of outdoor recreational activities such as fishing, hunting, cross country skiing and snowmobiling.

Non-Forested Uplands

The 23,659 acres (6.6 percent) of non-forested land make it the third largest land cover in the county. This category consists of herbaceous open and shrub land. This land cover is scattered relatively equally throughout the county with no specific or large concentrations. Much of the non-forested land is abandoned farm fields, no longer being farmed.

Upland Forests

The upland forestlands are the most predominant land cover in the county and accounts for 63.6 percent or 228,572 acres of the county. Of the forested land, the most prevalent forest type is aspen/birch. Other forest types include jack, red and white pine. More information on forest type can be found in Chapter 2.

Lowland Forests and Wetlands

Wetlands include land that has sufficient water at or near the surface to support wetland or aquatic vegetation. These areas are commonly referred to as swamps, marshes and bogs. The wetland category comprises non-forested types such as lowland brush (tag alder and willow) and wet meadows. Non-forested wetlands account for 11,667 acres or 3.3 percent of the surface area.

Lowland forests grow on soils with a seasonally high water table and are often classified as wetlands. Lowland forests include areas that support lowland hardwoods and conifers such as northern white cedar, black spruce, balsam fir, elm, red maple, ash and aspen species. Lowland forests occupy 53,760 acres or 15 percent of the county. Two of the most important functions of wetlands are water quality protection and ecological corridors. As can be noted on the Existing Land Use Map (**Figure 4.2**), the major wetland areas are adjacent to rivers and creeks. The

network of wetlands receives surface water and subsurface water discharge, creating the many streams and creeks that in turn flow into the area lakes. The interconnected resources exemplify how activities distant from major water bodies can still have an impact on the water quality.

Surface Water

Montmorency County is home to several major rivers and over 75 lakes, ponds, and flooding areas. Open water is located throughout the county and comprises 2.5 percent of the area in the county. The Thunder Bay River and its North and South branches flow through the east half of the county and the Black River is located in the northwest corner of the county. East and West Twin Lakes, Fletcher Pond, Turtle Lake, Avalon Lake, Long Lake, Grass Lake, and Rush Lake are some of the larger water bodies found in the county.

Planning and Zoning

Planning and Zoning are the principal tools that local communities have to manage growth, preserve community character, protect property values and enhance the economic viability of the area. Planning helps establish and focus the desired future of the community and zoning ordinances are used as one of the primary ways to implement the community master plan and achieve the goals of the community.

Montmorency County Planning Commission completed a master plan in _____. Montmorency County has no zoning enforced at the county level. In the county, the Village of Hillman and all the townships except Rust Township have adopted master plans. With the exception of Loud Township, all of the communities have adopted and administer their own zoning. These communities have a zoning administrator, planning commission and zoning board of appeals that administer their zoning. The planning commissions are responsible for overseeing the master plan, recreation plan and zoning ordinance. The Township Boards, Village Council and County Board are the governing bodies responsible for managing finances and making policy decisions. None of the communities have planning staff and rely on planning commissions to oversee planning and zoning activities. Townships do not have staff, but rely on elected officials to conduct township business.

A key element of the community master plan is the future land use plan. This is the culmination of the planning process that entails an analysis of existing conditions, public input and goal setting, and finally establishing the community's desired future. The community-wide future land use plan includes a map that depicts where the community envisions types and densities of development. As well, the plan may address important resource areas to protect. Accompanying text describes future land use categories, compatible uses, incompatible uses and development densities. Special issue areas may include utility service areas, roads, open space development and waterfront development. The future land use plan is a policy document designed to guide land use decisions over a given planning horizon, usually 20 years. By comparison, the zoning ordinance and zoning map is a local law that regulates how property can be developed today.

A review of community plans found communities have designated a majority of the land area in the County as natural resource and forest recreation. State lands are typically included in these areas. Residential development is envisioned, but at lower densities than areas planned specifically for residential development. Communities with active farming have designated

agricultural future land use areas. However, a comparison with current zoning indicates communities intend to reduce the amount of area planned for agricultural uses in the future.

Master plans, including the future land use plan, are implemented through zoning, capital improvement programs, and recreation planning. Zoning is the primary tool used by most communities to implement their master plan. Zoning regulates the type, intensity and location of development in a community. Within Montmorency County, the Village of Hillman and the Townships of Albert, Avery, Briley, Hillman, Loud, Montmorency, Rust and Vienna have zoning authority.

Hazardous Areas and Land Uses

The Montmorency County Hazard Map (**Figure 4.4** identifies areas and land uses that may have an increased hazard potential. Hazards shown on the map are oil and gas wells, high-risk forest areas, flood prone areas, main transportation routes, critical facilities and infrastructure, contaminated sites and dams. Residential areas were also included on the map to identify vulnerable people and property.

Oil and Gas Wells

An abundant amount of gas and some oil deposits are located in Montmorency County. As of January 2003, over 2,200 oil and gas wells have been drilled in Montmorency and 1,876 wells are producing gas wells, 90 wells are brine disposal wells, 22 are producing oil wells, 4 are observation wells and the remainder are dry holes that are plugged or in the process of being plugged. **Figure 4.3** depicts locations of all producing wells in the county.

Wild Fire Hazard Areas

Areas with increased wildfire risk were mapped using 1978 MIRIS land cover data. Highly flammable fuel sources such as stands of Jack Pine, Red Pine and Red Oak were identified and shown in orange on the Hazard Map (**Figure 4.3**). The largest concentrations of high-risk areas are located in the western half of Montmorency Township, the southwest portion of Albert Township, and in central Hillman Township. Other smaller areas of high fire risk can also be found scattered throughout the county.

Dams

There are fifteen dams located in Montmorency County. Two of the dams (Robert Slivensky Dam and Upper Hiawatha Dam) are rated as a significant hazard and the remainder of the dams are rated as a low hazard. The Michigan Department of Environmental Quality regulates all of the dams.

Contamination Sites

Sites that contain hazardous waste, sites of environmental contamination and oil and gas contamination are located on the hazard map. Some of the data shown was more than 10 years old at the time the map was prepared and should not be considered as a definitive source on all the contamination sites in the county but can be used as a guide to identify areas that may need further investigation.

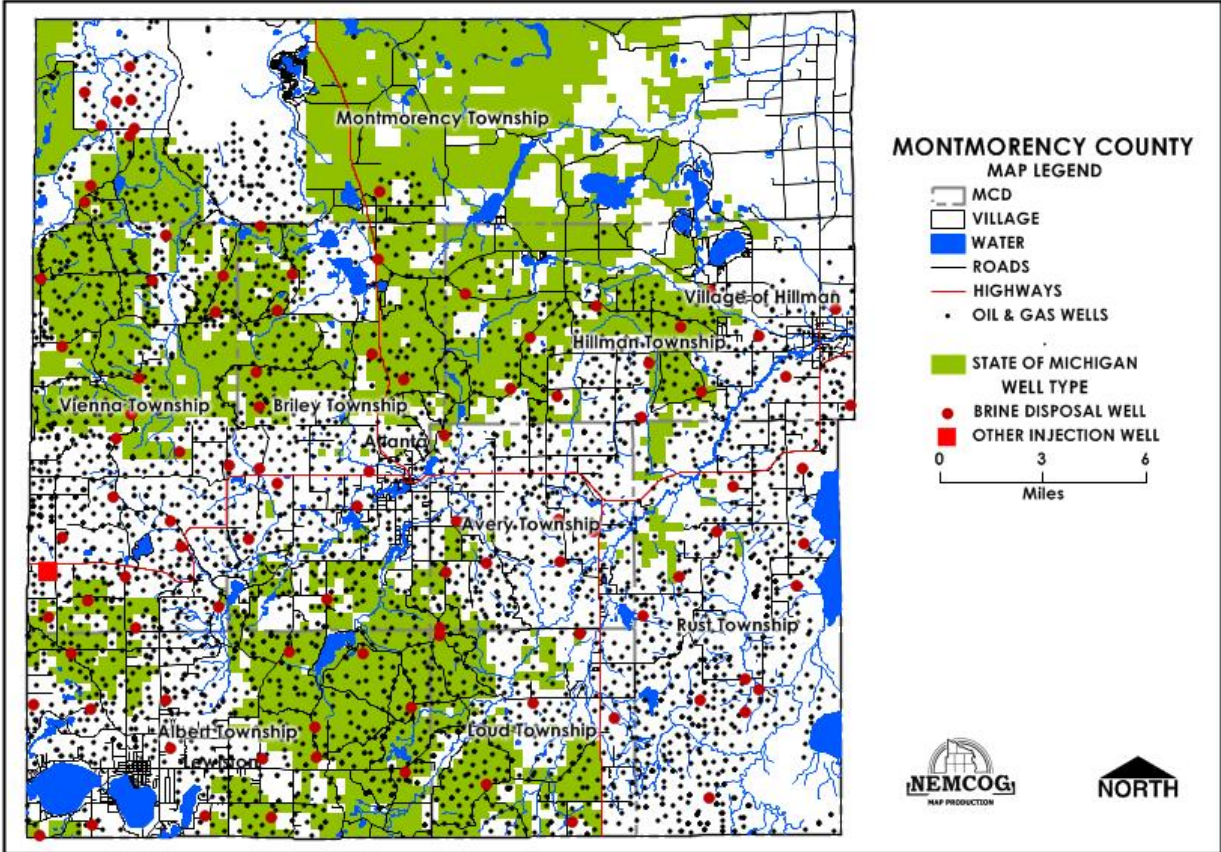
Flood Prone Areas

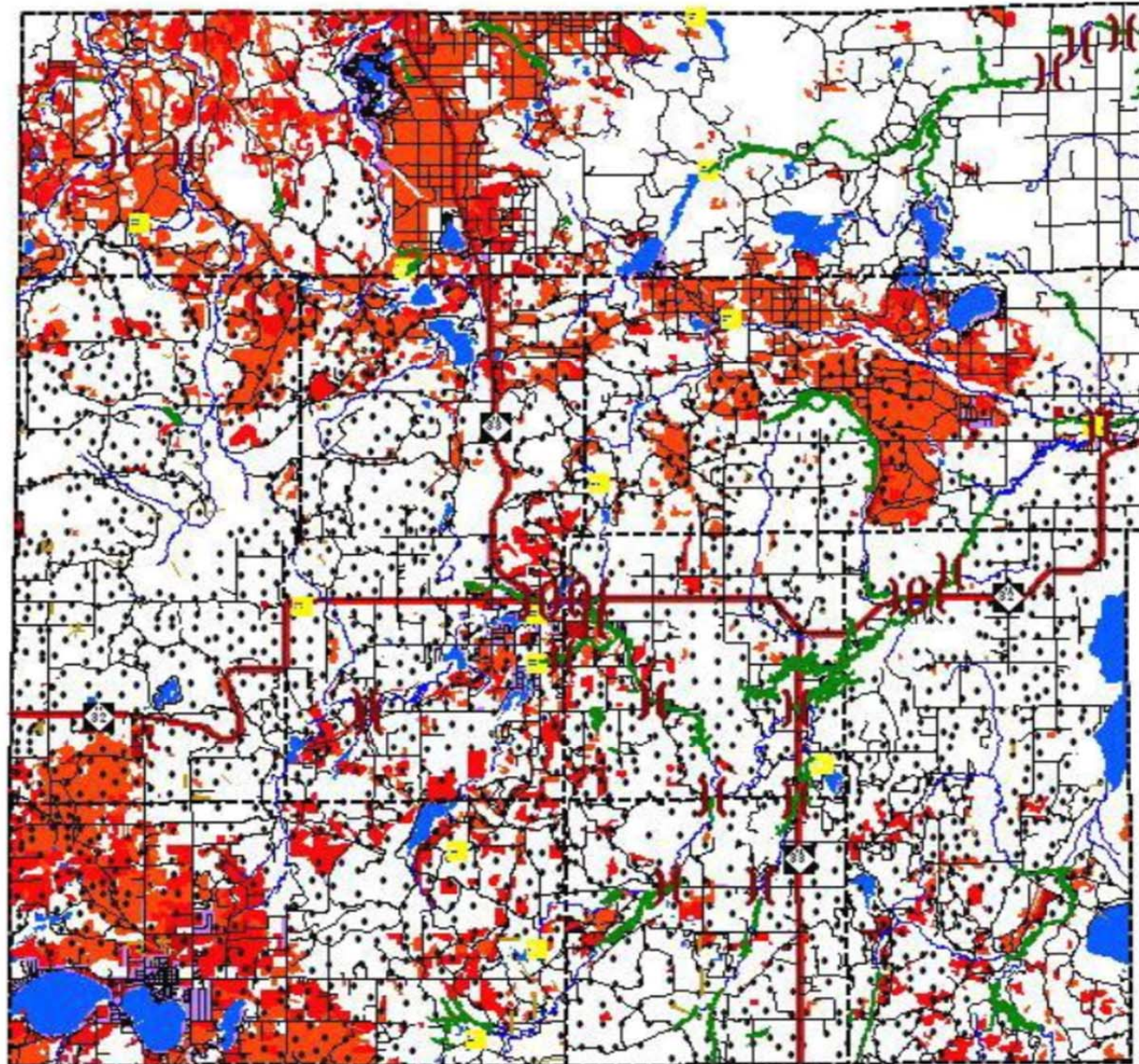
Soils that have been identified as having a high frequency of flooding are shown on the map. These areas have soils that are conducive to flooding and have a 50% chance of flooding in any given year.

Transportation

Montmorency County is bisected by M-32 and M-33. Michigan Department of Transportation Annual Average Daily Traffic Volume counts range from 2,400 to 4,400 vehicles per day on M-32, and from 1,500 to 1,800 vehicles per day on M-33.

**Figure 4.3: Montmorency County
Producing Oil/Gas Wells**
March 2012





LEGEND

- Wildfire Risk
- Industrial
- Residential
- Surface Water
- Townships
- Oil/Gas wells
- State Highways
- County Roads
- Dams
- Flood Prone
-)) Bridges

0 1 2 3
Miles

Figure 4-6:
Montmorency County,
Hazards