

Chapter 4: Land Use Patterns

Land Division

As development occurs, larger tracts of land are generally broken down into smaller parcels. Therefore, studying the existing pattern of land divisions is one way to analyze the status of land use and development. Land division patterns for Presque Isle County are discussed below. Approximately 24 percent of the land in the County is publicly owned (**Figure 4.1**). Most of the private ownership is in tracts that are 20 acres and larger in size. As with other parts of northern Michigan, private ownership is being divided into smaller tracts of 10 acres or less. Subdivisions and tracts less the one-half acre in size are concentrated in cities, villages, adjacent to water features and within the Presque Isle Harbor development. In recent years, several square miles of land in Bearinger Township, once owned by forest industry, have been converted to smaller tracts of recreational lands. These lands are heavily forested with extensive areas of wetlands.

Existing Land Use Characteristics

The analysis of land cover/use is based on a countywide land use mapping effort completed by NEMCOG in 1995. The map of existing land use, shown as **Figure 4.2**, illustrates the distribution of land uses throughout the County. Michigan Resource Information System (MIRIS) land cover/use classification categories were used to map the existing land use. The map represents an update of the 1978 MIRIS land cover/use inventory. The MIRIS map was updated with 1992 aerial photographs and field checking in the fall of 1995. The updated information was then computerized to produce the existing land use map and statistics. **Table 4.1** presents the land uses, showing the number of acres and percent of the County in each of the land use categories. Each of the land use categories is discussed later in this chapter. One important land use trend was noted during the MIRIS land cover/use map update. There has been an increase in low density residential development on both large and small tracts throughout the County. These are typically occurring on parcels two acres and larger.

Residential

As can be seen on the Existing Use Map and table, residential use ranks eighth in the amount of land in this use category. Residential use occupies less than two percent of the land in the County. Residential development is concentrated within areas adjacent to water features, within cities, villages and Presque Isle Harbor Development. Individual homes on larger tracts of land were generally not delineated; therefore, the inventory does not account for the low density residential development scattered along county roads. If these were mapped, the residential category may increase by less than one percent. Single family residential accounts for nearly all of the residential development in the County.

Commercial

Commercial areas are concentrated in Rogers City, Onaway, Posen, and Millersburg. Low density commercial development is occurring along highways, county roads and water features. Most of the commercial uses are service and retail. Lands used for commercial purposes comprise one tenth of one percent of the County's total area.

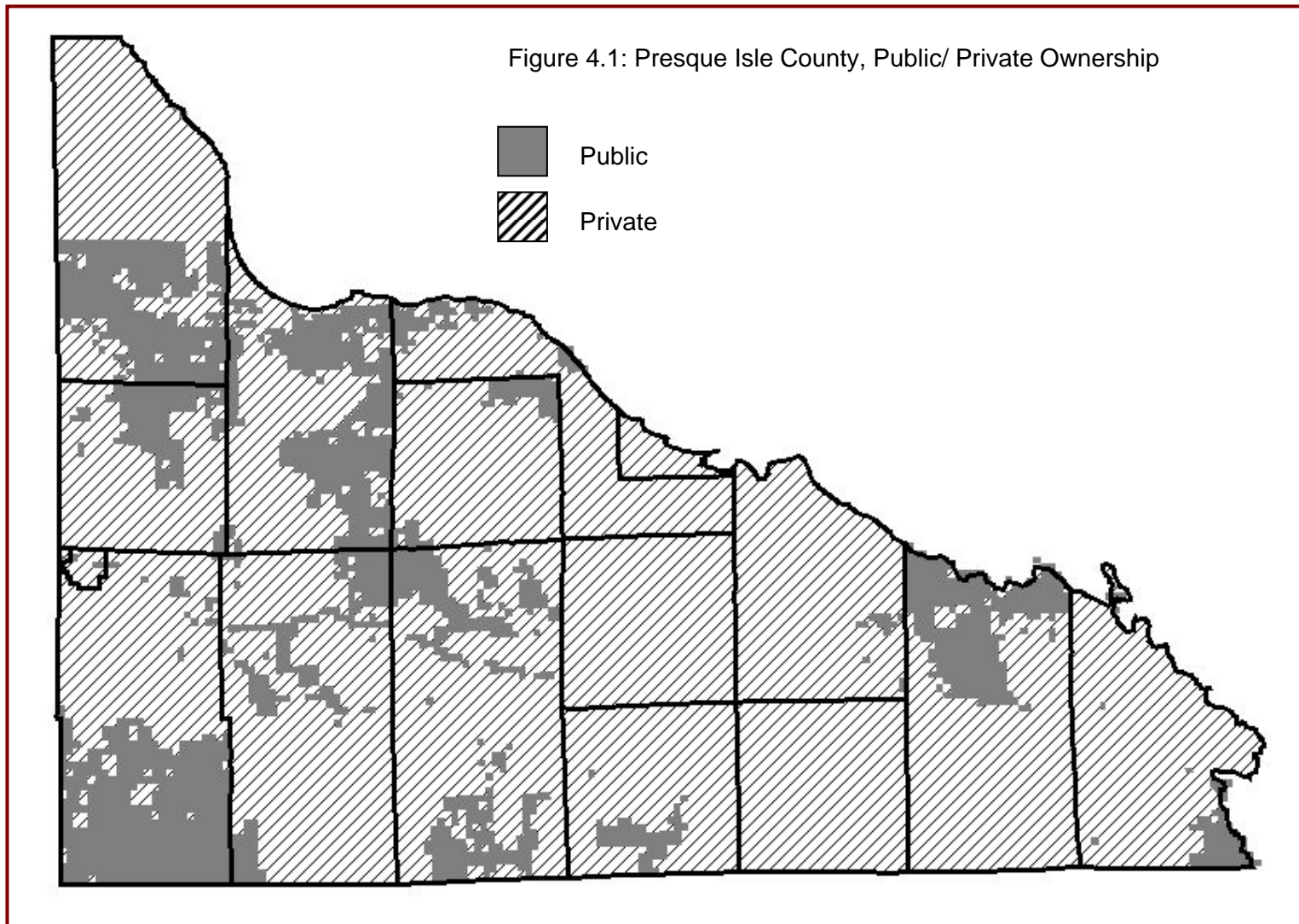
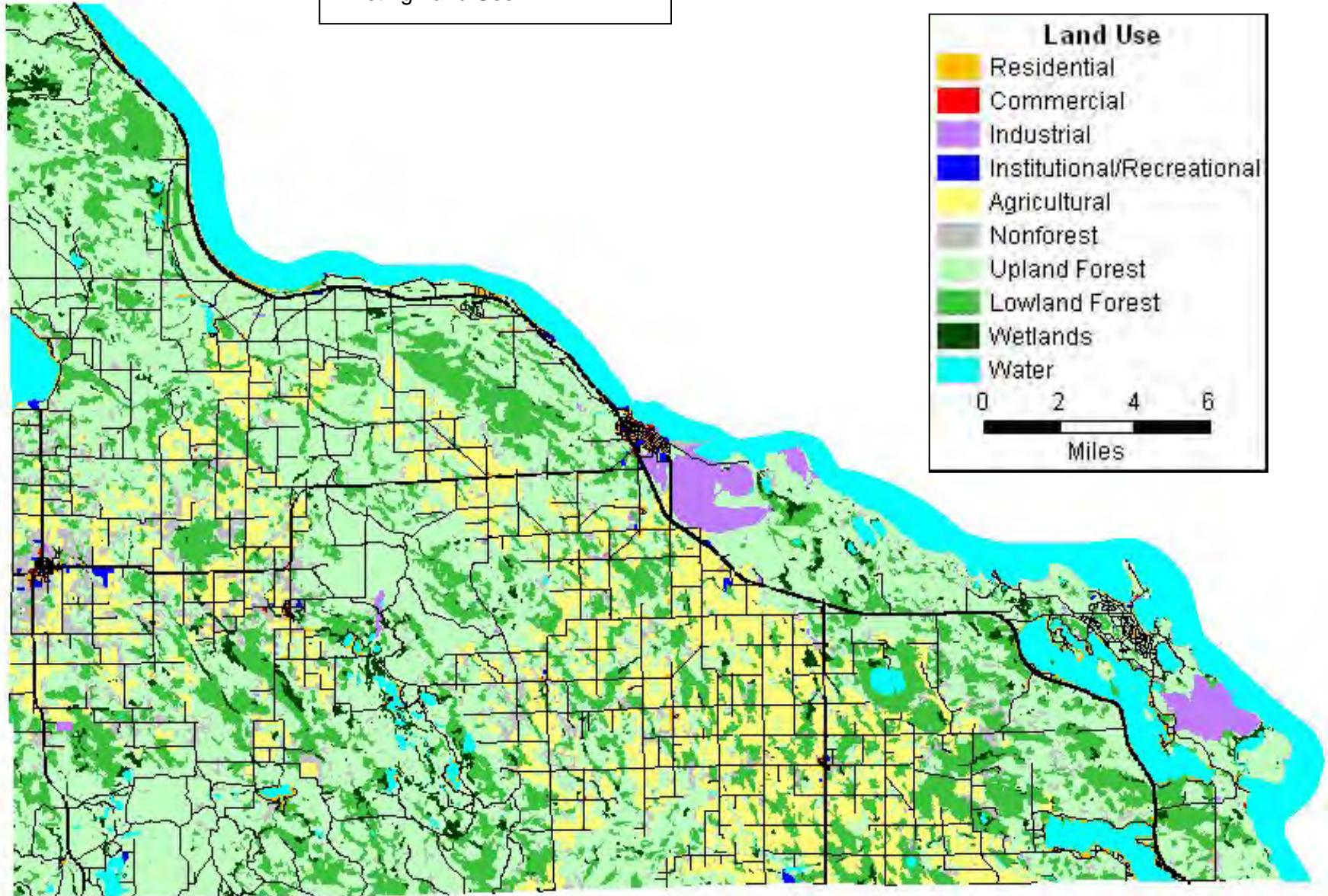


Figure 4.2: Presque Isle County
Existing Land Use



Land Use Category	Number of Acres	Percent of County
Residential	7,383	1.7
Commercial	437	0.1
Industrial/Extractive/Transportation	8,080	1.9
Institutional/Recreational	1,129	0.3
Agricultural	66,579	15.2
Non-forested Uplands	22,510	5.1
Upland Forests	217,211	49.6
Lowland Forests	87,071	19.9
Non Forested Wetlands	12,146	2.8
Water	15,253	3.5
TOTAL	437,797	100.0

Source: Michigan Resource Inventory System and NEMCOG photo interpretation, field verification and map updating in 1995.

Industrial/Extractive/Transportation

Land in this use category covers nearly two percent of the County. This category includes the Michigan Limestone and Stoneport quarry operations, and several sand and gravel pits. Industrial parks, manufacturing facilities, landfills, oil and gas processing facilities and airports are included in this category.

Institutional/Recreational

This category includes institutional uses such as churches, cemeteries, schools, hospitals and government facilities. Developed recreational facilities including public and private parks, golf courses, and campgrounds were mapped as part of this category. State Parks such as Onaway and Hoeft are mapped as recreational; however, other natural area parks such as Thompson's Harbor are mapped as forests and wetlands. This category accounts for approximately 0.3 percent of the County's area. As noted earlier, some 24 percent of Presque Isle County area is in public ownership. While these areas were 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 hunting, fishing, snowmobiling, hiking, bird watching, and nature study.

Agricultural

Agricultural lands comprise approximately 66,000 acres or 15 percent of the County. This represents the third largest land use category. Farming activities include hay production, pasture land and row crops, but does not include woodlots which are mapped in the forest category. While the amount of land being farmed has been decreasing each decade, generally the land is converting to a less intensive use of open lands and not converting to subdivisions and commercial uses.

Non-forested Uplands

The non-forested land category is the fourth most prominent land cover type in the County. Over 22,000 acres, more than 5.1 percent of the County, is in the non-forested category. A majority of the non-forest areas are old farm fields. Non-forested land is defined as areas supporting early stage of plant succession consisting of plant communities characterized by

grasses or shrubs. Such areas often occur on abandoned agricultural land or recently timbered areas. Typical plants are quack grass, fescues, timothy, bromegrass, Kentucky bluegrass, sedges, spotted knapweed, goldenrod, reed canary grass and clovers. Typical shrub species include blackberry and raspberry briars, dogwood, willow, sweet fern, sumac and tag alder.

Upland Forests

The upland forested lands are the most predominant land cover in the County and accounts for 50 percent or more than 217,000 acres of the County. By far the most prevalent upland forest type is aspen/birch. Other types include pine (red, jack and white), oak (red and white) and northern hardwoods (sugar maple, American beech and basswood). More information on forest types 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), fresh-water marshes with bulrushes and cattails, wet meadows, open bogs, and aquatic wetlands like lily pads. Non-forested wetlands account for 12,146 acres or 2.8 percent of the surface area. This is the sixth largest category ranking higher than individual urban built-up categories.

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 87,071 acres or 20 percent of the County area. 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, 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, which 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

Open water comprises 3.5 percent of Presque Isle County. The category includes 89 inland lakes and many small ponds. Thirteen of the lakes are 100 acres or larger with Black Lake, Grand Lake, and Long Lake each more than 2,000 acres in size. Other larger lakes include Lake Augusta, Lake Esau, Big Trout Lake, Lake Nettie and Tomahawk Creek Flooding, each with surface areas of 250 acres or more.

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.

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.

Land-use planning and zoning are governmental functions critical to public safety. However, because these functions are political as well, they are subject to intense differences of opinion and to public controversy. Therefore, they tend to lag behind development until the problem becomes aggravated. Being political they are also subject, even after enactment into law, to pressures for variances and modifications. With few exceptions, they cannot be made retroactive and, consequently, older developments are not much affected by them. Where land-use planning and zoning have been enforced, however, they have achieved significant degrees of fire safety (Oreg. St. Dep. For. 1978b, San Bernardino County Bd. Sup. 1974).

While building codes provide guidance on how to build in hazardous areas, planning and zoning activities direct development away from these areas, especially floodplains and wetlands. They do this by designating land uses that are compatible to the natural conditions of the land, such as open space or recreation in a flood plain, or by simply allowing developers more flexibility in arranging structures on a parcel of land through the planned development approach.

Capital improvement plans guide major public expenditures for communities for the next 5 to 20 years. Capital expenditures may include creating access roads and fire breaks, hazardous fuels reduction projects including community vegetation management, vegetation removal, and vegetation clearing and/or thinning, and retrofitting existing public structures against wildfire, etc.

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. The Presque Isle County administers planning and zoning for the 11 townships, which include Bearinger, North Allis, Ocqueoc, Case, Rogers, Moltke, Bismark, Belknap, Metz, Pulawski, and Posen Townships. The County also administers planning and zoning for the village of Millersburg.

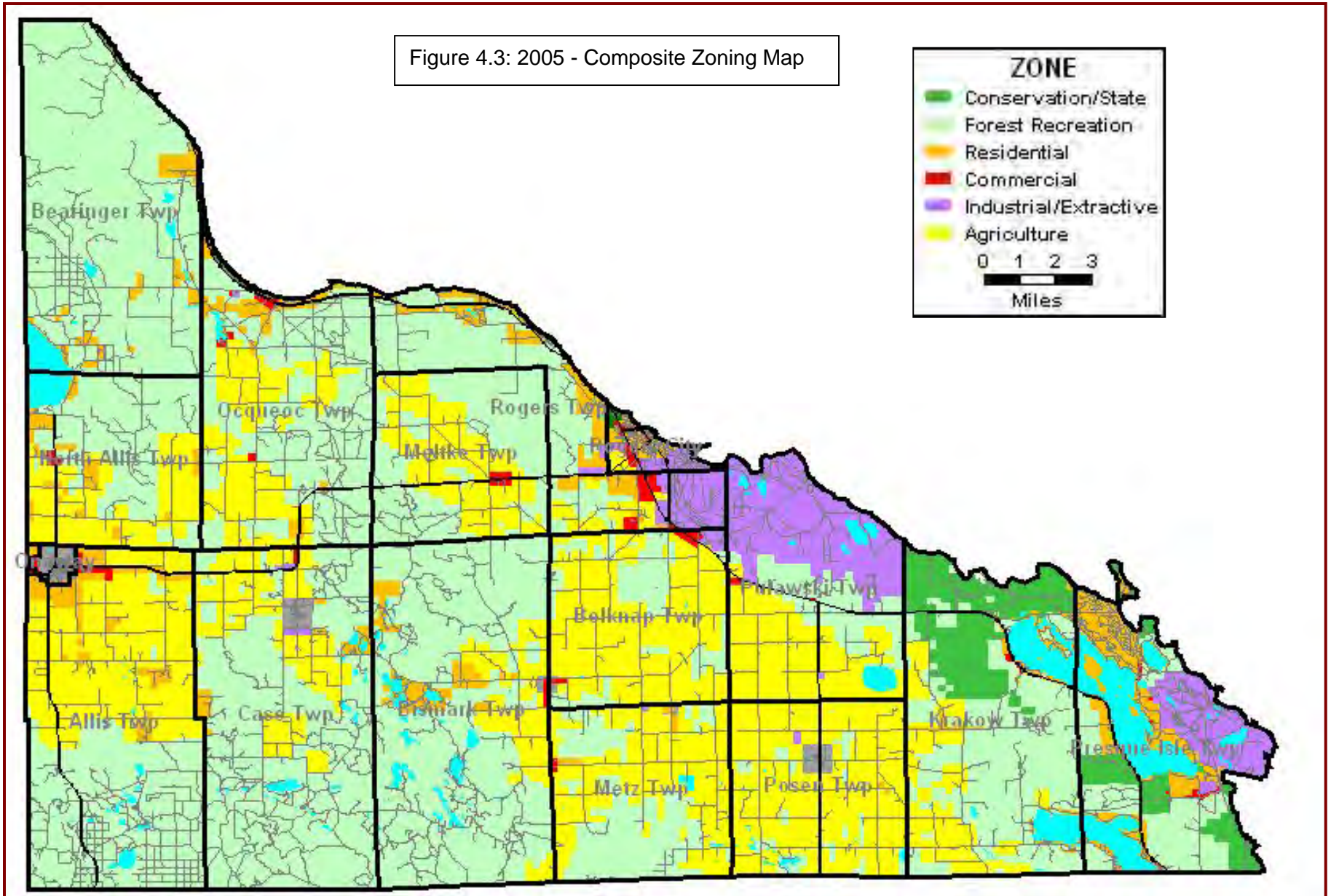
Within Presque Isle County, Rogers City, Onaway, Allis Township, Village of Posen, Presque Isle Township and Krakow Township have exercised their authority under state statutes to administer their own planning and zoning. Communities with planning and zoning have each have a zoning administrator, planning commission and zoning board of appeals that administers it's zoning. The planning commissions are responsible for overseeing the master plan, recreation plan and zoning ordinance. Governing bodies of these communities are responsible for managing finances and making policy decisions. Presque Isle County, Rogers City and Onaway have support staff to operate daily governmental functions. With the exception of Presque Isle Township, townships do not have staff, but rely on elected officials to conduct township business.

The composite Zoning Map (**Figure 4.3**) was created to show a countywide perspective of all the zoning districts. Terminologies for zoning maps tends to vary for each municipality, therefore zoning districts were interpreted into basic districts of residential, agricultural, forest recreation, commercial, industrial/extractive, and conservation. As such, zoning provides communities a means to implement hazard mitigation strategies for land use development, which may include standards for private/public road construction; driveway standards;

requirements for developments (such as subdivisions, condominium, commercial, recreational and industrial) to have two egress ingress roads; and house addresses to be displayed on 911 signs at the driveway end.

Another important zoning tool available to communities is the Planned Unit Development (PUD). Use of PUDs provides flexibility to both the community and developer to incorporate Firewise development standards. In high risk areas, PUD standards should include use of defensible zones, fuel breaks, road and driveway design, signage for street identification, ingress and egress roads, underground utilities and vegetative maintenance for managing dangerous fuel loads in high fire risk areas.

Figure 4.3: 2005 - Composite Zoning Map



Hazardous Land uses and Areas

The Presque Isle 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

As of January 2012, over 570 oil and gas wells have been drilled in Presque Isle County. Oil is the predominant resource being extracted and 37 of the wells in the county are currently producing oil. There is one producing gas well and the remainder of the wells are dry holes that are plugged or in the process of being plugged. The majority of the wells are located in the south and west area of the county. Most of the wells are located in Allis, Case, Bismark and Belknap Townships.

High Risk Fire 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 yellow on the Hazard Map. The largest concentrations of high-risk areas are located in the western portion of the county in Allis, North Allis, Case, Ocqueoc and Bearinger Townships. Other smaller areas of high fire risk can also be found scattered throughout the county.

Dams

There are five dams located in Presque Isle County. With the exception of the Trout Creek Dam near Rogers City, all of the dams are in relatively remote areas of the county and are not located near concentrations of residences or critical infrastructure. All of the dams are regulated by the Michigan Department of Environmental Quality and all have a low hazard rating.

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. Presque Isle County does not participate in a National Flood insurance program.

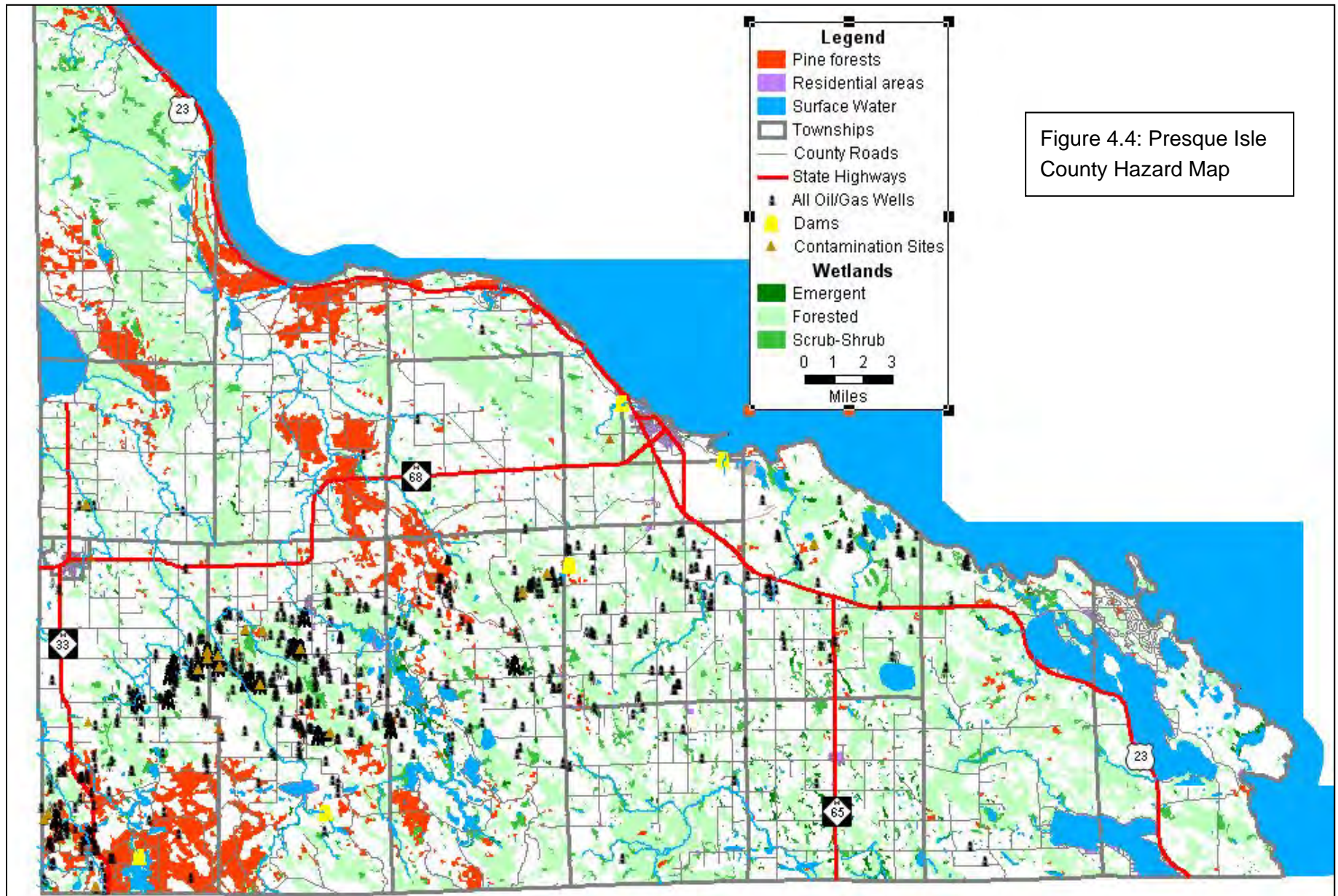


Figure 4.4: Presque Isle
County Hazard Map