

This chapter describes Ottawa County in terms of its most identifiable and distinctive features. These include the natural features and resources that relate to each other and give distinctive character to the landscape, the cultural landscape features that modify the natural environment, and the demographic characteristics of the people who live, work, and play in Ottawa County. All these factors play an important part in determining the opportunities and needs for land preservation and recreational amenities.

NATURAL FEATURES

General Location & Natural Context

Ottawa County consists of 565 square miles located on the western edge of the lower peninsula of Michigan along the eastern shoreline of Lake Michigan, the second largest of the Great Lakes. The County's sandy shoreline is 24 miles long, while its eastern boundary runs 30 miles from north to south. Traveling straight across the County from the eastern boundary to the Lake Michigan shoreline involves a 22-mile trip. Michigan's largest river, the Grand, traverses the entire width of the county and enters Lake Michigan at Grand Haven. In terms of natural communities, Ottawa County occupies a somewhat unique location in what has been referred to as the transition zone (**Figure 3.1**), an area where northern and southern forest types overlap. This results in a relatively greater diversity of plants and animals than in either the northern or southern zones.

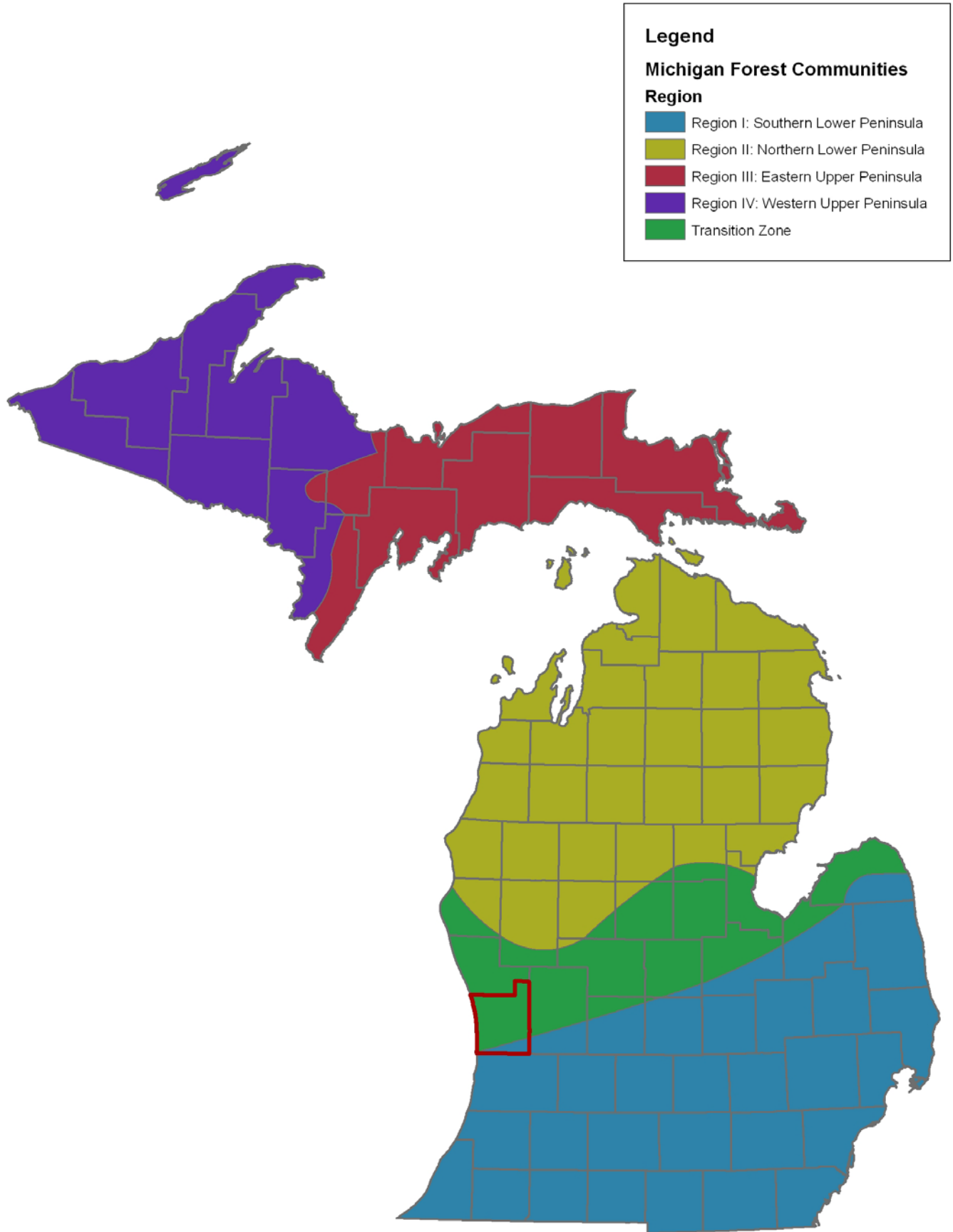
The environmental resources of Ottawa County have enticed fur trappers, lumbermen, early settlers, farmers, and today's residents and tourists. Outdoor recreation in Ottawa County has been enhanced by the existence of these environmental amenities - by the sandy beaches of Lake Michigan, by the slowly winding Grand River and its associated wetlands, by its popular inland lakes including Spring Lake and Lake Macatawa, and by the pleasant mixture of forests and grasslands that support a variety of wildlife.

As attractive as they are, the environmental resources that exist today are far different than those that greeted the earliest settlers to Ottawa County. In the past, communities developed their land with little regard for existing natural systems. Natural features were often viewed as a liability, needing to be controlled or destroyed.

Attitudes toward land have changed dramatically in recent decades as people began to recognize the negative effects of human activity on the environment. A new realization has emerged that development activities which destroy natural features carry greater costs - the most basic of which is a reduction in overall quality of life.

The natural features of Ottawa County - lakes, dunes, rivers and streams, rolling hillsides, wetlands, forests and open space - reflect its character. Previous studies have found that the citizens of Ottawa County are increasingly aware of the benefits which natural features provide

Figure 3.1 - Natural Communities Regional Context



and noted a growing willingness to support strong policies to protect these environmental assets. A basic goal of this section is to better identify key natural conditions, features and environmental resources so that they can be addressed in the planning process and protected as appropriate.

Climate

Lake Michigan influences the climate in Ottawa County significantly. Prevailing westerly winds blowing across the lake effectively moderate extreme winter and summer temperatures. In comparison to areas across the lake or further inland, temperatures above 90°F in the summer and below zero in the winter occur infrequently, rarely more than three or four times per season. Prolonged periods of extremely hot or cold weather seldom prevail during the summer or winter.

Rainfall averages over 31 inches per year. June and September are typically the wettest months while February remains the driest. The average annual snowfall measures 65 inches and increases to nearly 80 inches in a snow belt extending along the lake shore. Annual snowfall can range from accumulations exceeding 100 inches to amounts well less than 20 inches per year. Measurable amounts of snow usually fall each month from October through April.

Climate influences not only the extent of outdoor recreation but also the types of activities pursued. The ever-changing diversity of the climate in Ottawa County allows for seasonal variety in outdoor recreational opportunities. Abundant snowfall and extended periods of temperatures consistently below freezing encourage participation in outdoor winter activities, such as sledding, ice skating, snowmobiling and skiing. When the weather turns warmer, many travel to the County's popular shoreline seeking the cooling comfort of Lake Michigan. During or immediately after a prolonged spell of warm, humid weather, the public beaches along the County's shoreline attract large crowds, especially on summer weekends. In spite of variations in the weather from year to year, the County's climate remains an important feature that has enhanced the pursuit of outdoor recreation.

Geology

Literally underlying the visible landscape of Ottawa County are materials and formations that are part of the region's prehistoric past. Layers of rock including shale and limestone deposits produced during times when the region was covered with saltwater seas form the area's bedrock layers (**Figure 3.2**). These features are essentially unobservable to the public except through sampling from well drilling or engineering soil borings. More recent and much more visible evidence of geologic activity is found in the area's Quaternary Geology (**Figure 3.3**). These formations date from the time of the last ice age of 10,000 – 12,000 years ago, as well as more recent activity such as river and stream erosion and deposits. The most significant and grandiose of the more recent geologic features in Ottawa County are the sand dune formations along the Lake Michigan shoreline. The size and extent of the freshwater sand dunes which characterize the eastern Lake Michigan shoreline are found nowhere else in the United States or the world. Their visual impact and significance as a natural resource cannot be overstated. Accordingly, the dunes have been the focus of protective legislation, which attempts to regulate development in areas identified as "critical dune areas" by the Michigan Department of Natural Resources and Environment.

Figure 3.2 - Ottawa County Bedrock Geology

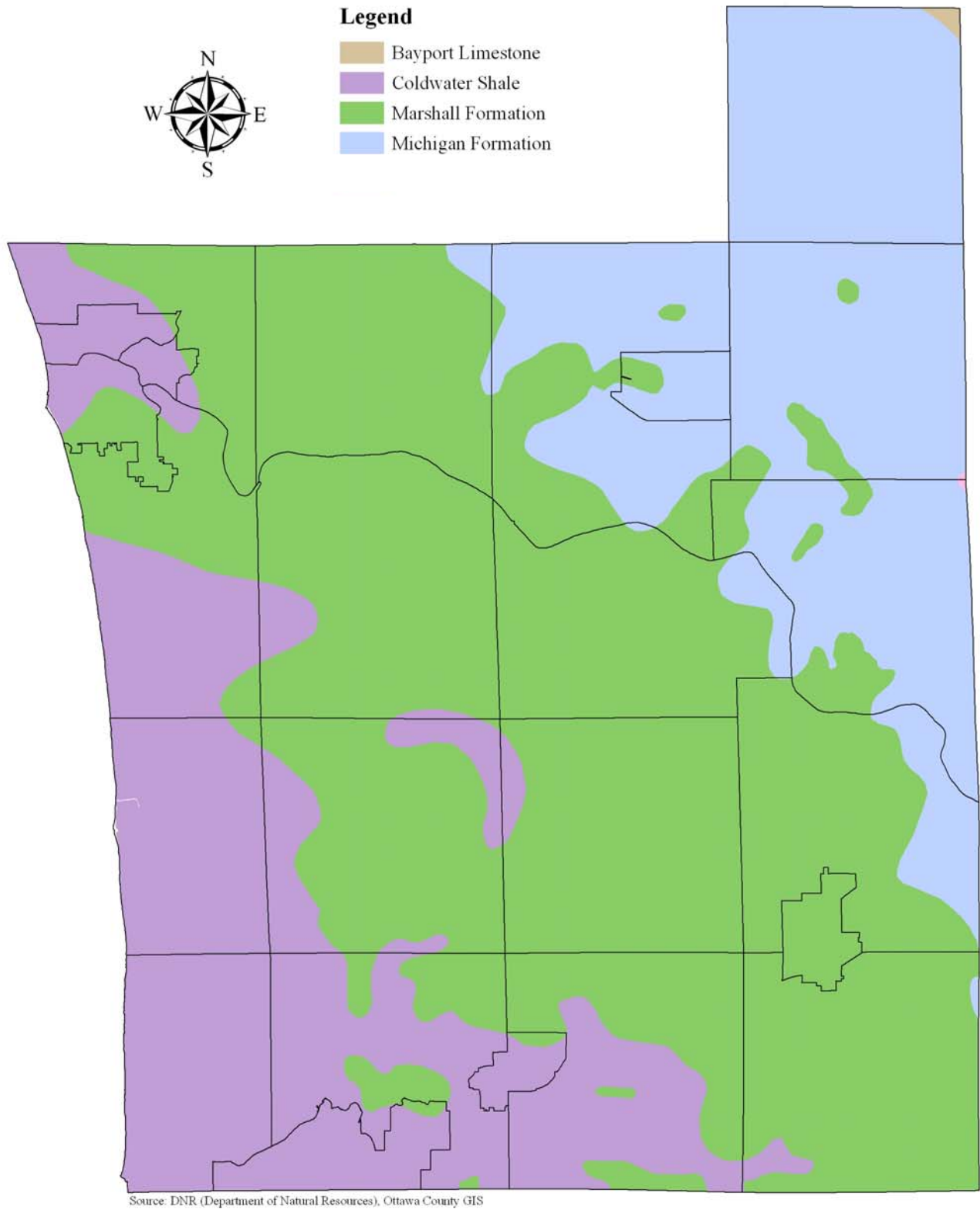
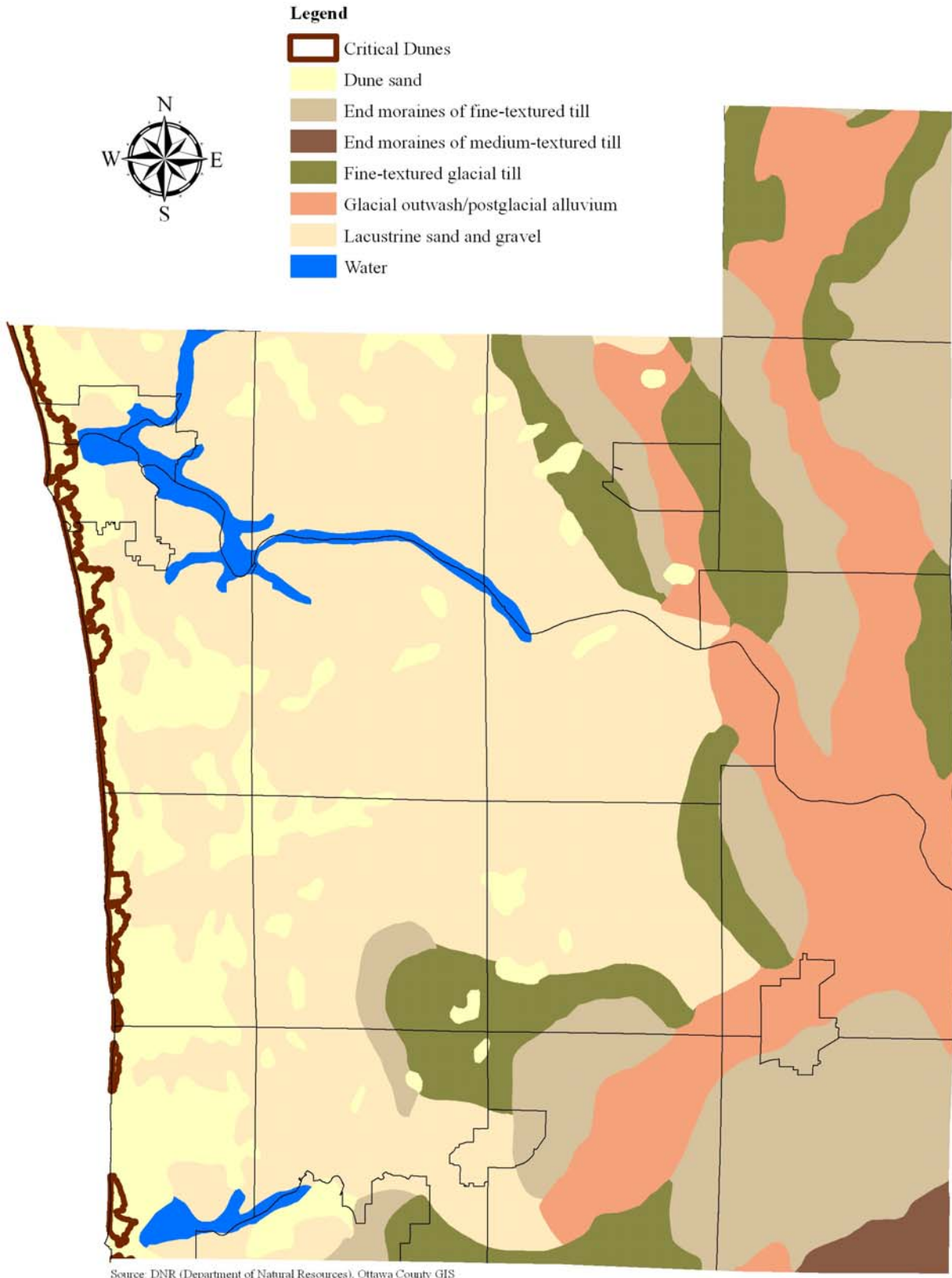


Figure 3.3 - Ottawa County Quaternary Geology



Critical dunes in Ottawa County extend almost the entire Lake Michigan shoreline. The widest areas are north of Lake Macatawa, in or near the Holland State Park and around Port Sheldon. Another significant area of dunes begins north of Lake Michigan Drive extending north to the County line. There are approximately 3,750 acres of critical dunes in Ottawa County.

Topography

Directly overlying these ancient bedrock formations are glacially deposited sands, gravels, and clays of varying concentrations and thicknesses. These glacial deposits are responsible for today's visible surface features or landforms, defining a landscape of generally flat to gently rolling terrain. Except for dune areas along Lake Michigan where some sand dunes reach 200 feet in height and steep clay ravines located along portions of river corridors, abrupt local changes in topography are uncommon in the County. While at the Lake Michigan shoreline the elevation measures 580 feet above sea level, the highest elevation in the County is slightly more than 950 feet above sea level (**See County Topographic Map - Figure 3.4**).

Hydrology (Water Resources)

The water resources in Ottawa County are an extraordinary recreational asset. Many parks in the County have been located on or near water, with that particular water body serving as the focal point for recreation. Because of an ever-increasing demand for water-based recreation, the emphasis of many future parks will likely continue to be on the presence of an attractive body of water.

Lake Michigan dominates the western edge of the County. It has attracted County residents and non-residents alike to its sandy beaches for years and continues to grow in popularity. Without dispute, the lake is probably the County's greatest recreational feature. Lake Michigan inspires outdoor activities during both summer and winter. During the summer however, activities intensify with swimming, boating, fishing, and other water sports as popular shoreline pursuits.

The primary watercourse in the County is the Grand River. Before entering Ottawa County, it has already traveled through numerous other Michigan communities on its way west from its origin near Jackson. Ottawa County is the last stretch of the river's journey, entering the County from the southeast and meandering northwesterly towards Grand Haven where it finally flows into Lake Michigan. The river drains the entire northern portion of the County and much of the eastern half through several small tributaries including Sand, Rush, Deer, and Crockery Creeks. The remaining portions of the County are drained by the Macatawa (Black) River, which empties into Lake Macatawa, and by the Pigeon River, which flows into Pigeon Lake (**See County Hydrology Map - Figure 3.5**).

The Grand River's potential for recreation is additionally enhanced by the river's bayous, wetlands and tributaries. Most of the bayous, such as Stearns, Pottawattomie, Lloyd, Milhouse and Bruce, are located along the northwestern reaches of the river and are popular fishing and boating locations.

Most wetlands in the County are associated with the Grand River and its tributaries. Other wetland areas can be found along the Macatawa and Pigeon Rivers, inland from the shoreline area, and sparsely scattered areas in the northeast. Wetlands are vitally important natural

Figure 3.4 - Ottawa County Topography

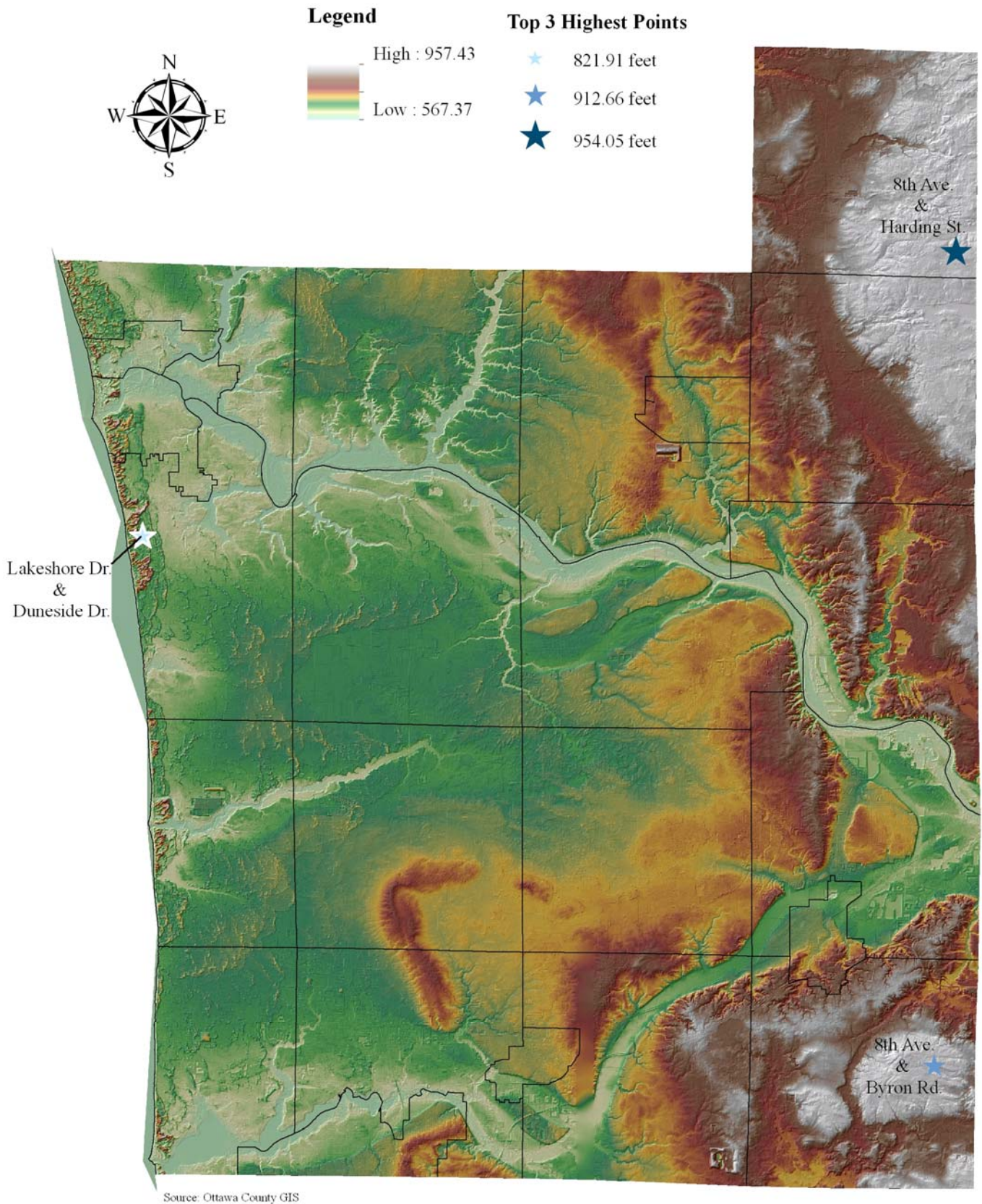
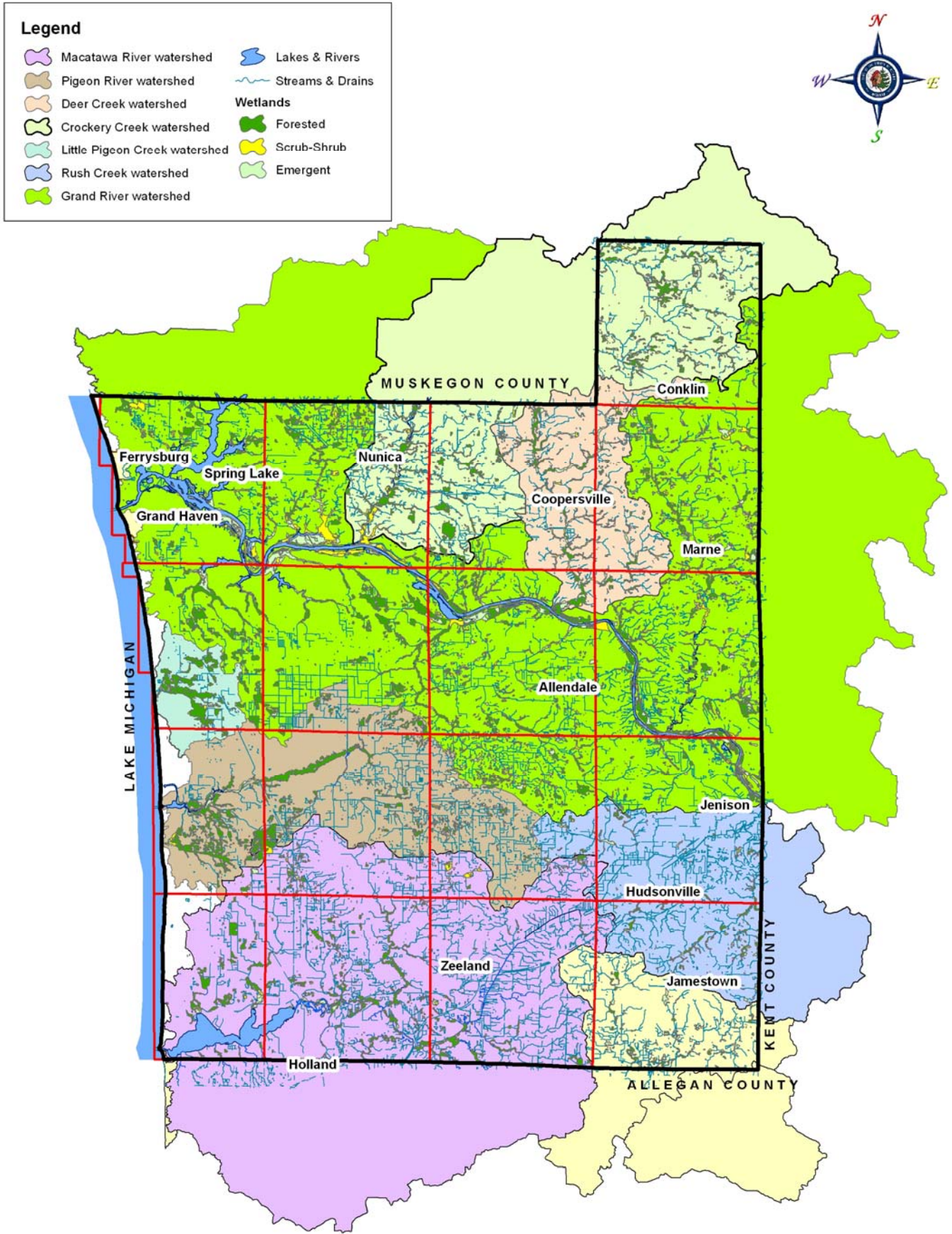


Figure 3.5 - Ottawa County Hydrology



features for their fish, wildlife and plant habitat; for their ability to filter pollutants; for their groundwater recharge value and for their importance in reducing flooding.

Anchoring the County's Lake Michigan shoreline is Spring Lake in the north and Lake Macatawa in the south. The recreational importance of these two large inland lakes is clearly evident by the concentration of much of the County's population in the communities located on these lakes. Because of these population concentrations, both Lake Macatawa and Spring Lake receive a large amount of recreational use.

There are several other inland lakes scattered throughout the County, ranging in size from 225 acres to less than five acres. Pigeon Lake (225 acres), adjacent to Lake Michigan, and Crockery Lake (108 acres), located in the northeast, are the largest of these inland lakes and are popular recreational lakes.

Water quality is a concern in many of Ottawa County's lakes and streams. Non-point source pollution is believed to be a major cause of water pollution. Non-point source pollution includes runoff from urban areas, farms, residential septic fields and many other difficult-to-define sources. Recent efforts associated with land protection in the river greenways have directly addressed this concern.

Soils

Most soils in the County are the result of glaciation, except the wind-blown sand along the lake, the alluvial soils on the floodplain, and the organic soils produced from decaying vegetation. The soils range from the light sandy soils associated with the lake plain to the heavier silt and clay loams occurring in the morainal uplands of the east (**Figure 3.6**). Excluding the dune sands and waterlogged marsh soils, most soils have been successfully utilized for many developmental activities. Many acres are considered prime farmland and are used for agricultural production (**Figure 3.7**). A few soil types in the County do possess some limitations, such as erodibility, compaction, drainage, etc., for certain uses and activities. Recreational development requires a site-specific evaluation of soil characteristics in order to identify potential problems.

Plants and Wildlife

Prior to European settlement, extensive white pine and hardwood forests nearly covered the entire County (**See Figure 3.8 for pre-settlement vegetation**). These forests initially attracted trappers and traders, but by the early 1800s, the lumbering industry was also motivated to utilize the vast forest resources. As these forests were logged out, the remaining cleared land was eventually farmed. Today, scattered patches of forest are found interspersed with fields of cultivated crops. Many of these smaller forests are located along wetlands, streams and rivers, on stabilized sand dunes along the lake, and on soils or lands not suitable for farming. In the 1930s, many acres of cleared land with sandy soils were planted in pine in order to combat wind erosion. These maturing pine plantations dot the western half of the County.

A beech-maple forest represents the climax forest characteristic of this climate. Many examples of this forest type can be found throughout the County, especially in the back dunes along the

Figure 3.6 - Ottawa County Soils

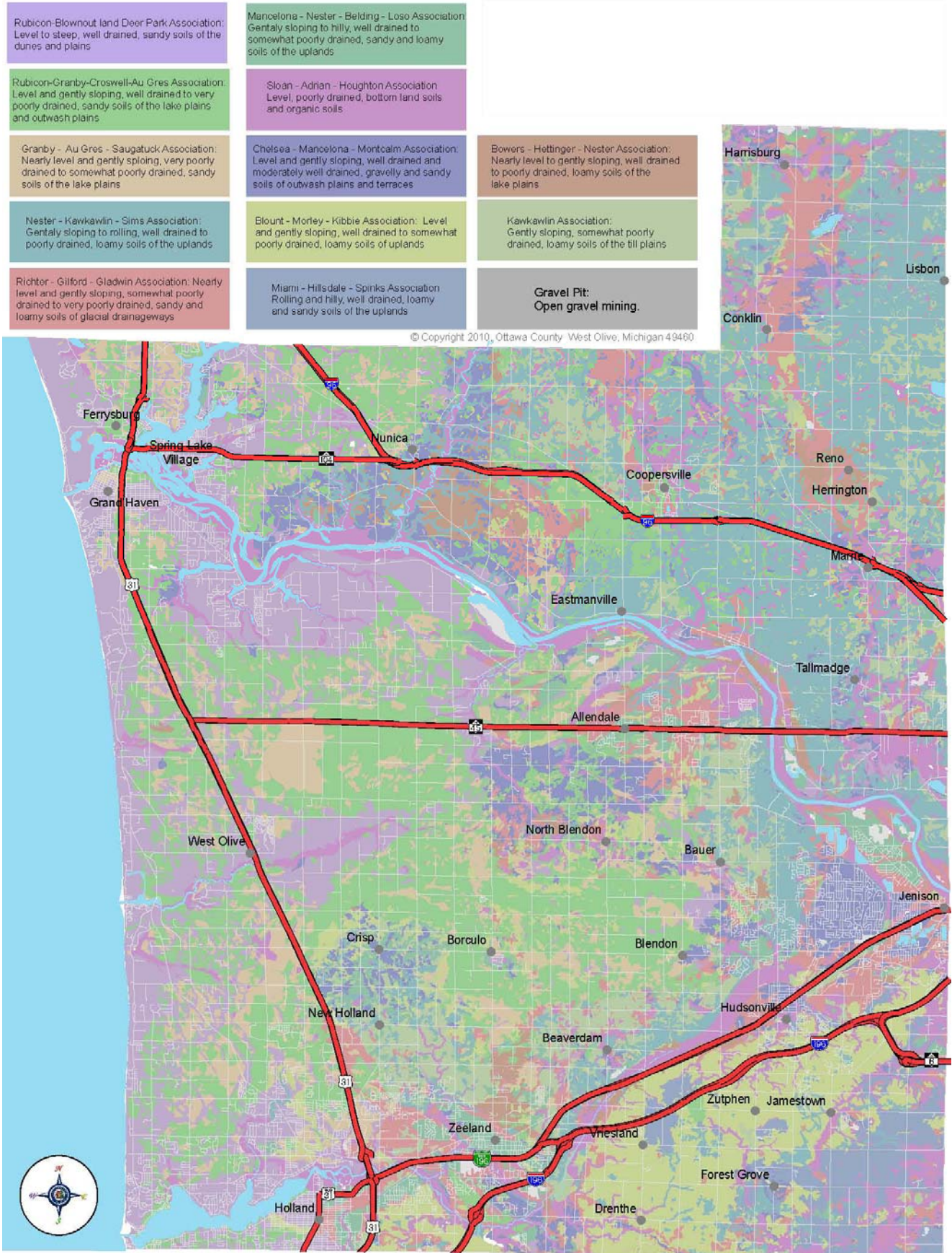
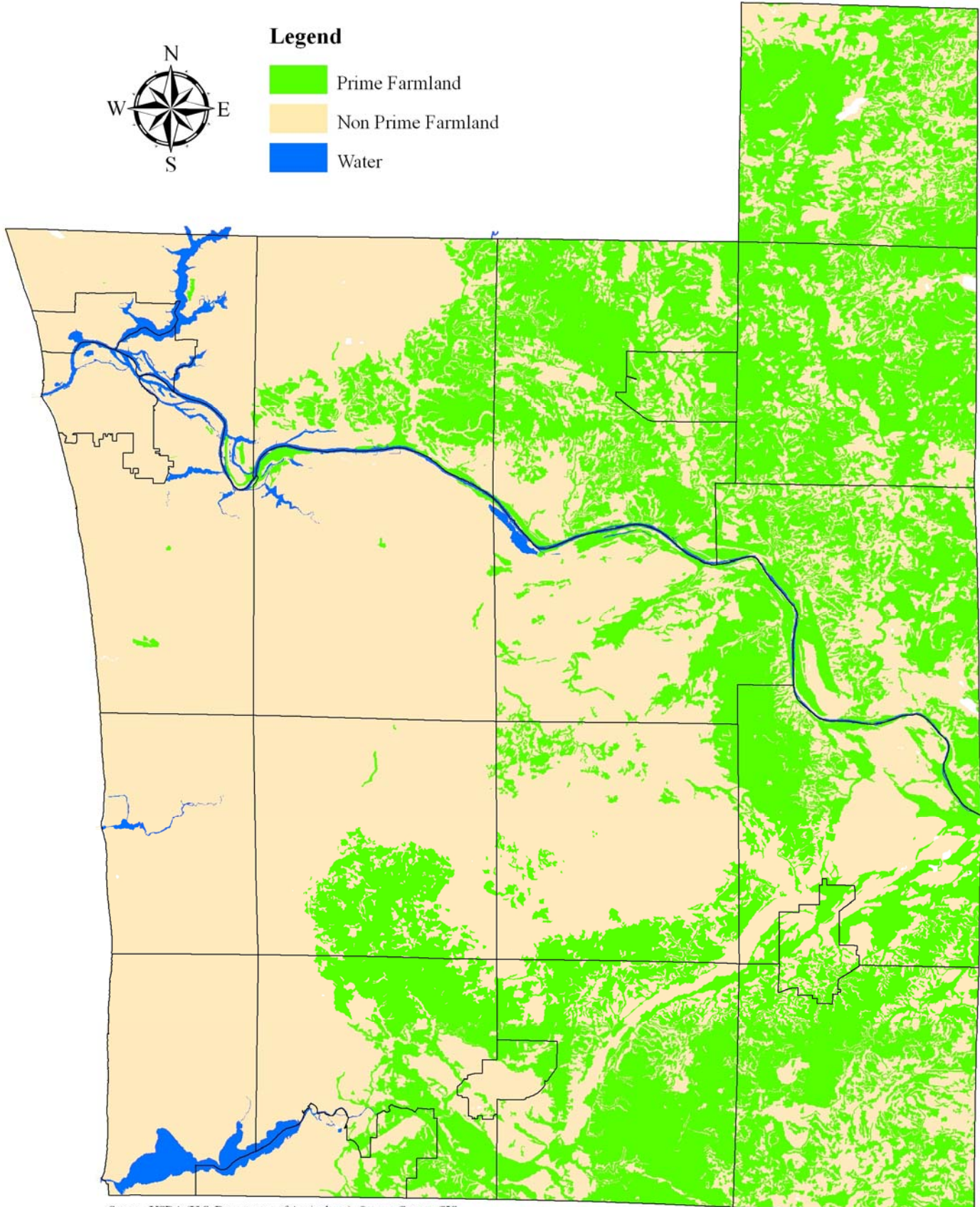
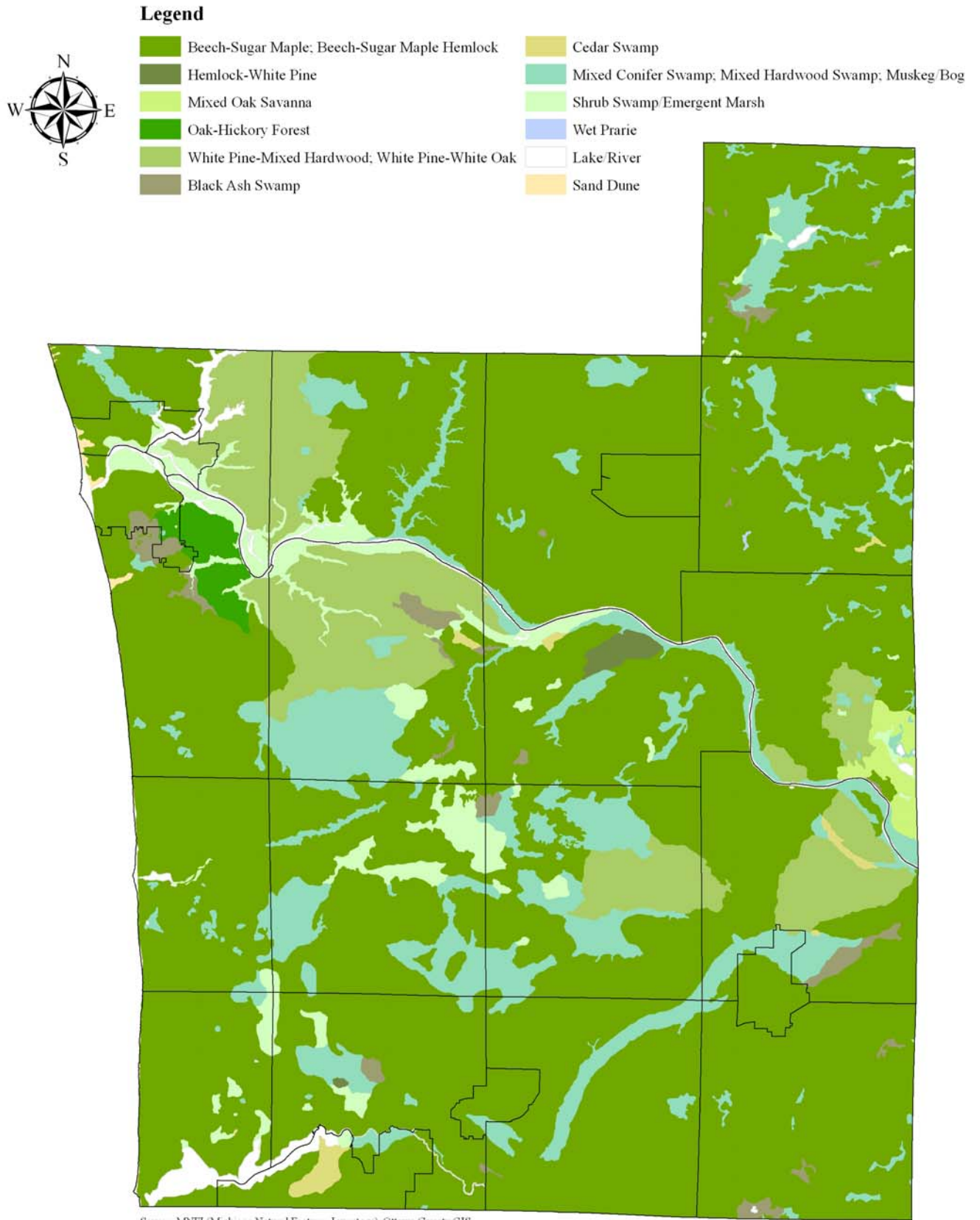


Figure 3.7 - Ottawa County Prime Farmland



Source: USDA (U.S. Department of Agriculture), Ottawa County GIS

Figure 3.8 - Ottawa County Pre-settlement Vegetation



shoreline. In wetter bottom lands, along rivers and streams, those plant species more tolerant of wet soils have dominated, such as ash, cottonwood, sycamore, and silver maple. Oaks and pines can be found in the drier upland areas of the County. A variety of native herbaceous plants can be found in fields, along roadsides, stream banks, marshes or other undisturbed areas.

In 1988, an inventory of natural features was prepared for Ottawa County by the Natural Features Inventory, a joint effort of the Nature Conservancy and the Michigan Department of Natural Resources. 37 natural areas of special interest were identified and rated as to their environmental quality and significance. Of the 37 areas identified, 11 were categorized as "notably significant," four were categorized as having "exceptional significance," and the remaining were categorized as "non-qualifying." Of the areas classified as "notably significant," almost half serve as habitats for State-Threatened plant species. The vast majority of the significant areas identified are located along the Grand River corridor. **Appendix A** shows the locations of the significant areas and provides a description of each site.

The species of wildlife to be found in any area is dependent on the available habitat - that combination of associated plant species which provides wildlife with food and cover. Unfortunately, many of Ottawa County's original wildlife populations have disappeared due to the loss of habitat. The habitat that does remain supports a variety of local wildlife. Quail, pheasant, field sparrow, red foxes, rabbits, skunks, woodchucks, and hawks are examples of mammals and birds that normally frequent croplands, pastures, meadows, and other open areas. Woodland areas support such wildlife species as squirrels, raccoons, coyotes, ruffed grouse, woodcock, wild turkey, woodpeckers, opossum, warblers, deer and owls. In ponds, swamps, marshes and other wetland areas, muskrats, beaver, ducks, geese, herons, mink and shorebirds can be found. A variety of fish species, including steelhead, northern pike, brown trout, largemouth bass, bluegill, channel catfish, and salmon can be found in the Grand River as well as in many other lakes and streams in the County.

Many recreational pursuits depend on the existence of a diverse plant and wildlife community. They tend to define an area's character and ambiance, making that area more attractive and interesting. As people become involved in outdoor recreation, they become more knowledgeable about the natural world around them, including its plants and wildlife.

Additional studies are needed to identify lands within Ottawa County which contain locally significant plant and wildlife populations. Priority should be placed on protecting these areas to ensure that remaining plant and wildlife populations survive as development continues.

Scenic Resources

One of the less tangible natural resources found in the County is its scenic beauty. The spectacular views of Lake Michigan, the majestic contours of the Grand River, and the panoramic display of farmland and grasslands are all part of what makes Ottawa County a special place to live.

Scenic resources cannot be defined by firm characteristics like sand dunes, woodlands, and other physical assets. Because scenic resources are determined by the "eye of the beholder," defining a scenic resource thereby becomes more difficult. Most people see scenic views as

including the roadway right-of-way area and adjacent roadside; but it is much more. The features found within these areas may include lakes, streams, and wetlands, striking stands of forest, and pastoral views.

They also include notable urban scenes and historic and cultural resources. In areas of flat terrain or on high ground, the view may extend for miles in horizon-to-horizon vistas. Efforts should be made to quantify scenic views so that prime views can be identified. Following their identification, methods of protecting high-priority views should be explored.

CULTURAL FEATURES

It is not simply the environmental resources that make Ottawa County unique. Local history, land uses, and other cultural characteristics and activities also define the County's particular recreational identity. Consequently, as these cultural characteristics change, their implications for recreation also change.

Regional Context

Ottawa County is located in the center of western lower Michigan and also in the center of the three metropolitan areas of Grand Rapids, Muskegon and Holland. Although two of these areas are not in Ottawa County, their populations and the highways that connect them form a strong geographic, economic, and cultural influence on the rest of the county. Ottawa County adjoins Muskegon County on the north, Kent County on the east, and Allegan County on the south. It is located approximately 100 miles from Lansing, 175 miles from Detroit, and 165 miles from Chicago (**See regional context - Figure 3.9**).

History

Ottawa County was once a wilderness. Timber wolves, black bears, and other vanished species stalked the thick pine and hardwood forests that blanketed the County. During the late seventeenth century, Jesuit missionaries and French fur traders were possibly the first non-native people to venture into this wilderness. Because of the availability of many fur-bearing creatures, several trading posts were established in the County. When the demand for their products diminished, the fur trade ceased. When the traders left, lumbermen replaced them.

In 1836, the first sawmill was located at the mouth of the Grand River, the site for the future settlement of Grand Haven. With a seemingly endless supply of virgin timber in the County and a growing shipping industry on the lake, the lumber industry unhesitatingly expanded. As the supply of timber dwindled, all the large sawmills closed down by 1890 and the few remaining smaller mills were producing only a fraction of the wood output of the earlier lumbering days.

Farming and settlements followed closely behind lumbering. With the land cleared of the County's original dense forests, new homes and farms were established. In 1847, a group of immigrants from the Netherlands arrived in Ottawa County and founded the community of Holland. Before long, the few remaining tribes of Native Americans were either relocated outside of Ottawa County or gradually assimilated into a new and rapidly changing culture. One such tribe was the Ottawa from whom the County received its name.

Figure 3.9 - Regional Context



As farming took hold, other communities spreading out from the lakeshore or following the Grand River were soon established. Even during this period, many took advantage of the County's recreational attractions. Excursions on riverboats plying the Grand River were quite popular, with picnics along the river's bank often the objective of such trips. The County's lakeshore was also a center of recreational pursuits. Resorts sprang up in Holland and Grand Haven as well as a few places in between during the late nineteenth century. These tourist-oriented businesses catered to vacationers from Chicago, Detroit, St. Louis and other out-of-county communities.

One interesting and visible evidence of early settlement is the square-mile grid system of roads. This pattern resulted from the system used by early surveyors to prepare the land for division and future ownership. This grid system is used throughout the county, breaking down only when significant or unusual physical barriers to its implementation were encountered such as along river corridors. This system also clearly identifies Ottawa County as part of the Midwest landscape similar to the states of Ohio, Illinois, Iowa, Wisconsin, and Minnesota.

Land Use

Figure 3.10 shows land use cover for Ottawa County as of 2006. This graphic clearly shows the three urbanized areas previously mentioned of Holland, Grandville (extending from Grand Rapids), and Grand Haven (extending from Muskegon). For undeveloped portions of the county, agriculture dominates in the central, northwest and southeast sections with large areas of forests and wetlands predominant in the western portions.

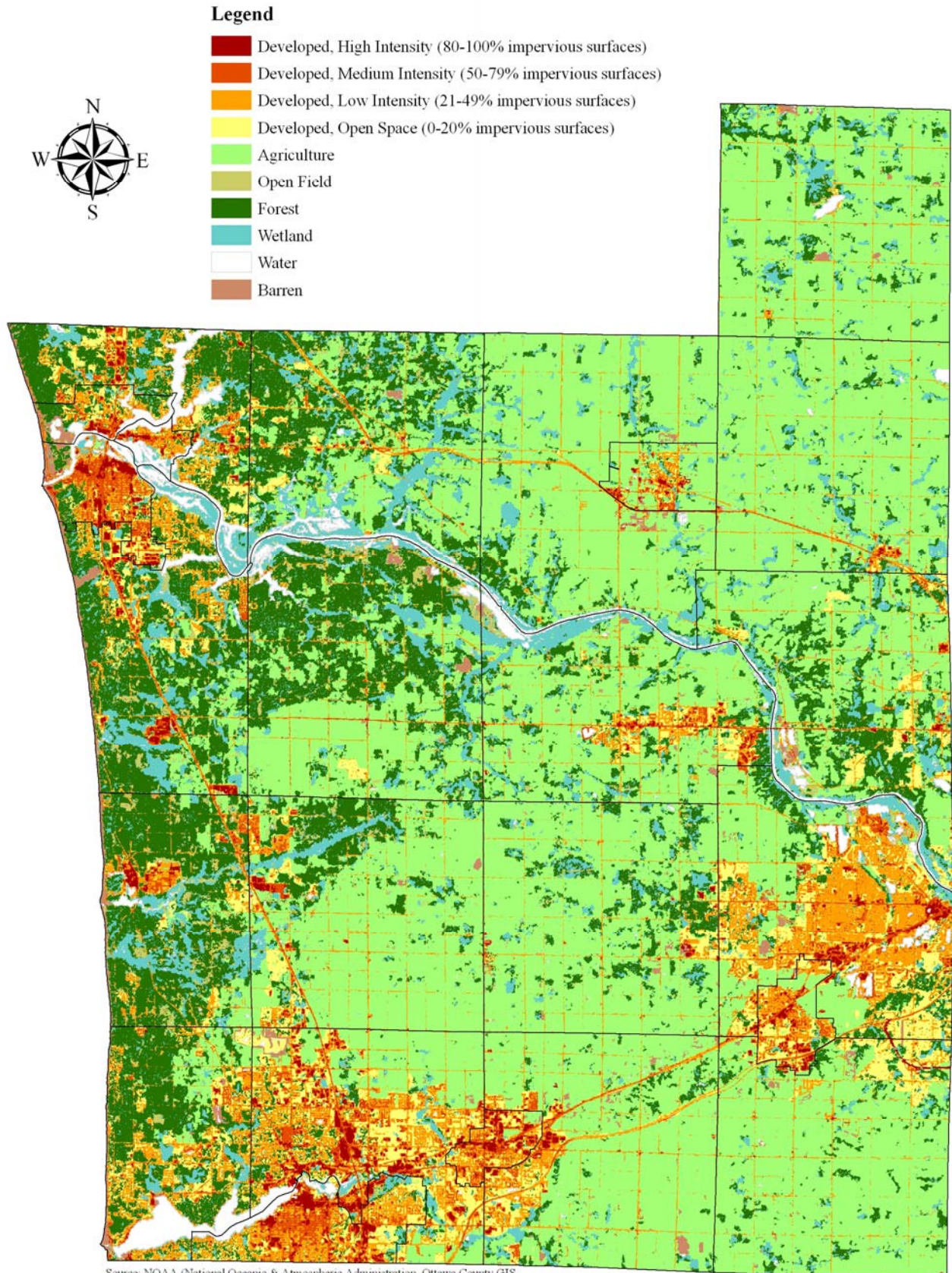
Of more interest for planning purposes is the change in land use over the last three decades. **Table 3.1** compares land use cover for three time periods of 1978, 1992, and 2006. Although the measuring methods used were somewhat different for the 2006 data, overall patterns are readily apparent.

Table 3.1 - Summary of Land Use & Cover Change 1978 to 2006

| | 1978 Acres | 1992 Acres | 2006 Acres | Percent of County | Difference 1978-2006 | Percent Change |
|-------------|------------|------------|----------------------|----------------------|----------------------|----------------|
| Urban | 43,792.5 | 56,522.5 | 72,635 | 19.7% | 28,842.5 | 39.1% |
| Agriculture | 201,757.5 | 173,810 | 177,614.5 | 48.1% | -24,143 | -12.0% |
| Open Field | 23,505 | 40,745 | 5,965.3 | 1.6% | -17,539.7 | -74.6% |
| Deciduous | 66,475 | 64,922.5 | 66,782.8 | 18.1% | 8,615.3 | 9.4% |
| Coniferous | 19,120 | 18,412.5 | Included with others | Included with others | Included above | Included above |
| Wetland | 5,770 | 5,772.5 | 33,197.5 | 9.0% | Included above | Included above |
| Water | 8,072.5 | 8,465 | 9,263 | 2.5% | 1190.5 | 14.7% |
| Barren | 605 | 547.5 | 3,425.4 | 0.9% | 2820.4 | 466% |
| Totals | 369,097.5 | 369,097.5 | 368,883.5 | 100.00% | NA | NA |

Source: Grand Valley State University Water Resources Institute (2006)
National Oceanic & Atmospheric Administration, Ottawa County GIS (2010)

Figure 3.10 - 2006 Land Use



As would be expected given the large increase in population over this time frame, urban land uses have increased significantly primarily at the expense of agricultural uses, including what was categorized as open field. However, agriculture remains the county's largest land use with almost half of the total land area devoted to that purpose. Interestingly, loss of land for this use appears to have stabilized to a significant extent during more recent years.

Forest and wetland area loss also appears to have stabilized to a degree, although anecdotal information would suggest that these more natural areas continue to be disturbed and broken into smaller, less ecologically significant units as they continue to be most desired for home sites.

Many of these trends continue to support the need to preserve, protect, and restore significant natural lands especially if this can be done ahead of land use change in the areas surrounding current development, after which this effort becomes much more difficult.

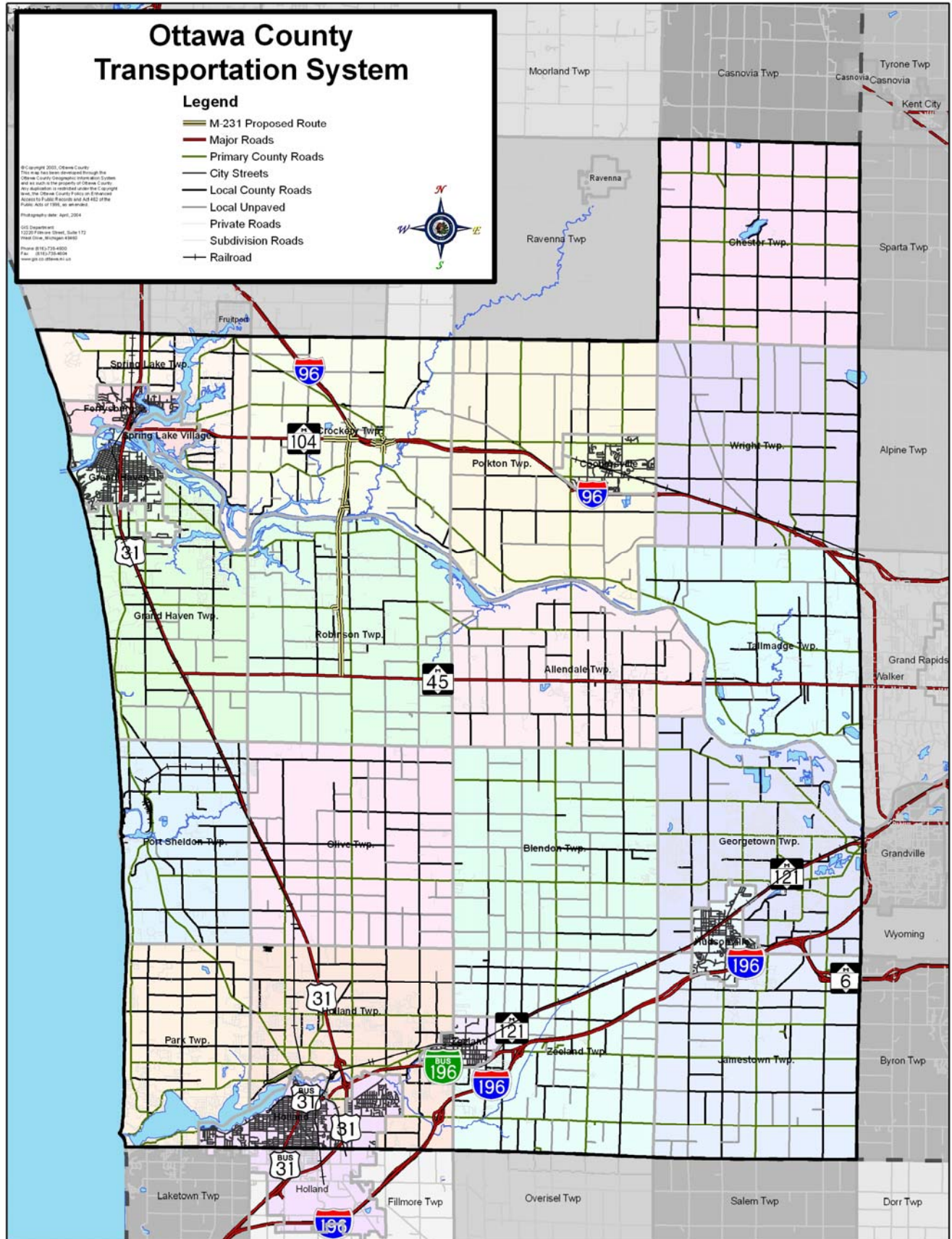
Transportation Network

The transportation network represents the physical and operational structure that provides people with mobility and access to economic, social, educational and recreational activities within and outside of the County. It also affects recreation in other more subtle ways. The costs to travel, the time it takes to get there, and the travel experience itself (whether the selected route was convenient, scenic, uncongested, and in good repair) all influence the willingness of an individual to leave home in order to participate in a recreation activity. At the same time the transportation network influences the location of recreation facilities and is also impacted by the traffic these facilities may generate.

The automobile, as the primary means for personal transportation, has defined much of today's transportation network. Previously distant recreation areas are much closer and more accessible to population centers today as a result of the automobile and a highway system that allows higher speeds, fewer interruptions, greater access, and, consequently, more distance in less time. Conversely, the current transportation network dictates the use of the automobile in order to travel and reach most destination points.

Ottawa County is served by an efficient system of highway connections (**Figure 3.11**). Much of this highway system was designed to primarily carry traffic to and from major population centers located within and outside the County. Within Ottawa County, the three major population centers are connected by a triangular network of highways. US-31, running along the shoreline between Holland and Grand Haven, carries traffic north to the Mackinaw Bridge and south to the Indiana border. I-96 enters the County near Marne after its connections in Grand Rapids, Detroit and Lansing, and turns northwest just past Nunica on its way to Muskegon. Originating from Grand Rapids, I-196 continues southeasterly to Holland and then turns south towards the state line. Bisecting this triangle is M-45, which terminates near Lake Michigan at US-31. Re-alignment of M-45 was completed in 2003 and a new bridge was constructed over the Grand River as part of the project. The new bridge and road improvements increase the ease of travel to the west side of Ottawa County and will likely impact the amount of use at the popular lakeshore parks in Ottawa County. They will also affect growth patterns in the County, potentially expanding the rate of growth in the eastern portion of the county.

Figure 3.11 - Transportation Network



In the fall of 2004, the M-6, Paul B. Henry Freeway, also referred to as the “South Beltline,” was completed. It connects I-196 in Georgetown Township to I-96 in Kent County. This new highway has increased the amount and ease of traffic between the south side of Grand Rapids and the Hudsonville and Jenison areas. Due to the ease of travel, Ottawa County Parks and Recreation facilities may also get an increased amount of use from non-residents. Existing parks most likely to be affected by this new highway will be Spring Grove and Hager Parks on the southeastern side of the County and Tunnel Park in Holland. Several County primary roads efficiently support these major regional transportation facilities. Because of the attraction of the Lake Michigan shoreline, the County does experience some difficult seasonal variations in the traffic load due to greater levels of recreational and tourist activities.

The US-31 bypass highway study was completed in 1999 for the U.S. Department of Transportation Federal Highway Administration and the Michigan Department of Transportation as a means to evaluate the potential of providing an alternative route of traffic around the greater Grand Haven area. The project purpose and need identified for the US-31 study area was to develop alternatives to reduce traffic congestion and improve safety for the traveling public. The chosen alternative proposes to construct a new highway that connects with US-196 near Zeeland and runs north along 120th Avenue, crosses the Grand River, and connects to I-96 near Nunica. Construction of the bridge across the Grand River has been funded and is scheduled to begin in 2011.

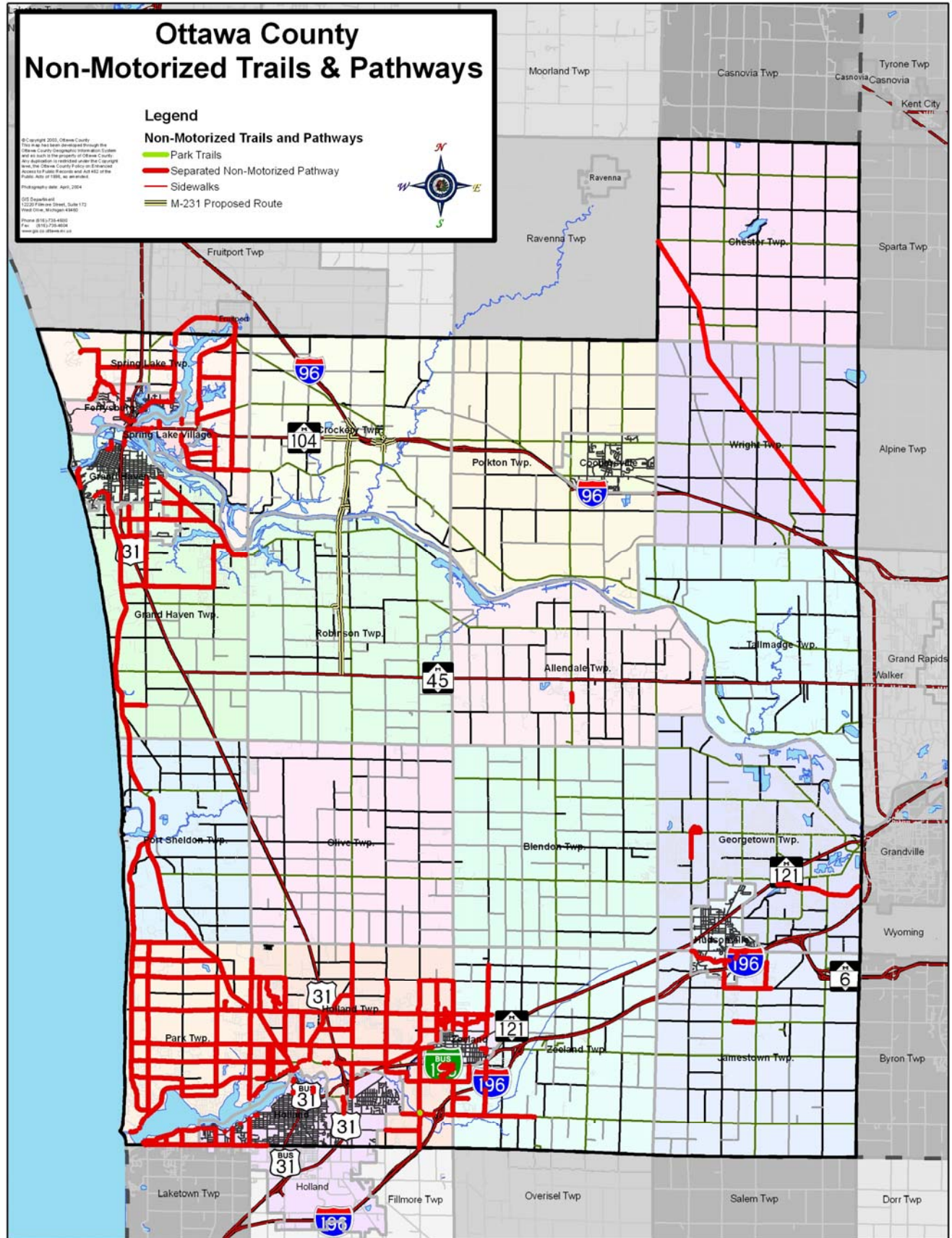
The study indicated that the major long-term impact on recreation along the new corridor will be noise. The study also indicated that there would be temporary impacts on recreation lands during construction. Access would be provided to recreation lands during construction, but there would be lane restrictions and rerouting of traffic. Permanent impacts on recreation are not anticipated, according to the study.

Although the study indicates there will be only temporary impacts on recreation in Ottawa County, there will be other impacts as well. The construction of a new highway creates a linear physical barrier with limited access under or over it. This could significantly impact the time of travel to get to a park or natural area. More importantly, the change in the transportation system will affect growth and land use, which will impact future needs for parks and open space. Disruption to local ecosystems will also be inevitable.

General air carrier and full commercial services are predominantly provided to Ottawa County users by the Kent County and Muskegon County International Airports. There are, however, six airport facilities in Ottawa County. Two of these, Grand Haven Memorial Airport and Park Township/Holland, are public airports. The other four, Coopersville/Pilot County, Jenison/Riverview Airport, Nunica/Jablonski and Zeeland/Ottawa Executive are all private airstrips.

Water transportation is another important network in the County that creates additional opportunities for access and mobility. Lake ports at Holland and Grand Haven have gradually shifted from predominantly commercial centers to places of recreation. As recreational boating increases, these lake ports will continue to experience more pressure for boating facilities. This will be in addition to pressures from other competing uses for port resources, such as for commercial, industrial, and residential needs.

Figure 3.12 - Non-motorized Transportation Network



Of great interest in terms of recreation planning is the recent development and expansion of a non-motorized trail network in Ottawa County (**Figure 3.12**). This network includes a large number of locally funded separated roadside paths, widened shoulders, sidewalks, and recreational trails that provide not only options for transportation but great recreational value as well. Additionally, a network of regional trails has been implemented in some areas and is in various stages of planning in several others. These trails have the potential to draw residents and visitors to them as a destination in themselves and to spur further trail development to create connections. Cities, towns, business, and other public attractions could all benefit from many of these connections.

Planning and Zoning

Although not readily visible like other cultural features, the county's political jurisdictions and their planning and zoning regulations will affect almost all future land uses in the county. **Figure 3.13** identifies the county's 17 townships, six cities, and one village. These local jurisdictions vary widely in terms of their population, concerns, and level of service. The unique situation of each must be considered as plans for recreation are planned and implemented.

One particularly good indicator of future growth patterns is the zoning regulations for these local jurisdictions. The standardized zoning map (**Figure 3.15**) shows areas that these local governmental units desire to be developed or kept in less intensive land uses. Again, these unique situations should be considered as county plans proceed.

Ottawa County is also part of larger planning areas. **Figure 3.14** identifies the metropolitan statistical areas that cover portions of the county.

Figure 3.13 - Political Jurisdictions

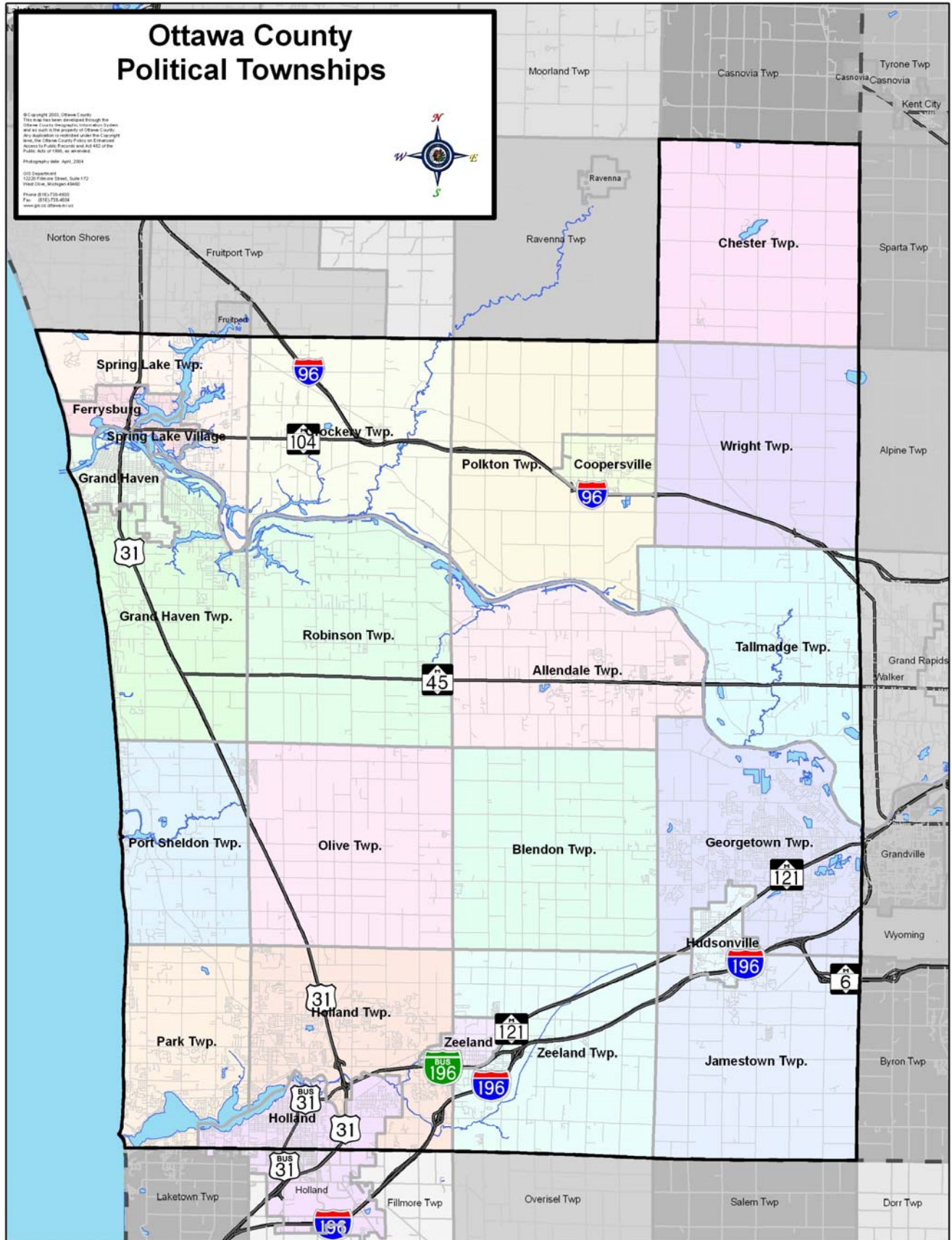
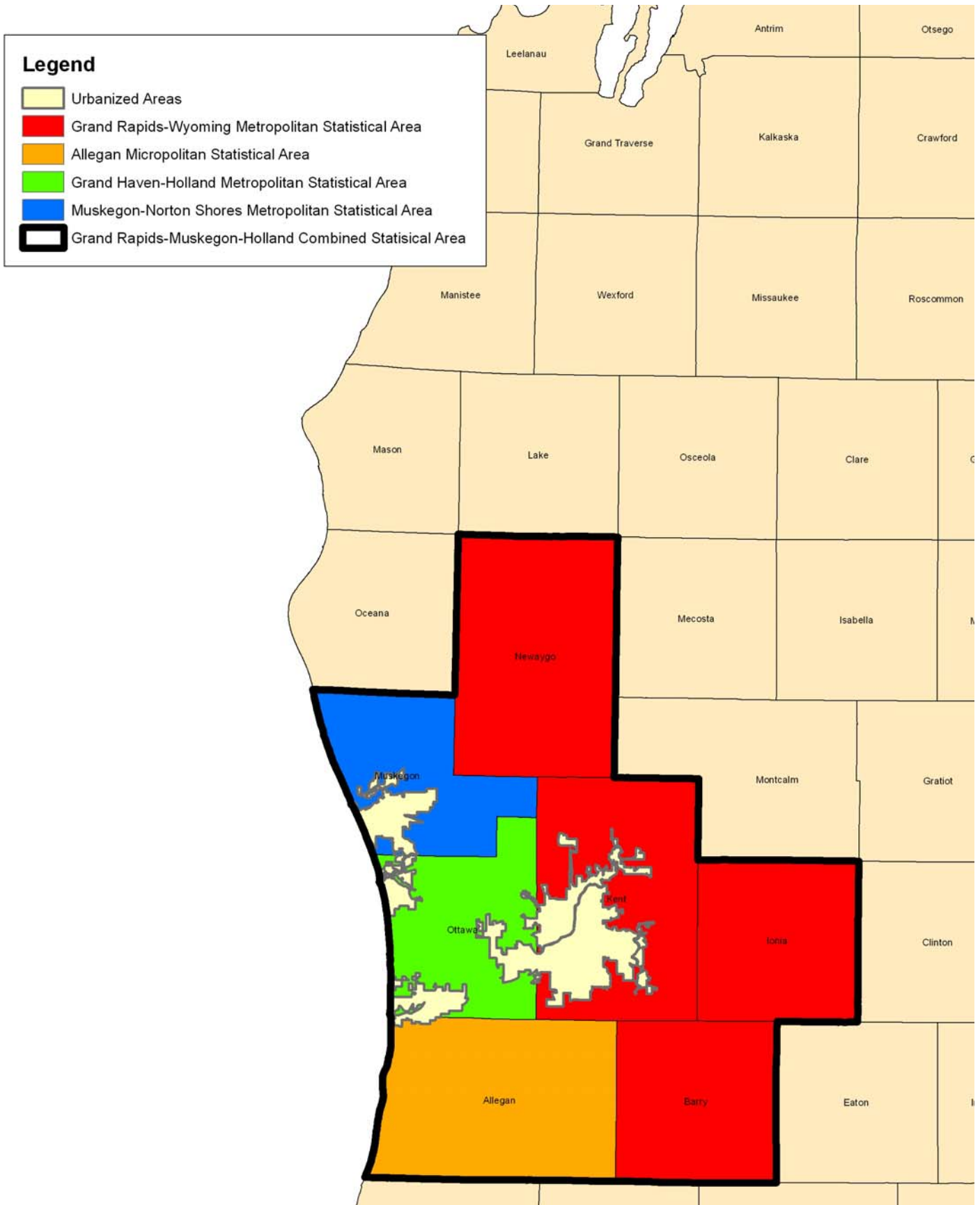
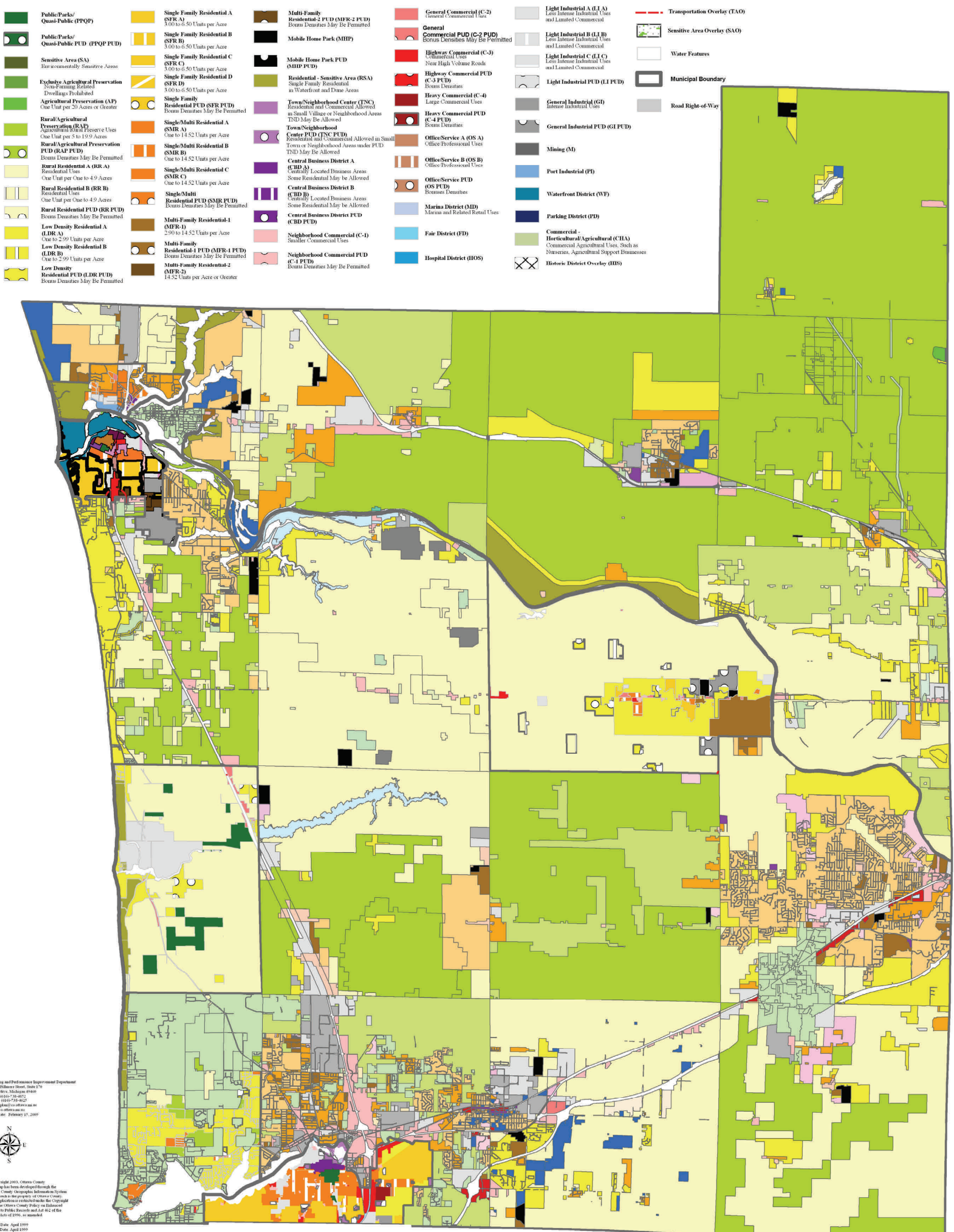


Figure 3.14 - Planning Areas



Countywide Standardized Zoning



DEMOGRAPHICS

Various population characteristics - size, age, income, education, and geographic distribution become important determinants as to the kind, amount, and location of recreational activities. The recreational interests of a person, for example, change as he or she ages, affecting the type and degree of recreation participation. A large proportion of individuals at a certain age level, such as under 15, would dictate certain types of facilities. In addition, many studies have also indicated that as a person's income and education level rises, so does his participation in recreation. Perhaps, more importantly, the geographic distribution and the size of the population impact the provision of recreation. Facilities need to be located where the people are and in sufficient quantity to avoid overuse or under utilization.

Population Trends

Over the last decade Ottawa County stands out as one of the fastest-growing counties in the State. While Michigan's population, in general, declined slightly over the last decade based on the 2010 census figures (-54,804, -0.55%), Ottawa County has experienced some of Michigan's largest population increases. Ottawa County ranks third in population increase between 2000 and 2009, with an increase of 23,643 people, representing a growth rate of 9.9%. In comparison, Kent County grew by 5.9%.

Table 3.2 provides a comparison of population trends and projections to 2020 for Ottawa and surrounding Counties.

Table 3.2 – Population Trends and Projections of Surrounding Counties

| County | Population | | Projections ¹ | |
|----------|-------------|---------------|--------------------------|-----------|
| | 2000 Census | 2009 Estimate | 2010 | 2020 |
| Allegan | 105,665 | 113,449 | 113,803 | 117,343 |
| Barry | 56,756 | 58,434 | 58,291 | 56,865 |
| Ionia | 61,521 | 62,574 | 62,111 | 57,477 |
| Kent | 574,336 | 608,315 | 611,448 | 642,777 |
| Muskegon | 170,200 | 173,951 | 173,940 | 173,827 |
| Newaygo | 47,876 | 48,686 | 48,516 | 46,645 |
| Ottawa | 238,314 | 261,957 | 263,671 | 280,797 |
| Michigan | 9,938,444 | 9,969,727 | 9,883,640 ² | 9,544,588 |

Source: U.S. Census Bureau, Ottawa County Planning and Performance Improvement Department

1. Projection data provided by the Ottawa County Planning and Performance Improvement Department; calculations based on the linear population trend from 2006-2009 in order to reflect the current economic conditions throughout the State of Michigan.
2. Michigan's 2010 population figure is the official Census number.

The continuing growth of West Michigan and the Grand Rapids metropolitan area are strong indicators of the need for cooperative planning in Ottawa County. Despite predictions to the contrary for the rest of the State, the economic and living environment of Ottawa County and

the surrounding region is likely to continue to attract new employers and residents throughout the coming decade and beyond.

Within Ottawa County, the growth varies widely among local communities, as is shown in **Table 3.3**. The largest numerical and highest rate increase between 2000 and 2009 occurred in Allendale Township (6,649 new residents, representing a 51.0% increase in population). Over half of the population (55.25%) resides in five communities – Georgetown Township, Holland Township, Holland City, Allendale Township, and Park Township. These communities contain a population of 144,731.

Allendale Township, Jamestown Township, and Zeeland Township have all grown by more than 20% since 2000.

Table 3.3 – Ottawa County Population Trends: 2000-2009

| Minor Civil Division | 2000 Census | 2009 Estimate | % Change (2000-2009) | Population Change (2000-2009) |
|-----------------------|-------------|---------------|----------------------|-------------------------------|
| Allendale Township | 13,042 | 19,691 | 51.0% | 6,649 |
| Blendon Township | 5,721 | 5,914 | 3.4% | 193 |
| Chester Township | 2,315 | 2,318 | 0.1% | 3 |
| Coopersville City | 3,910 | 4,150 | 6.1% | 240 |
| Crockery Township | 3,782 | 3,863 | 2.1% | 81 |
| Ferrysburg City | 3,040 | 3,059 | 0.6% | 19 |
| Georgetown Township | 41,658 | 45,368 | 8.9% | 3,710 |
| Grand Haven City | 11,168 | 10,713 | -4.1% | -455 |
| Grand Haven Township | 13,278 | 15,905 | 19.8% | 2,627 |
| Holland City* | 27,846 | 26,785 | -3.8% | -1,061 |
| Holland Township | 28,911 | 34,518 | 19.4% | 5,607 |
| Hudsonville City | 7,160 | 7,014 | -2.0% | -146 |
| Jamestown Township | 5,062 | 6,810 | 34.5% | 1,748 |
| Olive Township | 4,691 | 4,912 | 4.7% | 221 |
| Park Township | 17,579 | 18,369 | 4.5% | 790 |
| Polkton Township | 2,335 | 2,492 | 6.7% | 157 |
| Port Sheldon Township | 4,503 | 4,644 | 3.1% | 141 |
| Robinson Township | 5,588 | 6,130 | 9.7% | 542 |
| Spring Lake Township | 10,626 | 11,829 | 11.3% | 1,203 |
| Spring Lake Village | 2,514 | 2,416 | -3.9% | -98 |
| Tallmadge Township | 6,881 | 7,042 | 2.3% | 161 |
| Wright Township | 3,286 | 3,284 | -0.1% | -2 |
| Zeeland City | 5,805 | 5,465 | -5.9% | -340 |
| Zeeland Township | 7,613 | 9,266 | 21.7% | 1,653 |
| County Total | 238,314 | 261,957 | 9.9% | 23,643 |

Source: U.S. Census Bureau

* Ottawa County only

Projections of future population growth serve as an important tool for projecting what the future recreational needs of the County may be. **Table 3.4** illustrates the population

projections for the County to the year 2020. These projections indicate substantial growth within the County for the coming years and therefore support the need for more recreational facilities and open space to meet the needs of County residents in the future.

Table 3.4 – Ottawa County Population Projections: 2000-2020

| Minor Civil Division | 2010 Projection ¹ | 2020 Projection ¹ | % Change (2000-2010) | % Change (2010-2020) |
|-----------------------|------------------------------|------------------------------|----------------------|----------------------|
| Allendale Township | 20,466 | 28,213 | 56.9% | 37.9% |
| Blendon Township | 5,949 | 6,296 | 4.0% | 5.8% |
| Chester Township | 2,310 | 2,234 | -0.2% | -3.3% |
| Coopersville City | 4,134 | 3,976 | 5.7% | -3.8% |
| Crockery Township | 3,875 | 3,995 | 2.5% | 3.1% |
| Ferrysburg City | 3,076 | 3,245 | 1.2% | 5.5% |
| Georgetown Township | 45,525 | 47,090 | 9.3% | 3.4% |
| Grand Haven City | 10,764 | 11,278 | -3.6% | 4.8% |
| Grand Haven Township | 16,057 | 17,582 | 20.9% | 9.5% |
| Holland City* | 26,793 | 26,871 | -3.8% | 0.3% |
| Holland Township | 34,703 | 36,557 | 20.0% | 5.3% |
| Hudsonville City | 7,007 | 6,934 | -2.1% | -1.0% |
| Jamestown Township | 6,911 | 7,917 | 36.5% | 14.6% |
| Olive Township | 4,922 | 5,023 | 4.9% | 2.1% |
| Park Township | 18,399 | 18,700 | 4.7% | 1.6% |
| Polkton Township | 2,499 | 2,565 | 7.0% | 2.6% |
| Port Sheldon Township | 4,660 | 4,817 | 3.5% | 3.4% |
| Robinson Township | 6,151 | 6,360 | 10.1% | 3.4% |
| Spring Lake Township | 11,870 | 12,279 | 11.7% | 3.4% |
| Spring Lake Village | 2,434 | 2,612 | -3.2% | 7.3% |
| Tallmadge Township | 7,054 | 7,171 | 2.5% | 1.7% |
| Wright Township | 3,290 | 3,351 | 0.1% | 1.9% |
| Zeeland City | 5,467 | 5,483 | -5.8% | 0.3% |
| Zeeland Township | 9,355 | 10,248 | 22.9% | 9.5% |
| County Total | 263,671 | 280,797 | 10.6% | 6.5% |

Source: U.S. Census Bureau, Ottawa County Planning and Performance Improvement Department

* Ottawa County only

1. Projection data provided by the Ottawa County Planning and Performance Improvement Department; calculations based on the linear population trend from 2006-2009 in order to reflect the current economic conditions throughout the State of Michigan.

Age

As noted previously, the age of the population is an important indicator for recreation planning. Considerable variation exists with respect to age. For example, while the County median age is 32.3 years, the median in Allendale Township is only 21.3, reflecting the influence of Grand Valley State University. High concentrations of school-age children are found in some of the rural areas such as Blendon, Jamestown, and Olive Townships. At the opposite end of the spectrum, the median ages in the Spring Lake, Ferrysburg, and Grand Haven are 44, 40.5, and

40 years respectively, indicating an aging population. **Table 3.5** shows the age by community in Ottawa County.

Table 3.5 - Age by Community - As a Percent of Community Population

| Geographic area | Total population | Percent of total population | | | | | Median age (years) |
|-----------------------------------|------------------|-----------------------------|----------------|----------------|----------------|-------------------|--------------------|
| | | Under 18 years | 18 to 24 years | 25 to 44 years | 45 to 64 years | 65 years and over | |
| Ottawa County | 238,314 | 28.7 | 11.9 | 29.3 | 20.0 | 10.1 | 32.3 |
| Allendale Township | 13,042 | 22.3 | 39.3 | 23.2 | 10.5 | 4.7 | 21.3 |
| Blendon Township | 5,721 | 33.1 | 11.8 | 29.1 | 20.4 | 5.7 | 30.8 |
| Chester Township | 2,315 | 30.9 | 7.9 | 31.1 | 18.5 | 11.6 | 34.6 |
| Crockery Township | 3,782 | 27.6 | 7.1 | 31.5 | 23.8 | 9.9 | 36.9 |
| Georgetown Township | 41,658 | 29.4 | 10.9 | 27.5 | 21.6 | 10.6 | 33.8 |
| Grand Haven Township | 13,278 | 30.4 | 6.6 | 29.8 | 25.0 | 8.2 | 36.0 |
| Holland Township | 28,911 | 31.3 | 10.4 | 34.4 | 16.8 | 7.1 | 29.3 |
| Jamestown Charter Township | 5,062 | 34.9 | 8.9 | 28.4 | 21.9 | 5.9 | 31.2 |
| Olive Township | 4,691 | 33.2 | 10.9 | 34.1 | 16.5 | 5.3 | 28.9 |
| Park Township | 17,569 | 30.9 | 6.4 | 30.4 | 24.6 | 7.7 | 35.4 |
| Polkton Township | 2,335 | 28.8 | 7.8 | 27.7 | 25.1 | 10.7 | 36.8 |
| Port Sheldon Township | 4,503 | 29.5 | 7.6 | 30.0 | 25.0 | 7.9 | 35.8 |
| Robinson Township | 5,588 | 31.0 | 7.2 | 36.3 | 20.1 | 5.4 | 33.2 |
| Spring Lake Township | 13,140 | 25.3 | 7.0 | 28.6 | 24.4 | 14.6 | 38.1 |
| Tallmadge Township | 6,881 | 29.6 | 8.4 | 28.5 | 24.3 | 9.2 | 35.9 |
| Wright Township | 3,286 | 29.3 | 8.0 | 28.5 | 22.4 | 11.8 | 35.6 |
| Zeeland Charter Township | 7,613 | 34.2 | 8.2 | 31.5 | 18.9 | 7.2 | 30.7 |
| Coopersville City | 3,910 | 30.2 | 10.9 | 30.5 | 18.3 | 10.1 | 31.4 |
| Ferrysburg City | 3,040 | 22.7 | 7.3 | 26.6 | 29.1 | 14.2 | 40.5 |
| Grand Haven City | 11,168 | 20.1 | 9.2 | 27.6 | 23.4 | 19.6 | 40.0 |
| Holland City | 27,846 | 26.0 | 19.5 | 27.9 | 15.0 | 11.6 | 27.9 |
| Hudsonville City | 7,160 | 30.8 | 9.5 | 28.2 | 16.6 | 14.9 | 32.3 |
| Spring Lake Village | 2,514 | 20.7 | 5.2 | 25.7 | 21.9 | 26.5 | 44.0 |
| Zeeland City | 5,805 | 26.2 | 8.0 | 26.5 | 16.1 | 23.3 | 37.4 |

Source: U.S. Census Bureau, 2000

Data from the 2000 U.S. Census shows that, at the time, the age makeup of Ottawa County did not differ greatly from that of the State overall. **Table 3.6** compares the County's age distribution to that of the State.

Table 3.6 – Age Distribution (2009)

| Age | Ottawa County | | Michigan Percent |
|------------|---------------|---------|------------------|
| | Number | Percent | |
| Under 5 | 18,025 | 6.9% | 6.2% |
| 5-9 | 17,250 | 6.6% | 6.3% |
| 10-14 | 20,303 | 7.8% | 6.8% |
| 15-19 | 22,587 | 8.6% | 7.4% |
| 20-24 | 19,419 | 7.4% | 6.9% |
| 25-34 | 35,058 | 13.4% | 12.0% |
| 35-44 | 34,281 | 13.1% | 13.4% |
| 45-54 | 36,934 | 14.1% | 15.4% |
| 55-59 | 15,906 | 6.1% | 6.7% |
| 60-64 | 11,806 | 4.5% | 5.4% |
| 65-74 | 15,832 | 6.0% | 7.2% |
| 75-84 | 9,969 | 3.8% | 4.4% |
| 85+ | 4,587 | 1.8% | 1.9% |
| Median Age | 34.6 | | 38.5 |

Source: U.S. Census Bureau, 2009 American Community Survey

Race/Ethnic Group Distribution

The majority of the population in Ottawa County is white (90.7%). The percent of Ottawa County residents who are white is much higher than the State of Michigan.

The percent of Ottawa County residents who are white decreased 0.9% since 2000. The percent statewide decreased by 0.4% during the same time period.

The table below does not break out Hispanics or Latinos as a category under race, as the federal government considers race and Hispanic origin to be two separate and distinct concepts. Hispanics may be of any race. The U.S. Census does show that 8.2% of Ottawa County's population indicated they were Hispanic or Latino. This is a significant percentage of Ottawa County's population and warrants consideration in park planning and program development. Non-scientific observation of park use suggests that Hispanics are well represented in the parks, particularly the County Parks along Lake Michigan.

Table 3.7 – Racial Distribution (2009)

| Race | Ottawa County | | Michigan Percent |
|--|---------------|---------|------------------|
| | Number | Percent | |
| White | 237,692 | 90.7% | 79.9% |
| African American | 3,266 | 1.2% | 13.9% |
| American Indian and Alaska Native | 834 | 0.3% | 0.5% |
| Asian | 6,946 | 2.7% | 2.4% |
| Native Hawaiian and Other Pacific Islander | 33 | 0.1% | 0.1% |
| Other Race | 9,899 | 3.8% | 1.2% |
| Two or More Races | 3,287 | 1.3% | 2.0% |

Source: U.S. Census Bureau, 2009 American Community Survey

Physical Disabilities Population

Ensuring that recreational facilities are accessible to persons of all levels of physical ability is an important goal. Data concerning the number of persons with physical disabilities is an important consideration for programming facility needs. **Table 3.8** indicates Ottawa County has slightly lower population levels of physically disabled people than the State of Michigan as a whole. These numbers should not underestimate the importance of making recreational facilities accessible to persons with mobility limitations. Care should be taken in the design of all facilities to ensure they meet the needs of such persons.

Table 3.8 – Physical Disabilities (2009)

| Disability Status | Ottawa County | | Michigan Percent |
|---------------------------|---------------|---------|------------------|
| | Number | Percent | |
| Persons Under 18 Years | | | |
| Disabled | 3,257 | 4.8% | 4.7% |
| Not Disabled | 64,155 | 95.2% | 95.3% |
| Persons 18 to 64 Years | | | |
| Disabled | 10,515 | 6.4% | 11.8% |
| Not Disabled | 153,136 | 93.6% | 88.2% |
| Persons 65 Years and Over | | | |
| Disabled | 9,055 | 31.0% | 36.9% |
| Not Disabled | 20,172 | 69.0% | 63.1% |

Source: U.S. Census Bureau, 2009 American Community Survey

Gender Population

Most communities have a higher proportion of females due to their higher life expectancy. According to the U.S. Census Bureau's 2009 American Community Survey, Ottawa County's 2009 population was 49.4% male and 50.6% female. Michigan's 2009 population was 49.2% male and 50.8% female.

Household Distribution

Household distribution can influence a community's recreation needs since the distribution often identifies unique community traits. Ottawa County has several household characteristics that may influence the recreation programming and planning. **Table 3.9** shows the County has a higher proportion of family households (74.0 percent) than Michigan (66.1 percent). Within the overall category of family households, the County has a higher percentage of married couple families than the State, a lower proportion of female households with no spouse and a lower percentage of male householders with no spouse. Since Ottawa County has a higher proportion of family households, it follows that it has a lower proportion of non-family households. The County has a lower proportion of one-person households (19.7 percent) and a lower proportion of householders 65 and over living alone.

This information identifies the need to focus attention on family households (while not forgetting non-family households) by providing programs and facilities designed to serve families with children.

Table 3.9 – Household Distribution (2009)

| Household Distribution | Ottawa County | | Michigan Percent |
|---------------------------------------|---------------|---------|------------------|
| | Number | Percent | |
| Total Households | 94,556 | --- | --- |
| Family Households | | | |
| Total | 70,006 | 74.0% | 66.1% |
| Married Couple Family | 59,639 | 63.1% | 49.2% |
| Female Householder, no spouse present | 7,898 | 8.4% | 12.5% |
| Male Householder, no spouse present | 2,469 | 2.6% | 4.4% |
| Non Family Households | | | |
| Total | 24,550 | 26.0% | 33.9% |
| Householder Living Alone | 18,643 | 19.7% | 28.4% |
| Householder 65 years and over | 7,714 | 8.2% | 9.8% |
| Persons in Household (Average) | 2.70 | | 2.54 |

Source: U.S. Census Bureau, 2009 American Community Survey

Note: Region 8 information was not included in the table because more recent data were not available for all communities.

Employment

Table 3.10 identifies Ottawa County and Michigan employment trends for the years 2005 through 2009. The County's labor force increased between 2005 and 2006, but has decreased since that time. Employment has steadily decreased in the County since 2006 while the unemployment rate has increased significantly in the County, Region 8 and the State of Michigan.

The employment information shows the area's employment diversity and emphasizes the variety that exists. Many workers have active jobs while others have sedentary jobs. Recreation facilities and programs should exist that benefit both of these categories.

Table 3.10 – Employment Trends

| | 2005 | 2006 | 2007 | 2008 | 2009 |
|--------------------------|---------|---------|---------|---------|---------|
| Ottawa County | | | | | |
| Total Labor Force | 136,175 | 137,594 | 137,043 | 135,918 | 131,197 |
| Employment | 129,184 | 130,404 | 129,474 | 126,576 | 115,000 |
| Unemployment | 6,991 | 7,190 | 7,569 | 9,342 | 16,197 |
| Unemployment Rate | 5.1% | 5.2% | 5.5% | 6.9% | 12.3% |
| Region 8 | | | | | |
| Unemployment Rate | 5.9% | 6.1% | 6.1% | 7.2% | 11.9% |
| State of Michigan | | | | | |
| Unemployment Rate | 6.9% | 6.9% | 7.2% | 8.4% | 14.0% |

Source: Michigan Labor Market Information, Department of Labor and Economic Growth

Economic development of the County began with the exploitation of fur and timber resources during the early nineteenth century. Since that time, the economic base of Ottawa County has steadily expanded and diversified to include various manufacturing activities, numerous agricultural undertakings, and growing tourism-related enterprises. **Table 3.11** identifies employment distribution in the County and in Michigan. Ottawa County's employment distribution shows that "Management, professional and related" is the largest occupation category with "Manufacturing" and "Education, health care, and social assistance" as the largest industries. Michigan's employment distribution differs only slightly with the "Manufacturing" somewhat less important on a statewide basis.

Table 3.11 - Labor Force Employment (2009)

| | Ottawa County | | Michigan |
|--|---------------|---------|----------|
| | Number | Percent | Percent |
| Employed Population 16 Years and Over | 125,096 | --- | --- |
| Occupation | | | |
| Management, professional, and related | 42,333 | 33.8% | 33.4% |
| Service | 19,306 | 15.4% | 19.0% |
| Sales and office | 30,502 | 24.4% | 25.6% |
| Farming, fishing, and forestry | 2,760 | 2.2% | 0.7% |
| Construction, extraction, maintenance, and repair | 8,621 | 6.9% | 7.4% |
| Production, transportation, and material moving | 21,574 | 17.2% | 13.9% |
| Industry | | | |
| Agriculture, forestry, fishing, hunting, and mining | 3,951 | 3.2% | 1.4% |
| Construction | 6,866 | 5.5% | 5.0% |
| Manufacturing | 28,548 | 22.8% | 16.0% |
| Wholesale trade | 4,683 | 3.7% | 2.6% |
| Retail trade | 12,536 | 10.0% | 12.1% |
| Transportation, warehousing, and utilities | 4,875 | 3.9% | 4.0% |
| Information | 2,553 | 2.0% | 1.8% |
| Finance, insurance, real estate, rental, and leasing | 5,566 | 4.4% | 5.5% |
| Professional, scientific, management, administrative, and waste management | 9,000 | 7.2% | 9.1% |
| Education, health care, and social assistance | 27,429 | 21.9% | 23.8% |
| Arts, entertainment, recreation, accommodation, and food service | 9,329 | 7.5% | 9.6% |
| Other services (except public administration) | 6,061 | 4.8% | 5.0% |
| Public administration | 3,699 | 3.0% | 4.1% |

Source: U.S. Census Bureau, 2009 American Community Survey

The County's household income levels are considerably higher than Michigan's. **Table 3.12** shows Ottawa County's 2009 median household income was \$61,984. This figure is much higher than Michigan's median household income of \$56,681. Ottawa County also has a very low percentage of people below the poverty level compared to the State level.

This information indicates most people in Ottawa County can afford to pay for recreational programs and that the area can afford to develop and maintain adequate facilities to meet the growing population needs.

Table 3.12 – Socio-Economic Levels (2009)

| | Ottawa County | Michigan |
|--|--------------------------|-----------------|
| Median Family Income | \$61,984 | \$56,681 |
| Per Capita Income | \$23,843 | \$23,728 |
| Percentage of Families Below Poverty Level | 6.5% | 11.6% |

Source: U.S. Census Bureau, 2009 American Community Survey

