RUTLAND TOWNSHIP
BARRY COUNTY, MICHIGAN

MASTER PLAN

ADOPTED FEBRUARY 9, 2005
AMENDED OCTOBER 13, 2010
AMENDED _____, 2021

ACKNOWLEDGMENTS

Prepared and adopted by the Rutland Township Planning Commission

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RUTLAND TOWNSHIP

INTRODUCTION

This master plan represents the culmination of nearly 18 months' work by numerous residents and local officials. It reflects the community's deep concern for the natural beauty of its surroundings and a strong commitment to retain and strengthen the local quality of life. The plan outlines the preferred future for the community and a master plan to realize it. The plan addresses critical issues, yet, general in overall scope, recognizes that planning for the future is a delicate blend of art and science. Therefore, sufficient flexibility is needed to respond to the challenges of the future.

This plan reflects the community's deep concern for the natural beauty of its surroundings and a strong commitment to retain and strengthen local quality of life.

The growth experienced in the township is the basis for the creation of this plan. It provides the township with a solid decision-making foundation. The planning commission and township board recognized the need to view the pace and character of growth and development in the context of its long-term impact on the community.

Rutland Township is primarily a rural residential community located west of Hastings, offering significant open space and public land. These attributes, along with the relatively short driving distance to the Grand Rapids area along M-37, are good indicators that Rutland Township will continue to experience growth pressures and an increase in population.

The fundamental purpose of the master land use plan is to enable the township planning commission to establish a future direction for the township's physical development. The Michigan Planning Enabling Act explicitly gives the township planning commission the authority to prepare and officially adopt a plan. Once prepared, officially adopted, and maintained, this plan will serve as an advisory guide for the physical conservation of specific areas and other areas' development.

Because of constant change in our social and economic structure and activities, maintenance of the plan through periodic review and revision reflects contemporary trends while maintaining long-range goals. The program will be adequate to the degree that it:

- reflects the needs and desires of the citizens of Rutland Township;
- realistically interprets and reflects the conditions, the trends, and the dynamic economic and social pressures that bring change; and
- inspires consensus and cooperation among the various public agencies and the Township citizens toward achieving common goals.

THE PURPOSE OF THE MASTER PLAN

When the planning commission began the plan preparation process, it had several objectives. First, it was essential to clearly define the priorities of the township concerning growth and development and land use. Secondly, the township sought to develop a responsive plan to protect the quality of life by balancing natural features protection while allowing sustainable growth and development. Thirdly, the planning process is an opportunity to build and strengthen a community consensus about the future land use patterns in the township. Finally, the planning commission sought realistic and practical mechanisms to achieve the plan's objectives.

This township master plan accomplishes all these objectives. More specifically, this plan will serve the township in the following ways:

1. It provides a comprehensive means of integrating proposals that look years ahead to meet future needs regarding general and significant aspects of physical conservation and development throughout the township;

2. It serves as the official advisory policy statement for encouraging orderly and efficient use of the land for residences, businesses, industry, and agriculture, and for coordinating these uses of land with each other, surrounding population centers, streets and highways, and other necessary public facilities and services;

3. It creates a logical basis for zoning, subdivision design, public improvement plans, and for facilitating and guiding the work of the township planning commission and the township board as well as other public and private endeavors dealing with the physical conservation and development of the township;

4. It provides a means for private organizations and individuals to determine how they may relate their building and development projects and policies to official township planning policies; and

5. It offers a means of relating the plans of Rutland Township to the objectives of the general Barry County area.

PLAN METHODOLOGY

The planning process involved four inter-related phases:

- community opinion survey
- community consensus
- master plan preparation
- action strategies

The objective of the first phase was to gain the input of township residents through a community opinion survey. The township planning commission developed the survey with the assistance of planning consultants and distributed it to all property owners on the township tax roll. Tabulated survey responses are an essential tool to the planning commission to measure the attitude of township residents concerning overall land use, growth, and development. Township officials felt it was appropriate to begin creating a new master plan. Appendix A contains the survey responses.

Completing the community profile (Chapters 1 through 6) set up a natural segue for the township to host a "futuring" workshop to gather additional public input through a nominal group process. More than 30 township residents attended the workshop, which was held on May 21, 2003. The output of that session formed a "futuring" workshop report (Appendix B), which the planning commission used to develop the initial plan goals and objectives. Through refinement and modification, the planning commission shaped the final goals and objectives presented in this document.

The third phase, master plan preparation, involved drawing together the input from the opinion survey, community profile, and "futuring" workshop to prepare the draft future land use map and classifications. This phase included conducting several workshops with the planning commission, interested residents, and other township officials to develop language that represents the interests of the citizens of Rutland Township.

The final phase of the process involved the development of specific implementation strategies to carry out the plan. Chapter 9 reflects these strategies. Finally, after the fourth phase, the planning commission held a public hearing on the entire project.

Finally, on May 19, 2004, a community open house presented the draft plan and gathered citizen comments. Resident comments from the master plan's open house were added to the plan, and it was recommended to the township board for approval for distribution. The township approved the distribution to all the adjacent jurisdictions, including all townships, cities, and Barry County, for comment as required by the new Michigan Planning Enabling Act. On January 19, 2005, the planning commission held an official public hearing and adopted the master plan. The Rutland Township Board of Trustees adopted the Rutland Township Master Plan by resolution #2005-36 on February 9, 2005.

The planning commission completed its first 5-year review in 2009-2010. In addition to minor text updates, the plan was aligned with the new Michigan Planning Enabling Act of 2008. This update further developed energy efficiency strategies, added desired uses to specific land categories, modified some future land use categories, and inserted references to the Hastings Area Joint Plan where appropriate.

In 2015, the Rutland Township Planning Commission reviewed the township's master plan. It determined that the previous update, which was concluded in 2010, still retained all the necessary objectives that supported the goals that Rutland Township was seeking. Therefore, the master plan was chosen not to be updated at this stage.

In 2020-21, the Rutland Township Planning Commission revisited the necessity of updating the master plan and determined that an update was applicable at this juncture. Therefore, on September 2, 2020, the planning commission decided to begin the master planning process for an update. The planning commission determined that the information was outdated and needed to be updated to the most recent US Census Bureau information to get a more accurate picture of the community. The commission asked the consultation team to analyze the land-use changes from previous plan editions. Therefore, this update gathered and presented up-to-date demographic and socioeconomic data. In addition, the existing land use map, initially created in 2003, was updated to the current 2020 existing land uses. This master plan update also conducted a new community input survey over two months to gather further information for review and additions to the goals and objectives of the township.

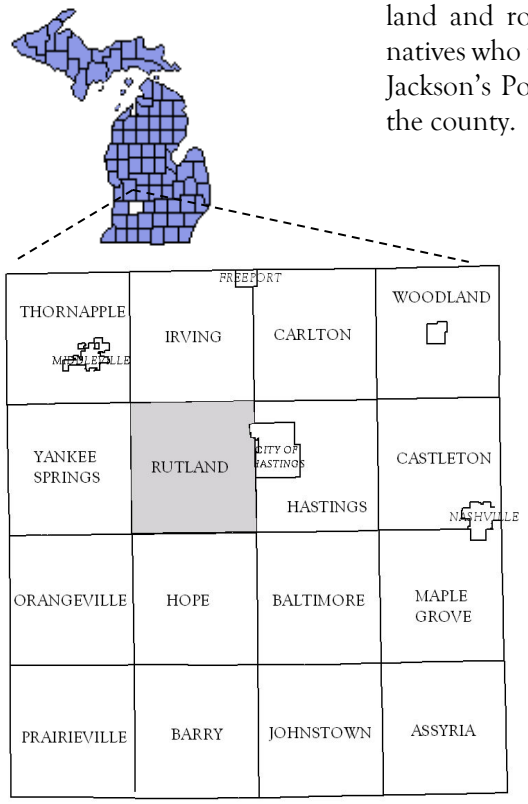
CHAPTER 1. NATURAL & CULTURAL FEATURES

Located in Barry County, Rutland Township is part of southwest lower Michigan. Rutland Township is a rural community that has an area of nearly 36 square miles. The City of Hastings is located east of Rutland Township and serves as the commercial hub of the Barry County region. Many significant natural features, including rivers, streams, large and small lakes, natural forests, and productive farmland, characterize the township. The township located between Grand Rapids, Kalamazoo, and Lansing is within an hour's drive on local two-lane Michigan highways.

The following discussion addresses significant natural and cultural features in the community of Rutland Township.

CULTURAL AND HISTORICAL FEATURES

The first white settlers arrived in Barry County in 1831. Historically, the forested land and rolling countryside were a favorite hunting destination among the natives who traveled from as far away as the Upper Peninsula.[1] President Andrew Jackson's Postmaster General, General William T. Barry, was the namesake of the county.



Rutland Township Location Map

Barry County was one of the last counties organized in the southern tier of the lower peninsula. Non-native settlers and the native residents co-existed peaceably.[1] Today, Barry County is an agricultural leader in dairy farming and crop production, including corn for grain, winter wheat, barley, oats, and hay. A recognizable characteristic is the many public lands, including the Barry State Game Area, the Middleville State Game Area, and Yankee Springs State Park.

Another geographical feature of Barry County is the many lakes, which are found throughout the area. Gun Lake, located in Yankee Springs Township, is the largest inland lake in Southwestern Michigan and provides plenty of opportunity for many types of recreational activities. East and north of Gun Lake, the Barry State Game Area, offers approximately 15,000 acres of public land renowned for excellent hunting and is home to Yankee Springs State Park. A large portion of the game area stretches into the southwestern part of Rutland Township. The Middleville State Game, located in Irving and Thornapple Townships just north of Rutland, also provides public land for outdoor activities.

[1] Barry County Website, 2003

Climate

According to the US Climate Data[2], an organization that recorded annual climatic conditions between 1981 and 2021, the annual average low temperature in the township is 37.0° F in the winter. Along with the Township's average of 63 inches of snowfall annually, they are conducive to many wintertime activities such as cross-country skiing, snowmobiling, and ice fishing. The annual average high temperature of 57.0° F makes for a pleasant and comfortable environment for fishing, golfing, hiking, and many other outdoor summer activities during the summer. The average annual rainfall for the Township is 37.42 inches.

TOPOGRAPHY, GEOLOGY & SOILS

Soils in the region are developed from unconsolidated glacial till weathered by the climate, animals, and vegetation. The township primarily consists of open rolling scenery. Topography is a characteristic of soil that generally illustrates the slope or lay of the land. As glaciers melted and receded northward, they deposited debris (e.g., soil sediment and rocks) in the form of till and moraines. Two significant types define soil classification in Barry County. When a glacier recedes and deposits soil uniformly, it is classified as till. If glaciers deposit a large amount of soil in one location, it is classified as a moraine. Therefore, slopes and drainage capability are created by where and how much deposited glacial debris is in particular areas.

The slopes and drainage of the area have been determined by where and how much glacial debris was deposited across the township.

Topography can create limitations for development if the slopes are too extreme. The topography in the Township rarely exceeds a 20-percent slope and does not create severe development limitations. However, potential development limitations may exist in the flood plains of the community as these soils can experience constant or seasonal wetness and steeper slopes. The Thornapple River, being the most considerable drainage network of Rutland Township, generates some of these topographical attributes.

Soils

According to the U.S. Department of Agriculture Soil Conservation Service's Soil Survey of Barry County[3], the soils in the Rutland Township fall into six distinct soil groups: Coloma–Boyer, Marlette-Oshtemo, Houghton-Sloan, Oshtemo-Coloma-Marlette, Coloma-Boyer-Spinks, and Oshtemo-Coloma-Marlette (see Map 1). The following discussion describes the characteristics of each.

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[2] "Weather Averages Hastings, Michigan." *Temperature - Precipitation - Sunshine - Snowfall*, 2021, www.usclimatedata.com/climate/hastings/michigan/united-states/usmi0380.

[3] Soil Survey of Barry County, Michigan, U.S. Department of Agriculture Soil Conservation Service, October 1990.

Soil Classifications

Coloma-Boyer Association. This soil type, located in the northeast and northwest portion of the township, lies in low slope areas (0 to 6 percent), well-drained to excessively well-drained sandy soils. As a result, the Coloma–Boyer Association is generally well suited for crops, pasture, building site development, and septic tank absorption fields.

Marlette-Oshtemo Association. This moderately sloping to steep slope composition consists primarily of well-drained loamy soils. These soils are generally not well suited to major crops such as corn and soybeans but serve well for hay or woodland stands. Site development and septic suitability can be generally poor to well suited to this soil classification depending on the specific location.

Houghton-Sloan Association. Found in the lower elevation landscapes of the township primarily surrounding the Thornapple River, Glass Creek, and Podunk Lake. Houghton-Sloan soil drains poorly, is relatively muddy, and is not well-suited for building development or septic tank absorption.

Coloma-Boyer-Spinks Association. This sandy soil is located primarily in the southwest portion of the township and is found in slopes ranging between 6 and 40 percent. A large amount of this soil is located in the Barry State Game Area and is undeveloped.

Oshtemo-Coloma-Marlette Association. Oshtemo-Coloma Marlette is the most significant soil classification within the township. The slopes range from 6 to 40 percent, which provides Rutland Township with the characteristic rolling terrain. This soil type varies significantly throughout the region and, depending primarily upon the steepness, can be reasonably well suited to poorly suited for building foundations and septic system drain fields. Similarly, this soil is relatively suitable for cropland and pasture, but specific areas, depending on make-up and slope, are susceptible to erosion.

Septic Limitations

The increased use of aging individual septic systems in these dense residential areas may add to the nitrate levels in the ground water and surface water in the area.

Private on-site individual septic disposal systems (ISDS) are used for homes not connected to public sewers. The composition of soils is a crucial component to the proper function and life span of an ISDS, and the Eaton-Barry County Health Department is responsible for inspecting and permitting all systems in Barry County. Map 2 is a generalized map that illustrates the septic suitability of the soils in the Township. Most soils are delineated as "severe," meaning that these soils are not suitable for an ISDS. However, the creation of this map came from a generalized soil map, and determining an appropriate location for an ISDS can only be identified with an on-site soil inspection. In other words, Map 2 may demonstrate that most of the soils in the township would not be suitable for onsite systems. However, most areas prove to have at least one specific place ideal for an ISDS.

An ISDS disperses liquid waste over a drain field and catches solid material in a septic tank. Regular maintenance at appropriate intervals will depend upon the age, design, and intensity of use. In addition, new developments utilizing on-site systems are now often required to designate reserve drain field locations for future use when or if the soils fail to filter liquid waste adequately.

LAKES, WATERSHEDS, DRAINAGE, AND WETLANDS

When discussing lakes, watersheds, drainage, and wetlands, it is essential to realize the interconnectivity of each of these natural attributes. Other environmental qualities will likely be affected if one of these features is changed or impacted through natural or human activities. The protection of water quality in Rutland Township depends on more than the actions or policies that one jurisdiction may make. Unpredictable natural occurrences and individual acts can also create changes in water quality. The Rutland Township Master Plan focuses primarily on the current and future land use aspects that can help the Township keep or improve the water quality of the local area and region.

Lakes

The larger lakes in Rutland Township include Algonquin, Podunk, Otis, Tanner, and Purdy. In addition, there are many smaller lakes and ponds throughout the Township, including Barry #8 (North and South) and Twin North (see Map 3).

Being the largest lake in the township, Algonquin Lake is a draw for seasonal and year-round residents. Practically all of the land around this lake has been divided and platted for single-family homes. Like most inland lakes in Michigan, the trend around Algonquin Lake is for property owners to improve a smaller seasonal cottage into a fully- functional year-round home. Potential impacts of this trend may be the degradation of the water quality in and around the lake. The increased use of aging individual septic systems in these dense residential areas may add to the nitrate levels in the ground and surface water in the area. Public sewer does not serve the lake's properties, nor are there plans to extend sewer to this area presently.

Podunk Lake is the other lake in the township that has significant residential development. However, home building on the lake's northeastern shore has likely been limited, as the soils in this area are typically wet.

Within the Barry State Game Area, Otis Lake is located in the southwest region of the township, and its shores lack development. However, a public access facility located on the eastern shore allows the visitors to launch boats into the lake.

Watersheds

Water quality within a watershed is directly related to the land management practices within that watershed.

A watershed is a region of land drained by a particular river or river system. Watershed systems include many smaller tributaries such as creeks and streams that feed into a larger river. Elevation and topographic features affect the watershed location. The Thornapple River, Glass Creek, and Fall Creek are the primary watersheds in Rutland Township (see Map 3).

The Thornapple River Watershed incorporates the northeastern portion of Rutland Township, including several dense residential developments, Algonquin Lake, and most of Hastings. The Glass Creek Watershed is located in the southwest and central areas of the township, while the Fall Creek Watershed is in the very southeast portion of the township. Watersheds are a reminder that natural processes do not follow political boundaries, and planning for healthy environments can transcend the abilities of individual jurisdictions.

The Thornapple River provides excellent resources for recreation opportunities, such as fishing and boating.

The Thornapple River Watershed Council is an organization dedicated to protecting the water quality in the Thornapple River Watershed region. They have organized river cleanup activities with other local organizations, such as the Barry County Water Quality Action Committee. Overall, these groups work to educate the population about the importance of protecting the Thornapple Watershed.

The Glass Creek Watershed originates in Hope and Orangeville Townships and extends north through Rutland Township to the Thornapple River. Finally, the Fall Creek Watershed stretches from Hope Township to Hastings. Fall Creek is also a tributary to the Thornapple River.

Water quality within a watershed is directly related to the land management practices within that watershed. For example, if a new development creates a large amount of impervious surface (e.g., pavement) and stormwater is not correctly managed, the flow rate and volume into the creek, stream, or river may increase that runoff that causes higher rates of bank erosion. Bank erosion will increase silt material on the streambed, thereby changing the chemistry of the water with phosphates, nitrogen, and other chemicals and altering the turbidity of the water. All of these changes may affect the wildlife that is dependent on the stream or river for survival.

Drainage

A defining element of the township is the Thornapple River. Today, the riverfront offers excellent recreational destinations, residential locations, and wildlife habitats. However, development can impact water quality due to fertilizer application and other human-related activities.

The entire Thornapple River Watershed includes 227 lakes, 741 total river miles, and a total area of 876 square miles.

The Thornapple River originates in eastern Eaton County, meanders west into Barry and Kent Counties, and eventually empties its water to the Grand River in Ada Township, east of Grand Rapids. The Grand River flows west and eventually empties into Lake Michigan. Containing hundreds of lakes and draining more than 876 square miles of land[4], the Thornapple River and its tributaries are home to dozens of fish species, including large and smallmouth bass, bluegill, trout, catfish, walleye, and perch.

In 1995, the Natural Resources Conservation Service (NRCS), a division of the United States Department of Agriculture (USDA), proposed a flood plain study for the Thornapple River. As of January 2001, the project, officially called the *Thornapple River Flood Plain Management Study*, was approved, and work began in the summer of 2001. The project completed in 2004 includes detailed hydraulic and hydrologic studies. The study area consists of a 38-mile stretch of the Thornapple River from McKeown Road, southeast of Hastings in Barry County, to the headwaters in Eaton County. The goal will be to identify the 10, 50, 100, and 500-year flood plains. With these floodplains recorded, wise land-use decisions will promote public health and safety. This plan was updated in 2016.

Map 4 illustrates the relief, or lay of the land, in the township through contour lines. Part of what causes relief is glacial recession activity at the end of an ice age, and the watercourses formed slowly erode the terrain. For example, the Thornapple River basin, being the primary drainage course in the township, generally has the lowest elevation, which explains why many smaller and higher elevation tributaries feed it.

[4] Website, www.thornappleriver.com 2003

Wetlands

Wetlands play a critical role in regulating the movement of water within watersheds. Water saturation in the root zone or above the soil surface characterizes a wetland for a substantial amount of time during the year. Thus, the fluctuation of the water table above and below the soil surface is unique to each wetland type.

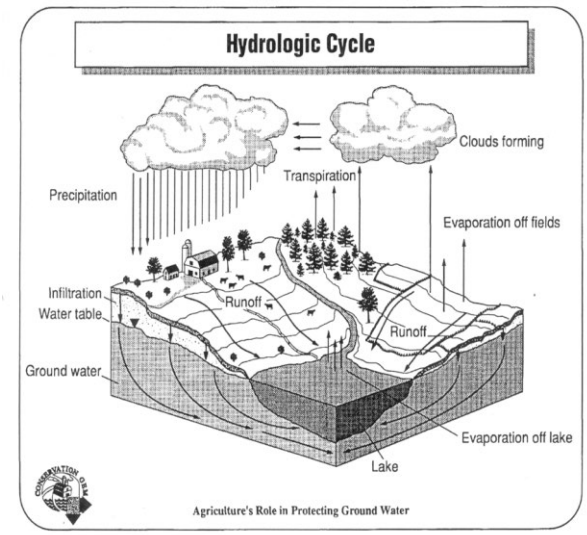
Wetlands store precipitation and surface water and then slowly release the water in associated water resources, ground water, and the atmosphere.

Wetlands store precipitation and surface water and slowly release that water, recharging groundwater or evaporating into the atmosphere. They help maintain the water table level and may serve as filters for sediments and organic matter. They may also act as a sink to catch water or transform nutrients, organic compounds, metals, and components of organic matter. In addition, wetlands can impact levels of nitrogen, phosphorous, carbon, sulfur, and various metals. Without wetlands, water quality decreases, the land becomes prone to flash flooding, and habitat for specialized plants and animals is lost.

Map 5 illustrates the location of the wetlands within the township identified and mapped by the National Wetlands Inventory (NWI). While the NWI describes the general area of wetlands in the township, a professional should conduct an on-site analysis to verify the specific boundaries of wetlands. In Michigan, wetlands adjacent to or associated with surface water; or are more extensive than five acres in size are regulated by the Natural Resources and Environmental Protection Act (Part 303 - Wetlands Protection, Act 451 of 1994). In addition, to fill or alter a wetland, permits must be granted by the Michigan Department of Environment, Great Lakes, and Energy.

The few wetlands in the township are typically associated with local lakes, drainage courses of the local creeks, and around the Thornapple River.

Groundwater and Surface Water



David P. Lusch, Center for Remote Sensing, Michigan State University

Rutland Township relies on individual wells for water supply and doesn't use a public water system. Though abundant, the groundwater supplies in the Township can be affected as more area becomes impervious and greater demand stresses the groundwater supplies.

Contamination of groundwater occurs relatively simply. Two significant contributors are fertilizer application on crops and residential lawns and septic tank drain field effluent. Proper fertilizer application management and septic tank maintenance may help to reduce nitrate levels significantly. Abandoned wells may also be a threat to groundwater quality if they have not been properly closed. Open wells may expose groundwater supplies to surface contaminates.

Wildlife

The existing fields, woodlands, wetlands, native grasslands, and drainage ways of Rutland Township provide suitable habitats for wildlife. Wildlife species include white-tailed deer, cottontail rabbits, raccoons, squirrels, red and gray fox, muskrat, mink, opossum, skunk, various songbirds and waterfowl, ruffed grouse, and woodcocks. The survival and enhancement of wildlife in the township depend on the habitat available in Rutland Township. New development that divides or destroys critical habitat areas may deplete wildlife populations.

Prime Farmland

The resource value of soils lies mainly in agriculture. Map 6 illustrates general locations of locally important prime farmland as indicated by the Michigan Department Environment, Great Lakes, and Energy Michigan Resource Information System (MIRIS) 1978 data. As defined by the U.S. Department of Agriculture, prime farmland is the land that is best suited to food, feed, forage, fiber, and oilseed crops. In addition, the soil qualities, growing season, and moisture supply are needed for a well-managed soil to produce a sustained high yield of crops economically. As a result, prime farmland has the highest product with minimal expenditure of energy and economic resources.

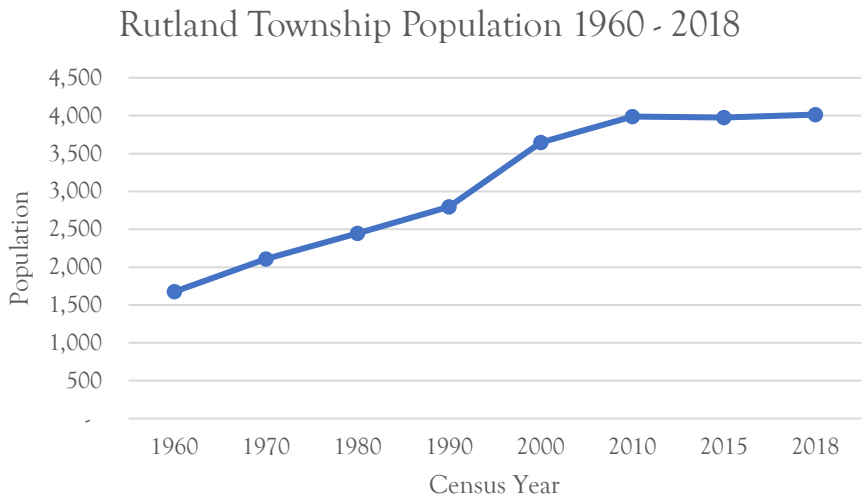
CHAPTER 2. POPULATION

Population counts can be an essential measure to express growth and its likely impact on land use in a community. Therefore, it is vitally important to understand the township's population and its growth trends to prepare a meaningful and realistic master plan. Therefore, this section of the master plan intends to understand the characteristics of the township's population and demographic trends.

The township's population has steadily increased over the last several decades.

The community has experienced significant growth between 1960 and 2018, with a total estimated population of 4,014 in 2018 (see Figure 1).[5]

Figure 1. Rutland Township Historic Population Growth



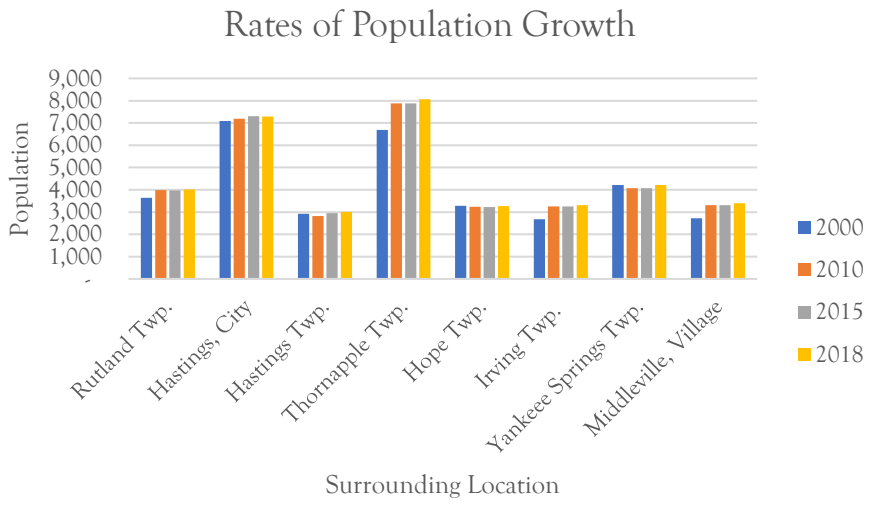
Source: US Census Bureau, 2018 ACS Estimates

It is also helpful to put the township's population shifts into the context of the region and compare population growth with neighboring communities. Figure 2 compares the 28-year population growth history between 2000 and 2018 in Rutland Township with other Barry County communities. Almost all communities in this comparison have consistently illustrated a strong population growth over the last 28-year period. For example, Barry County, as a whole, grew from 58,570 residents to 59,196 residents, a 1.1% increase between 2010 and 2018. Growth during earlier decades was faster, but the economic recession and other housing and economic factors have contributed to a lasting impact over many years in southwest Michigan. This economic impact translated into growth stagnation or loss of population.

[5] US Census Bureau, 2010 Decennial Census Table: H1; 2015 ACS 5-Year Estimates; 2018 ACS 5-Year Estimates

A noticeable trend occurs in the northwest portion of the county in Irving and Thornapple Townships and surrounding the Village of Middleville. It appears that the burgeoning Grand Rapids metro area is beginning to spill over into Barry County as more residents look for new homes in a rural setting. For instance, between 2000 and 2018, the Village of Middleville had a population increase of 19.9%; while Irving Township had a rise of 18.9%, Thornapple Township increased 17.2%%. However, most townships in the eastern and southern portions of the County saw only single-digit growth during the same period.

Figure 2. Comparative Rates of Population Growth Projections



Source: US Census Bureau, 2018 ACS Estimates

Statistical averaging is used to project the population growth over the next thirty years. These approaches are adequate to give a general sense of the overall growth trends. Still, they often have limitations, especially during rapid growth or decline, which may run counter to statistical trends. Therefore, basing future models on past trends is documented by the United States Bureau of the Census.

These approaches help give a sense of scale to future land use requirements and the demand for various public services and capital improvements. The following summarizes these projection techniques.

The Constant Proportion *(or ratio)* ***Method*** of forecasting population assumes that Rutland Township will continue to represent the same share of the percentage of Barry County's projected population in 2020, 2030, and 2040 which it comprises today. Using the preliminary population projections for Barry County prepared by the U.S. Census, the following table illustrates the results of the constant proportion method for Rutland Township:

CONSTANT PROPORTION METHOD

	2010 Population*	2020 Population Projection	2030 Population Projection	2040 Population Projection
Barry County	58,570	62,559	66,819	71,369**
Rutland Township	3,987	4,259	4,549	4,859

* Based on the percent of the County's total 2010 population residing in Rutland Township = 6.81%.

** The US Census did not project County population through 2040; this figure results from an extrapolation of the growth rates projected from 2010 through 2020 for another twenty years.

The Growth Rate *(or geometric)* ***Method*** forecasts future population growth or decline based on the township rate in the past. Using the growth rate method, the following assumes that change in the future will occur at the same average rate as has occurred annually since 1960. Using this approach over a six-decade span helps smooth out any variance, but it also results in a relatively aggressive annual growth rate.

GROWTH RATE METHOD

	Average Growth Rate/10 yrs. 1960-2018	2010	2020	2030	2040
Rutland Township	14.2%	3,987	4,007	5,028	5,825

The Arithmetic Method is similar to the growth rate method in that population projections are based on growth that occurred in preceding decades. This method bases population growth on the average increase in persons per year rather than on growth rates. The following projections rely on the calculated average net gain of 403 persons per decade between 1960 and 2018 in Rutland Township.

ARITHMETIC METHOD

	Average Increase Each Decade (Number of Persons)	2010 Population	2020	2030	2040
Rutland Township	403	3,987	4,390	4,793	5,196

An average increase of 2.79 persons per household between 2010 to 2019 should have added about 21 persons per year to the township's population.

The Building Permit Method may be the most reliable projection method because it portrays the growth based on current building permit data. Rutland Township has issued residential building permits for an annual average of 7.3 units over the last ten years. Assuming that building activity will continue at this rate, this method uses the township's average household size of 2.79 persons[6] to calculate the population growth. In other words, this method says that Rutland Township will increase by about 21 persons per year. Of course, since average household size has declined steadily in the United States over the past several decades, this methodology may slightly understate the rate of increase.

BUILDING PERMIT METHOD

Average No Permits/Year	Persons per H/H	2010 Population	2020	2030	2040
7.3	2.79	3,987	4,197	4,407	4,617

It is reasonable to predict that the population will approach approximately 4,214 persons by 2020, 4,695 by 2030, and about 5,125 by 2040.

The anticipated population levels for the township using each of the population techniques are summarized below. It is reasonable to predict that the population will approach approximately 4,214 persons by 2020, 4,695 by 2030, and 5,125 by 2040.

Each technique illustrates the township will continue to grow but at a much slower rate than between 1990 and 2010. Many factors impact growth in housing and population in Rutland Township. These include housing typologies and quality of neighborhood accommodations permitted or encouraged within the township, the image of Rutland Township as a desirable place to live, the public-school systems, the quality and quantity of commercial and industrial development, and the overall economic health of Southwest Michigan.

[6] U.S. Census, 2018 ACS Estimates.

SUMMARY POPULATION PROJECTION SUMMARY

	2010	2020	2030	2040
Constant Proportion	3,987	4,259	4,549	4,859
Growth Rate	3,987	4,007	5,028	5,825
Arithmetic	3,987	4,390	4,793	5,196
Building Permits	3,987	4,197	4,407	4,617
Average	**3,987**	**4,214**	**4,695**	**5,125**

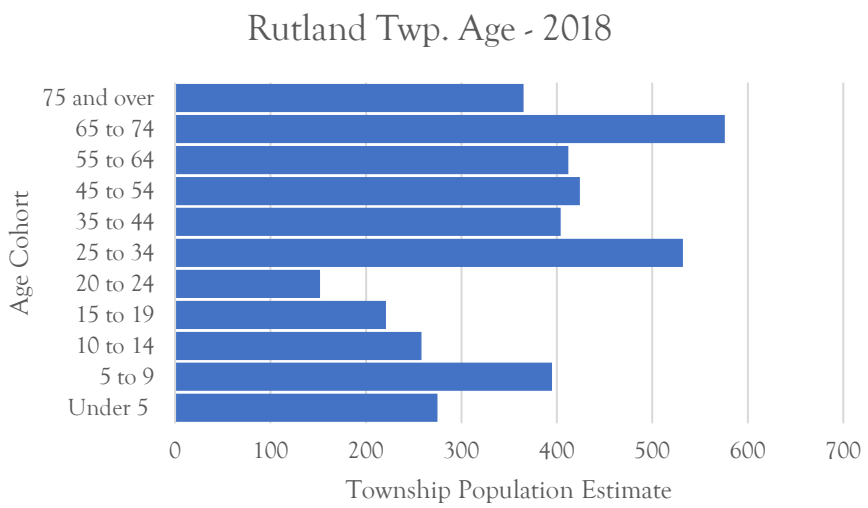
Age, Gender, and Racial Characteristics

Paralleling national trends, the population of Barry County and the township population has surprisingly decreased in age.

Comparing the age distribution of a community over time provides another opportunity to measure change. Also, an age breakdown of a community's residents helps determine the housing demands and recreational facilities needed. For example, in 2010, the median age of Rutland Township residents was 41.5 years, which was more significant than Barry County (41.2 years) and greater than the State and the U.S. (38.9 years and 37.2 years, respectively). In 2018, the median age of Rutland Township residents was 38.7 years, a significant decrease while the County, State, and Nation were getting older over the same period. Typically, the median age is the standard measurement demographers use to gauge the population of a specific group. Somewhat paralleling national trends, the people of Barry County are aging, unlike the Township, which has trended younger, as seen above.

In general, it is possible to identify more uniformity in the age distribution as the population ages. The aging of the "baby boomer" generation (54 to 74-year-olds in 2018) is evident, and they account for approximately 25% of Rutland Township's present population. The next largest generational cohort is the "millennial" generation (18 to 38-year-olds in 2018), making up approximately 21% of the township's population. The generation in-between the boomers and millennials, Gen-X, is a smaller cohort (17%) and is likely to be the parents of children enrolled in local high schools. A larger population of very young children under the age of 10 indicates a strong need for public services such as schools and daycare facilities.

Figure 3. Rutland Township Age[7]



Source: US Census Bureau, 2018 ACS Estimates

The 20 to 64 years age group is crucial as it represents the prime wage-earning population and includes the sub-set for family formations. Approximately57.5% of the County's population falls in the 20 – 64 age group, while about 47.9% of Rutland Township also falls into this category. Two components of this group are those establishing families (20- to 44-year-old = 27.1%) and the empty nesters (45- to 64-year-old = 20.8%). These combined age groups include slightly less than half of the population. However, they represent the demand for single-family housing stock and recreational facilities. In addition, they signal future increases in the under-five cohort and 5 to 19 years cohort, which often increases the demand in retail trade.

As a sub-set, the empty nesters' group comprises over 20% of the township's residents. Persons in this age cohort typically have reached their peak earning potential and have higher disposable incomes. Those 65 and older represent more than 23.4% of the Township's population in 2018. In contrast, that age group comprises about 17.7% of the people in the County.

The township is approximately half male (49.6%) and half female (50.4%). Racially, Rutland Township is a predominantly white community (96.4%). Only 3.6% of the population of Rutland Township is of a racial minority, which more than doubled the 1.5% population share in 2000.

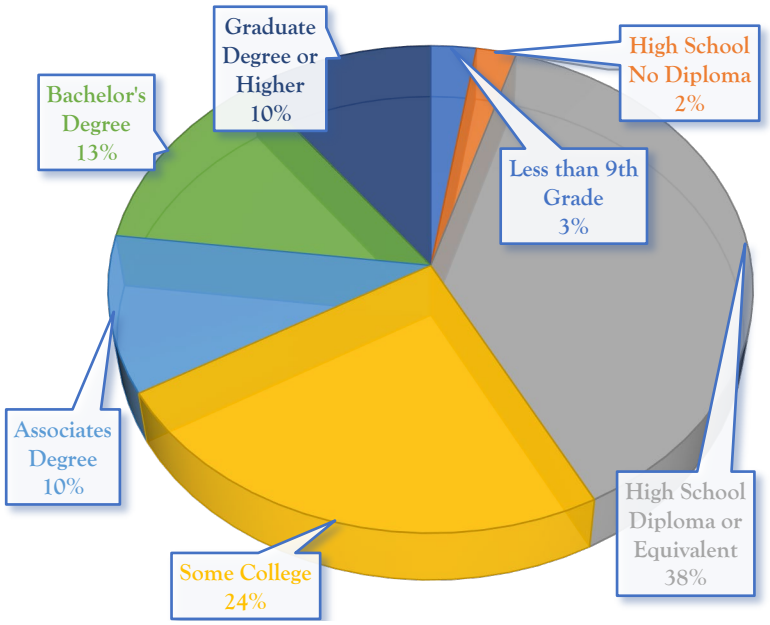
[7] US Census Bureau, 2018 5-Year ACS Estimate, Table: 20101.

Education

Two large school districts service Rutland Township. The Hastings Area Schools (Barry County Intermediate School District) and Thornapple-Kellogg Public Schools (Kent County Intermediate School District). Kellogg Community College's Fehsenfeld Center is also a multi-purpose education facility located in the Township. There are no secondary or primary schools situated in the Township due to the proximity of the City of Hastings. The total student population in Hastings Public Schools is 3,333 (K-12) during the 2020-2021 school year.

The 2018 census estimates indicate that within Rutland Township, approximately 64.4% of the population over 25 years of age have, at minimum, the equivalent of high school education, with 15.6% having a bachelor's degree or higher. Overall, in Barry County, approximately 63.0% of the population has a high school education, and an additional 13.7% reported receiving a bachelor's degree or higher.

Figure 4. Educational Attainment in Rutland Township [8]



By way of comparison, the U.S. Census reports that 90.5% of the population in Michigan have a high school education or equivalent, and 28.6% have a bachelor's degree or higher.[6] When compared with the State overall, a more significant percentage of the population of Rutland Township has attained at least a high school education (95.3%). However, a more substantial portion of the State's population has achieved post-secondary school degrees at the college or graduate study level.

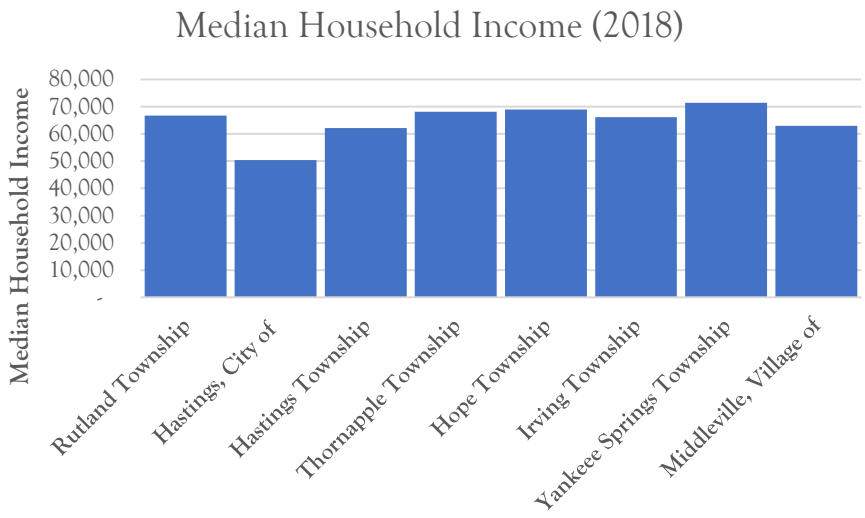
[8] US Census Bureau, 2018 ACS Estimates.

Income

Median household income measures the comparative economic strength of an area. It is also a helpful indicator to identify differences among jurisdictions. For example, figure 5 below compares the median household income in the township with surrounding townships, the county, and the State of Michigan. The 2018 median household income in the township was $66,705 compared with $61,016 in the county and $54,938 in Michigan. All communities that neighbor Rutland Township had a similar median household income. Rutland Township's earnings outperformed the City of Hastings, Hastings Township, Irving Township, and the Village of Middleville.

Income growth is a better indicator of economic health than static information on median incomes. It is, therefore, appropriate to determine whether the purchasing power of Rutland Township residents has improved relative to that of their neighbors (Figure 6). Purchasing power can be calculated by per capita income change.

Figure 5. Comparison of Household Incomes[9]

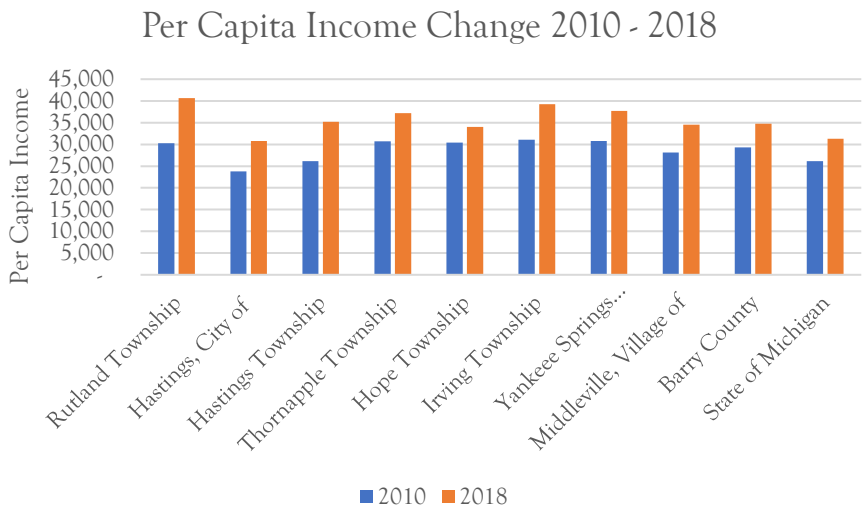


Source: US Census Bureau, 2018 ACS Estimates

[9] US Census Bureau, 2018 ACS Estimates.

This measurement divides total income in the community by its population. In 2010, the per capita income in Rutland Township was $30,243 and by 2018 increased to $40,657, an increase of 34.4% over ten years.[10] Barry County's per capita income increased from $29,328 to $30,243, an increase of 3.1%, while per capita incomes in the State of Michigan increased by 19.5% at the same time. This data showcases the Township income levels rose at a rate greater than most comparison communities; this is illustrated in Figure 6.

Figure 6. Comparative Growth in Per Capita Incomes[11]



Source: US Census Bureau, 2018 ACS Estimates

The entire Rutland Township region saw pretty significant improvement in incomes during the 2010s, with Rutland Township and Hastings Township receiving the most significant increases. It reveals that almost all per capita income increased more significantly than the county (15.6% between 2010 and 2018).

Neither median household income nor per capita income is a perfect measure of economic health because each has limitations. For example, per capita incomes can seem to understate a community's economic viability compared to its neighbors if a more significant percentage of the population is not employed (i.e., children or retirees). On the other hand, median household income reflects the midpoint in the range of all household incomes. Thus, medians are a helpful measure but can skew due to outlying values that distort the range.

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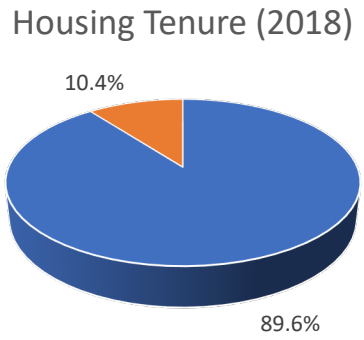
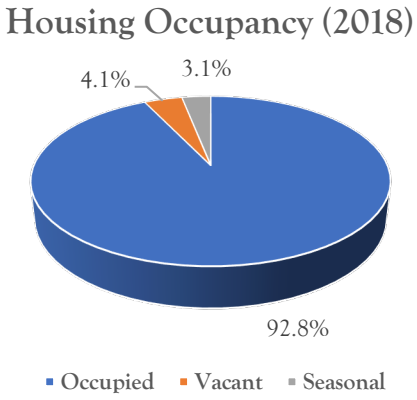
[10] The U.S. Census Bureau reports per capita income in current year dollars and to develop an accurate evaluation of true income growth it is necessary to adjust earnings to a common dollar value.

[11] U.S. Census Bureau, 2010 and 2018 ACS Estimates.

CHAPTER 3. HOUSING AND ECONOMIC DEVELOPMENT

This chapter reviews the current indicators of growth in the township relating to housing and economic development.





Housing

In 2018, there were 1,550 housing units in the township. Of those, 111 (7.2%) were vacant during the 2018 American Community Survey. Generally, when housing vacancy rates exceed 5%, there can be some concern for neighborhood stability. However, in Rutland Township's case, the vacancy rate is likely due to seasonal homes associated with the lakes or the Barry State Game Area.

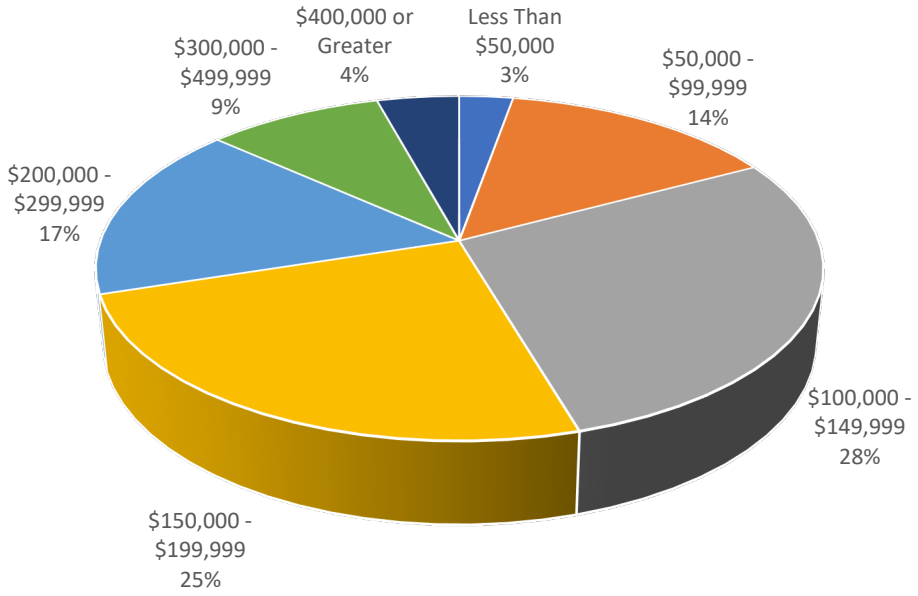
Another good test of the health of a community is the ratio of renter-occupied housing to owner-occupied housing. Generally, communities strive to achieve a 2:1 or even 3:1 balance of owner-occupied to rental housing within the market. Almost 90% of the homes in the township are made up of detached single-family dwellings (9:1 ratio), illustrating a low occurrence of typical rental units, including apartments and duplexes. The data collected through the 2018 ACS estimates show that housing tenure for Rutland Township show over 89.9% of the housing is owner-occupied.

New Development

New residential growth has decreased over the last eight years. Between 2010 and 2018, the housing units in Rutland Township decreased from 1,644 to 1,550 (-0.06%) in overall housing units. As the township parcel map illustrates (see Map 8), there are only a few subdivisions in the Township; therefore, it is likely that a majority of these homes on lots were created through simple land divisions. If, for example, the average lot size for each one of these new homes is 2.3 acres, the total land area consumed for residential development between 2010 and 2018 would be 605 acres. This example uses the 2.3-acre minimum lot size of the CR – Country Residential zoning district (Article V of the Rutland Township Zoning Ordinance) to illustrate a large zoned area of residential land in the Township

The largest share (28.2%) of owner-occupied home valuation in Rutland Township is between $100,000 and $149,999, followed by a 24.7% share valued between $150,000 and $199,000. The median household value was $156,900 in 2018. This data illustrates the housing stock in the Township can be fairly affordable and obtainable to most residents in the community.

Figure 9: Housing Value of Owner-Occupied Units



Source: U.S. Census Bureau, 2018 ACS Estimates

ECONOMIC DEVELOPMENT

Table 1 illustrates major occupation categories for Rutland Township, Barry County, and the State of Michigan, as broken down by the US Census Bureau American Community Survey.

Table 1
Categorized Occupations for 2018

Occupation Categories	Rutland Township		Barry County		State of Michigan	
	Employment	% of Total	Employment	% of Total	Employment	% of Total
Management, Business, Sciences, and the Arts	548	32.4%	8,454	30.0%	1,659,703	36.1%
Service	180	10.7%	4,268	15.1%	815,617	17.7%
Sales & Office	360	21.3%	5,913	21.0%	981,395	21.3%
Natural Resources, Construction, and Maintenance	160	9.5%	3,599	12.8%	363,017	7.9%
Farming[12]	0	0.0%	300	1.1%	26,331	0.6%
Production, Transportation, and Materials Moving	441	26.1%	5,975	21.2%	778,755	16.9%
TOTALS	**1,689**	**100.0%**	**28,209**	**100.0%**	**4,598,487**	**100.0%**

Source: US Census Bureau, 2018 ACS Estimates.

Relative to the County and State, employment in the township tends to mirror employment category percentages generally. Almost one-third of employed residents in the township found work in the Management, Business, Sciences, and the Arts categories. Moderate to high salaries can characterize these occupations, which is consistent with the income information reported in Chapter 2.

The significant businesses that impact Rutland Township, their products, and the number of current employees are illustrated in Table 2 below.

[12] Farming is a sub-component of the Natural Resources category, these numbers are not factored into the totals to prevent double-counting.

Table 2
Major Employers in the Rutland Township/Barry County Area – 2015

Rank	Employer	Employees	2010-2015 Change	Industry
1	Bradford White Corporation	900	+22.2%	Water Heaters
2	Pennock Hospital	475	-26.3%	Health Care
3	Hastings Mutual Insurance	423	+38.5%	Insurance
4	FlexFab, LLC	402	+37.8%	Silicone Hoses
5	Viking Corporation	322	+37.9%	Sprinklers
6	Thornapple-Kellogg Schools	300	Not Ranked in 2010 Plan	Education
67	Hastings Manufacturing	200	-100%	Motor Vehicle Parts
8	Hastings Area Schools	267	-18.0%	Education
9	Barry County	182	Not Ranked in 2010 Plan	Government
10	Thornapple Manor	181	Not Ranked in 2010 Plan	Assisted Living

Source: Barry County Chamber of Commerce, 2015

Downsizing is the result of the stagnation in the national economy and the consequential decrease in workload.

Several major regional employers have grown since the last release of employment numbers in 2005. These include sizeable gains at FlexFab, LLC, Bradford White Corp., Viking Corp., and Hastings Mutual Insurance. However, other significant employers have lost significant workforce numbers; Hastings Manufacturing lost half of its employment from 400 employees (2005) to 200 employees in 2015. In addition, other employers identified in the 2010 plan, such as Felpausch Foods Center and Metaldyne Corp., have closed operations in Barry County, which lost approximately 400 jobs locally.[13] A downward trend in unemployment is consistent in all the surrounding communities and follows county and state trends.

[13] Barry County Chamber of Commerce 2005 – 2015 Major Employers List

Table 3
Average Unemployment Rates 2013 - 2018

COMMUNITY	YEAR						% CHANGE 2013-18
	2013	2014	2015	2016	2017	2018	
Rutland Township	6.2%	4.7%	2.7%	1.9%	1.1%	2.4%	-158.3%
Hastings, City of	6.8%	7.8%	7.7%	4.2%	7.8%	5.5%	-23.6%
Hastings Township	5.6%	5.9%	4.0%	3.8%	3.3%	3.2%	-75.0%
Thornapple Township	3.0%	2.8%	2.9%	2.2%	2.7%	2.3%	-30.4%
Hope Township	5.2%	4.6%	3.7%	2.0%	2.0%	2.1%	-147.6%
Irving Township	9.8%	8.1%	7.4%	6.3%	5.9%	3.3%	-197.0%
Yankee Springs Township	7.9%	6.3%	4.9%	5.7%	3.0%	1.1%	-618.2%
Middleville, Village of	1.0%	1.6%	3.7%	3.8%	3.8%	4.3%	76.7%
Barry County	6.5%	5.8%	4.9%	3.9%	3.8%	3.2%	-103.1%
State of Michigan	7.8%	7.0%	6.0%	5.2%	4.5%	4.0%	-95.0%

Source: US Census Bureau, 2013-2018 ACS 5-year Estimates

CHAPTER 4. LAND USE AND DEVELOPMENT PATTERNS

The total land area of Rutland Township is approximately 36 square miles or about 23,000 acres. Rutland Township has historically shaped itself into an agricultural community since its origination. Most commercial and industrial development has taken place on the border with the City of Hastings to the east. The southwestern portion of the Township is primarily open land associated with the Barry State Game Area. The remaining areas of the Township consist of largely moderate to low density residential homes and various agricultural lands.

LAND USE

Land cover in Rutland Township spans the entire range from sensitive environmental features to intense urban development.

MIRIS is an effort to create a "statewide computerized database of information pertinent to land utilization, management, and resource protection activities."[14] MIRIS maps are prepared from aerial photography and reflect composite groupings of land categories. The original mapping for Barry County was done in 1978 and updated in 1994. Thus, the MIRIS mapping system is helpful for general impressions of land uses but can include some misinterpreted features. Similarly, any land use map aims to gain the community's aerial concept or bird's eye view.

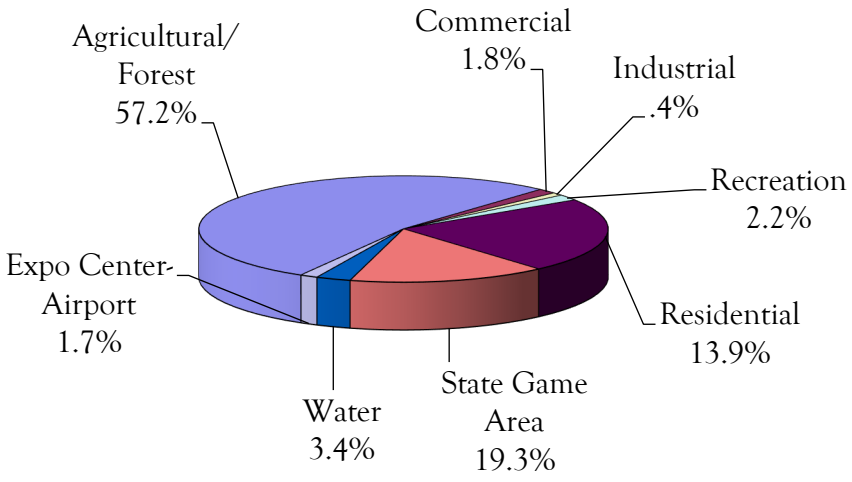
The existing land use map (Map 7) uses the original land use map created for the Master Plan adopted in 2005. With added up-to-date land-use coverage data gathered from Michigan Open-Source Data, the National Land Cover Database, and Rutland Township.

[14] Michigan Department of Natural Resources, Michigan Resource Inventory Program established under the Michigan Resource Inventory Act, 1979 PA 204.

Table 4
Land Use Breakdown

Land Classification	Acres	%
Agriculture/Forest/Open Space	13,280	57.2%
Commercial	468	2.0%
Industrial	127	0.6%
Recreational and Exempt Lands	619	2.7%
Residential	3,231	13.9%
State Game Area	4,545	19.9%
Water	787	3.4%
Institutional	403	1.7%
Total Acres	23,220	100.0%

Land Use Pie Chart



Residential

Similar to many other communities in Michigan, many of the homes on lake lots are being upgraded to year-round homes.

The largest concentration of existing residential development is around Algonquin Lake, Podunk Lake, and the M-37 corridor. A majority of the residential lots surrounding Algonquin Lake were small cottage lots traditionally intended for seasonal use. However, similar to many other communities in Michigan, many of these seasonal cottages have been upgraded to year-round homes. As land use intensifies, including rebuilding and enlarging of homes and increased effluent caused by aging septic systems, the integrity of the ground and surface water will be at risk.

There are two mobile home communities located in the township; one located at the intersection of M-37 and North Whitmore Road and the other near the Woodruff and Solomon Road intersection. Both of these developments are in the northern portion of the township.

Commercial and Industrial

Commercial and industrial development in the Township represents less than two percent of the land area in Rutland Township. Most of this type of development is typically strip development located along M-37 in the northeast portion of the Township, extending approximately 1.5 miles west of the City of Hastings boundary. The current Township zoning map also reveals that most properties zoned commercial and industrial are within this area.

Access management plans, such as the M-37 Access Management Plan for Barry County, completed in April 2004 by the M-37 Corridor Committee and MDOT, illustrate that strip commercial development can reduce the integrity and efficiency of major throughways. For example, if every new development located along M-37 gained a curb cut for direct vehicle access. As the number of curb cuts increase, more vehicles will be entering and exiting the roadway slowing the pace of traffic and decreasing safety. The Access Management Plan provides local leaders with guidance, solutions, and methods to preserve the investment, integrity, and safety of M-37.

Agricultural, Forested, and Vacant

Agricultural, forested, and vacant land uses are scattered throughout the township and represent approximately 57% of land use in the Township. In addition, as Map 7 illustrates, some large contiguous farmland areas in the township serve as productive cropland, hayfields, and pasture.

The majority of this category is associated with the Barry State Game Area in the western part of the township. In addition, there are other significant areas of forested and vacant areas throughout the Township that have been historically harvested for timber. The soils associated with these land areas are likely not suitable for effective agricultural practices.

Recreation

This land category comprising 1.8% of the township area, includes golf courses, the gun club, the YMCA camp, and a bird sanctuary. Because no public community parks or schools are located in the township, it's necessary to travel to surrounding community facilities for consolidated outdoor recreation, including basketball/tennis courts, soccer/softball fields, and traditional playgrounds.

CHAPTER 5. COMMUNITY FACILITIES AND SERVICES

Community facilities, such as schools, parks, recreational areas, and public buildings play an essential role in maintaining and improving quality of life. This chapter discusses these facilities and locations and the comprehensive development needs of the township. Map 8 illustrates the area of the community facilities discussed in this chapter.

Public Schools

Community facilities, such as schools, parks, and public buildings play an important role in maintaining and improving quality of life.

Hastings Area Schools, Thornapple-Kellogg Schools, and the Barry Intermediate School District all serve township residents. In addition, there are alternative options with local private and parochial schools. The boundary of the public school systems is illustrated on Map 9.

The Hastings Area School System includes one high school, one middle school, and five elementary schools. Most schools, including Hastings High School, Hastings Middle School, and Central, Northeastern, and Southeastern Elementary Schools, are located in the city limits. In addition, Star Elementary is located in Hastings Township. There were 3,333 students enrolled in the district for the 2020-21 school year. With 212 teachers employed by the school system, there is approximately one teacher per 16 students.

The Thornapple-Kellogg School district, based in the Village of Middleville, encompasses the northwestern portion of the township. The school district has a current enrollment of 2,840 students with an anticipated 2% growth per year, and the school district has an exceptional graduation rate. With 169 teachers, there are about 17 students per teacher. The district's five schools are located in the Village of Middleville, are as follows:

- Kindergarten-1st grade – McFall Elementary
- 2nd – 3rd grade – Lee Elementary
- 4th and 5th grade – Page Elementary
- 6th, 7th, and 8th grade – T-K Middle School
- High school (grade 9, 10, 11, and 12) – T-K High School

The Barry Intermediate School District (Barry ISD), with offices located in the City of Hastings, provides various services for the entire County. One function of the Barry ISD is special education, which includes diagnosing children with learning disabilities and treatment recommendations. In addition, therapists and teachers from the Barry ISD perform their work in the local schools, on-site, throughout the County. Some of the other services offered by Barry ISD include career preparation, professional staff development, attendance services, and educational consulting.

Kellogg Community College (KCC)

Nestled on 95 acres two miles west of Hastings on M-179, the KCC Fehsenfeld Center opened its doors in the fall of 1996 to residents of the Barry County community. The facility offers updated science and computer labs, general-purpose classrooms, and an interactive video classroom linking the center to Battle Creek, Coldwater, and beyond.

Several other colleges are located in the regional metropolitan areas, most within an hour's driving distance. For example, the Kalamazoo metro area includes Kalamazoo College, Kalamazoo Valley Community College, and Western Michigan University. Schools in Grand Rapids include Grand Valley State University, Aquinas College, Calvin College, Kendall College, and Davenport University. The Thornapple-Kellogg School District supports Grand Rapids Community College, while those found in the Hastings Area School District support Kellogg Community College.

Barry Expo Center

The Barry Expo Center, located at 1350 N. M-37 Highway in Rutland Township, has been home to the annual Barry County Fair since 1990 and offers various events throughout the year. The facility sits on 160 acres and has six (6) barns, three (3) outdoor arenas, a half (1/2) mile oval dirt track with a 2,500-seat grandstand, a 260-site campground with electric and water hookups, and parking for up to 4,000 cars. The Expo Center also has two (2) banquet halls with a capacity of 450 people, each with a fully licensed kitchen. The facility is available for events ranging from horse shows, wedding receptions, and antique shows.

Public Safety Services & Facilities

The BIRCH (Baltimore, Irving, Rutland, Carlton, and Hastings Township) Fire Department services the township and is based in Hastings. The BIRCH Fire Department and City of Hastings Fire Department are located within the same facility and use the same firemen, although each department owns separate equipment.

The BIRCH and City of Hastings Fire Departments employ four full-time firefighters, and the remaining twenty-one firefighters work on a volunteer basis. The BIRCH Fire Department owns two pumpers, one rescue vehicle, two grass vehicles (fights grass fires), one tanker, and a portion of the 100-foot aerial truck. While ownership is separate, equipment is shared in emergency circumstances.

Policing services are provided through the Barry County Sheriff Department and the Michigan State Police, both based in Hastings. Rutland Township has contracted with the Barry County Sheriff's Department to provide guaranteed Township patrol throughout the week during specific times. The patrol officer also attends Township Board meetings to report on his activities and answer any questions from the Township Board and residents. The Michigan State Police responds to emergency calls when this contracted officer is not available.

Township Hall and Rutland Cemetery

Township Hall is located at 2461 Heath Road and serves as the administrative center for the township and the location for all Board of Trustee, Planning Commission, and Zoning Board of Appeals meetings. Township Hall is available for public rental, and notification must be given 48 hours in advance upon request. The Rutland Cemetery is located at 4600 Upton Road and is operated and maintained by the township. The Township Clerk is responsible for the administrative operations of the cemetery, and the cemetery sexton runs the cemetery itself.

Community Recreational Areas and Facilities

Rutland Township and Barry County are home to numerous outdoor recreation and natural areas. Barry County contains large amounts of both federal and state park, game, and recreation lands, as well as two considerable non-motorized trails that offer walking, hiking, biking, horse, cross-country skiing, and snowshoeing. The North Country Trail is an extensive regional trail network that winds its way through multiple states, terminating in Vermont and North Dakota. It runs north-south through Barry County and intersects the northwestern corner of Rutland Township. The Paul Henry Trail is a rails-to-trails network that runs along a portion of the Thornapple River. The Middleville section of the trail terminates near the Barry County Fairgrounds and Expo Center. It follows the Thornapple River to the City of Hastings and as a gravel pathway onto the Village of Nashville. A connection through Rutland Township between the Middleville and Hastings portions would benefit the community and access nearby destinations.

Rutland Township is centrally located to large parks, natural areas, and preserves. The Yankee Springs State Park and Recreation Area occupy nearly 20% of the total land area of the Township. This 5,200-acre state wildlife preserve and recreation area offers residents the opportunity to swim, fish, camp, picnic, kayak/canoe, and hike. In addition to this recreation area, Rutland Township also contains the Edger Waterfowl Production Area, the Otis Lake – Sager Trail, Irving Pond, the Michigan Audubon Otis Bird Sanctuary, the Hidden Pond Preserve, the Baker Lake Area, and the Pierce Cedar Creek Institute. These locations all offer opportunities to hike, bike, horseback ride, cross-country ski, snowshoe, picnic, kayak or canoe, bird watch, fish, camp, or learn about the surrounding natural environment.

In addition, private facilities such as the YMCA camp located on Algonquin Lake, local golf courses, and other recreation locations offer structured summer camping, sport, crafting, and program options. Both the township and county contain numerous places which play an essential role in maintaining and improving the area resident's quality of life. By preserving and enhancing the access and mobility to and from these areas within Rutland Township, the community can build the linkages to regionally significant locations and its residents. The Blue Zones Activate Project, a multi-year initiative, establishes the local leadership for and strengthens the development of these linkages, improving the longevity and quality of life for Rutland Township residents.

CHAPTER 6. TRANSPORTATION AND PUBLIC UTILITIES

Roadways

Transportation linkages between Rutland Township, West Michigan, and the larger Midwest region are pretty good. Three State highways (M-37, M-43, and M-179) converge on the community, which provides easy access to Hastings, Battle Creek, Kalamazoo, and Grand Rapids. Map 10 depicts state, county, and local roads and pathways in the township.

Three State highways (M-37, M-43, and M-79) converge on the community, which provides easy access to Hastings, Battle Creek, Kalamazoo, and Grand Rapids.

To the northwest, M-37 provides connections to the Village of Middleville and the Grand Rapids metro area, approximately 30 miles away. This highway is a heavily traveled commuter route that is experiencing increased traffic annually. This traffic increase led to the development of the M-37 Access Management Plan sponsored in part by the Michigan Department of Transportation, adopted in April 2004. This plan focuses on M-37, adjacent roadways, and land uses in its proximity. It seeks to find solutions to existing traffic problems and reduce future ones. Access management plans look at the area from a regional perspective, and the project is not designed to focus on one particular jurisdiction. In summary, traffic, land use, and aesthetics are generally the primary focus of an access management plan.

West approximately 15 miles on M-179, formerly known as Chief Noonday Trail, is the Township's direct access to the major north-south highway in west Michigan U.S. 131. U.S. 131 allows easy access to other major federal highways, including I-96 to the north and I-94 to the south. The primary route to Lansing and Kalamazoo is M-43. All major regional cities are typically within an hour's drive.

The Heritage Route Program and M-179 (Chief Noonday Trail)

Created by the Michigan Legislature in 1993, the Heritage Route program, sponsored by the Michigan Department of Transportation, emphasizes cooperation among residents, government officials, landowners, and interested groups to preserve unique scenic, historic, or recreational highways. The Heritage Route Program is a grassroots program requiring the involvement of residents to ensure roads and roadsides remain in their natural and unspoiled conditions. Residents have an opportunity as individuals, groups, or entire communities to become involved in preserving roadsides with scenic, historical, or recreational qualities[15].

There are three categories of heritage routes: *scenic* - a state highway having outstanding natural beauty; *historic* - a state highway having notable landmark buildings and resources along its length; and *recreational* - maintained not only to serve the recreational driver, but also to capture that recreational setting of the area itself, and set the mood for the recreational experience[16].

The State of Michigan designates the Chief Noonday Trail (M-179) as a Recreational Heritage Route containing many recreational and historic sites. This area was once the hunting ground for native woodland Indians. It continues to be heavily wooded and inhabited by a variety of wildlife. There is a significant portion of this heritage route bordering state-owned land in Barry County. This heritage route is the gateway to both the Yankee Springs Recreational and Barry State Game areas. Activities available include camping, hiking, swimming, boating, fishing, hunting, biking, horseback riding, water and cross-country skiing, berry and mushroom picking, photography, and visits to historical sites and museums.

[15] Michigan Department of Transportation Website, 2003
[16] Michigan Department of Transportation Website, 2003.

The Benefits of Heritage Routes

According to MDOT, the following outline illustrates the benefits of designating a Heritage Route.

Preservation Benefits

- Identify, preserve, and enhance Michigan's scenic, historical, and recreational resources.
- Provide an opportunity for growth management within a corridor by encouraging appropriate development.
- Provide an opportunity to manage the traveler/tourist impact on resources.

Economic Benefits

- Attract visitors, who bring additional revenues, enhancing economic activity in the region.
- Attract new businesses.
- Enhance existing jobs and create new jobs.
- May help a community obtain additional funding for improvement projects.

Community Benefits

- Provide a future vision for the area.
- Enhance the local, regional, and state image on a national level.
- Identify, promote, and preserve community uniqueness, thereby enhancing community appeal.
- Enhance the quality of life in the community.

Education Benefits

- Provide education for future generations by example.
- Opportunity to share ideas, information, and research.
- Provide an effective hands-on teaching tool.
- Establish an education network.

All-Season Roads

According to MDOT, all of the State roads in Rutland Township function within their design standards, based on average daily traffic volumes.

All-season roads have a year-round carrying capacity for heavy trucks such as semis, tractors/trailers, and other large vehicles. Therefore, commercial and industrial activities must be located on these all-season roads; otherwise, severe road damage may occur. For example, in Rutland Township, both Airport Road from West State Road to M-37 and West State Road are currently designated all-season county roads. However, according to the Barry County Road Commission, efforts are being made to obtain federal funding to rehabilitate Green Street from the Hastings city limit to M-37, making this an additional all-

season road. Anticipation of this project timeline would begin in the next five to ten years. Other all-season routes in Barry County include M-37, M-43, and M-179.

Other planned road improvements in the Township include improving approximately a half-mile of Irving Road just south of Upton Road. The Remaining County roads in the Township will continue to be regularly maintained.

Traffic volumes are an essential indicator of growth and development. According to the Michigan Department of Transportation (MDOT) information, all State roads in Rutland Township function within their design standards, based on average daily traffic (ADT) volumes. In addition, the Barry County Road Commission monitors traffic volumes on County roads in the Township.

ADT is determined by placing electronic counting devices at specific locations on the road and averaging the traffic count for 24 hours. According to MDOT, these traffic-counting devices are typically left in a place for many days to provide an adequate average number representation. The average number represents both lanes (directions) of traffic. When this average number is determined, it may be adjusted to reflect seasonal traffic fluctuations.

The list below illustrates some of the areas with the highest traffic volumes in Rutland Township.

Location	Actual Count/Year	Estimated 2040 ADT
West State Road, east of Hammond Rd	6,200/2001	28,520
Green Street, west of Cook Rd	5,232/1997	24,067
Chief Noonday Road, west M-43	3,048/2020	14,021
Heath Rd, east of Tanner Lake Rd	5,004/2001	23,018
Chief Noonday, west of Irving Rd	2,694/1987	12,392

Traffic count figures measure traffic for a particular location and assist the County with road maintenance decisions. However, it's also essential to realize the road limitations when considering different types of developments. Map 10 illustrates State Highways and County paved and gravel roads.

The Five-Year Road and Bridge Program published by the Michigan Department of Transportation reflects statewide road improvements for regional areas in the State. The Southwest Region[17] report indicates only one road improvement scheduled in Barry County, between Assyria Road and Francis Street on M-66 in

[17] The MDOT Southwest Region include Rutland Township, Barry, Van Buren, Kalamazoo, Calhoun, Berrien, Cass, St. Joseph and Branch Counties.

the county's eastern portion. In addition, no State Highway improvements are planned in Rutland Township at this time.

An additional 48,944 car trips per day may be expected on local roads in the next 30 years.

Anticipation of increased volumes of traffic along arterials may occur with further expansion of the housing stock both in the Township and in the surrounding areas of the county. A typical single-family residence generates about 9.55 trips per day.[18] As indicated in the population data in Chapter 2, the Township population could increase to approximately 5,125 by the year 2040. Therefore, at 9.55 vehicle trips per household, the generation of 48,944 car trips per day is on local roads will occur. Of course, these estimates do not consider other trips emanating from outside the immediate area and either passing through to destinations elsewhere or destined for local facilities.

According to the community input survey conducted in February 2021, only 4.8% of the respondents worked in Rutland Township. Many respondents stated that they worked in Hastings, the Grand Rapids area, or at home, illustrating those new homes in the township would impact all local roads and state highways if these commuter trends continue.

PUBLIC TRANSIT

Public transit services are available to Rutland Township residents through Barry County Transit (BCT). According to the Michigan Department of Transportation, Barry County Transit started in 1982 and offers a door-to-door service countywide and demand-response "quickie bus" service in Hastings and the Village of Middleville. BCT currently has 14 vehicles, 11 of which are lift-equipped. Services are available between 5:30 A.M. and 5:30 P.M., and there are approximately 15 employees.

AIR TRANSPORTATION

Hastings City/Barry County Airport, located in northeast Rutland Township, offers general aviation services, primarily serving corporate and recreational aviation needs. The airport has one asphalt runway (3,900' x 75') and two turf runways (2,567' x 200' and 2,400' x 190'), which can accommodate twin-engine aircraft and small business jets. In addition, the airport includes amenities such as parachuting and ultralight aircraft vehicle storage. Facilities include light industry and several hangers. Adjacent land use to the airport is primarily residential.

Commercial passenger air service is available through the Gerald R. Ford International Airport and the Kalamazoo-Battle Creek International Airport.

[18] Institute of Traffic Engineers, *Trip Generation*, 5th Edition, 1991.

Both facilities provide daily jet and turboprop service to regional hubs in Detroit, Chicago, Pittsburgh, Cincinnati, Indianapolis, Minneapolis, and Cleveland.

NON-MOTORIZED TRANSPORTATION

Sidewalks and Wide Shoulders

Roadways in Rutland Township are maintained by the Michigan Department of Transportation or the Barry County Road Commission. State Highways (M-43, M-37, M-179) and County primary roads such as Gun Lake Road and State Road are heavily traveled by motor vehicles and contain little to no shoulder room for pedestrians or cyclists. Many municipal, local, or local gravel roads are suitable for walking, jogging, or cycling. Still, when vehicular traffic is present, pedestrians or cyclists often don't have much room to maneuver out of the line of vehicular traffic flow. Typically, only experienced cyclists are comfortable riding in a vehicular traffic lane and knowledgeably negotiate traffic. Too frequently, both cyclists and pedestrians find themselves in conflict with motorized traffic. Often, neither the cyclist/pedestrian nor motorist know the proper rules of the road and how to handle this common situation safely.

Therefore, pedestrian sidewalks, trails, or wide, paved shoulders are solutions that provide a safe space for these additional road users to navigate. In addition, a well-constructed and maintained network of sidewalks and wide shoulders often offers more incentive for residents to enjoy the options of walking, jogging, and cycling. Therefore, the township must work with the Barry County Road Commission and MDOT to install these amenities when constructing or developing the roadways vital to users of all ages in this community.

The North Country Trail

Rutland Township has large amounts of open space associated with the Barry State Game Area. The North Country Trail (NCT) is located just west of the township near Peets and Bowens Mill Road. The NCT has plans to connect eight states, including New York, Pennsylvania, Ohio, Michigan, Wisconsin, Minnesota, and North Dakota. The trail will be over 4,000 miles long and will represent the longest trail in the country when completed. At this time, there are no certified segments of the NCT in Rutland Township, although some certified sections exist close by (see Map 8). With its headquarters in Lowell, Michigan, the North Country Trail Association continues to work hard to develop, maintain, preserve, and promote the trail through a national network of volunteers, chapters, and government agencies. In addition, the Chief Noonday Chapter supports the section of the trail south of Grand Rapids to Battle Creek.

The Paul Henry – Thornapple Trail

Just north of the township at the intersection of Irving Road and the old railroad corridor is the Paul Henry – Thornapple Trail, which runs north to the Village of Middleville. From the northern border of the township, the trail is unpaved for approximately 1.5 miles. Then a section about 3.5 miles long becomes paved and eventually ends in the Village of Middleville.

The Paul Henry – Thornapple Trail Association envisions the trail, when completed, to be approximately 42 miles, running from Grand Rapids through Dutton, Caledonia, Middleville, Irving, Hastings, and Nashville, and terminating in the Village of Vermontville in Eaton County. Other completed sections are in the City of Kentwood, north, and south of the Village of Caledonia in Caledonia Township, and the Village of Nashville. Different areas of the trail are in development, and some are in the proposal or conceptual stage. At the time of this writing, none of the trail sections through Rutland Township are complete.

UTILITIES

Groundwater/Wastewater

The township primarily uses on-site individual septic systems to treat household wastewater. However, proper treatment of sewage through personal septic systems depends on the design of the on-site system and the soils in which the system is placed.

The Algonquin Lake area is an area of specific concern as there is a high density of homes that are all on individual septic systems. In addition, many of the cottages are now year-round homes, introducing a greater volume of effluent to the soil. This contamination has the potential to impact the groundwater and surface water of Algonquin Lake.

Rutland Township is also served with limited sewer service in the eastern portion of the Township adjacent to the City of Hastings. The limited sewer service extends from Green Street and Cook Road and runs westward down Green Street to the M-37/M-43 intersection. This sewer extension is part of the City of Hastings sewer facility and is treated at the City of Hastings sewer plant. The primary purpose for the original sewer extension was to serve FlexFab Inc., located at Green Street and M-43/M-37. However, the existing agreement allows existing and new development to connect to the sewer within the negotiated service area.

In 2000, the north side of Heath Road and M-43/M-37 was developed with a Wal-Mart department store. The original site was designed with an on-site individual septic system. However, due to design flaws and difficult soil

conditions, this system failed and was being served via a pump and haul system. To appropriately remedy this situation, a new sewer has been extended from the City of Hastings along the railroad corridor just north of M-37 or State Road. This extension required the approval of Rutland Township, the City of Hastings, and Wal-Mart Corporation.

Alternative Energy

Solar

Solar technologies directly harness energy from the sun. Solar technologies include photovoltaic systems that convert sunlight to electricity, solar hot water systems that heat water for swimming pools and buildings, and solar space heating systems that provide heat for buildings. In addition, passive solar designs provide heat for structures, and daylighting strategies use sunlight to reduce electricity used for lighting. Photovoltaic cells can be placed on homes, buildings, or free-standing in yards.

Wind

Wind energy systems use the wind to turn a set of aerodynamic blades attached to an electric generator or turbine. When the wind blows, these blades turn, spinning a shaft that creates electricity in a generator. Wind generators can power anything from a single energy source, like a light bulb, to an entire community. Residential wind generators are becoming more common in Michigan, especially in rural areas, where residents use them as backup energy sources should power failures occur.

Rutland Township desires to encourage renewable energy systems and provide opportunities for businesses and individuals to harness the power of natural systems for conversion to useable forms of energy.

CHAPTER 7. GOALS AND OBJECTIVES.

The Rutland Township Planning Commission used the Community Profile and the results of the community input survey and the previous "futuring" workshop to develop a series of ten broad goal statements, with each goal supported by more specific objectives. The purposes intended to describe a desirable end state or the condition of the township about 25 years into the future. They are intentionally general, but all are felt to be attainable through concerted effort. The objective statements tend to be more specific and may be regarded as milestones in the journey to achieve the larger goal.

A. NATURAL FEATURES

THE CITIZENS OF RUTLAND TOWNSHIP WILL CONTINUE TO ENJOY THE COMMUNITY'S RURAL CHARACTER AS MANIFESTED IN THE ROLLING HILLS, INLAND LAKES, AND WOODS. THE RURAL CHARACTER WILL BE DEFINED BY CLEAN LAKES, STREAMS, AND RIVERS; CLEAR AIR; NATIVE WILDLIFE; AND QUIET AND STAR-FILLED NIGHTS.

OBJECTIVES:

1. Create an inventory of the significant natural features of the township, identifying the characteristics to be preserved, the likely threats that may impact them, and the relative priority among the various natural assets. This inventory will include a description of essential wetlands, sensitive areas, and contiguous lands for wildlife habitat.
2. Create standards in the residential and commercial zoning districts that minimize point and non-point sources of pollution into the local watershed.
3. Develop standards and policies to protect the natural environment adjacent to rivers and streams and provide environments supporting healthy aquatic wildlife and stable riverbanks.
4. Coordinate a water quality study that focuses on the current conditions of the groundwater supply identifying the potential threats, and recommends land-use decisions that will protect the aquifer for future generations.

B. HOUSING AND NEIGHBORHOODS

RUTLAND TOWNSHIP WILL PRESERVE ITS DIVERSE RESIDENTIAL CHARACTER BY MANAGING GROWTH TO ENSURE THAT RESIDENTIAL DEVELOPMENT STRENGTHENS EXISTING NEIGHBORHOODS AND THAT NEW HOUSING DEVELOPMENTS ARE ADEQUATELY CONFIGURED TO HARMONIZE WITH EXISTING NATURAL FEATURES AND TRANSPORTATION NETWORKS.

OBJECTIVES:

1. Identify lands targeted for housing development.
2. Amend the zoning ordinance to encourage higher-density residential development to be located in areas where adequate infrastructure is likely to be provided in the future.
3. Retain integrity of the planned density levels within the township.
4. Adopt a water and sewer extension ordinance which guides the requires the extensions of any new water and sewer service as they become available to the township.
5. Amend the zoning ordinance to ensure that all new residential development is designed with safe, efficient, and attractive, motorized and non-motorized transportation networks.

C. ECONOMIC DEVELOPMENT

THE ECONOMIC HEALTH OF RUTLAND TOWNSHIP WILL BE SECURED THROUGH GROWTH THAT IS COMPATIBLE WITH THE AREA'S NATURAL FEATURES; IS ESTHETICALLY ATTRACTIVE; IS SERVED WITH APPROPRIATE WATER, SEWER, AND TRANSPORTATION INFRASTRUCTURE; AND IS BALANCED WITH THE COMMERCIAL NEEDS OF THE REGION.

OBJECTIVES:

1. Inventory existing industrial areas and the areas that would be suitable for future industrial development.

2. Identify obstacles to appropriate and desired economic development.

3. Work with regional municipalities and non-profit organizations to create new policies to attract and support reliable information networks throughout the region.

4. The township will work closely with the Hastings City/Barry County Airport Authority and determine appropriate land uses compatible with the existing development. The zoning ordinance will be amended to reflect the results of this coordinated effort.

5. Amend the zoning ordinance to ensure that commercial and industrial land will be inventoried to ensure that they are balanced with the region's needs and will be designed to complement the existing commercial land uses in the immediate area.

D. MANAGED GROWTH AND OPPORTUNITIES

GROWTH WITHIN RUTLAND TOWNSHIP WILL BE GUIDED RATIONALLY AND SEQUENTIALLY, AVOIDING PATTERNS OF SPRAWL AND USING INNOVATIVE AND FLEXIBLE APPROACHES TO INTEGRATE DEVELOPMENT WITH THE TOWNSHIP'S NATURAL FEATURES.

OBJECTIVES:

1. Establish incentives for development that support the township's goals, and establish disincentives for development that encourage sprawl.
2. Develop an inventory of in-fill development opportunities and promote their uses.
3. Implement a program of community education to inform residents of the advantages of managed growth.
4. Inventory the land uses in the surrounding jurisdictions, including residential, commercial, and industrial land uses, to promote wise land-use decisions on a regional basis.

E. COMMUNITY FACILITIES AND UTILITIES

RUTLAND TOWNSHIP WILL PROVIDE PUBLIC WATER AND SEWER UTILITY SERVICES TO EXISTING AND PLANNED FUTURE DEVELOPMENT TO GUIDE GROWTH AND DEVELOPMENT AND PROTECT NATURAL RESOURCES SUCH AS GROUND AND SURFACE WATER.

OBJECTIVES:

1. Extend or create opportunities for water and wastewater services to areas targeted for development.

2. Establish a committee to develop and research options for water and sewer services in the township, emphasizing the Algonquin Lake area.
3. Establish limited approaches to wastewater collection and treatment for isolated areas of development that will not exacerbate sprawl.

RUTLAND TOWNSHIP WILL PROVIDE OPPORTUNITIES FOR RENEWABLE ENERGY SYSTEMS THROUGH CAREFUL REVIEW AND APPROVAL BY STAFF, THE PLANNING COMMISSION, AND THE TOWNSHIP BOARD WHEN APPROPRIATE TO ALLOW COMMERCIAL AND RESIDENTIAL USES OF WIND, SOLAR, BIOMASS, CELLULOSIC, AND OTHER SOURCES OF RENEWABLE ENERGY.

OBJECTIVES:

1. Conduct a sustainability audit of the zoning ordinance to ensure renewable energy systems are permitted and, when applicable, follow a special land use process.
2. Consider an overlay zoning approach to accommodate the development of alternative energy resources to designate appropriate township areas for large-scale commercial energy systems, i.e., wind farms, ethanol facilities, etc.
3. Amend the zoning ordinance to allow residential-scale wind and solar systems to be approved following an administrative review. Variations to such standards would require special land use review and approval.

F. REGIONAL COOPERATION AND GOVERNANCE

RUTLAND TOWNSHIP WILL CONTINUE TO PROVIDE LEADERSHIP IN COOPERATION WITH NEIGHBORING COMMUNITIES TO MANAGE GROWTH, ESTABLISH CONSISTENT AND COMPATIBLE LAND-USE POLICIES, AND EFFECTIVELY COMMUNICATE THOSE POLICIES TO OTHER GOVERNMENT UNITS AND THE PUBLIC.

OBJECTIVES:

1. Establish and strengthen structures for regional decision-making.
2. Identify fiscal, political, and administrative obstacles to regional decision-making and implement programs to overcome them.
3. Create an informed and educated community concerning the advantages of regional cooperation.

4. Work closely with the Hastings City/Barry County Airport Authority to develop a positive and productive approach for determining the future airport facility, and the land uses surrounding the airport.
5. Support the Hastings Area Joint Planning Commission and the Hastings Area Joint Plan

G. RECREATION

THE RESIDENTS OF RUTLAND TOWNSHIP WILL HAVE ACCESS TO VARIOUS RECREATIONAL OPPORTUNITIES THAT EMPHASIZE THE LANDSCAPE'S NATURAL FEATURES.

OBJECTIVES:

1. Create an inventory of the significant recreational assets of the Township and determine the appropriate and sustainable level of public use for each.
2. Establish and extend non-motorized trails and parks to connect population centers with natural features and recreation amenities within new developments. Park and trail facilities will be located in areas less suitable for growth, such as floodplain and wetland areas.
3. Establish a recreation committee to determine the recreational needs of the community, emphasizing a regional perspective.
4. Establish a system of coordination and communication between Rutland Township, surrounding jurisdictions, and Barry County to enhance the Barry County Recreation Plan, which incorporates a county-wide trail network plan.
5. Coordinate with Barry County to develop "connect the trails initiatives" that would connect the non-developed sections of regional trails and walkable areas around Algonquin Lake.
6. Research the availability of public funding and grants for recreational purposes and the most effective way of applying for this funding.
7. Township policies will support the Thornapple River as a primary recreational amenity for the township.

H. OPEN SPACE AND FARMLAND PRESERVATION

RUTLAND TOWNSHIP WILL BE A COMMUNITY WITH LARGE TRACTS OF UNDEVELOPED AND UNFRAGMENTED LANDS. THESE LANDS WILL BE CHARACTERIZED BY UNIQUE NATURAL FEATURES AND ACTIVE OR FALLOW

FARMLAND, WHICH WILL PRESERVE THE RURAL CHARACTER OF THE TOWNSHIP.

OBJECTIVES

1. Create an inventory of viable tracts of farmlands.
2. Establish and maintain effective communication with owners of significant tracts.
3. Foster and strengthen markets for agricultural products.
4. Establish incentives for continued agricultural operations and disincentives for development that fragments significant agrarian lands and forest habitats.
5. Explore the possibility of enacting or participating in a TDR or PDR program.

I. TRANSPORTATION

THE ROADWAY NETWORK, MASS TRANSIT SERVICES, AND AIR TRANSIT SERVICES IN RUTLAND TOWNSHIP WILL REMAIN EFFICIENT AND SAFE AND EFFECTIVELY SERVE THE TOWNSHIP AND THE SURROUNDING REGION. ROAD NETWORKS WILL BE IMPROVED AND EXPANDED PER THE TOWNSHIP'S LAND USE OBJECTIVES.

OBJECTIVES:

1. Increase township presence and participation in roadway planning and decision-making.
2. Provide corridors for local and regional transit, including roadways, non-motorized transportation, and forms of mass transit.
3. Develop roadway facilities such as sidewalks, trails, and paved wide-shoulders for pedestrians and cyclists.
4. Establish a trail network used exclusively to connect the YMCA camp, Algonquin Lake, and the City of Hastings to the North Country and Paul Henry Trails.
5. Create a forum with the other jurisdictions within Barry County and MDOT to ensure that the M-37, M-43, and M-179 corridors remain safe and efficient.
6. Develop an access management ordinance to protect the public investment in the existing transportation network through access management standards.

7. Develop a coordination system with the Hastings City/Barry County Airport Authority on land-use decisions on airport property and the surrounding region.

CHAPTER 8 - FUTURE LAND USE

The future land use plan is a compilation of descriptions, recommendations, and justification for the future use of land in Rutland Township. It is the framework for the management and regulation of future development and serves as the basis for evaluating rezoning requests.

This plan should guide the creation of the most desirable township for township residents.

The Michigan Planning Enabling Act specifically gives a township planning commission the authority to prepare and officially adopt a plan. This plan should provide guidance for creating the most desirable township for township residents when designed, adopted, and maintained.

Due to the constant change in our socioeconomic structures and activities, the plan must be maintained through periodic review and revision to reflect contemporary trends while maintaining long-range goals.

The future land use plan is general in scope. It is not, in most cases, intended to establish precise boundaries or exact locations of future uses. The timing of particular land use is dependent on several factors, such as availability of public utilities, provisions for adequate roadways, effect on public services, and the demand for particular land use based on market forces. Therefore, additional factors must be considered when reviewing a request for rezoning a parcel of land.

THE RELATIONSHIP OF PLANNING TO ZONING

The relationship between land use planning and zoning is essential. Planning guides land uses from a policy standpoint, while zoning regulates by law or ordinance. The laws of the State of Michigan require a community to engage in land use planning activities, including the preparation of a master plan, before the initiation of a zoning ordinance in a community.

The following narrative provides a better understanding of the terms planning and zoning.

Land Use Planning

Land use planning is the process of guiding the future growth and development of a community. Generally, the master plan addresses the various factors relating to the growth of a community. Through land-use planning processes, it is intended that a community can preserve, promote, protect, and improve public health, safety, and general welfare. Additional considerations include comfort, good order, appearance, convenience, law enforcement, fire protection, preventing overcrowding of land, facilitating adequate and efficient transportation, water, utilities, conservation, and utilization and protection of natural resources within the community.

Zoning

Zoning is one of the tools, along with capital improvements programming, utility policies, and the administration of local subdivision regulations, which implements the goals and policies of a master plan. The enactment and administration of the zoning ordinance are legislative and administrative processes conducted by local government units relating to implementing the goals and policies of the master plan. Zoning ordinances accomplish the management of land use by creating different zoning districts within a community. Each zone has a listing of standards that usually include setbacks, lot coverage standards, permitted and special uses, lot size requirements, and structural standards. A zoning ordinance also has general requirements about parking, site plans, unique processes, general land-use rules, and landscaping.

PLAN ASSUMPTIONS

The goals and policies previously outlined and the analysis of the township's physical, social, and economic makeup allowed the formulation of seven broad assumptions to develop a long-range development plan. These include:

1. The population of Rutland Township is expected to increase dramatically over the next two decades as the projections indicate an increase of at least 911 persons by 2040. This new population will create the demand for a variety of new housing options.
2. Residents indicate that preserving natural areas and open space is a priority in the township. There was a preference for living in large lot residential or rural undeveloped settings.
3. New residential and commercial development along the M-37/M-43 corridor, if not appropriately managed, will threaten the integrity of these state highways. Therefore, preserving the safety and efficiency of these major thoroughfares will be challenging as development proposals are presented.

4. Development options within the township hinge on the availability of water and sewer services. At the time of this writing, sewer serves a small portion of the township adjacent to the City of Hastings, and there is no official plan to develop or extend water and sewer services in the township. However, some of the future land use classifications found in this chapter have been structured, in part, to consider the possibility and likelihood of these services becoming available. For example, suppose water and sewer services become available in the township. It would then be recommended that the township review the master plan due to the significance of such services.
5. Commercial growth needs to be confined to central locations, which provide a service center for township residents.
6. Due to nutrient loadings, it may be necessary to develop wastewater collection and treatment facilities around Algonquin Lake in the next ten years.

LAND USE CLASSIFICATIONS

The future land use plan recommends many different land use classifications. The following descriptions of these future land use designations explain each classification's intended uses and location characteristics. In addition, the location of these classifications is provided on the future land use map (Map 11).

OPEN SPACE/AGRICULTURAL PRESERVE

Description

The township has a limited amount of high-quality agricultural land remaining in production. Agricultural lands include primarily field crops (corn, wheat, alfalfa, etc.) and animal rangeland. These areas help give the community its rural character, and the farming activity remains an essential element of the local economy. The overall purpose of the Open Space/Agricultural Preserve land use classification is to promote the continued use of quality farmlands for agricultural purposes, minimize the potential for conflict with more intense land uses, and preserve significant open space areas.

One challenge to preserving farmland is reducing the potential conflict between new rural residential home sites and active agricultural practices. Depending on the intensity of the farming operation, noise, fumes, odors, and chemical applications may be part of the operation to which new residents may not be accustomed. Therefore, it is essential to recognize this potential conflict and carefully consider new land applications surrounding the Open Space/Agricultural Preserve category.

Locations

The Open Space/Agricultural Preserve classification exists in various locations throughout the township, with the largest contiguous area west of Algonquin Lake in the northeast region of the township. Other sites have been designated in the northwest and south-central area of the township.

Desired Uses and Density

The primary use in this area should be farming, including large acreage farms, smaller hobby farms, and related activities while making provision for wineries with vineyards by special land use. In addition, residential development associated with farming operations should be anticipated, including duplex uses for farm labor purposes. Other single-family housing may be permitted either in very low densities or conservation cluster design that preserves farmland and open space areas and natural features. Finally, the township will develop mechanisms to encourage the continuation of agriculture within the community, reduce potential adjacent land-use conflicts, and recognize the legitimate interest of property owners to make economic use of their lands.

The goal of this classification is to preserve nine acres of farmland for every one acre of new non-farm residential land area created.

The Open Space/Agricultural Preserve classification's density will be one unit per ten acres. This density intends to create a 10-acre minimum lot size for this area and encourage residential land divisions to preserve large contiguous land plots for farming. In other words, the goal of this designation is to maintain nine acres of farmland for every one acre of the new non-farm residential land area created. Preservation may include using areas of land that are not suitable for farming due to soil conditions, slopes, or varying sizes. In some cases, density may be increased in areas ideal for development but may require techniques such as conservation cluster designs and planned unit developments (PUD). In addition, the township will work to develop incentives to encourage the preservation of agricultural lands and natural features that may include transferable development rights (TDRs) and the purchase of development rights (PDRs). TDRs provide additional development rights to an area if transferred from a farmland preservation area to a high-density area. PDRs purchase the development rights from the landowner, and the land remains undeveloped.

Where conservation cluster developments are proposed or required, the township will use flexible zoning techniques to implement a consistent development plan. The overall objective will be to preserve a minimum of 50% of the agricultural lands in the proposed development. The first step would be to conduct a site analysis to identify those locations on site that are unsuitable for agricultural use because of soil types, terrain, adjoining land uses, or other factors. Second, a set of performance measures will be developed to measure potential development impacts on those portions of the site with strong agricultural potential. These may include buffer distances to isolate agricultural effects from residences, road connections to minimize conflicts with farm vehicles, minimum parcel size standards for farming purposes, and other appropriate techniques. To the extent development can be accommodated

within a portion of the site without impact on the agricultural areas, some additional density may be permitted.

New developments in this designation area should offer neighborhood amenities such as hiking paths and horse trails that interconnect with other surrounding trails or public lands.

COUNTRY RESIDENTIAL

Description

Rutland Township contains large tracts of wetlands, wildlife habitat, forestlands, and river valleys mixed with small farming and agricultural practices. These differences are a vital part of the community's identity. With careful planning, they may be preserved and protected so that future generations may continue to enjoy an unspoiled natural environment. The overall purpose of the Country Residential classification is to foster the protection of these natural features with as little disturbance as possible. This designation may see low-intensity development incorporating careful measures to limit the impact on natural elements. Techniques such as conservation easements are encouraged. The extension of public infrastructures, such as sewer and roads, should be carefully planned to further the overall goals of this plan.

The forests, open pasture, and wetlands of the Barry State Game Area, located in the western portion of the township, provide residents and visitors excellent recreational opportunities while also preserving wildlife habitat. The Country Residential classification provides a transition area between these public lands and more developed suburban areas.

Locations

This designation is located primarily in the southeast portion of the township and dispersed throughout the privately owned land around the Barry State Game Area.

Desired Uses and Density

Country Residential uses should be limited to forestry and farming operations mixed with single-family housing limited to a very low density that preserves natural areas at a ratio of one unit per two acres. The intention is not to create a minimum lot size of two acres specifically but to preserve two acres of contiguous natural area for every one acre developed. This density may only be reached if optimum development conditions are present, including soil conditions, transportation, and utilities. Minimum lot size requirements will depend on the type of land division proposed and the effort to preserve natural features, but not less than 2.3 acres per lot. Furthermore, overlay-zoning districts will be developed to identify unique resource areas that will require special protection. These may include but are not limited to sensitive stream corridors, wildlife corridors,

viewsheds, wetlands, and recharge areas. Conservation cluster designs will also be encouraged or required to protect the identified natural assets of the township.

Where conservation cluster developments are proposed, the township may use its PUD mechanism to implement developments that are consistent with this plan. The process for reviewing a conservation cluster development will be the same as in the Agricultural Preservation classification. Conservation easements should be strongly encouraged as a part of such a development to ensure that the undeveloped portions of the site remain in a natural state. In addition, the township may encourage limited community wastewater facilities to promote more compact development and protect natural resources.

Limiting commercial land will conserve the township's atmosphere and preserve open spaces within the community. These commercial uses may include equestrian-related facilities, such as stables and riding arenas, seasonal farm markets for local produce, wineries with vineyards, agricultural entertainment, and other open space activities compatible with the surrounding residential development. In addition, allowing these uses will retain larger parcels, enabling landowners to gain profit from a more significant acreage.

New residential developments in this designated area should incorporate trails, interconnecting trail easements, parks, open spaces, or other amenities. In addition, developers should be encouraged to define a building envelope where residents may build, landscape, mow or improve, but allow the remainder of their lot to remain in a natural state.

MEDIUM DENSITY RESIDENTIAL

Description

The Medium Density classification anticipates high quality and aesthetically pleasing developments that increase density yet promote sustainable elements.

Locations

The Medium Density Residential land use classification is located north of Algonquin Lake and along the Thornapple River. In addition, an area south of Kellogg Community College, where water and sewer services may develop, is designated in this land-use classification.

Desired Uses and Density

Primarily detached single-family homes with low impact and conservation design techniques will be encouraged. Where appropriate, small pockets of natural lands unsuitable for development may be suitable for neighborhood parks and gathering spaces. Overall, residential between 0.5 and 1.0 units per acre will be achieved if development conditions, such as soil makeup, topography, transportation, and availability of sewer services, are conducive to development. Through the PUD option or Open Space Residential developments, higher densities may be considered. The effects of that density on natural features, infrastructure, and surrounding properties can be mitigated using the planned unit development option.

Residential developments should be designed as neighborhoods and provide sidewalks, trails, parks, and other amenities that create charm and character for the community.

HIGH-DENSITY RESIDENTIAL

Description

The High-Density Residential classification plays an essential role in achieving the township's goals to preserve sensitive environmental areas while providing a core residential development. The primary purpose of this designation is to establish human-scale, walkable neighborhoods close to commercial and recreational services with good amenities and designs that are compatible with the area's natural features. This designation also recognizes the existing high-density developments located in the township. Most of these platted lots are already developed with single-family homes.

Locations

Most of this land-use classification is located around Algonquin Lake and Podunk Lake, adjacent to commercial and industrial areas along the M-37/M-43 corridor.

Desired Uses and Density

The primary land use in this classification will be high-density single-family residential that is consistent and compatible with the existing high-density areas. Duplex, townhomes, and multi-unit dwellings are also considered, provided water and sewer are available. The key to this classification being successful will be the availability of public utilities. If these services remain unavailable, further development with similar densities surrounding Algonquin Lake is not recommended. In addition, it will be challenging to realize high-density development in this area if land applications for lower-density development occur before sewer installation. Therefore, public sewer services may not become available to this area during the life of this plan. However, future land-use

decisions should consider that this area is planned to accommodate much of the new housing demand associated with projected population growth.

Approaches to encourage high-density development in this area may include providing incentives to developers to provide public sewer and other zoning techniques that limit growth unless sewer is provided. Conservation design techniques will be encouraged, where appropriate, to establish small pockets of natural land within this area. Overall residential densities of three to five dwelling units per acre can be achieved if public sewer service becomes available.

MANUFACTURED HOME COMMUNITY

Description

The Manufactured Home Community classification will provide for the placement of a medium to high-density mobile home park. Availability of public utilities will be required, and these areas must be located near higher population concentrations. Natural buffers around mobile home parks will protect less intensive land uses and will be designed to retain significant natural features. In addition, more considerable road frontage setbacks will be encouraged to keep country roads scenic.

Location

The Manufactured Home Community land use classification is west of M-43 and south of M-179 in Section 14 of the Township, immediately south of the Kellogg Community College.

Desired Uses and Density

This classification offers potential for quality, affordable housing at approximately four to six units per acre, depending upon the environmental conditions.

MIXED-USE AREA

Description

The Mixed-Use Area land use classification is designed to diversify land uses in various locations to serve multiple residential, commercial, and industrial demands. These uses may include quality high-density single-family attached and detached homes, duplexes, condominiums, and apartment complexes mixed with various compatible neighborhood commercial and light industrial land uses. This classification also considers the possibility of senior housing. Although possibly dense in some areas, development in this designation will add to and preserve the township's rural character through careful preservation of significant natural features and site location. In addition, transportation in this area will

remain safe and efficient by limiting access points onto existing and proposed roadways.

To preserve the health of existing commercial and industrial areas in the township and the surrounding area, any new commercial and industrial land should consider existing uses rather than detract from healthy urban centers. New commercial development should be scaled and located to serve the immediate residential areas of the township. Part of this logic realizes that infill development is beneficial where infrastructure such as roads, water, sewer services, etc., exist or can be efficiently expanded. Land development should occur rationally and sequentially, avoiding the leapfrog development effect that creates sprawl.

This logic also realizes that the existing sewer agreement between Rutland Township and the City of Hastings will play a key role in identifying an initial target area for dense residential, commercial, and industrial growth. Growth and development outside these target areas should be limited to light and small-scale, which will not create additional expansion. Other considerations for limitations of action outside the target area will include total floor area, parking requirements, impervious surface, and significant changes to the character of the immediate area.

Location

This classification is located on Green Street and along the M-37/M-43 corridor from the east boundary of the township to Kellogg Community College (KCC).

Desired Uses and Density

This land-use classification will complement existing commercial and residential land uses and add defining character to the more intense uses located along the M-37/M-43 corridor and Green Street. The area located east of Kellogg Community College (KCC) should allow a mix of residential options with limited compatible commercial development. The idea is the area around Kellogg Community College will eventually be developed to serve the housing needs of a limited number of college students.

The area north and south of Green Street is planned to be a diverse and walkable area that offers excellent access to commerce and light industry establishments. Mixed uses will be weighed for compatibility with the entire development.

As with all proposed high-density development, many of these options only possible with the availability of public sewer service. However, suppose sewer service does not become available for this area. In that case, other future uses should be considered which do not require water and sewer facilities and do not threaten the community's natural resources or rural character.

Maintaining a safe and efficient M-37/43 corridor is a primary objective of the township. Regular maintenance and preparation for future shared use will provide accessibility for all users along this corridor. In addition, design standards that encourage innovative and creative development should be used to create a safe and unique environment.

This land-use classification protects significant natural features, incorporation of these features will retain the community's character while safeguarding natural resources for future generations. Minimizing impervious surfaces is a priority for this area reducing ground and surface water quality degradation. In addition, night sky conditions will be protected through quality design and the limitation of outdoor lighting fixtures.

One essential feature of this land use is adequate neighborhood access. Zoning regulations should acknowledge this, providing innovative standards for parking, driveways, and pedestrian safety. Unique retail options can be a source of identity and are often considered landmarks in a community. Inviting pedestrian-scale design such as outdoor seating, awnings, signs, and high-quality landscape standards will be reinforced by ordinance.

Also, since this land-use area is closely intertwined within commercial development and the residential areas intended to serve, some degree of conflict with adjacent residential properties is likely to occur. However, these conflicts can be minimized by:

- Requiring screening, green belts, and berms for properties that abut residential properties;

- Allowing limited transitional uses in the adjacent residential area where such properties directly adjoin the residential high-density regions; examples may include parking or storage lots with plenty of screening and landscaping; and

- Additional optional developments such as liner buildings, reduced parking standards, and second-story residential all help lower surrounding land-use conflicts.

INDUSTRIAL

Description

This classification is intended for industrial applications that are not likely to require public utilities and will be designed to be compatible with surrounding land use.

Location

This land-use classification's location on M-37 near the Upton Road intersection in Section 9 of the township is designated to be the only location for future industrial growth.

Desired Uses

Industrial uses will have minimal impact on the environment or surrounding community and may include warehousing and mini-storage, and contractor offices and yards. Specifically, the industrial land use classification has the following purposes:

- To protect residences by separating them from the effects of industrial and manufacturing activities and by preventing the use of industrial areas for new residential development; and
- To protect manufacturing and related developments against congestion by limiting the bulk of buildings related to the land around them and the adjacent buildings.

Plans for industrial areas will also include provision for transportation, utilities, and the use of land. Furthermore, methods will ensure adequate control of this area and buildings and the continuing management of the development through zoning regulations and private restrictions incorporated as legal requirements in deeds of sale or lease. Such provisions will protect the investments of developers in the district and the industries occupying improved sites.

LAKE COMMERCIAL

Description

The Lake Commercial classification is intended to serve as a limited commercial area near the existing commercial development at the west end of Algonquin Lake. Growth in this area will be sensitive to surrounding residential development and blend in with the nautical atmosphere. The land area for this designation is small, and it is contemplated that this area will not expand to create excessive commercial development in a primarily residential area.

Location

The Lake Commercial District is located at the west end of Algonquin Lake on W. State Road.

Desired Uses

The desired uses of this classification include convenience commercial developments intended to serve lakeside residents and users. The general uses in this classification will consist of bait shops, convenience stores, small-scale watercraft storage and sales, ice cream shops, and small restaurants. Watercraft sales, rentals, and uses that will result in additional watercraft traffic on Algonquin Lake are not intended for this area. Landscaping and lighting requirements will be extensive and detailed, while impervious surfaces will be kept to a minimum to protect the adjacent open water. Structures in this designation will be small with maximum square footages to ensuring compatibility. Architectural standards, including specific sign requirements, will be imposed on all developments to provide high-quality building and signage that adds character.

AIRPORT COMMERCIAL/LIGHT INDUSTRIAL

Description

The Airport Commercial/Light Industrial future land use classification is intended to provide a mix of commercial and light industries relating to the Hastings City/Barry County Airport operations. These uses are designed to be compatible with surrounding land use, including the airport and other neighboring residential developments.

Development in this area should occur rationally and sequentially, including the consideration of infill at other locations in the township that may be more appropriate for proposed uses. In addition, new developments should be connected to water and sewer utilities, and growth should occur in a manner that considers the future development of adjacent parcels and access.

Location

The Airport Commercial/Light Industrial future land use classification is located south of State Road east of the existing Hastings City/County Airport.

Desired Uses

Optimal land use should be dialed in to support operations at the airport. However, some light commercial and clean industrial services that are not appropriate in the mixed-use area may be located in this area. These should be developed in harmony with the area's natural features, including protecting existing forested areas, wetlands, and shorelines to preserve the township's rural character. Night sky conditions will be saved through the design and limitation of outdoor lighting fixtures. Any new traffic patterns will be designed to limit impacts in existing and proposed residential developments of the surrounding area. Growth in this area should be encouraged to use the Planned Unit Development option to present creative and attractive results. Development patterns should occur in a rational and sequential design to keep infill areas to a minimum.

INSTITUTIONAL/PUBLIC

Description

This classification identifies the areas in the township that are public lands intended for various public use; these areas include schools, public facilities, and airports.

Locations

The areas included under this designation have the Barry County Expo Center in Section 5, the Hastings City/Barry County Airport in Section 11, Kellogg Community College (Fehsenfeld Center) in Section 14, and the Rutland Township Hall in Section 14.

Desired Uses

The Hastings City/Barry County Airport

The Hastings City/Barry County Airport consists of approximately 250 acres, including runways, clear zones, airplane hangars, and other buildings associated with airport operations. Uses on the airport property should continue to be consistent while recognizing and limiting potential conflict with the surrounding residential land use. Future use on airport property should be decided with the cooperation of the airport authority and township officials. This area may also require the creation of a special zoning district for specific land uses.

The Hastings City/Barry County Airport has developed a layout and approach plan that discusses appropriate land uses on and around the airport. State law mandates that this plan be incorporated into this master plan. The layout and approach plan will assist the township by determining future land uses and recognizing any potential structural limitations for creating any new districts, new amendments to the zoning ordinance, and any unique variances from the regulation.

Kellogg Community College - Fehsenfeld Center

The Fehsenfeld Center is an educational branch of Kellogg Community College located on approximately 90 acres. Future land uses on this property should remain education-oriented with the possibility of student housing in the future. In addition, using the Planned Unit Development option may allow creative campus development.

Other uses in this designation should continue with quality management, and special attention should be given to each public user to promote each individual's integration.

PARKS/RECREATIONAL

Description

This designation identifies public and private golf courses, organized camps, and lands under public ownership that may serve recreational purposes in the future.

Location

These areas are located in Sections 2, 12, 16, and 21 of Rutland Township.

Desired Uses

Uses should be reserved for recreational and open space activities. Development around these areas should be designed to harmonize with the outdoor amenities and blend well with the natural landscape.

WATERWAY PROTECTION

This classification recognizes natural assets surrounding the watersheds in the township. It was created to protect the township's delicate ecosystems and water quality by providing a 100-foot shoreline buffer on each side of the designated streams and rivers while permitting less intensive development, where feasible. In addition, the Waterway Protection area recognizes that the region will grow and that growth may be accommodated within the watershed, providing measures to protect sensitive features.

Several strategies include:

- Development should be encouraged in areas that least affect the integrity of the watershed's water quality;
- Development should be structured to reduce degradation of the watershed;
- Development and integration of different land-use groups, as defined within this plan, should be encouraged to minimize unnecessary vehicular movements within the watershed and region;

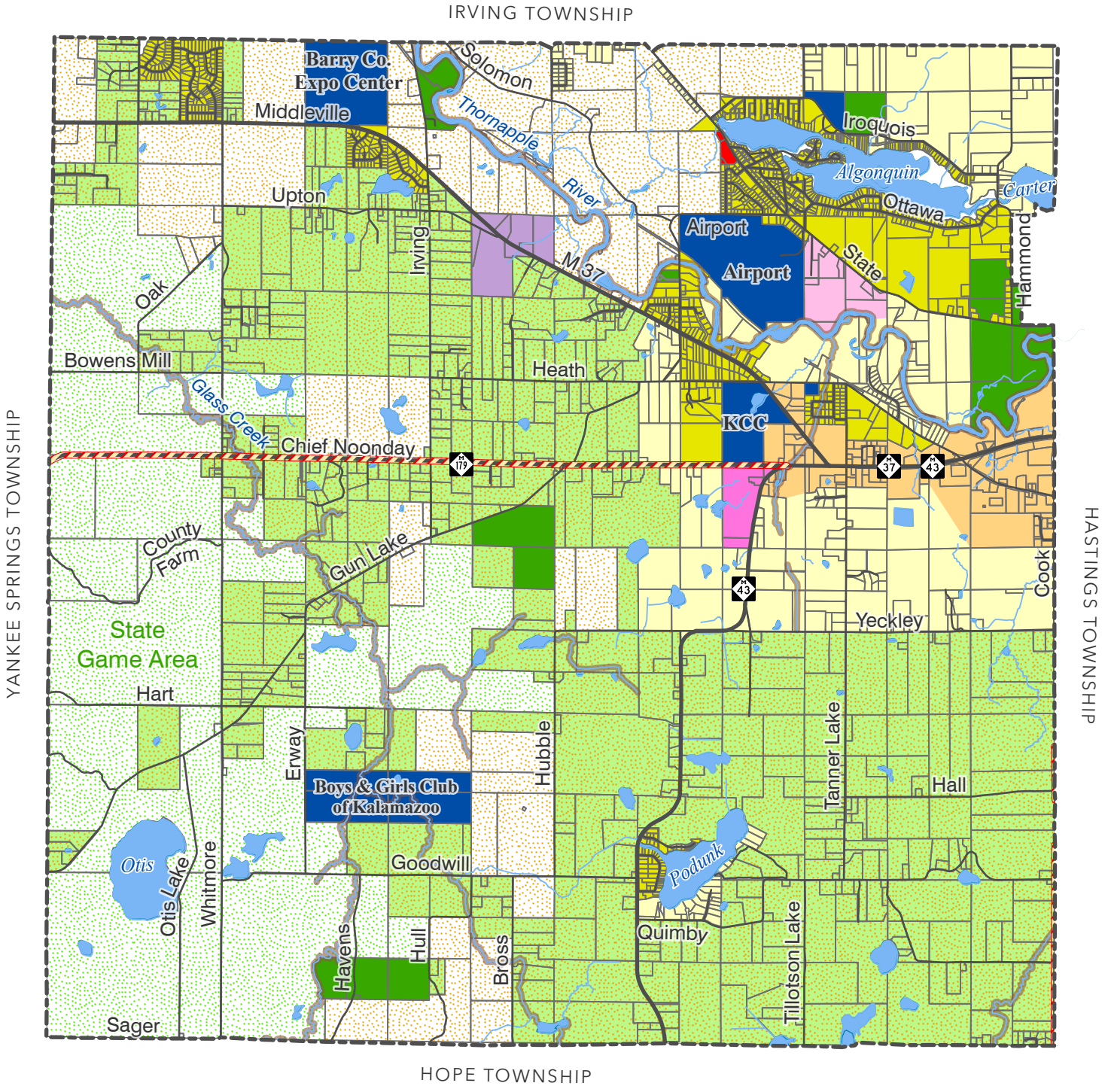
- Growth should be concentrated within designated areas to create an identity; and
- Intensive development should be limited to a prescribed area that maximizes existing investment in the infrastructure and defines appropriate growth.

In addition to stream protection, another objective of this land use designation is protecting wildlife corridors. Due to the extent and quality of wetlands and streams in the Thornapple River watershed, this area hosts a diverse population of wildlife that adds to the township's character. The protection of wildlife corridors will support the environmental protection goals of this plan. The purpose of wildlife corridor protection is habitat connectivity to prevent the growth of isolated habitat populations, ultimately weakening or threatening a species in the area and negatively impacting Rutland's beloved ecosystem.

Land may include a combination of low-intensity development harmonizes with the sensitive natural features of the watershed. Examples are parks, trails, and recreational land.

SCENIC ROAD AREA

The Scenic Road Area is a classification that has been placed on M-179, also known as Chief Noonday Road, and the southeast portion of Cook Road in Rutland Township. Its goal will protect the natural vegetation and rural character of these roads as assets of the community. M-179 is also designated as a Heritage Route by the Michigan Department of Transportation. Development along these roads will protect the natural character and viewsheds of the township. In addition, incorporating pedestrian and bicycling facilities along these roads ensures users of all ages and types the accessibility to these corridors.



Map 11

FUTURE LAND USE

Rutland Charter Township, Barry County, MI

0 0.5 1 Mile

Data Sources: MI Open Data, NLCD, Rutland Charter Township

Legend

Land Use Designations

- Open Space/Agricultural Preserve
- Country Residential
- Medium Density Residential
- High Density Residential
- Manufactured Home Community
- Mixed Use
- Light Industrial
- Lake Commercial
- Airport Commercial/Light Industrial
- Institutional/Public
- Parks/Recreation/Camps
- State Game Area
- 50 Foot Scenic Easement
- 100 Foot Buffer of Streams/ Rivers

CHAPTER 9 - IMPLEMENTATION STRATEGIES

THIS MASTER PLAN RECOMMENDS THE FOLLOWING ACTIVITIES AND STRATEGIES TO ACHIEVE THE GOALS AND CARRY OUT THE OBJECTIVES OF THE PLANNING COMMISSION AND THE CITIZENS OF RUTLAND TOWNSHIP.

1. REVISE THE ZONING ORDINANCE AND MAP.

Description. The township's zoning ordinance is the primary regulatory tool for carrying out the objectives of this plan. Therefore, the township's zoning ordinance will need to be updated to match the planning policies of this document.

The following paragraphs describe many of the changes needed in the zoning ordinance and zoning map.

a. Create conservation overlay districts, where needed, to preserve rolling hills, inland lakes, streams, scenic road corridors, wetlands, large stands of woodlands, and native wildlife. This task may also include creating a buffer around the Barry State Game Area. In addition, a natural features inventory (Task 2) will be an essential source of information.

b. Develop standards in the residential, commercial, and industrial zoning districts that seek to minimize point and non-point sources of pollution into the local watershed. These standards may include creating a separate stormwater runoff ordinance developed in cooperation with the Barry County Drain Commission.

c. Create language and standards within the zoning ordinance that encourages high-density residential, commercial, and industrial development to be located in areas where adequate public infrastructure is presently available. This task should involve using the current sewer service agreement made with the City of Hastings (refer to the *Mixed-Use Future Land Use Designation* for further description of this logic).

d. Modify or create new zoning districts that reflect the goals and future land use designations in the master plan.

e. Develop buffer zones adjacent to active agricultural properties to reduce the potential for conflicts between farming practices and residential land uses.

f. Develop regulations for residential districts requiring sidewalks.

g. Allow commercial and industrial uses balanced with the region's economics and complement the existing land uses in the immediate area.

h. Form a committee to cooperate with the Hastings City/Barry County Airport Authority and determine land uses for the Airport that will be compatible with surrounding development. This task may include developing an airport master plan that considers future land uses over the next 20 years.

i. Develop architectural standards for multi-family housing, commercial structures, and industrial structures to ensure that these development types enhance the township's character.

j. Improve the current landscaping standards to provide more specific guidelines regarding the amount, placement, and type of landscaping within new developments.

k. Develop lists of permitted and particular uses for the agricultural and rural residential zoning districts that allow limited commercial uses that may assist and promote the preservation of large contiguous tracts of land.

l. Review and, if necessary, modify the planned unit development option reflecting the goals and land use designation language.

m. Identify and rezone properties that are incompatible with the future land use plan.

n. Review the site plan requirements and make any changes necessary better to reflect the goals and objectives of the master plan.

o. Create new land development regulations within each zoning district to reflect the density recommendations in the future land use map and text.

p. Establish density bonuses for cluster developments both in residential and agricultural zones. These bonuses may enable greater than the average density in areas where significant natural areas and farmland can be preserved through clustering. It is recognized that it may be necessary to combine on-site wastewater systems and possibly wells in such situations.

q. Establish revised lot size and frontage requirements to reduce the fragmentation of farmlands. The zoning ordinance will need to be adjusted to permit or even require smaller single-family lots if they are located within agricultural areas. The objective will be to promote clustering and minimize the fragmentation of productive farmlands. Allowing cluster

developments as a use by right and standard subdivision/site condominium land divisions as a special use is also an appropriate tool to reducing land and habitat fragmentation.

r. Development proposals within the township will be required to address specific performance standards which maintain and enhance the region's natural environment and incorporate buffering principles. Those performance standards will include:

1. Buffers of at least 200 feet in width for the protection of streams, rivers, and wildlife corridors;

2. Accurate and field verified wetlands delineation and protection;

3. Dedicated scenic easement of 100 feet from all county roads preserving and adding of natural vegetation and non-motorized trail networks;

4. Retaining existing natural and native vegetation, including trees and grasses, which minimize the need for formal landscaping and excessive fertilization;

5. Prohibiting high traffic generating land uses in rural areas;

6. Strong implementation assurances (e.g., performance bonds, deed restrictions, etc.);

7. The reduction of stormwater runoff protects the watershed health by creating standards that regulate impervious surfaces that clearly define and control lot coverage for all districts. The township should also review and, if necessary, restructure the parking lot requirements to reduce unnecessary impervious surfaces, including the regulation of the maximum and minimum amount of required parking spaces.

Responsibilities. This activity should primarily be the responsibility of the planning commission with support from township staff and planning consultants.

Related Goals and Objectives. The strategy supports the following goals and objectives: Goal A, Objectives 2- 4; Goal B, Objectives 2, 5; and Goal C, Objectives 3, 4.

2. INVENTORY KEY NATURAL FEATURES/PARKS/OPEN SPACE AREAS.

Description. A vital aspect of the township's master plan is preserving the community's natural beauty and essential features. The purpose of this strategy is to prepare an inventory of significant natural features and to identify the likely trends or conditions that may threaten them. This

inventory may include surface features as well as groundwater and possible surface impacts on groundwater. The township will develop mapped exhibits that will guide future land use decisions. The Michigan Natural Features Inventory will serve as a good starting point with field verification and evaluation conducted on a sequential basis as the inventory develops. In some areas, it may be appropriate to create overlay zoning or other preservation mechanisms.

In addition, as private property owners submit site plans for approval, independent and professionally prepared natural features reports may be collected for incorporation into this inventory.

Also crucial to the residents of Rutland Township is the creation of recreational opportunities that exhibit the natural beauty and open space of the community, such as the Thornapple River. A trail network linking natural features with new and existing population centers is anticipated due to this strategy.

Standards for preserving such features will need to be developed that are effective yet, permit reasonable use of private lands. These would be structured to enable proposed buildings to be shifted on a site to preserve identified features.

Responsibilities. This activity should primarily be the responsibility of the planning commission with support from township staff and planning consultants.

Related Goals and Objectives. The strategy supports the following goals and objectives: Goal A, Objectives 1- 4, and Goal G, Objectives 1-7.

3. EXPLORE PURCHASE OR TRANSFER OF DEVELOPMENT RIGHTS.

Description. Consider establishing a program to purchase or transfer development rights from those farmers who would prefer to continue to farm their lands but who can reasonably be expected to realize substantially higher returns by developing their lands. Such a program will likely require public funding, and the first step for implementation will be to build public support, both for the concept and possibly supporting a share of the program's cost. Coordination with Barry County and the Farmland Preservation Board may provide additional support for this program as these programs may benefit from regional effort and perspective.

Responsibilities. This activity should primarily be the responsibility of the planning commission with support from the township board and township planning staff and consultants.

Related Goals and Objectives. The strategy supports the following goal and objectives: Goal H, Objectives 1- 5.

4. REVIEW THE SUBDIVISION & SITE CONDO ORDINANCE.

Description. Review the Township Subdivision and Site Condominium Ordinance that specifically regulates platted subdivisions and site condominium applications. This ordinance will include requirements for open space areas, including language that may incorporate non-motorized trail requirements. Utility extension requirements may also be addressed within the subdivision control ordinance to encourage desired densities.

Responsibilities. Township staff may assume lead responsibility for this policy with assistance from the planning commission and adoption by the township board.

Related Goals and Objectives. This strategy supports the following goals and objectives: Goal B, Objectives 1- 5, and Goal D, Objective 1.

5. IMPROVE PUBLIC UNDERSTANDING OF GROWTH MANAGEMENT.

Description. Prepare a program of public service announcements, speaker's bureau, and school curriculum on the importance of the careful management of the township's open lands, natural areas, and farmlands, and the need to achieve a balance of land uses to support desired services. The theme may explain that it is possible and desirable to have both development and rural character, but effective management is needed. The speaker's bureau would periodically target service clubs, neighborhood and community organizations, and other interest groups.

Part of this program may also involve coordinating with other public agencies within the township, county, and state. These may include the Barry County Drain Commission, Barry County Road Commission, Barry-Eaton Health Department, Michigan Department of Transportation, and other local agencies or organizations that may be willing to share information and create an educated citizenry.

Responsibilities. The planning commission and the township board may provide some leadership in carrying out this strategy. In addition, it may be possible to use the resources of Michigan State University Extension to conduct training workshops and similar activities.

Related Goals and Objectives. This strategy supports the following goal and objectives: Goal D, Objective 3.

6. DEVELOP A UTILITY ORDINANCE

Policies that direct the location of public water and sanitary sewer services are an essential growth control mechanism. By encouraging new development located in proximity to existing or proposed sewer and water lines, the township will be in the most vital position to guide and direct growth according to the plan.

For this technique to be effective, the township must develop feasible mechanisms to manage the placement of utilities in the community. This strategy contemplates a more comprehensive approach to utility services, including a capital plan for utility extensions, a local rate structure, the phasing of utility improvements, and the policies that may be necessary to address phasing and service to outlying areas.

Responsibilities. The township board, being the legislative body for the community, must undertake this strategy.

Related Goals and Objectives. This strategy supports the following goal and objectives: Goal E, Objectives 1- 3.

7. COOPERATE WITH NEIGHBORING GOVERNMENTS.

With the county seat, the City of Hastings, nearby, it's evident that inter-jurisdictional cooperation on specific land use issues should be manifested. To manage growth correctly, the Township seeks to establish consistent goals and regulations so that the greater area develops in a compatibly efficient manner.

The township planning commission is well-positioned to use the Master Plan as a guide to foster intergovernmental cooperation with the City of Hastings, Barry County, and neighboring townships on several issues to the benefit of all communities. Of course, the implementation of any resulting programs will require support and endorsement from all parties involved. This activity should begin on completion of the Master Plan process and should, of course, be viewed as an ongoing strategy.

Responsibilities. The planning commission will be responsible for the effort of communicating with other commissions serving adjacent communities.

Related Goals and Objectives. This strategy supports the following goal and objectives: Goal F, Objectives 1- 4.

8. DEVELOP A NEW ACCESS MANAGEMENT OVERLAY ORDINANCE

Traffic on M-37, M-43, and M-179 needs to be monitored more closely by the township. In addition, the community wishes to have a more significant presence in the roadway planning and decision-making process. This strategy would establish a new overlay district to regulate access to these roadways in all new developments. Its purpose will be to ensure efficient and safe traffic movement by controlling access points, building setbacks, and encouraging shared access.

At the time of this writing, the Michigan Department of Transportation (MDOT) is in the process of completing a new M-37 Corridor Study in Barry County that will outline a series of recommendations for retaining and improving safety and efficiency along this route. These recommendations include intersection modification and draft overlay district language that the county and townships may use. Therefore, Rutland Township should consider adopting this corridor study as an appendix to the master plan for future reference, recognizing the importance of such a study and using the recommendation to help formulate an overlay district.

MDOT has also created "*The Access Management Guidebook,*" which outlines various access management examples and illustrations to improve the safety and quality of new development on any road. This document should be used while creating any new access management overlay or new site plan standards. For example, the guidebook makes recommendations for parking lots to be interconnected to reduce unnecessary curb cuts, with the option of moving the parking lot to the rear of the building.

This task should follow the completion of the zoning ordinance update (Strategy 1, above). In addition, the planning commission should work with the Barry County Road Commission and MDOT to outline appropriate alternatives to access management along these three roadways. The resulting standards may be adopted as an overlay district that would complement the underlying zoning.

Alternative forms of transportation are encouraged along these thoroughfares, including bicycling and walking opportunities. In addition, any opportunities for trail development along these corridors should also be included.

Responsibilities. In partnership with the Michigan Department of Transportation and the Barry County Road Commission, the planning commission will be responsible for conducting and organizing studies and preparing access management plans for these corridors. Township staff, engineers, and planning consultants will also be helpful.

Related Goals and Objectives. This strategy supports the following goal and objectives: Goal I, Objectives 1- 4.

9. CONDUCT A VIEWSHED ANALYSIS

This task will identify, map, and develop appropriate regulatory language that encourages the protection of critical viewsheds in the township. Important viewsheds will include scenic vistas visible from public places such as county roads, state highways, and trails. Protection of these viewsheds will retain and enhance the rural character of the township.

Responsibilities. The planning commission will be primarily responsible for conducting and organizing the viewshed analysis. Township staff and planning consultants may also be used, if necessary.

Related Goals and Objectives. This strategy supports the following goal and objectives: Goal A and H.

10. CONDUCT A STUDY THAT EXPLORES SEWER FACILITY ALTERNATIVES FOR ALGONQUIN LAKE AREA.

Protection of the surface water quality of Algonquin Lake and the surrounding groundwater resources will require the township to conduct a sewer study that explores wastewater treatment options. This study will consider the various wastewater treatment methods, the location of such service, and the approximate development costs associated with each process. This study will provide the township with a framework for evaluating all alternatives and the basis for action or no action.

Responsibilities. The planning commission and township board will be responsible for initiating the study. The study itself will need to be produced by a professional engineer(s) familiar with this type of analysis.

Related Goals and Objectives. This strategy supports the following goals and objectives: Goal A, B, and E, Objectives 1 through 3.

11. IMPLEMENT AND SUPPORT THE HASTINGS AREA JOINT PLAN.

In 2008-09, the City of Hastings, Hastings Township, Rutland Township, and Carlton Township completed a collaborative planning process, culminating in the Hastings Area Joint Plan. A component of the Joint Plan is the creation of the Joint Planning Commission (JPC). Each municipality has representation on the JPC, which oversees land use, zoning, and over 32 miles of infrastructure within the boundaries of the joint planning area. The joint future land use plan, goals, objectives, and implementation steps are included in the Hastings Area Joint Plan, including the M-37 Road Concept project.

Responsibilities. Rutland Township will be responsible for maintaining a presence and voice on the Joint Planning Commission.

Related Goals and Objectives. This strategy supports the following goal and objectives: Goal F, Objectives 1- 4.

12. ZONING PLAN.

The following zoning plan complies with the requirements of the Michigan Planning Enabling Act of 2008 as amended. The zoning plan is part of the Rutland Township Master Plan and includes the future land use designations and how those designations relate to the zoning districts in the township.

FUTURE LAND USE DESIGNATION	**CURRENT ZONING DISTRICTS** **Includes such other comparable zoning districts as may be included in the Zoning Ordinance by amendment**
Open Space/ Agricultural Preserve	**AG** Agricultural
Country Residential	**RE** Rural Estate Residential **RR** Rural Residential
Medium Density Residential	**R-1** Residential Single-Family **R-2** Residential Single-Family **R-3** Residential Single and Two Family
High-Density Residential	**R-4** Multiple Family Residential
Manufactured Home Community	**RMH** Residential Mobile Home Park
Mixed-Use	**MU** Mixed-Use **C-1** Office/Commercial **C-2** Community Business District **C-3** General Business **C-4** Commercial Industrial (light industrial uses only)
Lake Commercial	**C-2** Community Business District
Airport Commercial/ Light Industrial	**C-3** General Business (at the Hastings City Airport) **C-4** Commercial Industrial (with light industrial airport uses)
Industrial	**C-4** Commercial Industrial (with heavy industrial uses)
Institutional/Public	**C-4** Commercial Industrial (with public uses)
Parks/Recreation	**R-5** Recreation

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APPENDIX A – COMMUNITY INPUT SURVEY

Appendix A represents the data obtained through the community input survey in February 2021.