

ACKNOWLEDGMENTS





District 1 - Bob Teunessen

District 2 - Catherine Getty

District 3 - David W. Jackson, Chair

District 4 - John Smelker

District 5 - Mike Callton

District 6 - Mark A. Doster

District 7 - Bruce Campbell

District 8 - David Hatfield, Vice Chair

Planning Commission

David Hatfield

John Laforge

Jack Miner

Clyde Morgan, Chair

Jack Nadwornik

Joyce Snow

Robert Vanderboegh

Planning Staff

James McManus, Planning Director Julie Stoneburner Jack Ward

Barry County also acknowledges the work and guidance provided by the Master Plan Steering Committee on the development of the Barry County Master Plan.



TABLE OF CONTENTS

	THE WONDER	Root Findings	2
	OF BARRY COUNTY		
2	THE GEOGRAPHY OF BARRY COUNTY	Regional LocationRoot Findings	
3	THE PLACES OF BARRY COUNTY	Local Communities Existing Land Use Root Findings	39
4	THE NATURAL RESOURCES OF BARRY COUNTY	Water Features, Watersheds, and Floodplains	51 53 60
5	THE PEOPLE OF BARRY COUNTY	Demographic and Community Profile	69 71 80
6	THE INFRASTRUCTURE OF BARRY COUNTY	Water and Sanitary Sewer Infrastructure Transportation Network Broadband Connectivity Alternative Energy. Trails and Non-Motorized Transportation School Districts Root Findings	94 102 104 106

	THE ECONOMY OF BARRY COUNTY	Industrial Land Analysis Commercial Land Analysis Residential Land Analysis Fiscal Impact Analysis Root Findings	.123 .126 .127
	THE PARTNERS OF BARRY COUNTY	Barry County Partners	.133
9	THE VISIONS OF BARRY COUNTY	The Visions of Barry County	141
	THE FRAMEWORK OF BARRY COUNTY	The Framework	
	THE PLAN FOR BARRY COUNTY	Barry County Planning/Zoning History Since 1961 Future Land Use Future Land Use Maps. Zoning Plan: Impact on County Zoning Decisions. Action Plan	.168 .179 .193

TABLE OF CONTENTS | iii



List of Maps

County Zoning	13
Existing Land Use	41
Floodplain Locations	50
Wetlands	52
Preserved Land	54
Prime Farmland Locations	56
Approximate Mineral Mining Areas	59
Population Growth, 2010-2020	68
Municipal Water Infrastructure	92
Sanitary Sewer Infrastructure	93
NFC Roadway Classifications	95
Act 51 Roadway Classifications	97
Roadway Conditions	99
Estimated Traffic Volumes	101
Estimated Broadband Internet Speed, 2021	103
Frails and Paved Shoulders	108
County Framework	151
County Framework - NE Quadrant	153
County Framework - NW Quadrant	155
County Framework - SE Quadrant	157
County Framework - SW Quadrant	159
County Framework - Gun Lake Area	161
County Framework - Hastings Area	163
Future Land Use	179
Future Land Use - NE Quadrant	181
Future Land Use - NW Quadrant	183
Future Land Use - SE Quadrant	185
Future Land Use - SW Quadrant	187
Future Land Use - Gun Lake Area	189
Future Land Use - Hastings Area	191

List of Tables

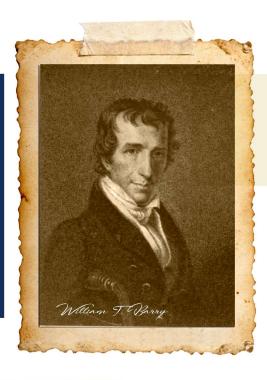
Table 1:	Barry County Population Growth, 2010-2020	67
Table 2:	Barry County Population Projection	69
Table 3:	Alternate Migration Scenarios	69
Table 4:	Population Change in Age Structure, Barry County	70
Table 5:	Barry County Age Demographics	72
Table 6:	Households and Families	73
Table 7:	Educational Attainment	74
Table 8:	Resident Type of Occupation	75
Table 9:	Barry County Resident Occupation by Industry	76
Table 10:	Median Household Income (in 2019 Inflation-Adjusted Dollars)	77
Table 11:	Housing Characteristics, Barry County	78
Table 12:	Barry County Countywide Commute Destinations	80
Table 13:	Barry County Commuter Destination Data	84
Table 14:	Public Sewer and Water Authorities in Barry County	91
Table 15:	School Districts by High School Enrollment (2022-23 School Year)	115
Table 16:	Industrial Productivity and Labor Demand	121
Table 17:	Acreage of Commercial Clusters in Barry County	124
Table 18:	Commercial Acreage Needed	125
Table 19:	Summary of Land Use Acreage Supply/Demand	126
Table 20:	Cost of Service per Tax Dollar by Land Use	127
Table 21:	Potential Fiscal Impact	127
Table 22:	Zoning Plan	194
List o	f Figures	
Figure 1.	Proximity to Metropolitan Centers within Region	6
Figure 2.	Distance to Metropolitan Centers from Center of Barry County	
Figure 3.	Housing Types in Barry County	79
Figure 4.	Barry County Commuter Flow Map	81
Figure 5.	Barry County School Districts	115
Figure 6.	Industrial Employment of Barry County Residents	
Figure 7.	Retail Spending vs Spending Power	



THE WONDER OF BARRY COUNTY

Barry County ... a nearly 200-year-old agricultural community overlaid with resplendent natural beauty and resources worthy of conservation. A community of people committed to its heritage, where local values are on display county-wide in farming practices; natural preservation efforts; homestead landscapes; local attractions; and civic traditions.

'Wonder', defined as a cause of astonishment or admiration' or 'rapt attention at something experience', is inherent to Barry County.

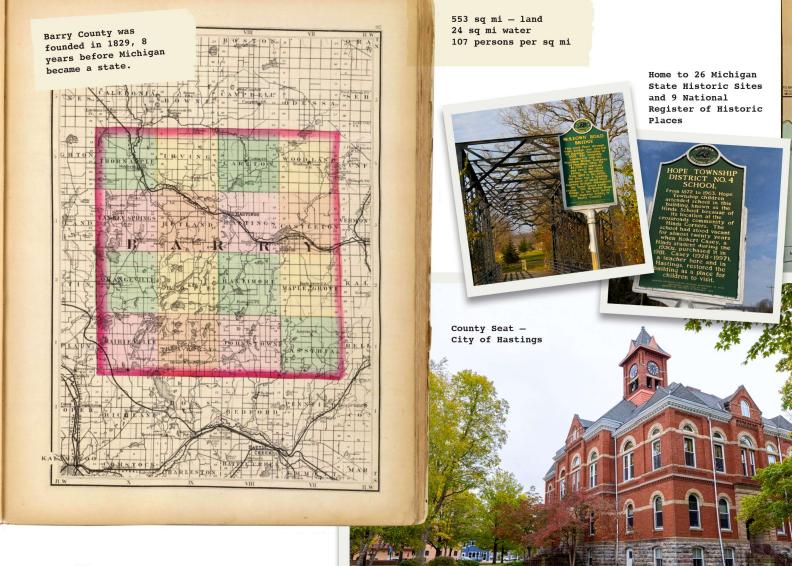


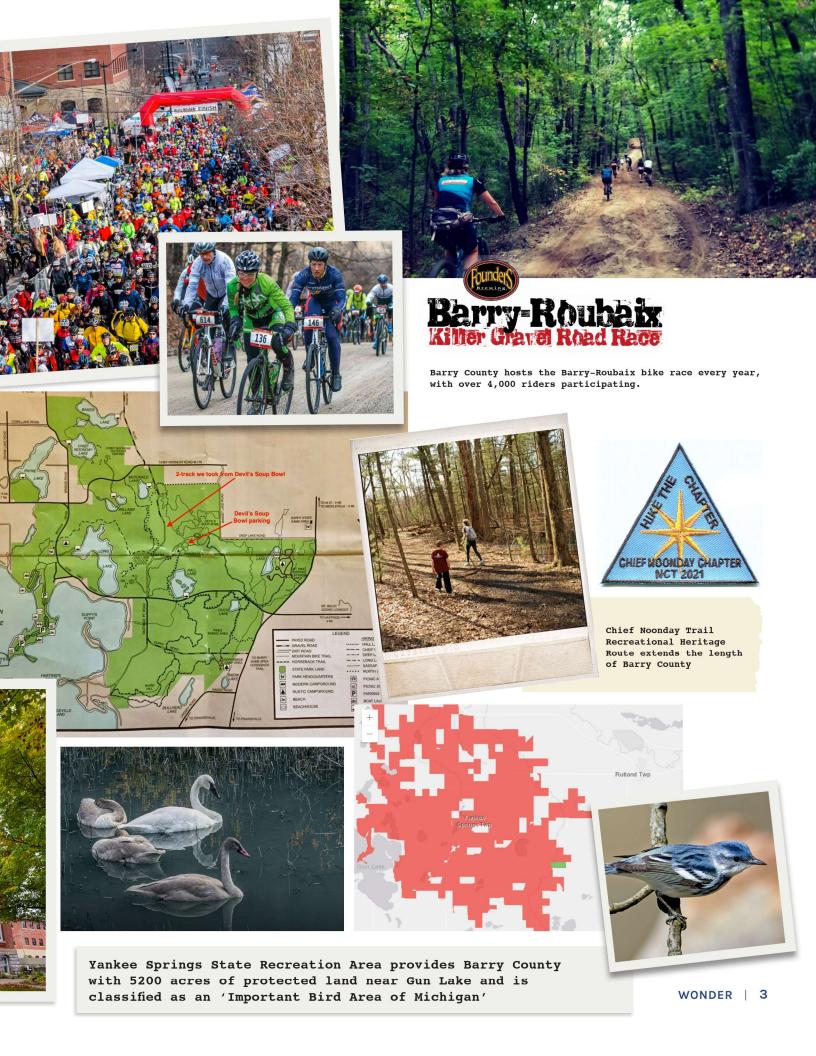
William J. Barry

Barry County was named after William T. Barry, Postmaster General in the Andrew Jackson Administration

How did William Taylor Barry, U.S. Postmaster General under President Andrew Jackson, get a Michigan county named after him when he was not, in fact, from Michigan? Because Barry County was one of the Michigan Territory's 10 so-called "cabinet counties" named after President Jackson himself along with some men who served in his cabinet. It's said the naming may have been a political move to score some points with the President in the hopes of winning the territorial dispute over Toledo (which ultimately led to Michigan gaining the U.P.).









THE GEOGRAPHY OF BARRY COUNTY

Barry County is located in the southwestern lower peninsula of Michigan. The County has an area of 576 square miles - roughly equivalent to 368,640 acres. The County is characterized by rolling terrain featuring upland forests and natural woodlands interspersed with inland lakes, rivers, creeks, and low-lying wetlands. Barry County also features a prominent farming industry, with nearly 42% of its land currently used for agriculture. Between the County's natural features and rich agricultural environment, Barry County remains a popular recreational destination within west Michigan.

Regional Location

Barry County's close proximity to numerous metropolitan areas is another defining feature of its geography. From Barry County's boundaries, Grand Rapids lies 15 miles to the north; Lansing lies 25 miles to the east; Battle Creek and Kalamazoo are roughly 5 and 10 miles south of Barry County's southern boundary. Holland and the Lake Michigan shoreline are roughly 30 miles to the west. This places many of west Michigan's largest economic centers within easy commuting distance of Barry County.

Regional Accessibility

Even from the interior of Barry County, most of these large metropolitan areas remain just within commuting distance. Figure 2 on the following page identifies commuting routes and distances to these centers, illustrating the favorable accessibility of the County's location within the region.

Grand Rapids

Figure 1. Proximity to Metropolitan Centers within Region

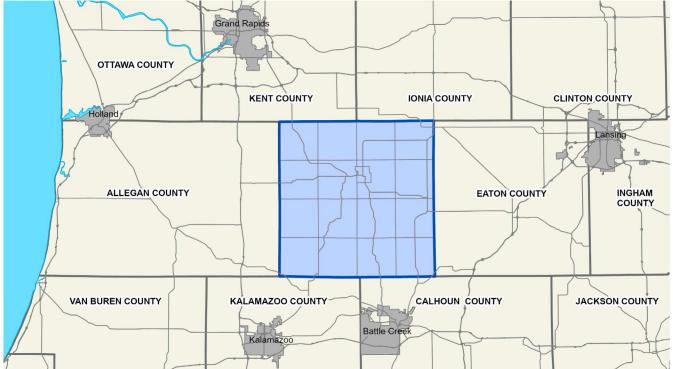
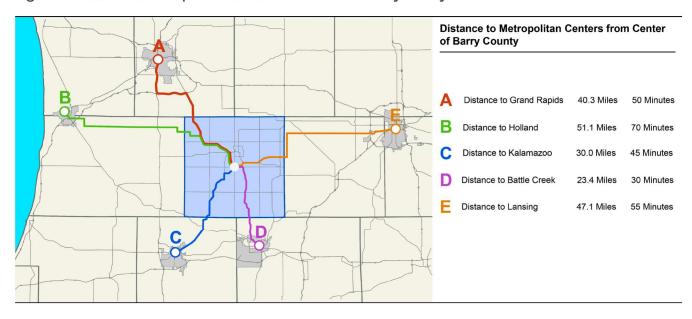


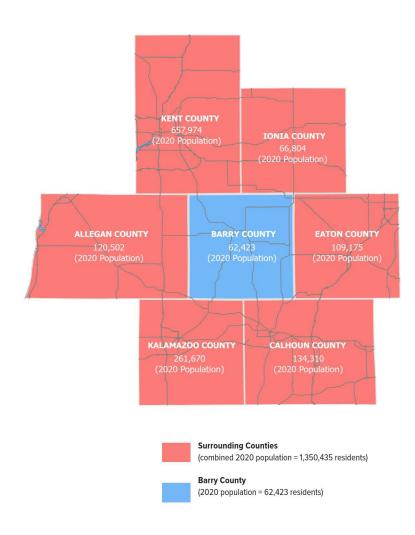


Figure 2. Distance to Metropolitan Centers from Center of Barry County



Because of its extensive natural areas and rural setting, Barry County has a lower population than each of its neighboring counties. The 2020 Census indicated that Barry County has a population of roughly 62,000 residents while the surrounding six counties feature a combined population of over 1.3 million people. This further illustrates Barry County's favorable situation as a core of agricultural lands and undeveloped natural environments to the surrounding high population areas.

While Barry County's regional location provides convenient access to amenities and employment opportunities, it's also a primary influence on the County's growth and development. As west Michigan continues to grow, many residents working in areas such as Grand Rapids or Kalamazoo may move to Barry County due to its convenient commuting distance and appealing rural environment. This has profound land use impacts and will be a driving factor in the County's long-range development.



Root Findings

Although Barry County is located in close proximity to west Michigan's largest metropolitan centers, its population is smaller than its neighboring counties. This allows the agricultural and rural character of Barry County to 'stand out' in the region.

The abundance of preserved public lands and inland lakes and waterbodies makes the County an attractive place of residence and recreation.

Most Barry County residents can commute to any of five major job centers (Kalamazoo, Grand Rapids, Holland, Battle Creek, and Lansing) in under one hour.

The combination of natural beauty, recreational amenities, and reasonable commutes to a number of job centers makes Barry County an ideal "bedroom community." Residents seek out large lots and natural settings, and the beauty of the community must be preserved to retain that appeal.



THE PLACES OF BARRY COUNTY

Barry County's physical development is the product of numerous factors over the span of its history. Founded in 1830, much of the County remains in agricultural production nearly two hundred years later. While the County has retained its agricultural heritage, it has also preserved many woodlands and natural features. Located primarily within public lands owned by the Michigan Department of Natural Resources, these natural land features occupy much of the western half of the County.

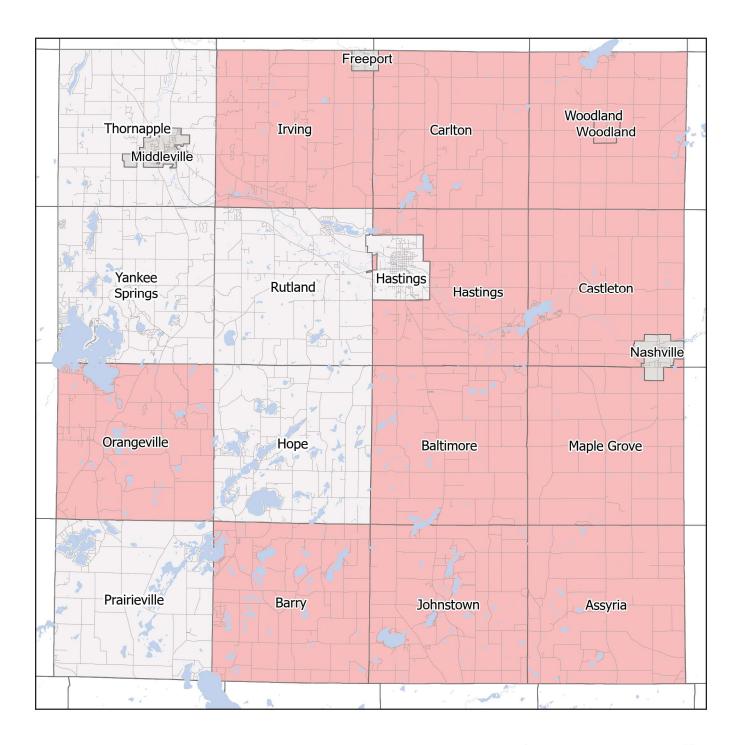
Local Communities

Barry County consists of 16 townships, four villages, and one city. The County provides zoning services for 11 of the Townships, but this plan includes a vision for the entire County.

The 21 municipalities are detailed on the following pages. Not included on the following pages are hamlets and other small communities that are not chartered or incorporated municipalities:

- » Carlton
- » Cedar Creek
- » Cloverdale
- » Dowling
- » Hickory Corners
- » Irving
- » Orangeville
- » Woodbury (partially in Eaton County)



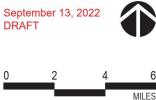


County Zoning

Barry County, Michigan

LEGEND

Municipalities with County Zoning
Municipalities with Local Zoning
Bodies of Water





Thornapple Township





County Zoning:

No

Township Hall Location:

200 E. Main Street P.O. Box 459 Middleville, MI 49333

2020 Population:

9,331

Key Natural and Recreational Features:

Thornapple River, North Country Trail, Duncan Lake

Key Commuting and Economic Characteristics:

Fastest growing township in the County, with development centered on the M-37 corridor and around the Village of Middleville.













Village of **Middleville**







Village Hall Location:

100 E. Main Street. Middleville, MI 49333

2020 Population:

Key Natural and **Recreational Features:**

The Thornapple River, North Country Trail and Paul Henry Trail extend through and around the Village. Local parks include Wildwood Trails Park, Middleville Dog Park, Spring Park and Veteran's Memorial Park.

Key Commuting and Economic Characteristics:

M-37 (Broadway) extends through Middleville as a major corridor in the Village. The Village houses Thornapple Kellogg High School, middle school, and three elementary schools. The Village is also home to Bradford White Corporation, an industrial home appliance maker. Bradford White contributes to the amount of light and heavy vehicle traffic in the Village.











Irving Township





County Zoning:

Yes

Township Hall Location:

3425 Wing Road Hastings, MI 49058

2020 Population:

3,734

Key Natural and Recreational Features:

This Township is largely rural in character with the Village of Freeport and the small hamlet of Irving being the only population centers in the Township.

Key Commuting and Economic Characteristics:

Three major commuting routes extend through the Township. Nearly all agriculture or natural areas.











Carlton Township





County Zoning:

Township Hall Location:

85 Welcome Road Hastings, MI 49058

2020 Population:

2,368

Key Natural and **Recreational Features:**

Several small lakes: Leach Lake, Middle Lake, Lower Lake, Welcome Woods Campground, Fuller Cemetery. Most of the Township is rural agriculture.

Key Commuting and Economic Characteristics:

The hamlet of Carlton and a small portion of the Village of Freeport represent the only population centers in the Township.









Village of Freeport





County Zoning:

No

Village Hall Location:

209 S. State Street Freeport, MI 49325

2020 Population:

58

Key Natural and Recreational Features:

The Village of Freeport has a disc golf course, a cemetery, and the Coldwater River runs through the NE corner. The Village is a mixture of wooded natural areas, open farmland, and neighborhoods. The Village has one park that contains a baseball and softball field, basketball court, sand volleyball court, and open spaces.

Key Commuting and Economic Characteristics:

No state highways or major commuting routes in the County extend through the Village and M-43 is a few miles to the south. The layout of the Village is dense for a small town and maximizes open spaces. There are some manufacturing facilities in the northern section of the Village, which require heavier equipment and transportation. There are four main roads that lead into the Village from outside. Most of the Village of Freeport is in Irving Township, however the east side of the village is in the northwest corner of Carlton Township.











Woodland **Township**





WOODLAND TOWNSHIP

WOODLAND, MICHIGAN

County Zoning:

Township Hall Location:

156 S. Main Street PO BOX 98 Woodland, MI 48897

2020 Population:

2,344

Key Natural and **Recreational Features:**

Jordan Lake, Woodland Cemetery. Most of the Township is rural agriculture.

Key Commuting and Economic Characteristics:

Three state highways extend through the Township (M-66, M-50, and M-43). Lakewood High School is in the Township. The Village of Woodland is located in the center of Township. The hamlet of Woodbury and the Village of Lake Odessa are nearby, just over the boundaries into Eaton and Ionia Counties, respectively.











Village of Woodland



County Zoning:

Yes

Village Hall Location:

156 S Main Street Woodland, MI 4889

2020 Population:

530

Key Natural and Recreational Features:

The Village of Woodland has one park—Herald E. Classic Memorial Park. The park features a baseball field, basketball court, and play structure. The Lakewood Public Schools building also has baseball/softball fields, soccer fields, basketball courts, and a play structure. There is a lot of open farm land in the village limits. Expansive open farmland with few wooded areas.

Key Commuting and Economic Characteristics:

The Village is mostly rural residential with some commercial. M-43 runs through the downtown east-west and Woodland Road runs through town north and south.













Yankee Springs Township







County Zoning:

Township Hall Location:

284 N Briggs Road Middleville, MI 49333

2020 Population:

4,369

Key Natural and **Recreational Features:**

Gun Lake and many smaller lakes: Cobb Lake, Barlow Lake, Bassett Lake, Long Lake, Hall Lake, Payne Lake, Chief Noonday Lake, Baker Lake, Deep Lake, Turner Lake, Bullhead Lake, Snow Lake, and others. The area also has the Yankee Springs Recreation area and the Devil's Soup Bowl, the Barry Game Area Target Range, the North Country Trail, the Pines Scenic Trail, the Barry State Game Area, Camp YMCA Manitou-Lin, Long Lake Outdoor Center, Yankee Springs Mountain Bike Trail, and the Yankee Springs Golf Course.

Key Commuting and Economic Characteristics:

The Township is bisected by M-179. M-37 traverses the northeast corner of the Township as a major corridor. The Township does not have a population center, other than clusters of residential housing along the lakeshores.









Rutland Township





County Zoning:

No

Township Hall Location:

2461 Heath Road Hastings, MI 49058

2020 Population:

4,042

Key Natural and Recreational Features:

Michigan Audubon – Otis Sanctuary, Otis Lake, Algonquin Lake, Podunk Lake, Environmental Adventure Camp, Barry County Waterfowl Production Area, YMCA Camp Algonquin, Hammond Hills Disc Golf Course.

Key Commuting and Economic Characteristics:

The Township is bisected by M-179. M-37 and M-43 also run through the area. The area is a mix of commercial, residential, agriculture and natural spaces. Many of the functions on the area support the economy of the City of Hastings. Some big box commercial and the Hastings airport are in the Township.













City of **Hastings**







County Zoning:

City Hall Location:

201 E State Street Hastings, MI 49058

2020 Population:

7,314

Key Natural and **Recreational Features:**

The Thornapple River runs through the City of Hastings from east to west. The river offers a number of amenities including, Bliss Riverfront Park, Thornapple Plaza, and Tyden Park. In addition to riverfront parks, the City has Sweezy's Pond Park, Fish Hatchery Park, Riverside Cemetery, Tangle Town Park, Hammond Hills Mountain Bike Trail and Disc Golf Course,

Key Commuting and Economic Characteristics:

M-43 enters the City from the north and goes into the middle of downtown before going west and leaving the City. There are also a number of east-west roads that cut through the city. The City has a vibrant downtown that is positioned to provide commercial services to a population of 10,000 people. There is an active school system within the City limits.









Hastings Township



Aastings Charter Township

County Zoning:

Yes

Township Hall Location:

885 River Road Hastings, MI 49058

2020 Population:

3.023

Key Natural and Recreational Features:

Thornapple River. The Township does not have a major lake, but borders Thornapple Lake, Carter Lake, and Leach Lake. The Township is mostly rural agriculture and natural areas...

Key Commuting and Economic Characteristics:

M-37, M-43, and M-79 run through the Township. Borders much of the City of Hastings and enjoys the growth impacts of the City's economic activity.









Castleton Township







County Zoning:

Township Hall Location:

915 Reed Street Nashville, MI 49073

2020 Population:

3,593

Key Natural and **Recreational Features:**

Thornapple Lake is in the SW corner of the Township and is the key natural feature. Mud Creek enters the Township from the NE orner and runs into Thornapple Lake in the SW. Most of the Township is rural agriculture with some natural areas.

Key Commuting and Economic Characteristics:

The population center of the Township is the Village of Nashville in the SE corner. M-66 and M-79 run through the Township and meet in Nashville. The Township has a few other major roads.



Village of Nashville





County Zoning:

No

Village Hall Location:

203 N. Main Street Nashville, MI 49073

2020 Population:

1,464

Key Natural and Recreational Features:

The Thornapple River begins in Nashville and flows west into Thornapple Lake.
The Village also has a Mill Pond in the backwaters of the Thornapple. The Mill Pond has a boat launch.

Key Commuting and Economic Characteristics:

M-66 and M-79 are two major routes that extend through and serve the Village. The Village is densely populated with expansive open space. There is an elementary school in the Village that is part of Maple Valley Schools. The Village also has a commercial strip that has small town commercial offerings.













Orangeville Township





County Zoning:

Township Hall Location:

7350 Lindsey Road Plainwell, MI 49080

2020 Population:

Key Natural and **Recreational Features:**

Gun Lake, Fish Lake, Stewart Lake, Fawn Lake, Wiley Lake, Blue Lake, Orr Lake, Crystal Lake, England Lake, Adams Lake, Lime Lake and others. The Township is mostly natural open space. There is also rural agriculture and a lakeshore community in the NW corner near Gun Lake.

Key Commuting and Economic Characteristics:

The hamlet of Orangeville is a historic center in the Township. The lakeshore community near Gun Lake is also a population center. No state highways extend through the Township, but major north-south routes exist.









Hope Township





County Zoning:

No

Township Hall Location:

5463 M-43 Hastings, MI 49058

2020 Population:

3,284

Key Natural and Recreational Features:

Several lakes in the Township with the biggest being Wall Lake and Long Lake. Smaller lakes include: Big Cedar Lake, Guernsey Lake, #21 Lake, Cloverdale Lake, Wilkinson Lake, Pine Lake, Head Lake, Cox Lake, Larabee Lake, Horseshoe Lake, Bawker Lake. The Hidden Pond Preserve, Camp Michiwana, and the Jones Lake Campground are natural areas in the Township.

Key Commuting and Economic Characteristics:

The hamlets of Cedar Creek and Cloverdale and the lakeshore residential areas exist as population centers in the Township. There are lakeshore residential areas throughout the Township. M-43, a major commuting route in the County, extends north-south through the center of the Township.









Baltimore Township



County Zoning:

Township Hall Location:

3100 E Dowling Road Hastings, MI 49058

2020 Population:

2,011

Key Natural and **Recreational Features:**

Clear Lake, also located partially in Hope Township, is the Township's only major lake. Smaller lakes in the Township include Long Lake, Gregory Lake, Hall Lake, Mixer Lake, Middle Lake, Newton Lake, Aurohn Lake, Pierce Lake, Brewster Lake, Mud Lake, and others.

Key Commuting and Economic Characteristics:

The Township is mostly rural agriculture and natural open spaces. The Township allows large-scale cultivation and sale of marijuana. The hamlet of Dowling is the main population center in the Township. M-37, a major north-south commuting route in the County, bisects the Township.









Maple Grove Township



County Zoning:

Yes

Township Hall Location:

721 Durkee Street Nashville, MI 49073

2020 Population:

1,326

Key Natural and Recreational Features:

The Township represents a nearly exclusively rural agricultural community within the County, with minimal wooded areas or water features. There are two smaller lakes in the southern portion of the Township: Ellis Lake, Wild Lake.

Key Commuting and Economic Characteristics:

M-66 enters the Township from the NE corner and exits in the southern middle. M-79 extends east from M-66 to Charlotte, located in adjacent Eaton County. The southern portion of the Village of Nashville is located in the NE corner of the Township and represents the community's only population center.











Prairieville Township





County Zoning:

Township Hall Location:

10115 S. Norris Road Delton, MI 49046

2020 Population:

3,502

Key Natural and **Recreational Features:**

The Township is home to many inland lakes including two major lakes: Crooked Lake and Pine Lake, as well as access to Gull Lake in the SE corner of the Township. Gull Lake is a major lake lying mostly in Kalamazoo County, but serves as a major attraction for residential and commercial development, as well as a recreational destination, in the Township. There are several smaller lakes in the Township including Indian Lake, Shelp Lake, Little Long Lake, Miller Lake, Cook Lake, West Gilkey Lake, Silver Lake, Warner Lake,

Key Commuting and Economic Characteristics:

M-43, a major commuting route in the County, extends along the eastern border of the Township. The Township contains many campgrounds and RV parks. There is not a village or population center in the Township, but there are some residential clusters near the lakeshores.







Barry Township





County Zoning:

Yes

Township Hall Location:

11300 M-43 Delton, MI 49046

2020 Population:

3,488

Key Natural and Recreational Features:

The Township is largely rural agriculture with some open and wooded natural spaces. There is access to Crooked Lake in the NW corner of the Township and Gull Lake in the SW corner. Gull Lake is a major lake lying mostly in Kalamazoo County, but serves as a major attraction for residential and commercial development, as well as a recreational destination, in the Township. The Township also has Fair Lake, Pleasant Lake, Gilkey Lake, Bulkey Lake, and Mud Lake. In addition, there are several smaller lakes in the Township.

Key Commuting and Economic Characteristics:

M-43 extends north-south primarily along the Township's western boundary.
The hamlets of Delton and Hickory
Corners are the main population centers in the Township. Barry Township is in the process of constructing a new water tower. The Township is home to the Gilmore Car Museum and its historic 90-acre campus.













Delton



County Zoning:

Hamlet Location:

M-43 and Orchard and Delton Roads

2020 Population:

Key Natural and **Recreational Features:**

The hamlet of Delton is a U.S. Census Designated Place in the northwest corner of Barry Township. The hamlet had a population of 596 in 2020. The hamlet is largely rural agriculture with some open and wooded natural spaces. Delton is on the eastern shore of Crooked Lake in the NW corner of Barry Township. In addition, Pleasant Lake and Mud Lake are directly to the east of Delton. The key recreational offerings in Delton are Crooked Lake, Delton-Kellogg school fields and facilities, Barry Township Park, and the Delton District Library.

Key Commuting and Economic Characteristics:

M-43 runs north-south through the hamlet of Delton and forms crossroads with Orchard and Delton roads. There are numerous types of businesses along M-43 and Delton and Orchard roads, including restaurants, grocery stores, and many other types of businesses and services to serve the community. The Barry County Township Hall and Ascensions Borgess Hospital are located near the southern border of Delton. Delton is also home to Delton-Kellogg High School and has an eastern shore on Crooked Lake. The hamlet is approximately 30 minutes by car to Kalamazoo and Battle Creek, and approximately 50 minutes by car to Grand Rapids.













Johnstown Township



County Zoning:

Yes

Township Hall Location:

13641 M-37 #37 Battle Creek, MI 49017

2020 Population:

3,112

Key Natural and Recreational Features:

The Township is mostly rural agriculture and open and wooded natural spaces. There are no formal nature preserves or parks in the Township. There are several lakes within the Township including; Clear Lake, Fine Lake, Bristol Lake, Long Lake, Mill Lake, Culver Lake, Dunn Lake, Wilkes Lake, Von Syckle Lake, Manning Lake, and a few other smaller lakes and ponds.

Key Commuting and Economic Characteristics:

M-37, a major commuting route in the County, extends north-south through the middle of the Township. There are no formal town centers in the Township, but population clusters exist primarilly around the lakeshore areas.











Assyria Township



County Zoning:

Township Hall Location:

8094 Tasker Road Bellevue, MI 49021

2020 Population:

2,074

Key Natural and **Recreational Features:**

The Township is mostly rural agriculture and open and wooded natural spaces. There are no formal nature preserves or parks in the Township. There are several lakes within the Township including, Taylor Lake, Cassidy Lake, West Lake, High Hill Lake, Metcalf Lake, Loon Lake, and a few other smaller lakes and ponds. The Wabascon Creek is present throughout the Township.

Key Commuting and Economic Characteristics:

M-66 bisects the Township from north to south. The population centers in the Township are largely positioned along M-66 and in the lakeshore areas. The rest of the Township is rural residential or agriculture.









Joint Planning Areas

Joint Planning Commission (JPC):

The Joint Planning Commission (JPC) of the City of Hastings and Rutland Township exists to exercise planning and zoning jurisdiction over a portion of Rutland Township that is adjacent to the City of Hastings.

The geographic area covered by the JPC extends along M-43, just west of the City of Hastings, and includes some land along the Thornapple River.

Key Natural and Recreational Features:

The northern boundary of the JPC area follows the shoreline of the Thornapple River as it winds through Rutland Township. The land within the JPC area that is near the river is a mixture of floodplains, wetlands, and open natural spaces. The southern portion of the JPC area extends along M-43 and is largely commercial in nature and served by necessary utilities.

Key Commuting and Economic Characteristics:

The entire JPC area is zoned 'MUD Mixed Use', although the Joint Zoning Ordinance that governs the area also allows light industrial use. This segment of the M-43 corridor is recognized as a 'gateway' into the City of Hastings and the JPC has been successful at encouraging and regulating development in the JPC area consistent with 'gateway' objectives regarding access, signage, building facades, etc.

Joint Planning Alliance (JPA)

design, and major development projects.

The Joint Planning Alliance (JPA) is a consortium of four local communities--City of Hastings, Rutland Township, Hastings Township, and Carlton Township--and Barry County. The JPA is not a regulatory zoning body but instead works together on broader planning issues.

The JPA has also been instrumental in envisioning and coordinating infrastructure projects, and in acting as a communication vehicle between the adjacent communities. The JPA frequently appoints subcommittees

to work on specific issues, such as trail extensions, corridor













Attractions and Destinations

One of the best-known places in Barry County is the Gilmore Car Museum. The museum is open to the public and consists of a private collection of cars owned by Genevieve and Donald Gilmore. The Gilmore Car Museum brings thousands of visitors to Barry County each year. The museum also hosts large events throughout the year, such as car shows, an automotive lecture series, how-to workshops to help people repair their classic cars, and behind-the-scenes tours. The museum is near the southwest corner of Barry County by Hickory Corners. The Gilmore Car Museum is one of many assets that brings Barry County national recognition.

Discovering history in Barry County at the Historic Charlton Park and Village Museum in Hastings is a very popular activity in the County. The park contains a replica of a historic village and highlights the history of the area. Bowens Mills is another place to learn about history in the County. Bowens Mills is a Michigan Historic Site that offers visitors a visit to a historic grist mill and some apple cider. If you are in Barry County and looking to share a drink, the Glass Creek Winery and Brewery is a great place to visit. The winery is a small, family run business located just outside Hastings and is open to the public. For dessert, Barry County residents and visitors can head over to Nashville to MOO-ville Creamery for freshly made ice cream. MOOville estimates that it welcomes 500,000 visitors each year to the Nashville creamery for family fun and great tasting ice cream. The largest annual event is Memorial Day, which is also MOO-ville's anniversary. The creamery is currently in its 18th year of operation. The Memorial Day celebration has games, food, activities, and of course, ice cream. The creamery also boosts Barry County's economy by bringing jobs and revenue to the community. While the business is headquartered in Nashville. MOO-ville has three other store locations











outside of Barry County, in Eaton Rapids, Zeeland, and Ionia. This makes Mooville an economic driver for Barry County, as well as a great tasting treat. The creamery is open to the public and serves lunch at all locations. For fun, Mooville has a petting farm from mid-April through mid-October, offers self-guided robot dairy tours, and has a gift shop.

For those seeking art and culture in Barry County, visiting the murals and local artwork in the City of Hastings will amaze and inspire. The City also has a bandshell at Thornapple Plaza where residents and guests can enjoy a summer concert series, among other events. In addition to the Hasting summer concert series, the County has Gun Lake Live – a summer concert series at Bay Pointe.

Festivals and events dot the annual calendar in Barry County. Some of the more popular events are the Barry-Roubaix—a classic style off-road cycling race in the Yankee Springs Recreation Area. The race draws cyclists from all of the state and region. The Barry County Agricultural Society organizes the Barry County Fair. Each year the fair creates educational, social, cultural and economic opportunities to preserve and promote agriculture and traditions year round generating economic stimulation and tourism development in Barry County. The Fair is 169 years old and gives County residents a chance to show off their hard work and have fun. The Village of Nashville hosts an annual car show in June. Visitors can see historic cars, socialize and have fun at this annual event. The Barry County Brewfest is an annual event held at Gun Lake. The festival is held by the Barry County Chamber of Commerce and EDA. Another event to bring joy to Barry County residents and visitors is the Delton Founders Festival. The festival celebrates Delton's past while embracing what makes it a great place to live and work.



Existing Land Use

Due to Barry County's abundant natural features, numerous lake cottage communities surround the County's inland lakes - many of which are summer homes while others are used as year-round residences. In addition to this residential land use pattern, subdivision development is becoming increasingly prevalent in the northwestern corner of the County, namely along the M-37 corridor. This has significant land use implications, as continued suburban development will result in the loss of agricultural and open space lands in the County.

Understanding the County's existing land use pattern is invaluable in developing a coherent future land use vision for Barry County. The current land use distribution is described on the following pages.

The categories used illustrate the existing land use conditions in Barry County. The Existing Land Use Map and corresponding analysis uncovers several implications for planning the County's future land uses.

Preserved Open Space/Natural Features

This land use represents much of Barry County's public and quasi-public lands. Although some of these parcels are in private ownership, or are Southwest Michigan Land Conservancy properties, much of this land is state-controlled, namely the Yankee Springs Recreation Area and the Barry and Middleville State Game Areas. This land use is characterized by undeveloped woodlands, open spaces, prairies, and wetlands.



Farmland/Rural Residential

This land use encompasses all of Barry County's agricultural farm operations as well as the rural residential parcels that often result from agricultural lot splits. Rural residential uses are most commonly single-family farmhouses or large lot single-family houses that have been split from larger agricultural parcels. Because of this, residential densities in this land use are typically well below 1 unit per acre.



Lake Residential

This land use is characterized by lakefront residential communities on the numerous inland lakes within Barry County. Although many of the houses in this land use resemble summer cottages on small lots, there are also larger houses that are constructed as year-round residences. Because of the small lot sizes and compact lakefront neighborhoods, residential densities in this land use are typically 4-8 units per acre.



Urbanized Residential

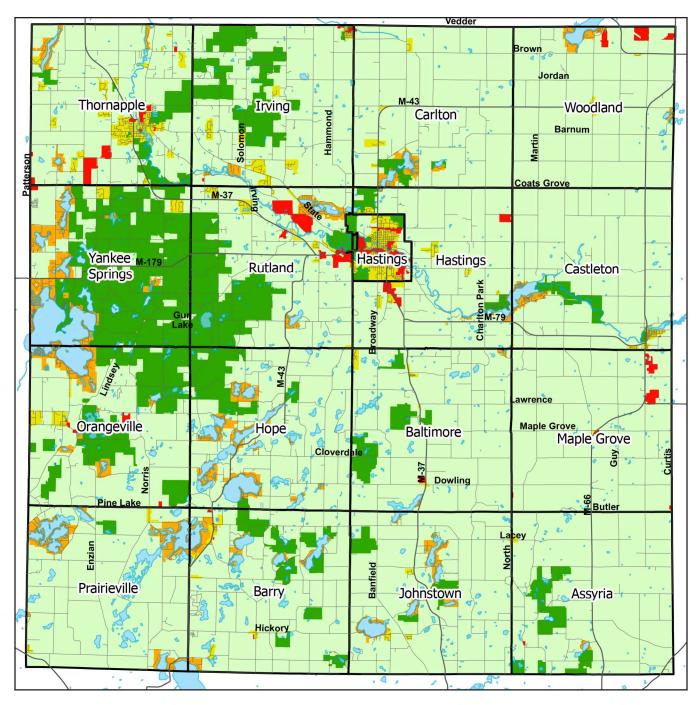
This land use represents the concentrated areas of residential neighborhoods within Barry County. These include residential blocks in cities and villages, multifamily apartment and condominium buildings, and single-family subdivision development. This land use represents the suburban and urban residential forms within the County and typically feature densities of 6-12 units per acre.



Commercial / Industrial

This land use encompasses both commercial and industrial operations within the County. This includes city and village downtown districts, suburban commercial centers, and large-scale industrial operations such as factories and warehouses.

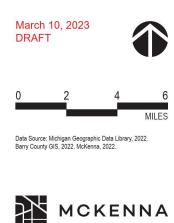




Existing Land Use

Barry County, Michigan





Root Findings

An analysis of Barry County's existing land use indicates agriculture and recreationoriented areas remain the County's primary land uses. This is desirable to residents and County leaders and this plan's top priority to preserve the County's natural beauty and recreational amenities.

Because of Barry County's desirable natural features and its proximity to major metropolitan regions, many local communities are experiencing extensive suburban development. This is primarily occurring in Thornapple, Irving, and Rutland Townships in the northwestern quarter of the County. Likely spurred by convenient access to the **Grand Rapids** region via M-37, subdivisions are replacing farmland in these communities, posing challenges in preserving the rural agricultural character of these areas.

Due to its abundance of inland lakes and waterways, Barry County features a high number of lakefront residential areas. While many residences may be used as summer cottages or vacation homes, increasing remote work policies may result in people using these houses as year-round residences.

Many Barry County residents work and shop outside of the County, indicating the importance of the region's major roadways. As the County faces growth pressures, directing this growth to areas served by existing infrastructure can alleviate the effects of sprawl and related traffic demands, while also encouraging local shopping and support of community amenities.

It is recognized that Barry County is well-positioned to serve as a residential growth magnet in the region. This potential trajectory will need to be balanced against the County's four fundamental land use directives: 1) agricultural and recreational lands are of primary importance; 2) suburban sprawl threatens those agricultural and recreational lands: 3) lakeshore development presents capacity challenges; and, 4) the major roadways in the County provide key commuting routes and direct access to local commercial

centers.





NATURAL RESOURCES

The defining characteristics of Barry County are the abundance of water, farmland and rolling terrain. Historically, Barry County has been a rural agricultural area that is also blessed with many natural amenities.



Water Features, Watersheds, and Floodplains

The abundance of freshwater recreation in the area makes this County unique. The most significant water features in Barry County are the Thornapple River and Gun Lake.

The Thornapple River begins in Eaton County and enters Barry County to the east near Nashville, before flowing into Thornapple Lake. The river picks up again on the west side of Thornapple Lake and flows through Hastings, Irving, and Middleville before exiting the County near the northwest corner. The Thornapple River Watershed includes 227 lakes, 741 total river miles. and a total area of 876 square miles. In 2001 the USDA completed a flood plain study for the Thornapple called the Thornapple River Flood Plain Management Study. The USDA study identified 10-, 50-, 100-, and 500-year flood plains. The Thornapple River is a key natural feature for Barry County.

Gun Lake and the Yankee Springs Recreation Area are also key natural and recreational features in Barry County. Gun Lake is a 2,737-acre all sports lake and is one of the largest inland lakes in the southern Lower Peninsula of Michigan. These features not only shape the geography of the County, but they also provide a large amount of the County's outdoor recreation and are an economic driver for the region. In addition to Gun Lake, Barry County also has nine major inland lakes and is dotted with nearly 250 smaller lakes.

Major Inland Lakes in Barry County:

- Algonquin Lake
- Cloverdale Lake
- Fine Lake
- Gull Lake
- Gun Lake
- Jordan Lake
- Leach Lake
- Long Lake >>
- Lower Crooked Lake
- Middle Lake
- Pine Lake
- Upper Crooked Lake
- Thornapple Lake
- Wall Lake
- Wilkinson Lake

Barry County has two major watersheds; the Kalamazoo River and the Grand River Watershed. The County identifies 13 streams that feed into the Grand River watershed and eight streams that flow into the Kalamazoo River watershed. Water quality in watersheds is directly related to the land practices that occur in the areas surrounding them. Increasing development and impervious surfaces can have a negative impact on stormwater runoff into the watersheds. Runoff that is produced by the application of lawn fertilizers is also another major factor in reducing the quality of watersheds. Lists of the streams and their corresponding watersheds are below.

The Pierce Cedar Creek Institute is currently conducting a watershed study on the Cedar Creek watershed. Information gathered from the study will identify pollutants and their levels, identify concentrations of pollutants, and help to identify the sources of the pollutants.

Grand River Watershed

- Cedar Creek
- Coldwater River
- **Duck Creek**
- Duncan Creek
- Fall Creek
- Glass Creek
- Gun River
- Little Thornapple River
- Mud Creek
- Quaker Brook
- Scipio Creek
- Shanty Creek
- Thornapple River

Kalamazoo River Watershed

- Augusta Creek
- Gull Creek
- Gun River
- Rabbit River
- Seven-mile Creek
- Spring Brook
- Wabascon Creek
- Wonadoga Creek

Groundwater and Surface Water

As population growth and development continue to occur in Barry County, there will be degradation of the County's natural resources-including groundwater and surface water. There are several organizations that are involved with water quality in the Barry County area. Some of them include the Barry County Conservation District, the Barry-Eaton County Health Department, and the Michigan Groundwater Stewardship Program at the Michigan State University Extension in Hastings. These organizations all have an interest in water quality protection and provide various related services to the public.

Floodplains

In this section of the Master Plan floodplains and wetlands are discussed. Floodplains are the low-lying areas adjacent to rivers that are formed by sediment deposited by rivers. The floodplain is an integral part of a river and is essential for a healthy functioning river system. A wetland is a land area that is covered with water, either permanently or seasonally.

Barry County has an abundance of freshwater lakes, ponds, rivers, and streams which can be associated with floodplains. Floodplains are those areas which are adjacent to lakes, rivers, streams, and ponds that are prone to overflow and flood their banks. Land within the 100-year flood plain statistically has a 1% chance of flooding in any given year, and therefore a 100 percent chance of flooding within a 100-year period. Floodplains differ greatly in size depending upon factors such as the permeability of the soil and the volume of water within the water body.

A floodplain contains three (3) basic components. First, the channel, which is the area of normal stream flow. Second, the floodway, which is the 100-year flood plain. Third, the flood fringe, which is the land between the floodway and the outer limits of the areas known to be subject to possible flooding. In Barry County, there are many areas which are mapped floodplain areas.

The following statements are generalized statements of map description and are not intended to indicate the flow of water. In the northern half of the County, there are numerous floodplains along the Thornapple River and Thornapple Lake. The largest floodplain area in the northern portion of the county is in Castleton Township. This floodplain is created by the Thornapple River and Mud Creek flowing into Thornapple Lake. The Thornapple River flows west out of the Village of Nashville on the county's eastern border, before

emptying into Thornapple Lake. The area surrounding the Thornapple River floodplain is rural agriculture with small housing clusters along the south shore of Thornapple Lake. The Mud Creek floodplain begins in Woodland Township in the County's northeast corner and flows southwest into the Thornapple Lake. Most of the land surrounding Mud Creek floodplain is rural agriculture.

The Thornapple River leaves the City of Hastings, near the middle of the County, and flows west, creating a chain of floodplain areas along its northern and southern banks. The river bends to the west at Irving and creates another floodplain to the northwest of the hamlet. The river then flows into Thornapple Township before bending to the north and creating a floodplain south of Middleville. The river then leaves the Village and flows north before exiting the County. This area contains another floodplain and is mostly surrounded by rural agriculture.

Another significant floodplain is the area surrounding Gun Lake in Yankee Springs and Orangeville Townships. Gun Lake is a large inland lake that makes up a significant portion of surface area of Yankee Springs Township. The floodplain around Gun Lake covers a large area, especially on the northern shore. Most of this area is the Yankee Springs Recreation Area, but there are small residential clusters and cottages in the area, as well. A small portion of Gun Lake and its floodplain extends over the western boundary of Barry County into Allegan County. Another large section of floodplain extends directly to the south of Gun Lake into Orangeville Township, on the western boundary of the County.

The southern half of Barry County is dotted with small lakes and ponds. Many of the areas surrounding these freshwater bodies are 100-year floodplains. The largest floodplain in this area is on the southern border of the County, straddling the Assyria Township and Johnstown Township lines. This large, marshy floodplain area is created by a series of small lakes that are connected by Wabascon Creek. Some of the lakes in the chain are Cassidy Lake, High Hill Lake, Mud Lake, and Metcalf Lake.

Two other minor floodplain areas are created by High Bank Creek and Mud Creek in Maple Grove and Baltimore Townships. These creeks create marshy floodplain areas that are surrounded by rural agriculture and extend down into Johnstown Township to the south. Other minor floodplain areas in the southern portion of the County are in Hope Township. Hope Township has several freshwater lakes and ponds,



including Wall Lake, Long Lake, Cloverdale Lake, Head Lake, Pine Lake, Guernsey Lake, Wilkinson Lake, Big Cedar Lake, Shallow Lake, and others. Fall Creek creates a 100-year floodplain area in the northeast corner of the Township near Twin Lakes. Another minor floodplain area in Hope Township is in the northwest corner of the Township near Pine Lake. This floodplain is created by Glass Creek flowing through the Township. Most of the area around Glass Creek is the Hidden Pond Nature Preserve. The floodplain extends north into Rutland Township.

Lastly, Hope Township contains a 100-year floodplain area on the north and south shores of Wall Lake. Wall Lake is a 540-acre lake in the southwestern portion of Hope Township. The lake is surrounded on 3-sides by residential clusters and cottages. The southwest shore of the lake is not developed and is currently used for rural agriculture. This lake creates 100-year floodplain areas in the southwest corner and the northeast corner, between Wall Lake and Shallow Lake to the east.

A floodplain has the natural significance of being an area likely to flood, and thereby endangering life and property. In 1968 the U.S. Congress passed the National Flood Insurance Act (NFIA), creating the National Flood Insurance Program, which gave floodplains a regulatory significance as well. The NFIA shifted the financial burden of funding flood disaster from the government (and therefore the taxpayers as a whole) to those most likely to need the dollars through the establishment of a self-funding insurance program. Flood insurance, which had not been available before, was made available and was made a requirement of receiving a mortgage from any federally backed lender for structures located in the 100-year floodplain. The program is administered at the local and state level and imposes strict limitations on any type of development activity within the 100-year floodplain.

Communities "participate" by adopting local floodplain management ordinances and must be "participating" for residents to be eligible for the insurance. Barry County entered the program in February of 1989. In addition, floodplains are regulated by state statute (Part 31 of P.A. 451 of 1994). A permit from EGLE is required for all activities within the floodplain that reduce storage capacity. The County Zoning Ordinance assigns floodplain management duties to the building and zoning official. A floodplain permit or a letter of no authority from the State is required when an application for any type of development is made within a flood hazard area zone, according to the County Zoning Ordinance.

Communities participating in the National Flood **Insurance Program**

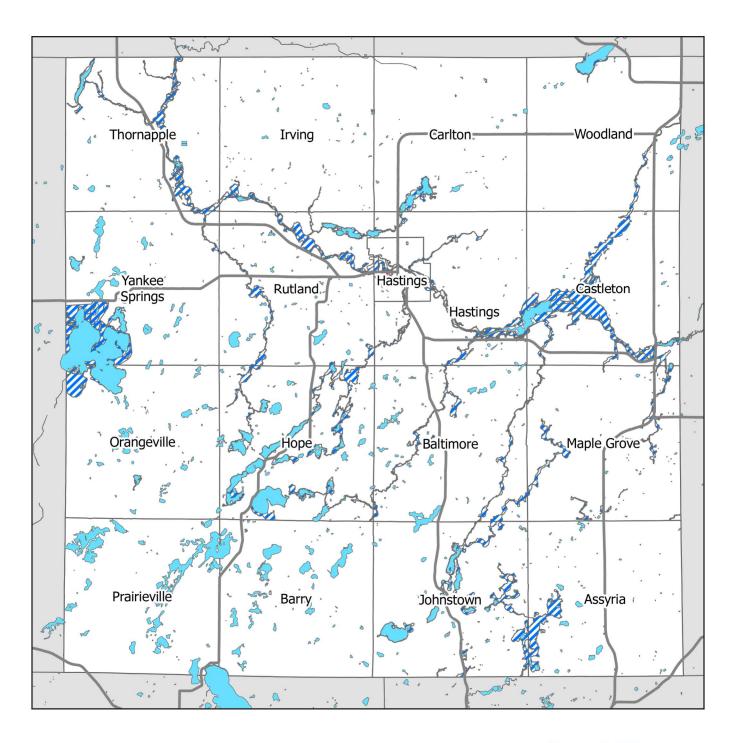
- Baltimore Township
- Barry Township
- Carlton Township
- Castleton Township
- Village of Freeport
- City of Hastings
- Hastings Township
- Hope Township
- Irving Township **>>**
- Johnstown Township
- Maple Grove Township
- Village of Middleville
- Village of Nashville
- Orangeville Township
- **Rutland Township**
- Thornapple Township
- Woodland Township
- Yankee Springs Township

Communities not participating in the National Flood **Insurance Program**

- Assyria Township
- Prairieville Township

There are several policy implications at the County level as result of the NFIA. Financial incentives are built in to encourage correct administration of the program. EGLE has the authority to issue permits for development activities within the regulated floodplain area, but it is local administrators who assure that the permits are secured when required. An administrative oversight which allows construction in the floodplain will cost a resident property owner money through annual flood insurance premiums and will affect property value. Communities which fail to comply with Program requirements may be suspended from the Program, eliminating local lending options for residents.

Communities are offered an additional financial incentive for doing more than the minimum required by the NFIA. The NFIA establishes a voluntary community rating system (CRS), scored from 1-10 with non-participating communities being given automatic score of 10. In communities where a lower rating is achieved, residents receive reduced insurance rates. Recognized activities within the CRS scoring schedule include public information, mapping, and flood damage reduction. Barry County may choose to participate in the CRS program.



Floodplain Locations

Barry County, Michigan

LEGEND

Zone AE (100-year Flood)
Zone X (500-year Flood)







Data Source: Michigan Geographic Data Library 2022. United States Data Catalog – Naional Flood Hazard Layer 2020.





Wetlands

Wetlands are characterized by water saturation in the root zone, or above the soil surface, for a certain amount of time during the year. The fluctuation of the water table above and below the soil surface is unique to each wetland type.

Wetlands play a critical role in regulating the movement of water within watersheds. They store precipitation and surface water and then slowly release the water into associated water resources, ground water, and the atmosphere. Wetlands also help maintain the level of the water table and may serve as filters for sediments and organic matter. They may also serve as a sink to catch water, or transform nutrients, organic compounds, metals, and components of organic matter. Wetlands can impact levels of nitrogen, phosphorous, carbon, sulfur, and various metals. Without them, water quality decreases, areas are prone to flash flooding and habitat for specialized plants and animals is reduced.

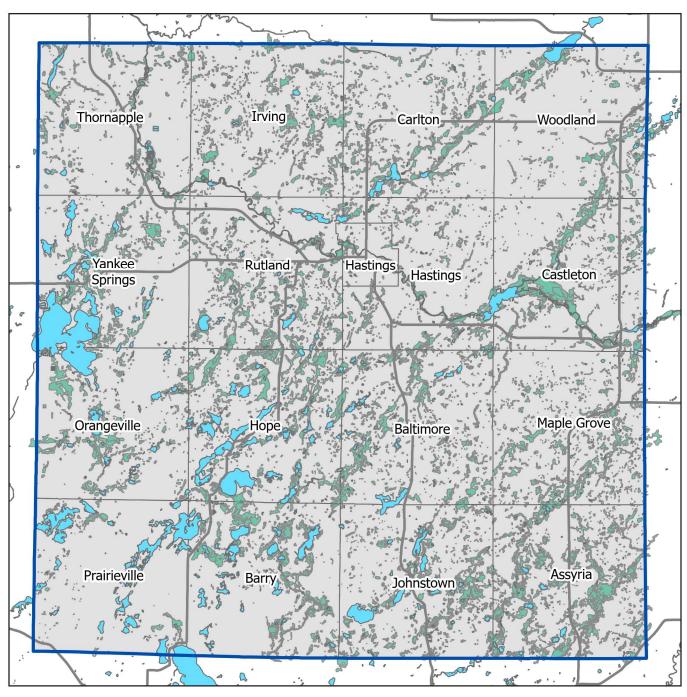
The wetlands in Barry County are dispersed and are primarily associated with low-lying areas and drainages.

Floodplains vs Wetlands

Wetlands differ from floodplains in that a wetland is consistently saturated with water in the root zone (or above), except in extreme dry conditions. Flood plains, on the other hand, are uplands that are consistently dry, except in extremely wet conditions, where nearby water bodies can overflow their banks. Wetlands can exist within flood plains, however, especially when they are in close proximity to bodies of water.







Wetlands

Barry County, Michigan





Soils and Farmland

The U.S. Department of Agriculture, Soil Conservation Service, classifies the soils of Barry County into eight different general soil associations. A detailed description of each soil type, location in the County, and suitable uses is below.

Soil Categories

- Marlette-Capac
- Kalamazoo-Oshtemo >>
- Coloma-Boyer >>
- Marlette-Oshtemo >>
- >> Perrington-Ithaca-Marlette
- >> Houghton-Sloan
- Oshtemo-Coloma- Marlette
- Coloma Boyer-spinks

The Marlette-Capac Association exists primarily in the northeastern portion of Barry County, including Woodland, Carton, Castleton, Hastings, and Maple Grove Townships. This association makes up approximately 18 percent of the County and is primarily used for crops such as hay, corn, soybeans, winter wheat, and pasture. These soils are generally not well suited to septic systems due to wetness and low permeability. Slopes range from 0 to 12 percent.

The Kalamazoo-Oshtemo Association is located in the southwest Barry Township, Southeast Prairieville Township, and in western Thornapple Township. This soils association, making up about seven percent of the County's soils, is slightly sloping with a range of 0 to 12 percent. Most of these soils are used for crops, including hay, as well as pasture or woodland. The low slope areas are generally well suited to building site development and septic system function.

The Coloma-Boyer Association is located in the northwestern portion of the County in parts of Yankee Springs, Irving, Rutland and Thornapple Townships. This soil is primarily sandy, well drained, and is used for cropland and forests. Septic systems are moderately suitable on this soil type but may cause well water pollution due to poor filtration.

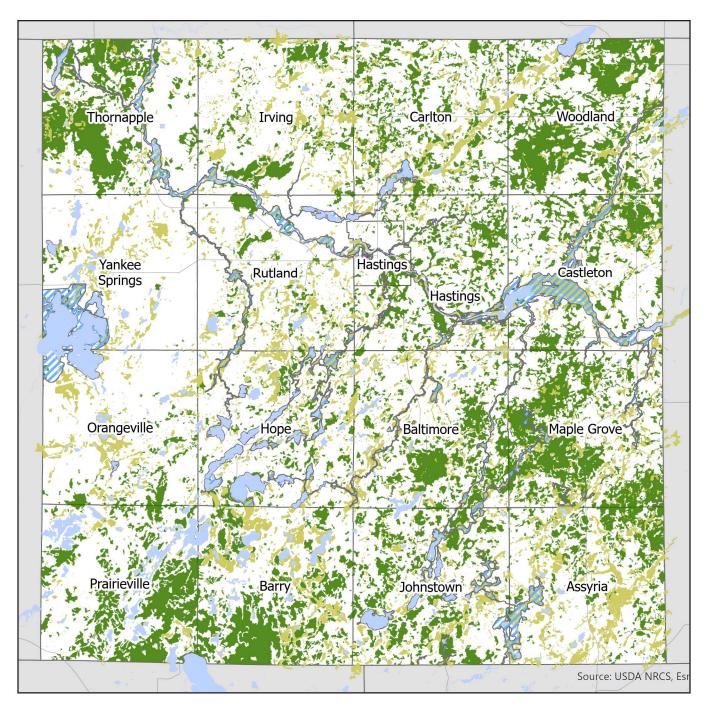
The Marlette-Oshtemo Association is a steep sloped soil ranging from 6 to 40 percent. This soil makes up approximately 21 percent of the county and is located in various locations throughout the County. Areas of steep slope not suitable to development or septic systems, but other areas with gentle slopes are generally well suited for both.

The Perrington-Ithica-Marlette Association, only making up about 4 percent of the County's soil, is primarily located Maple Grove Township and is associated with the higher elevations in the County. The soils in this association are well suited for crops such as corn and soybeans. Suitability for development or septic systems varies greatly in this association, due to the soil composition and slope.

The Houghton-Sloan Association is typically found close to water bodies including rivers and streams, and in the lower parts of the landscape. This soil, often located in flood plains, is usually level and composed of mucks, peat, and sand. Not well suited for development or agriculture due to instability and wetness, this association can provide excellent areas for wildlife and forests. Individual disposal of effluent is severely limited due to low permeability and high-water tables. This soil makes up about 8 percent of the County soils.

The Oshtemo-Coloma-Marlette Association is found in the central and southern half of Barry County, making up about 22 percent of the County soils. Steep areas are not suitable for development or septic fields, although this area is well suited for pasture and hay.

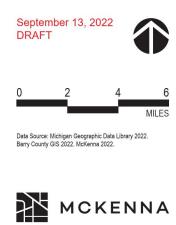
The Coloma-Boyer-Spinks Association is generally high sloped soil, ranging from 6 to 40 percent. This soil makes up approximately 13 percent of the soils in the County and is located east of Gun Lake and west of Podunk Lake in the western portion of the Township. The Yankee Springs Recreation Area and the Barry State Game Area are in this region, which was primarily because these soils were not suitable to agriculture. The federal government bought these land areas in the 1930's and rehabilitated the soils through efforts of the CCC and Workers Project Association.



Preserved Land

Barry County, Michigan







Farmland

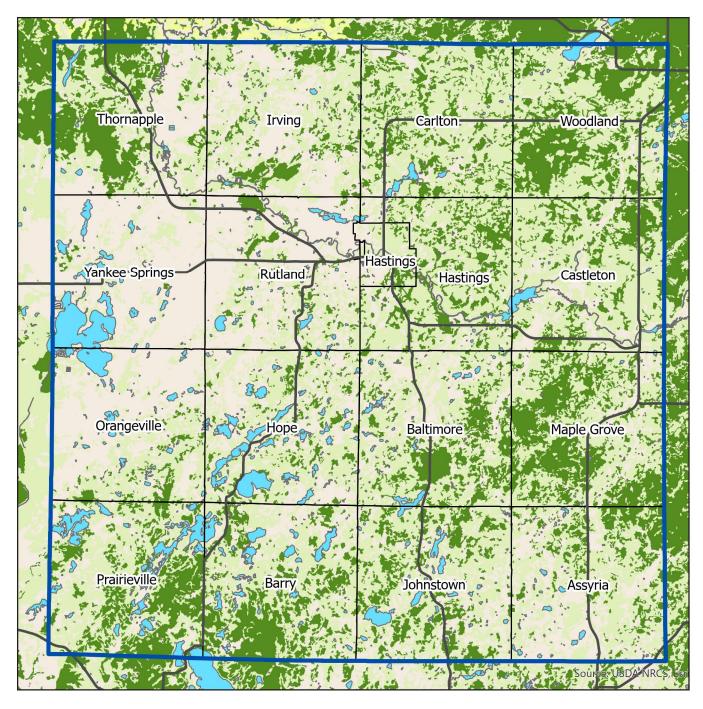
To preserve farmland, Michigan has enacted the PA 116 farmland preservation program. PA 116, the Michigan Farmland and Open Space Preservation Act, is a law designed to preserve farmland from being developed.

The law, which was passed in 1974, allows a farm landowner to enter into an agreement with the state that ensures that the land remain in agricultural use for a minimum of 10 years and up to 90 years. In return, the farm owner may be entitled to income tax benefits and exemption from special assessments on the land. Today, 3.3 million acres of land in Michigan is protected under this program (PA 116: A farmland preservation program in Michigan that new farmers may not be familiar with - Farm & Farmers Markets (msu.edu), June 25, 2018).

Barry County has a total of 37,290 acres protected by PA 116. The County also operates a Purchase of Development Rights Program known as the Barry County Farmland Preservation Program. The County has adopted Farmland Preservation and Open Space Preservation Ordinances to implement the program. The County program has preserved XX,XXX acres of Farmland.

In addition to PA 116 properties, the County also has a large amount of prime farmland. Prime farmland is a USDA designation for land that has the ideal conditions for farming. The largest sections of prime farmland in Barry County are in the northwest, northeast, and southwest corners of the County. These areas make up portions of Thornapple, Woodland, Prairieville, and Barry Townships. There is also a large section of prime farmland in the eastern portion of the County in Maple Grove and Baltimore Townships. The area of the County with the least amount of prime farmland is the area near Yankee Springs Recreation Area and Gun Lake.

To ensure that Barry County retains its rural agricultural identity and conserves its natural spaces, the County allows for the preservation of land. Preserved land exists throughout Barry County in the form of agriculture, wetlands, forests, recreation areas, and bodies of water.



Prime Farmland Locations

Barry County, Michigan

Prime Farmland Farmland of Local Importance Farmland of Statewide Importance Farmland of Unique Importance Not Prime Farmland





Mineral Mining

Barry County is home to the numerous types of soil categories listed above. Many areas of the County have soils that are ideal for gravel mining and processing. An overview of those soil types and their locations is below.

The Kalamazoo-Oshtemo series of soils is Barry County's best soil for potential gravel mining and processing. The soil can be found in the southwest and western portion of the County, specifically in southwest Barry Township, southeast Prairieville Township, and in western Thornapple Township.

The **Coloma-Boyer** soil is another potential soil for gravel mining and processing. The Coloma soil is mixed with the Boyer soil in the northwest portion of the County in Yankee Springs, Irving, Rutland, and Thornapple Townships. The soil can also be found mixed with Spinks soils in the central and southern portion of the County. The Coloma-Boyer-Spinks soil can also be found in areas east of Gun Lake and west of Podunk Lake in Rutland Township. Both of these areas should be considered for potential gravel mining and processing.

Lastly, the Oshtemo-Coloma-Marlette soil, which is found in the central and southern portion of the County, would also potentially be suitable for mining and processing. This soil is a mixture of two soils that are present in many parts of the County. Together, they make up 22% of the soil in Barry County. Coloma soil is sandy and dry and Marlette and Oshtemo are both loamy soils. This soil will need to be studied further to ascertain its suitability for gravel mining and processing.

There are several other soil types in Barry County that are not suitable for gravel mining. Those include: Houghton-Sloan, Perrington-Ithica-Marlette, Marlette-Capac, and the Oshtemo-Coloma-Marlette. Quite often, these are the rich agricultural lands that make up a large portion of the eastern half of Barry County.

Detailed descriptions of the individual soils in Barry County and their suitability for gravel mining and processing. all are listed below.

GOOD

Boyer: The Boyer series consists of very deep, well drained soils formed in sandy and loamy drift underlain by sand or gravelly sand outwash at depths of 51 to 102 cm (20 to 40 inches). The soils are on outwash plains, valley trains, kames, beach ridges, river terraces, lake terraces, deltas, and moraines. Slope ranges from 0 to 50 percent.

Coloma: The Coloma series consists of very deep, somewhat excessively drained or excessively drained soils formed in sandy drift. These soils are on moraines, outwash plains, deltas, and stream terraces. Slope ranges from 0 to 70 percent. Mean annual precipitation is about 787 mm (31 inches).

Kalamazoo: The Kalamazoo soil consists of very deep, well drained soils formed in loess-influenced loamy outwash overlying sand, loamy sand, or sand and gravel outwash on outwash plains, terraces, valley trains, and low lying moraines. Slope ranges from 0 to 18 percent. Saturated hydraulic conductivity is moderately low to moderately high in the loamy materials and high in the sandy materials.

Oshtemo: The Oshtemo series consists of very deep, well drained soils formed in stratified loamy and sandy deposits on outwash plains, valley trains, moraines, and beach ridges. Slope ranges from 0 to 55 percent.

Spinks: The Spinks series consists of very deep, well drained soils formed in sandy eolian or outwash material. They are on dunes, moraines, till plains, outwash plains, beach ridges, and lake plains. Slope ranges from 0 to 70 percent.

POSSIBLE

Marlette: The Marlette series consists of very deep, moderately well drained soils formed in loamy till. These soils are on till plains, ground moraines, and end moraines. Slope ranges from 2 to 12 percent.

Perrington: The Perrinton series consists of very deep, moderately well drained soils formed in loamy and/or clayey till on ground moraines, end moraines, and till plains. Slope ranges from 0 to 12 percent. Mean annual precipitation is about 762 mm (30 inches), and mean annual temperature is about 7.8 degrees C (46 degrees F).

NOT SUITABLE

Capac: The Capac series consists of very deep, somewhat poorly drained soils formed in loam or clay loam till. These soils are on moraines and till plains. Slope ranges from 0 to 6 percent.

Houghton: The Houghton series consists of very deep, very poorly drained soils formed in herbaceous organic materials more than 130 cm (51 inches) thick in depressions and drainageways on lake plains, outwash plains, ground moraines, end moraines, till plains, and floodplains. Slope ranges from 0 to 2 percent.

Ithaca: The Ithaca series consists of very deep, somewhat poorly drained soils formed in till on ground moraines and end moraines. Slope ranges from 0 to 6 percent.

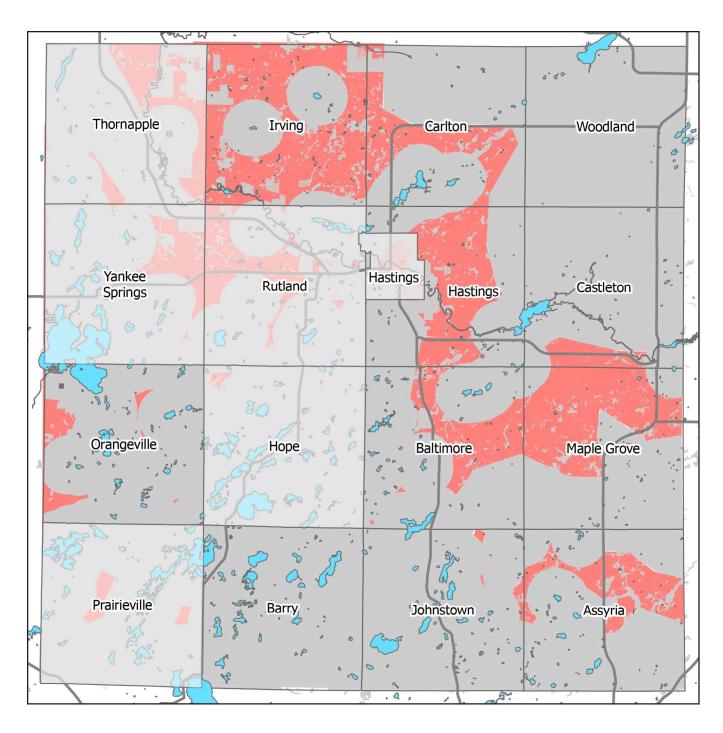
Sloan: The Sloan series consists of very deep, very poorly drained soils formed in loamy alluvium on flood plains. Slope ranges from 0 to 2 percent.

Mineral Mining Target Areas

_

The map on the following page shows the parts of the County that will be most susceptible to interest from mineral mining companies, based on the soil type, proximity of wetlands, potential for development, and other factors. The County does not necessarily endorse the use of land in these areas for mineral mining, but understands that the need may arise for mines. Any mining operation must be environmentally responsible and have a detailed reclamation plan for after its functional life is



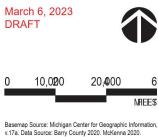


Approximate Mineral Mining Areas

Barry County, Michigan

LEGEND

Approximate Mineral Mining Target Area
Approximate Locations Not Suitable for Mineral Mining





Endangered, Threatened, and Special Concern Species

According to the Michigan Natural Features Inventory, several plant and animal species are listed as endangered in Barry County. As development continues in the region, Barry County must plan for species and habitat preservation or risk losing valuable biodiversity.

Barry County has three endangered species—the Indiana bat, the Mitchell's satyr, and the Cerulean Warbler. According to the U.S. Fish and Wildlife Service, the Indiana bat is a medium-sized Myotis, resembling the little brown bat (Myotis lucifugus) but differing in coloration. Its fur is a dull grayish chestnut rather than bronze, with the basal portion of the hairs on the back a dull-lead color. The species' historical range included Alabama, Arkansas, Connecticut, Georgia, Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Vermont, Virginia, West Virginia.

The cerulean warbler (Setophaga cerulea) is a small songbird in the family Parulidae. It is a long-distance migrant, breeding in eastern North American hardwood forests. In the non-breeding season, it winters on the eastern slope of the Andes in South America, preferring subtropical forests.

The Mitchell's satyr is a dark, chocolate brown, medium-sized butterfly with a wing span that ranges from 1.5 to 1.75 inches (3.8-4.4 cm). The ventral surface, or underside, of the forewing and hindwing, contains a row of four to five black, yellow-ringed ocelli, or eyespots, with the central three eyespots on the hindwing being the largest. Two orange bands encircle the eyespots. Mature larvae are pale green with pale, longitudinal stripes and a bifurcate tail. The Mitchell's satyr is endangered in the U.S., Michigan, and Barry County. It is ranked S1 or critically imperiled and is legally protected in Michigan. Barry County should take steps to provide habitat improvements for these and other endangered species.

Barry County is home to a few invasive species of plants and insects. The zebra mussels and the Eurasian milfoil (marine plant) can be found in the waterways of Barry County.

Methods to control the spreading of these exotic marine species include thermal flushing, chlorination, mechanical filtration, anti-fouling paints, acoustics, and electrical shock. However, these solutions are generally only useful for spot control. Barry County

boaters can also assist in the process. After boating in waters likely contaminated, the following are recommended tasks to ensure that the mussels do not spread.

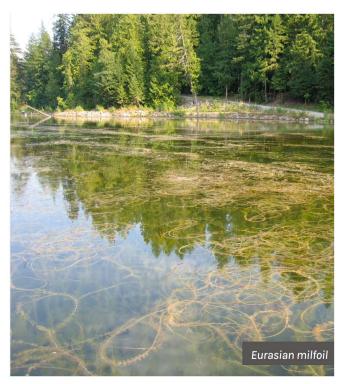
- » Do not transport bait used in infested waters; wash bait pails with hot water.
- » Leave the boat out of water for at least three days in hot, dry conditions (zebra mussels can stay alive up to five days out of water).
- » If the boat trailer has water in it, drain it immediately.

Gypsy moths and purple loosestrife are threats to the County's plant habitat. Remediation techniques should be followed for each of these invasive species. Aerially spraying with pesticides to repress outbreaks of gypsy moths has been an effective mechanism for managing the pest. Also, "tree banding," which precludes caterpillars from climbing trees to feed, destroying eggs, and natural parasites, viruses, and diseases, is another method to help eradicate the moth.

Purple loosestrife is harder to combat when the plant has taken over a large area. Remediation methods like burning, digging, herbicides, and cutting are impractical to manage this invasive plant. Biological control and introducing natural enemies into the habitat can be effective.















Root Findings

The defining characteristics of the County are the abundance of water, farmland and rolling terrain.

and nearly 250 smaller lakes. Gun Lake is the County's biggest lake and a key natural resource. Gun Lake continues to provide recreation amenities for the region, and it is an economic driver for the area.

Barry County has 15 major inland lakes

The County
has two
major
watersheds.
13 streams
feed into the
Grand River
watershed
and eight
streams
flow into the
Kalamazoo
River
watershed.

Water quality in watersheds is directly related to the land practices within the watershed. Low impact development standards in waterfront areas can help address this challenge.

Wetlands
exist
throughout
the County,
and are
important in
protecting
watersheds
and habitats.
Wetland
regulations
have not
been adopted
at the local or
county level.

Many areas of the County have soils ideal for mineral mining. Areas vulnerable to mineral extraction should be identified and appropriate standards to protect preserved lands; require environmentallyresponsible operations; and ensure reclamation should be established.

Prime farmland exists throughout the County, though it is most prevalent in the eastern townships. Over 37,000 acres of farmland in Barry County are being protected through the Michigan Farmland Preservation Program (PA 116).

There are several plant and animal species listed as endangered in Barry County. As the human population of the County continues to expand, it is possible that plant and animal diversity will continue to decrease unless intentional actions are taken to protect vulnerable species.

Invasive species such as zebra mussels and the Eurasian milfoil (marine plant) have been found in the waterways of Barry County. Gypsy moths and purple loosestrife are threats to the County's vegetation. Active remediation techniques are needed Countywide to control invasive species.



THE PEOPLE OF BARRY COUNTY

Population and demographic trends are a key measure in observing how Barry County has changed over the past decade. Because of its close relation to land use, this section highlights crucial demographic information and its influence on future long-range planning. Understanding the population of Barry County is imperative to creating a Master Plan.



Demographic and Community Profile

Barry County has grown over the past decade, gaining over 3,200 residents. The population of Barry County now stands at 62,992, according to 2021 Census estimates. As the table below indicates however, much of this growth is concentrated in only a few communities while other communities have experienced a decline in population since 2010.

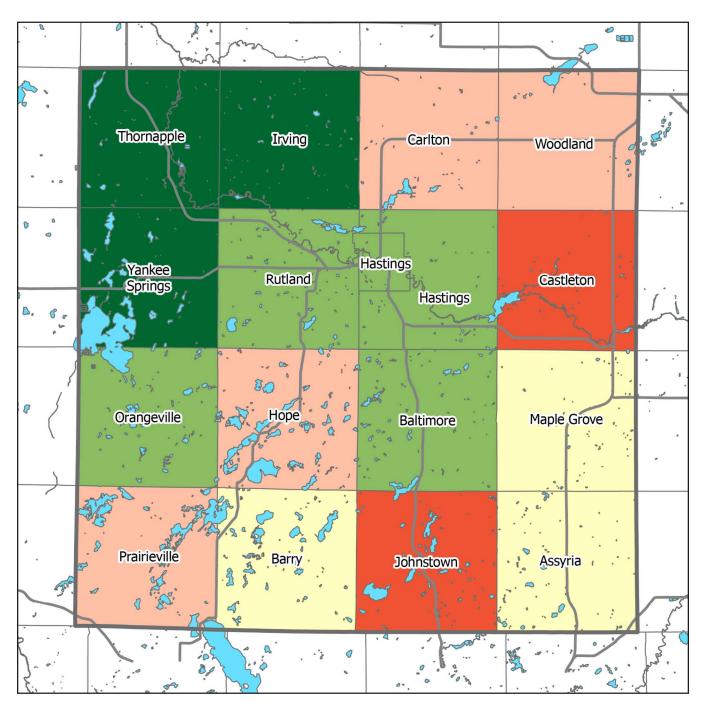
Table 1: Barry County Population Growth, 2010-2020.

	2020 Population	2010 Population	Percent Change (2010-2020)
Barry County	62,423	59,173	5.5%
Assyria Township	1,992	1,986	0.3%
Baltimore Township	1,947	1,861	4.4%
Barry Township	3,417	3,378	1.1%
Carlton Township	2,368	2,391	-1.0%
Castleton Township	3,329	3,471	-4.1%
City of Hastings	7,514	7,350	2.2%
Hastings Charter Township	3,013	2,948	2.2%
Hope Township	3,154	3,239	-2.6%
rving Township	3,734	3,250	14.9%
Johnstown Township	2,841	3,008	-5.6%
Maple Grove Township	2,676	2,668	0.3%
Orangeville Township	3,398	3,311	2.6%
Prairieville Township	3,334	3,404	-2.1%
Rutland Charter Township	4,136	3,987	3.7%
Thornapple Township	9,331	7,884	18.4%
Voodland Township	1,994	2,047	-2.6%
ankee Springs Township	5,322	4,065	31.0%

Source: US Census Bureau Decennial Census Data. (2020). Table P1: Race (PL94-171)

According to this data, the northwestern portion of the County experienced the greatest population increase while the southern and eastern portions of the County experienced the most significant population decline. The geography of Barry County's population change over the past decade is illustrated on the following map.

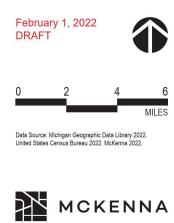
The residents of Barry County are mostly white (96%) or Hispanic/Latino (3.5%). Other races are present in the County, but they represent less than 1% of the total population of the County. Barry County has a large population of adults who are 18-64, making up 54% of the population. Older adults aged 65 and older make up 19% of the County. Children and those under 18 years of age represent about 22% of the population of Barry County.



Population Growth, 2010-2020

Barry County, Michigan





Population Projection

In order to project the population in the future, a Cohort-Component Population Projection was used. Cohort-Component Population Projections are developed using the following methodology:

Cohort-Component

The population is divided into ten-year age cohorts, using US Census data. At each ten-year interval, individual age cohorts are moved up the ladder. For instance, the group that was 30-40 years old in 2010 became the 40-50-year-olds in 2020, minus those who die during that time frame based on the mortality rate for their age group. In order to calculate the number of people aged 0-10, the population of women of childbearing age was calculated and a 10-year birthrate per thousand (from the Michigan Department of Community Health) applied to give the number of births. By using the average death and birth rates, the analysis predicts how many people should be living in the County in 2020, if no one had moved in or out of the County.

Net Migration Calculation

To account for migration, the population projection also includes a net migration factor. The net migration factor was calculated by comparing the population we would have predicted from 2010, to the actual population in 2020, which we now know. The Cohort-Component Analysis predicted a County population of 66,852, but the actual population was 62,423 Therefore, the analysis estimates a **net loss of 4,429** people from the County who would otherwise be living there if they had not moved away. 4,429 represents a -6.6% net migration rate. If that net migration rate were to continue over the next 10-20 years, the table below shows the population change in Barry County:

Table 2: Barry County Population Projection

Year	Projected Population
2020	62,423
2030 (Projected)	65,029
2040 (Projected)	67,464

Source: US Census, ESRI, McKenna Calculation

Alternate Migration Rates

The current net migration rate might not stay the same over the next decades. Table 5 shows how the population will change if the migration rate stays the same, slows down, or becomes positive (more people move in than move out). The analysis includes a 10% net migration rate as a "stress test" to understand what the upper limit of the county's population growth could be. If the County plans for this "Extreme Growth" scenario, it can ensure that the county has planned for enough housing to manage very high growth rates.

The table includes five scenarios.

- Continued Out-Migration (-6.6% Net Migration Rate)
- Reduced Out-Migration (-3.3% Net Migration Rate)
- Zero Net Migration (0% Net Migration Rate)
- Positive Net Migration (+2% Net Migration Rate)
- Extreme Growth (+10% Net Migration Rate)

Table 3: Alternate Migration Scenarios

Not Miduation			
Net Migration Rate	2020 (Actual)	2030 (Projected)	2040 (Projected)
-6.6% (Actual 2010-2020)	62,423	65,029	67,464
-3.3%	62,423	66,991	71,494
0%	62,423	68,953	75,644
2%	62,423	70,142	78,218
10%	62,423	74,898	88,950

Source: US Census, ESRI, McKenna Calculation

Below, the analysis further breaks down that migration rate into individual age groups, to see which groups had the biggest change between predicted and actual change. Table 3 demonstrates the migration rate for each age group. It also demonstrates the general rate of change from 2010-2020 in Barry County side-by-side with Michigan's rate of change for comparison.

Barry County experienced the most out-migration from people in their 20s, which is not surprising, given the County's lack of a four-year university, and relative lack of jobs and housing for emerging adults. The County also experienced outmigration of retirees. In some cases, these residents moved to warmer climates, but they may also have sought out assisted living facilities in neighboring counties. Due to overall demographic shifts (i.e. the aging of the large Boomer and Millennial generations), the number of 20-somethings and retirees in the County did increase overall, despite the out-migration.

The County experienced significant in-migration from people between 30 and 40 years old. This is the age group when households, especially couples, seek out housing with land, quiet, and quality schools, which drove over 1,600 30-somethings to Barry County over and above what the projection anticipated. One of the key factors behind this in-migration may have been the rise in "work from home" in the wake of the Covid-19 pandemic. The ability of established professionals to avoid commuting on some or all work days would have increased the appeal of Barry County's natural beauty and recreational amenities, especially for families.



Table 4: Population Change in Age Structure, Barry County

	2010				Actual %	Change
	Population	Predicted	Actual	Migration Rate	Barry County	Michigan
Total Population	59,573	66,852	61,045	-8.7%	+2.5%	+0.2%
0-9 years	8,043	9,222	7,287	-21.0%	-9.4%	-9.5%
10-19 years	8,459	7,978	7,611	-4.6%	-10%	-12.3%
20-29 years	6,077	8,431	6,655	-21.1%	+9.5%	+7.8%
30-39 years	7,328	6,011	7,457	+24.1%	+1.8%	-3.2%
40-49 years	8,877	7,206	6,937	-3.7%	-21.9%	-19.0%
50-59 years	9,114	8,635	9,116	+5.6%	0%	-2.1%
60-69 years	6,195	8,537	8,564	+0.3%	+26.2	+39.3%
70-79 years	3,574	5,352	4,512	-15.7%	+52.5	+32.1%
80+ years	1,906	5,480	2,906	-47.0%	+2.5	+9.7%

Source: US Census





Age Characteristics

Understanding the age characteristics of Barry County residents helps identify factors that have profound economic, public health, and land use planning implications. Just as age pyramids are used to indicate levels of development and market opportunities at the global scale, analyzing age cohorts of County residents provides a "snapshot" of its current population and allows us to project future needs based on these figures.

For example, a high number of working-age adults may indicate a strong employment base - an attractive feature for many manufacturing and consumer-based industries. Additionally, a high number of children between 0-9 years old may indicate future school facility and playground needs. A high population of retired and elderly residents may also highlight potential demand for senior programming or specific recreation opportunities. While far from comprehensive, analyzing age characteristics is valuable in projecting Barry County's future population growth.

Table 5 on the following page provides age demographics of communities within Barry County. Some summary points of this data are included below.

- Young Children as Percentage of Total Population -11.3% of Barry County's total population is under the age of 9 years old. Although this is slightly lower than the national average of 11.9%, some communities such as Irving Township (17.2%) and the City of Hastings (14.1%) are higher than the national average, indicating a larger number of children in those communities.
- Working-Age Adults as Percentage of Total Population - 48% of Barry County's total population is between the ages of 20 and 59. This is lower than the national average of 52%. Woodland Township

features the highest percentage of residents in this age cohort (60.7%) along with the City of Hastings (53.4%). This likely has downstream impacts on employment, family creation, and natural population growth, as this age cohort is most likely to be in the workforce and starting families.

Senior Citizens as Percentage of Total Population - 25.2% of Barry County's total population is over 60 years old. This is higher than the national average of 22.8%. The communities in Barry County with the highest percentage of this age cohort are Hope Township (39.3%) and Johnstown Township (34.9%).

In the aggregate, Barry County's population is older than the national average, although the communities experiencing population growth tend to feature higher percentages of younger residents.



Table 5: Barry County Age Demographics.

	0-9 Years	10-19 Years	20-29 Years	30-39 Years	40-49 Years	50-59 Years	60-69 Years	70-79 Years	80+ Years
Barry County	7,023	7,805	6,641	7,309	6,892	9,128	8,670	4,363	2,709
City of Hastings	1,062	704	1,368	1,063	679	902	783	430	320
Assyria Township	248	320	151	288	236	296	335	175	101
Baltimore Township	270	223	252	248	258	251	258	38	98
Barry Township	345	372	309	516	446	443	549	333	146
Carlton Township	180	326	218	165	283	412	352	137	97
Castleton Township	397	495	430	435	383	485	487	305	155
Hastings Charter Township	300	268	181	347	273	608	600	251	187
Hope Township	145	266	481	234	468	443	683	360	197
Irving Township	643	391	307	524	300	496	393	208	86
Johnstown Township	269	466	231	263	414	452	442	278	271
Maple Grove Township	183	125	132	137	182	288	170	76	78
Orangeville Township	254	421	321	321	430	585	687	205	177
Prairieville Township	284	491	371	432	296	531	485	436	154
Rutland Charter Township	502	717	358	495	434	592	444	331	150
Thornapple Township	1,197	1,349	974	933	1,017	1,124	1,102	184	281
Woodland Township	278	380	209	309	237	455	278	214	66
Yankee Springs Township	466	491	348	599	556	765	622	302	145

Source: US Census Bureau American Community Survey 5-Year Estimates. (2019). Table S0101: Age and Sex.



Household/Family Characteristics

Household and family data provides valuable insight on the living arrangements of Barry County residents. The following table illustrates the size of total households and families in communities across the County.

Table 6: Households and Families

	Total Households	Average Household Size	Total Families	Average Family Size
Barry County	24,296	2.46	17,201	2.90
City of Hastings	3,015	2.37	1,688	3.07
Assyria Township	858	2.51	622	2.98
Baltimore Township	815	2.44	552	2.99
Barry Township	1,598	2.16	893	2.77
Carlton Township	859	2.53	625	2.97
Castleton Township	1,413	2.53	1,015	2.96
Hastings Charter Township	1,113	2.54	928	2.69
Hope Township	1,583	2.07	1,128	2.43
Irving Township	1,220	2.74	955	3.07
Johnstown Township	1,296	2.38	939	2.85
Maple Grove Township	538	2.50	397	2.84
Orangeville Township	1,456	2.34	1,046	2.65
Prairieville Township	1,383	2.30	1,029	2.62
Rutland Charter Township	1,383	2.91	1,112	3.29
Thornapple Township	2,935	2.78	2,198	3.18
Woodland Township	958	2.53	710	2.93
Yankee Springs Township	1,873	2.29	1,364	2.66

Source: US Census Bureau American Community Survey 5-Year Estimates. (2019). Table S1101 Households and Families.

This data indicates that Barry County's average household and family size is lower than the national average of 2.61 persons per household and 3.27 persons per family. Rutland Charter Township, Thornapple Township, and Irving Township all feature average household sizes that exceed the national average. Rutland Charter Township is the only community that features an average family size exceeding the national average. Hope Township features the smallest average household size and smallest average family size in the County.

The Median Household Income in Barry County was \$65,557 in 2020, compared to the State of Michigan which was \$59,234. Barry County only saw 8% of its residents living in poverty, in 2020. Census estimates show that Barry County has a single-family home ownership rate of 84%. The State of Michigan had an owner-occupied rate of 72% for the same period.

Education Characteristics

Education has strong correlations with an individual's earnings over their lifetime. It also plays a significant role in attracting businesses, as a region's educated workforce may indicate a larger talent pool from which to hire.

Over 93% of Barry County adults aged 25+ have a high school diploma, which is better than the Michigan average of 91%. However, Barry County (23%) has a lower percentage of residents aged 25+ with bachelor's degrees than Michigan did with 30% of adults 25+ having a bachelor's degree.

The following table represents educational attainment for residents over the age of 25 in communities across Barry County.

Table 7: Educational Attainment

	Less than 9th Grade	9th to 12th Grade	High School Graduate	Some College, No Degree	Associate's Degree	Bachelor's Degree	Graduate or Professional Degree	High School Graduate or Higher	Bachelor's Degree or higher
Barry County	1.8%	5.6%	37.7%	23.4%	10.4%	14.8%	6.2%	92.7%	21.1%
City of Hastings	2.6%	4.4%	35.5%	22.8%	10.5%	16.8%	7.4%	93.0%	24.2%
Assyria Township	2.3%	7.5%	43.5%	21.8%	9.3%	11.1%	4.4%	90.2%	15.5%
Baltimore Township	2.4%	6.5%	40.8%	22.8%	11.4%	9.8%	6.3%	91.1%	16.1%
Barry Township	1.3%	3.3%	35.6%	29.7%	7.3%	17.9%	4.9%	95.4%	22.8%
Carlton Township	3.6%	5.7%	35.9%	25.5%	11.0%	14.0%	4.2%	90.7%	18.3%
Castleton Township	2.6%	8.4%	42.2%	28.3%	10.4%	5.4%	2.7%	89.0%	8.1%
Hastings Charter Township	1.1%	6.0%	46.0%	21.3%	10.6%	10.7%	4.2%	92.8%	15.0%
Hope Township	3.2%	6.2%	45.5%	17.8%	10.1%	14.1%	3.1%	90.6%	17.3%
Irving Township	1.3%	5.3%	39.3%	23.8%	9.5%	13.7%	7.1%	93.4%	20.8%
Johnstown Township	0.7%	5.7%	39.0%	29.5%	10.6%	11.0%	3.4%	93.7%	14.5%
Maple Grove Township	3.0%	6.2%	41.2%	21.4%	12.0%	13.1%	3.1%	90.8%	16.2%
Orangeville Township	1.4%	10.1%	45.7%	17.7%	6.5%	12.4%	6.2%	88.5%	18.6%
Prairieville Township	1.1%	3.2%	27.9%	22.6%	13.5%	20.0%	11.6%	95.7%	31.7%
Rutland Charter Township	2.9%	4.2%	35.0%	22.6%	11.0%	13.6%	10.7%	92.9%	24.3%
Thornapple Township	0.7%	4.7%	33.2%	21.9%	11.0%	21.4%	7.0%	94.5%	28.4%
Woodland Township	1.7%	5.7%	38.1%	23.6%	14.5%	12.1%	4.2%	92.6%	16.3%
Yankee Springs Township	0.6%	5.0%	30.7%	25.8%	10.3%	18.7%	9.0%	94.4%	27.6%

Source: US Census Bureau American Community Survey 5-Year Estimates (2019). Table S1501 Educational Attainment.



Employment Characteristics

Employment data can better illustrate economic conditions and workforce characteristics in Barry County. Table 8 represents the type of occupation of Barry County residents.

Table 8: Resident Type of Occupation

	Civilian Workforce Over 16 Years Old	Management, business, science, and art	Service	Sales and Office	Natural Resources, Construction, and Maintenance	Production, Transportation, and Material Moving
Barry County	29,100	29.3%	15.4%	21.1%	14.0%	20.2%
City of Hastings	3,777	23.9%	18.7%	21.5%	12.7%	23.2%
Assyria Township	949	26.4%	14.8%	20.0%	16.0%	22.8%
Baltimore Township	915	23.3%	18.4%	17.7%	15.8%	24.8%
Barry Township	1,613	36.2%	15.0%	19.0%	15.4%	14.4%
Carlton Township	1,138	28.8%	8.7%	23.2%	12.3%	27.0%
Castleton Township	1,579	20.7%	19.7%	29.8%	10.3%	19.5%
Hastings Charter Township	1,408	28.8%	16.1%	21.1%	14.8%	19.2%
Hope Township	1,690	29.8%	24.2%	12.8%	13.1%	20.0%
Irving Township	1,534	33.8%	13.6%	17.7%	17.8%	17.1%
Johnstown Township	1,322	31.8%	15.9%	16.4%	15.3%	20.6%
Maple Grove Township	628	24.0%	10.5%	19.9%	18.9%	26.6%
Orangeville Township	1,624	26.4%	16.7%	15.0%	15.5%	26.4%
Prairieville Township	1,496	40.0%	14.2%	15.5%	17.6%	12.6%
Rutland Charter Township	1,855	27.3%	12.5%	24.0%	13.3%	22.9%
Thornapple Township	4,057	35.9%	13.4%	21.7%	12.9%	16.1%
Woodland Township	1,195	25.6%	17.6%	19.1%	11.9%	25.9%
Yankee Springs Township	2,320	27.0%	10.1%	33.2%	12.9%	16.8%

This data shows that most residents in Barry County work in management, business, science, and art occupations. Many Barry County residents also work in sales and service occupations as well as production, transportation, and material moving occupations.



Table 9 represents the many industries in which Barry County residents are employed. This data illustrates that most residents are employed in manufacturing occupations along with health care and educational occupations. The percentage of residents employed in manufacturing occupations is nearly 15% higher than the national average, indicating a strong manufacturing presence in Barry County.

Table 9: Barry County Resident Occupation by Industry

		<i>Б</i>							<u></u>	ō	e t			
	Civilian Workforce Over 16 Years Old	Agriculture, forestry, fishing and hunting, and mining	Construction	Manufacturing	Wholesale Trade	Retail Trade	Transportation and warehousing, and utilities	Information	Finance and insurance, real estate and rental	Professional, scientific, and management	Educational services, health care, and social assistance	Arts, entertainment, and recreation	Other services	Public administration
Barry County	29,100	3.1%	8.6%	24.0%	3.1%	9.7%	4.1%	1.0%	5.4%	6.6%	18.3%	7.0%	5.8%	3.3%
City of Hastings	3,777	0.5%	5.4%	25.7%	1.2%	12.2%	1.8%	0.0%	4.1%	7.7%	16.9%	14.8%	5.9%	3.7%
Assyria Township	949	6.3%	7.0%	24.4%	1.8%	9.6%	9.2%	0.7%	1.9%	5.9%	15.7%	8.4%	5.8%	3.3%
Baltimore Township	915	2.5%	11.5%	21.5%	2.1%	12.2%	3.6%	1.0%	5.5%	8.1%	14.8%	6.4%	5.5%	5.4%
Barry Township	1,613	12.6%	6.4%	24.6%	1.9%	5.6%	5.6%	6.6%	2.2%	2.7%	20.8%	3.6%	3.7%	3.7%
Carlton Township	1,138	3.5%	5.8%	32.6%	5.1%	7.6%	2.9%	1.3%	8.7%	3.3%	17.8%	1.1%	3.3%	7.0%
Castleton Township	1,579	2.8%	8.0%	17.3%	3.2%	16.0%	4.6%	0.3%	10.3%	3.0%	16.1%	11.8%	4.2%	2.5%
Hastings Charter Township	1,408	1.3%	8.2%	24.7%	3.3%	6.7%	5.5%	0.6%	7.9%	8.8%	16.3%	9.2%	6.5%	1.1%
Hope Township	1,690	0.0%	4.3%	33.7%	0.0%	1.6%	0.0%	0.9%	4.6%	10.4%	28.3%	2.0%	13.3%	0.8%
Irving Township	1,534	3.5%	12.5%	26.8%	4.1%	8.7%	3.1%	0.8%	7.2%	6.4%	13.3%	4.4%	8.0%	1.1%
Johnstown Township	1,322	6.8%	8.3%	25.6%	3.2%	6.4%	4.5%	0.0%	1.7%	8.2%	18.0%	5.2%	8.5%	3.6%
Maple Grove Township	1,203	2.2%	10.6%	14.3%	0.7%	9.8%	7.6%	1.9%	1.9%	4.1%	29.3%	12.1%	5.1%	0.3%
Orangeville Township	1,624	1.5%	9.3%	32.3%	4.2%	3.2%	5.4%	0.0%	2.8%	4.9%	20.5%	9.4%	4.8%	1.6%
Prairieville Township	1,496	6.6%	10.6%	19.2%	4.1%	6.8%	1.3%	0.9%	6.8%	4.2%	22.6%	8.6%	3.7%	4.5%
Rutland Charter Township	1,855	0.5%	14.4%	19.8%	2.9%	13.3%	4.9%	0.5%	1.0%	8.3%	24.6%	5.4%	1.7%	2.6%
Thornapple Township	4,057	1.9%	10.2%	19.5%	5.9%	10.5%	4.2%	1.3%	5.7%	7.6%	18.7%	5.3%	5.5%	3.8%
Woodland Township	1,195	4.8%	7.2%	18.7%	3.1%	12.3%	3.9%	1.8%	5.7%	6.4%	16.2%	6.9%	4.9%	7.9%
Yankee Springs Township	2,320	2.1%	8.8%	22.9%	3.3%	15.4%	6.7%	0.8%	9.7%	7.4%	11.7%	3.0%	6.9%	1.4%

Income Characteristics

Income data can be used as a measure of economic stability and financial well-being; higher median household incomes correspond with reduced poverty among residents. A higher household income also increases a household's purchasing power, resulting in positive economic "spillover" effects such as purchasing new cars and appliances or dining out more frequently. Because of this, observing median household income is a valuable method of studying the financial health of a community.

Table 10 reflects the median household income for communities in Barry County between 2010-2019. These values were adjusted to account for inflation using the Consumer Price Index Tool produced by the Bureau of Labor Statistics. This provides a more-accurate representation of how income has changed over the past decade.

Table 10: Median Household Income (in 2019 Inflation-Adjusted Dollars)

	2019	2015	2010
Barry County	\$ 71,430	\$ 65,689	\$ 66,738
City of Hastings	\$ 61,747	\$ 51,833	\$ 54,763
Assyria Township	\$ 66,132	\$ 60,873	\$ 76,334
Baltimore Township	\$ 62,910	\$ 59,962	\$ 66,088
Barry Township	\$ 68,087	\$ 62,299	\$ 71,538
Carlton Township	\$ 73,380	\$ 82,448	\$ 72,441
Castleton Township	\$ 47,097	\$ 46,549	\$ 58,138
Hastings Charter Township	\$ 76,649	\$ 57,411	\$ 69,069
Hope Township	\$ 84,182	\$ 59,030	\$ 55,809
Irving Township	\$ 76,374	\$ 74,863	\$ 75,833
Johnstown Township	\$ 66,556	\$ 78,411	\$ 79,690
Maple Grove Township	\$ 73,034	\$ 72,770	\$ 72,375
Orangeville Township	\$ 65,425	\$ 61,429	\$ 57,927
Prairieville Township	\$ 70,507	\$ 71,951	\$ 72,821
Rutland Charter Township	\$ 82,778	\$ 72,044	\$ 67,785
Thornapple Township	\$ 80,421	\$ 77,024	\$ 81,343
Woodland Township	\$ 73,811	\$ 62,299	\$ 60,068
Yankee Springs Township	\$ 78,146	\$ 75,027	\$ 81,343

Source: US Census Bureau American Community Survey 5-Year Estimates. (2019). Table S1901 Household Income Over the Past 12 Months. Values are adjusted for inflation using the United States Bureau of Labor Statistics CPI Calculator.

These values indicate that Barry County features a median household income that exceeds the national average. Over the past ten years, the average median household income in Barry County has increased from \$66,738 in 2010 to \$71,430 in 2019. Hope Township features the highest median household income in 2019 at \$84,182 while Castleton Township features the lowest median household income in 2019 at \$47,097. Only four communities in Barry County feature a lower median household income than the national average, indicating that household income is relatively stable in Barry County.

Housing Characteristics

Analyzing a community's housing stock illustrates the type of housing units in the community, the relative size of those units, and their age. In a period where demographic trends are shifting and alternative housing arrangements are needed to accommodate working professionals and aging empty-nesters, a mix of housing types of various ages indicates a higher capacity to house a broader spectrum of residents. The following table illustrates housing characteristics of Barry County below.

Table 11: Housing Characteristics, Barry County

Occupied Housing Units	24,296
Units in Structure	
1 unit detached	21,126
1 unit attached	340
2 unit apartment	183
3-4 unit apartment	314
5-9 unit apartment	168
10+ unit apartment	492
Mobile home or other type of housing	1,673
Year Structure Built	
2014 or later	482
2010 to 2013	269
2000 to 2009	3,548
1980 to 1999	6,632
1960 to 1979	5,424
140 to 1959	3,162
1939 or earlier	4,779
Number of Bedrooms in Unit	
No bedroom	216
1 Bedroom	1,075
2 or 3 bedrooms	16,855
4 or more bedrooms	6,150

Source: US Census Bureau American Community Survey 5-Year Estimates. (2019). Table S205 Physical Housing Characteristics for Occupied Housing Units.

According to **Table 11** over 87% of housing units in Barry County are single-family detached houses while only 6% are located in multi-unit structures. 55% of the County's housing stock was constructed prior to 1979 while only 3% of the County's housing stock was built between 2010-2019. This data indicates that the County's housing stock is primarily comprised of older single-family houses. The median value of a single-family home in Barry County was \$171,800 in 2020. The State of Michigan had a median value of single-family homes of \$162,600 in 2020.

Single-family houses, and other housing types such as townhouses, duplexes, quadplexes, and multi-family buildings are all appropriate future housing types. New neighborhoods are encouraged to contain a variety of housing types, to allow for a variety of price points and to create increased density without impacting the character of existing adjacent neighborhoods.

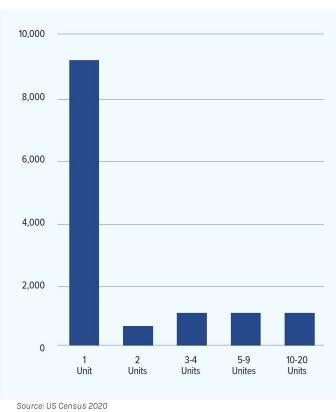
In Barry County, the majority of the housing stock is comprised of detached single-family homes, or large multi-unit apartment complexes. **Figure 3** illustrates the gap between housing types in the County. One of the goals in this Future Land Use Plan is to identify locations for medium-density housing.

Neighborhoods should be designed with connected street patterns, including connections to existing neighborhoods where possible, and should have amenities (such as parks and schools) within their boundaries. Businesses and retail should be within walking distance, along major corridors.

Future residential development areas, where new housing is constructed, should be considered in Barry County. Ideally, the target density of new residential construction would be 3-5 units per acre, to ensure compatibility with the existing built environment. Some areas in this category are greenfield or undeveloped sites, while others are low density neighborhoods where infill is desirable – provided neighborhood character is maintained.



Figure 3. Housing Types in Barry County









Commuting Characteristics

Identifying and visualizing commuting patterns within Barry County is valuable in identifying where and how residents get to work. Due to the County's close proximity to west Michigan's major economic centers, many residents work in surrounding communities. The following table illustrates the overall commuting characteristics for Barry County residents.

Table 12: Barry County Countywide Commute Destinations

Barry County Commute Destinations (2019)						
Total Commuters	29,541	100%				
Kent County	8,671	29.4%				
Barry County	7,908	26.8%				
Kalamazoo County	2,811	9.5%				
Calhoun County	2,187	7.4%				
Allegan County	1,434	4.9%				
Ottawa County	952	3.2%				
All Other Locations	5,578	18.9%				
Eaton County	375					
Ingham County	252					

Source: US Census On the Map

This data indicates that nearly 75% of Barry County residents work in surrounding counties. The largest number of residents commute to Kent County while relatively few residents commute into Ottawa, Ionia, or Eaton Counties. While this provides a useful representation of commuting patterns across the region, the commuting characteristics for each community in Barry County is unique.

Marshall Megasite

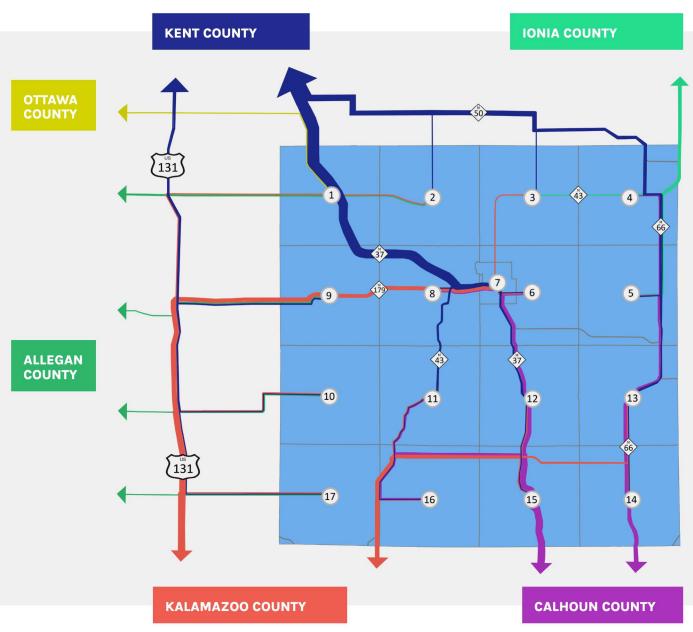
-

The Ford Battery Plant to be built at the "Marshall Megasite" at I-69 and I-94 in Calhoun County could impact Barry County employment and commuting, especially in the southeastern portion of the County. Announced in early 2023, the plant is expected to employ over 2,500 people when it opens in the mid-2020s.



Figure 4 indicates the estimated commuting patterns using data accessed from the United States Census Bureau's On The Map Data Portal. This flow map provides a visual representation of where residents of Barry County communities work and the routes they likely take every day. While destinations and the exact routes used by commuters are granular datasets that are not easily obtained, Figure 3.2 provides a useful exercise in illustrating which communities in Barry County have higher amounts of commuters, indicating they may serve as "bedroom communities" for surrounding metropolitan areas.

Figure 4. Barry County Commuter Flow Map

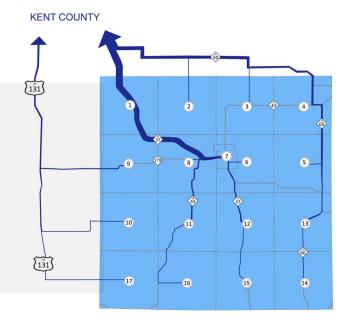


Source: US Census Bureau On The Map Data Portal. (2019).

Unsurprisingly, each community's proximity to surrounding metropolitan areas and major transportation corridors has an outsized influence on commuting patterns. These patterns and their relation to specific destination counties are further discussed on the following pages.

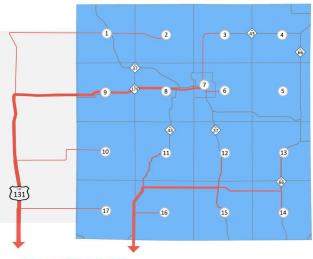
KENT COUNTY

The location of the greater Grand Rapids metropolitan region, nearly one in three Barry County commuters travel to Kent County for work every day. While every community in Barry County features residents who work in Kent County, the northern portion of Barry County features the highest number of commuters traveling to Kent County regularly. This is likely driven by access to M-37, US-131, and I-96 along with close proximity to Grand Rapids, Wyoming, and Kentwood.



KALAMAZOO COUNTY

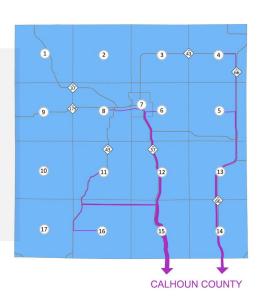
Kalamazoo County remains another prominent destination among Barry County commuters, as US-131 provides quick access to the Kalamazoo metropolitan area. While these commuters are largely concentrated in the southern portion of Barry County, there is a noticeable amount of commuters from the County's central communities as well.



KALAMAZOO COUNTY

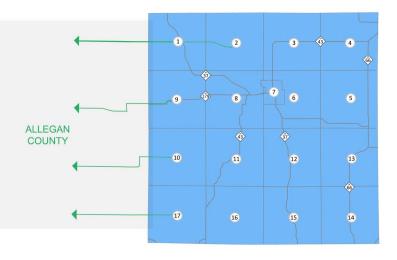
CALHOUN COUNTY

Many Barry County residents commute south into Calhoun County, likely due to the Battle Creek region and convenient access via M-37 and M-66. These commuters largely reside in the southeastern portion of Barry County.



ALLEGAN COUNTY

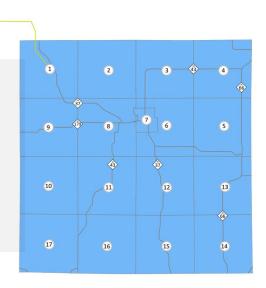
Many communities in western Barry County feature residents who regularly commute into Allegan County. These numbers remain relatively small compared to other commuting destinations however, perhaps due to Allegan County's dispersed employment centers and limited east-west transportation corridors.



OTTAWA COUNTY

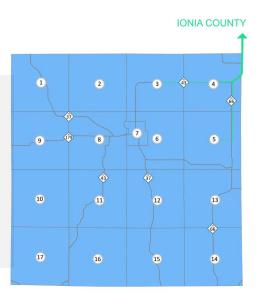
OTTAWA COUNTY

Ottawa County is another commuting destination, although limited compared to other counties. Due to its more distant location, only Thornapple Township in the northwest corner of Barry County features a noticeable number of commuters traveling to Ottawa County regularly.



IONIA COUNTY

Some commuters in the northeast portion of Barry County commute to Ionia County regularly. This is likely due to convenient access to M-66 which connects these communities to Ionia.



These detailed analyses show that Barry County's central position and proximity to west Michigan's major metropolitan regions is a favorable environment for commuters. While many residents living in Barry County also work in Barry County, nearly three in four workers commute outside of the County on a regular basis. While this indicates that Barry County is an attractive place to live for many residents working elsewhere, it may also represent a lack of employment opportunities in the County—a situation that may pose challenges as the County seeks to attract residents and new employers to the region.



Table 13: Barry County Commuter Destination Data

	Commuters	
1. Thornapple Township	Collin	luters
Total Commuters	4,703	100%
	2,573	55%
Kent County	934	20%
Allogan County	185	4%
Allegan County Ottawa County	164	4%
Other locations	847	18%
2. Irving Township	047	1676
Total Commuters	1,701	100%
Kent County	680	40%
Barry County	536	32%
Kalamazoo County	60	4%
Allegan County	53	3%
All other locations	372	22%
3. Carlton Township	07E	2270
Total Commuters	1,332	100%
Kent County	538	40%
Barry County	410	31%
Ionia County	42	3%
Kalamazoo County	40	3%
All other locations	302	23%
4. Woodland Township		
Total Commuters	783	100%
Barry County	222	28%
Kent County	180	23%
Calhoun County	73	9%
Ionia County		
ioina county	73	9%
All other locations	73 235	9% 30%
	180 N 100 N	10000-11
All other locations	180 N 100 N	10000-11
All other locations 5. Castleton Township	235	30%
All other locations 5. Castleton Township Total Commuters	235 1,339	30%
All other locations 5. Castleton Township Total Commuters Barry County	1,339 429	30% 100% 31%
All other locations 5. Castleton Township Total Commuters Barry County Kent County	1,339 429 286	30% 100% 31% 20%
All other locations 5. Castleton Township Total Commuters Barry County Kent County Ionia County	1,339 429 286 147	30% 100% 31% 20% 11%
All other locations 5. Castleton Township Total Commuters Barry County Kent County lonia County Calhoun County	1,339 429 286 147 99	30% 100% 31% 20% 11% 7%
All other locations 5. Castleton Township Total Commuters Barry County Kent County lonia County Calhoun County All other locations	1,339 429 286 147 99	30% 100% 31% 20% 11% 7%
All other locations 5. Castleton Township Total Commuters Barry County Kent County lonia County Calhoun County All other locations 6. Hastings Charter Township	235 1,339 429 286 147 99 378	30% 100% 31% 20% 11% 7% 31%
All other locations 5. Castleton Township Total Commuters Barry County Kent County Ionia County Calhoun County All other locations 6. Hastings Charter Township Total Commuters	1,339 429 286 147 99 378	30% 100% 31% 20% 11% 7% 31%
All other locations 5. Castleton Township Total Commuters Barry County Kent County lonia County Calhoun County All other locations 6. Hastings Charter Township Total Commuters Barry County	1,339 429 286 147 99 378 1,440 645	30% 100% 31% 20% 11% 7% 31% 100% 45%
All other locations 5. Castleton Township Total Commuters Barry County Kent County lonia County Calhoun County All other locations 6. Hastings Charter Township Total Commuters Barry County Kent County	1,339 429 286 147 99 378 1,440 645 307	30% 100% 31% 20% 11% 7% 31% 100% 45% 21%
All other locations 5. Castleton Township Total Commuters Barry County Kent County Ionia County Calhoun County All other locations 6. Hastings Charter Township Total Commuters Barry County Kent County Calhoun County	1,339 429 286 147 99 378 1,440 645 307 82	30% 100% 31% 20% 11% 7% 31% 100% 45% 21% 6%

	Commuters		
7. City of Hastings			
Total Commuters	3,597	100%	
Barry County	1,591	44%	
Kent County	838	23%	
Calhoun County	169	5%	
Kalamazoo County	158	4%	
All other locations	841	23%	
8. Rutland Charter Township			
Total Commuters	2,127	100%	
Barry County	767	36%	
Kent County	654	31%	
Kalamazoo County	87	4%	
Calhoun County	86	4%	
All other locations	533	25%	
9. Yankee Springs Township			
Total Commuters	2,629	100%	
Kent County	1,200	46%	
Barry County	422	16%	
Allegan County	319	12%	
Kalamazoo County	152	6%	
All other locations	536	20%	
10. Orangeville Township			
Total Commuters	1,749	100%	
	1,7 40	10070	
Kent County	413	24%	
	50 - 00 - 200000		
Kent County	413	24%	
Kent County Barry County	413	24%	
Kent County Barry County Allegan County	413 331 313	24% 19% 18%	
Kent County Barry County Allegan County Kalamazoo County	413 331 313 273	24% 19% 18% 16%	
Kent County Barry County Allegan County Kalamazoo County All other locations	413 331 313 273	24% 19% 18% 16%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township	413 331 313 273 419	24% 19% 18% 16% 24%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township Total Commuters	413 331 313 273 419	24% 19% 18% 16% 24%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township Total Commuters Kalamazoo County	413 331 313 273 419 1,417 365	24% 19% 18% 16% 24% 100%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township Total Commuters Kalamazoo County Barry County	413 331 313 273 419 1,417 365 340	24% 19% 18% 16% 24% 100% 26% 24%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township Total Commuters Kalamazoo County Barry County Kent County	413 331 313 273 419 1,417 365 340 194	24% 19% 18% 16% 24% 100% 26% 24%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township Total Commuters Kalamazoo County Barry County Kent County Calhoun County	413 331 313 273 419 1,417 365 340 194 156	24% 19% 18% 16% 24% 100% 26% 24% 11%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township Total Commuters Kalamazoo County Barry County Kent County Calhoun County All other locations	413 331 313 273 419 1,417 365 340 194 156	24% 19% 18% 16% 24% 100% 26% 24% 11%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township Total Commuters Kalamazoo County Barry County Kent County Calhoun County All other locations 12. Baltimore Township	413 331 313 273 419 1,417 365 340 194 156 362	24% 19% 18% 16% 24% 100% 26% 24% 14% 11% 25%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township Total Commuters Kalamazoo County Barry County Kent County Calhoun County All other locations 12. Baltimore Township Total Commuters	413 331 313 273 419 1,417 365 340 194 156 362	24% 19% 18% 16% 24% 100% 26% 24% 14% 11% 25%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township Total Commuters Kalamazoo County Barry County Kent County Calhoun County All other locations 12. Baltimore Township Total Commuters Barry County	413 331 313 273 419 1,417 365 340 194 156 362 854 225	24% 19% 18% 16% 24% 100% 26% 14% 11% 25%	
Kent County Barry County Allegan County Kalamazoo County All other locations 11. Hope Township Total Commuters Kalamazoo County Barry County Kent County Calhoun County All other locations 12. Baltimore Township Total Commuters Barry County Calhoun County Calhoun County	413 331 313 273 419 1,417 365 340 194 156 362 854 225 188	24% 19% 18% 16% 24% 100% 26% 24% 11% 25% 100% 26% 22%	

	Commuters	
13. Maple Grove Township		
Total Commuters	670	100%
Calhoun County	195	29%
Barry County	117	18%
Kent County	79	12%
Kalamazoo County	55	8%
All other locations	224	33%
14. Assyria Township		
Total Commuters	813	100%
Calhoun County	261	32%
Barry County	132	16%
Kent County	88	11%
Kalamazoo County	70	9%
All other locations	262	32%
15. Johnstown Township		
Total Commuters	1,314	100%
Barry County	341	26%
Calhoun County	321	24%
Kent County	166	13%
Kalamazoo County	162	12%
All other locations	324	25%
16. Barry Township		
Total Commuters	1,515	100%
Kalamazoo County	407	27%
Barry County	344	23%
Kent County	196	13%
Calhoun County	189	13%
All other locations	379	25%
17. Prairieville Township		
Total Commuters	1,498	100%
Kalamazoo County	625	42%
Kent County	181	12%
Allegan County	130	9%
Barry County	122	8%
All other locations	440	29%

Root Findings

Barry
County has
experienced
an increasing
population
since 2010,
with most
of the
population
growth
occurring
in the
northwestern
portion of the
County.

The population growth occurred despite a negative net migration rate—more people moving out of the County than moving in.

If the migration rate reverses, the County could experience much faster growth—potentially reaching 75,000 or even more than 80,000 people.

Although the County's average age is older than the national average, the communities growing fastest feature younger average ages, indicating higher numbers of children.

Many residents are employed in manufacturing, education, and health care industries. Average household incomes range across all communities within Barry County, but in general are above the national average.

The County's existing housing stock is composed mostly of older singlefamily residences.

Housing growth slowed in the County during the 2010s, through the rate of construction increased in the latter half of the decade.

Three in four **Barry County** residents travel outside of the County for work. Although many residents also work in Barry County, its rural quality of life in proximity to major economic centers makes the County an attractive "bedroom community."

Kent County is the largest draw for **Barry County** commuters, with over 29% of residents traveling there for work. Kalamazoo and Calhoun Counties also represent major destinations, with a combined 17% of Barry residents working in those two counties.



THE INFRASTRUCTURE OF BARRY COUNTY

Public infrastructure supports the economic and social life of a community, and plays a key role in growth, preservation, and community character. This chapter outlines the past, present, and future of the infrastructure of Barry County.



Water and Sanitary Sewer Infrastructure

Due to its combination of cities, villages, and rural areas featuring a more dispersed population density, numerous public authorities provide water and sanitary sewer service in Barry County. The entities providing municipal water and sanitary sewer infrastructure across the County are described in the table below.

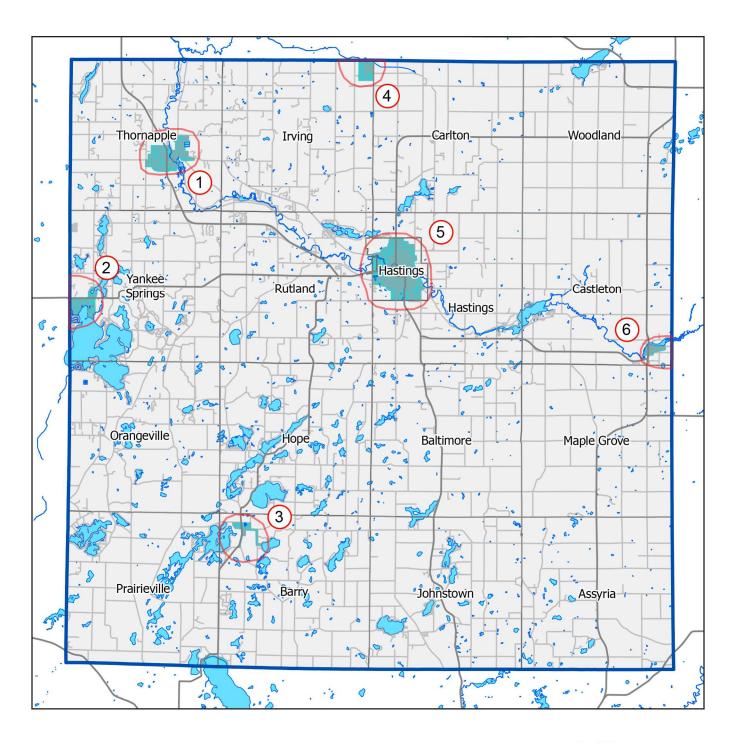
Table 14: Public Sewer and Water Authorities in Barry County.

Public Authority	Background	Municipal Water Service Area	Sanitary Sewer Service Area
Barry Township	Serves the Delton Area	Delton Area	Delton Area
City of Hastings	Water treatment plant processes 800,000 gallons of water daily, features two water towers and one ground storage reservoir	Within City Boundaries, plus portions of Rutland Township	Within City Boundaries, along Thornapple River Drive towards Thornapple Lake, Powell Road subdivision east of the City
Village of Freeport	Features a single water tower, services properties within Village of Freeport	Within Village Boundaries	None
Village of Middleville	First created in the 1930s, water and sewer system services properties within Village of Middleville boundaries	Within Village Boundaries	Within Village Boundaries
Village of Nashville	Water treatment plant processes 115,000 gallons per day, sewer treatment facility features lagoons near Thornapple River	Within Village Boundaries	Within Village Boundaries
Thornapple Township	Established in 1990, Septic Tank Effluent Pump (STEP) system, pumps sewage to treatment lagoons near Duncan Creek	None	East side of Duncan Lake
Gun Lake Area Sewer & Water Authority	Established in 1979, sewer treatment facility is located on the south side of Gun Lake	Northern finger of Gun Lake, part of Payne Lake	Gun Lake, Barlow Lake, Cobb Lake, Payne Lake
Gull Lake Water & Sewer Authority	Established in 1980, serves areas around Gull Lake in Barry County and Kalamazoo County	None	North side of Gull Lake
Southwest Barry County Sewer Authority	Established in 1993, sewer treatment facility is located on M-43 south of Delton	Pleasant Lake Area	Fine Lake, Gilkey Lake, Fair Lake, Wall Lake, Long Lake, Cloverdale Lake , east side of Guernsey Lake, Pine Lake, Crooked Lake, north side of Shelp Lake
Lakewood Wastewater Authority	Established in 1984, sewer treatment facility processes 500,000 gallons per day, serves Village of Woodland and Lake Odessa area	None	Village of Woodland, southern Jordan Lake

The maps on the following pages illustrate the location of municipal water and sanitary sewer service areas. The red lines indicate the approximate outer boundary of future service that could be provided by the entities.

Public water infrastructure is mostly located in concentrated pockets of the County where population density is highest. This includes the City of Hastings, the Village of Middleville, the Village of Freeport, the Village of Nashville, the northern portion of Gull Lake, and the Delton area in Barry Township.

Sanitary sewer infrastructure is located not only in areas with higher population densities but also in areas where lack of sewer service may pose serious environmental health risks. For this reason, sanitary sewer services are widely provided in areas with numerous lakefront cottage communities, especially in the western half of the County.



Municipal Water Infrastructure

Barry County, Michigan

LEGEND

Municipal Water Service Area
Water Features

Authority Providing Service

- 1 Village of Middleville
- Q Gull Lake Sewer and Water Authority
- Southwest Barry County Sewer Authority
- 4 Village of Freeport
- (5) City of Hastings
- 6 Village of Nashville

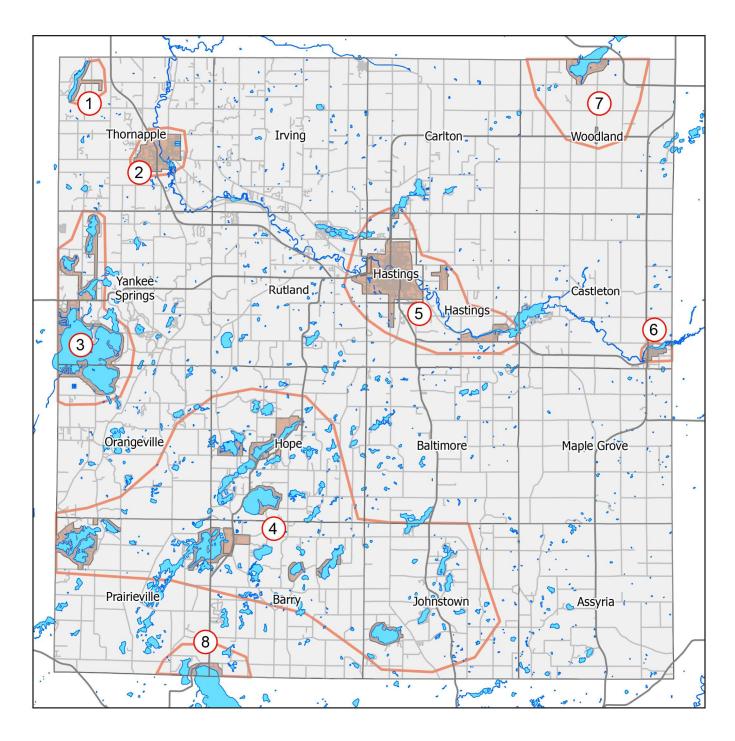
April 22, 2022 Draft





Data Source: Michigan Geographic Data Library 2022, Barry County GIS 2022. Local Units of Government and the Southwest Barry County Sewer Authority 2022. McKenna 2022.





Sanitary Sewer Infrastructure

Barry County, Michigan

Sanitary Sewer Service Area Water Features

Authority Providing Service

- 1 Thornapple Township
- Village of Middleville
- 3 Gull Lake Sewer & Water Authority
- Southwest Barry County Sewer Authority
- City of Hastings
- 6 Village of Nashville
- 1 Lakewood Wastewater Authority







Data Source: Michigan Geographic Data Library 2022. Barry County GIS 2022. Local Units of Government and the Southwest Barry County Sewer Authority 2022. McKenna 2022.





Transportation Network

Transportation infrastructure connects residents to employment opportunities, farmers and manufacturers to distant markets, and provides convenient access to the region's natural features and recreational amenities. Barry County contains over 1,000 miles of roadways to service its 577 square mile area. Although located in close proximity to larger metropolitan regions such as Grand Rapids, Kalamazoo, Battle Creek, and Lansing, there are no interstates or freeways that traverse Barry County. Because of its largely rural and low-density character, much of the County's transportation network is instead in the form of two-lane roadways.

Due to the importance of a functioning and well-maintained roadway system, numerous entities are tasked with providing regular maintenance and rehabilitation of area roadways. The most relevant agencies are listed below:

Michigan Department of Transportation (MDOT) -

MDOT is the state-wide transportation agency tasked with maintaining all state trunklines in Barry County. These includes all "M-Routes" such as M-37, M-43, M-179, M-79, and M-66. MDOT also disburses federal transportation funding for eligible projects across the County.

Barry County Road Commission (BCRC) – BCRC is the local road agency for all of Barry County. Deriving much of its operating revenue from state transportation funding and local townships, the BCRC is tasked with road maintenance of all roadways in Barry County's 16 townships.

Cities and Villages – Due to how state transportation funding is distributed in Michigan, cities and villages maintain control and responsibility for all non-MDOT roadways within their jurisdictions. The City of Hastings, Village of Middleville, Village of Freeport, and Village of Nashville all perform maintenance of their local streets.

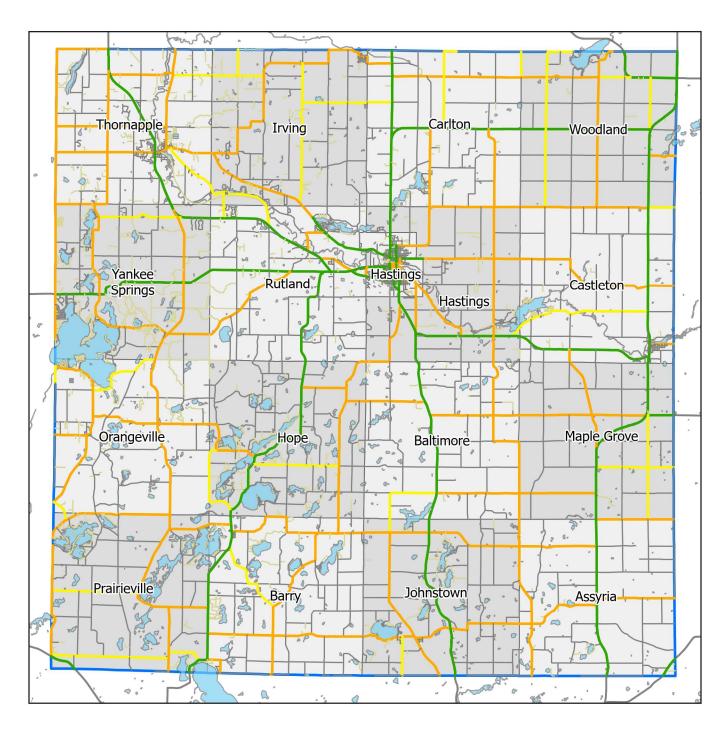
These entities rely on a mix of federal, state, and local funding sources to maintain all the roadways in Barry County. An observation of how these funds are disbursed is discussed below:

National Functional Classification (NFC) System

Roadways eligible for federal funding are identified through the National Functional Classification (NFC) system which separates roadways into categories based on their functions and traffic characteristics. Following this system, the only roadways not eligible for federal aid are those that are identified as "Local Roads," such as residential streets or lightly-traveled County roads...

Many of Barry County's roadways are eligible for federal transportation funding, with only the lesser-traveled county roads and city streets remaining ineligible for funding.





NFC Roadway Classifications

Barry County, Michigan





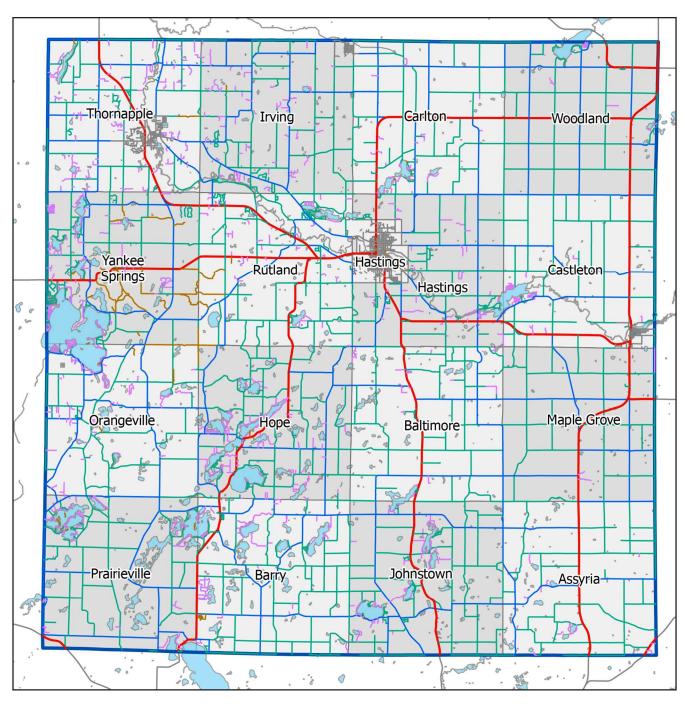




Act 51 Roadway Classification System

In 1951, the State of Michigan passed Public Act 51 which established the Michigan Transportation Fund which is funded by state fuel taxes and vehicle registration fees. Public Act 51 also established a classification system to determine funding eligibility for these roadways. Under this law, county road commissions, cities, and villages are empowered as "Act 51 agencies" to receive state transportation funding and apply them to eligible projects. The Act 51 Roadway Classifications Map for Barry County is on the next page.

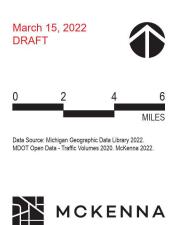
Similar to the NFC Classifications Map, the County's "State Trunk Lines" and "County Primary" roads are the highest funding priority. Private roads are ineligible for this funding and are mostly located in lakefront cottage communities or in newer subdivisions.



Act 51 Roadway Classifications

Barry County, Michigan



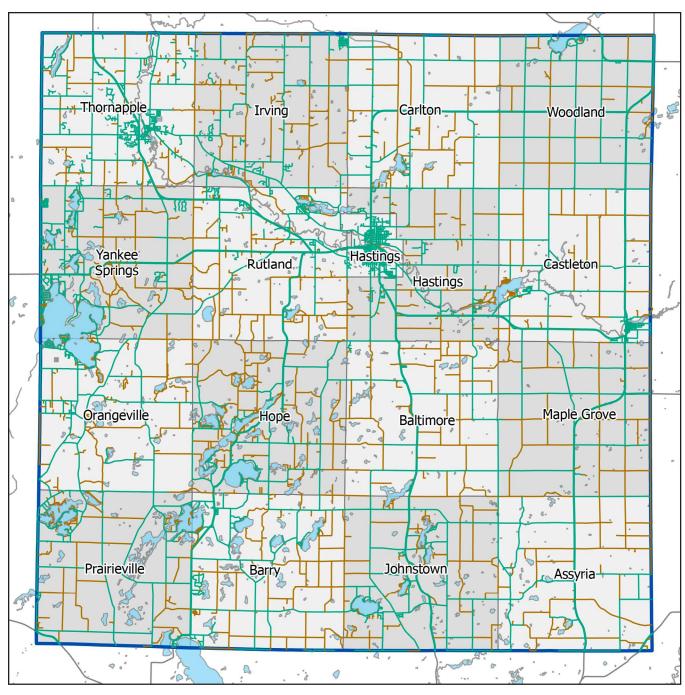




Paved and Unpaved Roads

Due to its large land area and its rural and low-density character, Barry County has a mix of paved roadways and unpaved roadways. Of the BCRC's 1,066 miles of roadways under its control, **593 miles are paved while 473 miles are unpaved gravel roads**. The map on the following page illustrates the location of these roadways and their status as either paved or unpaved.

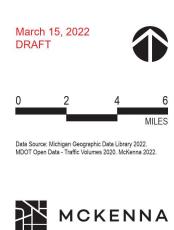
Most of the County's major roadways are paved while more rural, less-traveled roadways are typically unpaved. This likely follows travel patterns, as unpaved roads provide access to a limited number of properties while paved roads typically accommodate inter-county travel between destinations.



Roadway Conditions

Barry County, Michigan







Traffic

Understanding traffic trends within the County better illustrates which roadways experience the highest traffic. Every few years, MDOT analyzes Annual Average Daily Traffic (AADT) on major roadways, providing an estimate of the number of vehicles driving on the road daily. The map on the following page below indicates the AADT of these roads in Barry County.

According to the Estimated Traffic Volumes Map, M-37 connecting the City of Hastings to the Village of Middleville north to the Kent County line is the most heavily trafficked corridor in Barry County. Other heavy traffic corridors include M-179 connecting the City of Hastings to Yankee Springs Township as well as US-131 in neighboring Allegan County and M-37 running south from the City of Hastings to the Calhoun County line.

Transit

The County is also serviced by Barry County Transit, founded in 1982. Barry County Transit offers Rural Service, Student Services, and Med-Van service. Ride service is by appointment only and there is a fee for rides.

Rail and Air Transport

Railroad – Freight train track enters Barry County in the town of Woodbury in the northeast corner of Woodland Township. The track enters the County going east/west and then veers north and exits the County. The tracks connect the Woodbury area to freight hubs in Grand Rapids and Lansing, with further connections to Holland, Muskegon, Detroit, Flint, and other destinations.

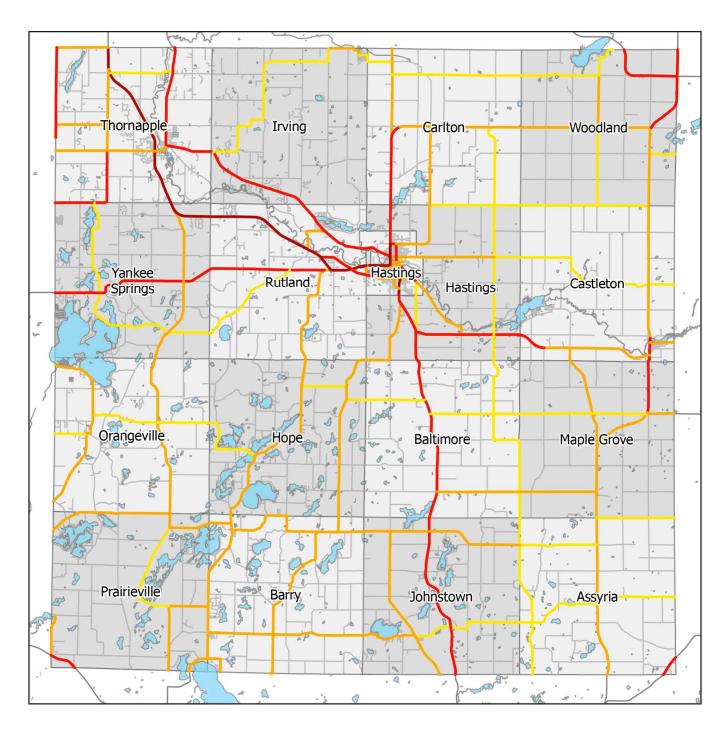
The tracks also connect to existing passenger (Amtrak) stations in Grand Rapids, East Lansing, and Detroit, meaning that if passenger service is ever established between those destinations, Barry County could be served via a Woodbury Station. (Currently, those three cities have passenger rail connections to Chicago, but not to each other).

The rest of the County is unserved by rail, with historic tracks removed. Some of have been converted to bike trails, providing recreational opportunities. The lack of rail limits industrial opportunities within the County, though the County's rural beauty and proximity to major employment centers offset the lack of industry.

Hastings/Barry County Airport is jointly owned by the City of Hastings and Barry County. The airport is located in Rutland Township, Northwest of the City of Hastings, and between the Thornapple River and Algonquin Lake. The airport serves general aviation uses, including local businesses, and is also the home of several aviation organizations, including:

- » The Thornapple Flying Academy LLC is an aircraft rental / flight training company based at the Hastings City/Barry County Airport.
- » The Hastings Flying Association is a group of pilots and aviation community related individuals dedicated to helping to provide development and enjoyable activities at the Hastings City/Barry County Airport.





Estimated Traffic Volumes

Barry County, Michigan

LEGEND

8,001 - 15,000 AADT
3,001 - 8,000 AADT
1,001 - 3,000 AADT
0 - 1,000 AADT

March 16, 2022
DRAFT

0 2 4 6
MILES

Data Source: Michigan Geographic Data Library 2022.
MDOT Open Data - Traffic Volumes 2020. McKenna 2022.

Broadband Connectivity

Broadband internet, with its fast download speeds and consistent connectivity, helps connect residents and businesses to the online world. A stable and reliable broadband internet infrastructure connects students to classrooms, patients to online medical services, employees to their workplaces, distant friends and families, and businesses to the broader global economy. As more and more economic and social activity moves online, communities lacking internet connectivity are placed at a competitive disadvantage.

As shown on the map on the following page, Barry County features reasonable broadband infrastructure, however there are pockets of limited connectivity and slower speeds in rural portions of the County.

Broadband download data is provided by Connected Nation, a national non-profit with ties to major internet providers that seeks to expand broadband access. Internet download speeds are measured by how much data can be transferred in one second. The Federal Communications Commission's (FCC) goal is for all households to be able to upload and download at least 10 Megabytes (MB) per second. Based on data from Connected Nation, nearly all of Barry County meets this goal, however there are isolated pockets where internet speeds are insufficient. These areas include portions of central Irving Township, eastern Carlton Township, central Woodland Township, the Yankee Springs Recreation Area in Yankee Springs and Orangeville Townships, portions of Baltimore Township, and eastern Assyria Township.

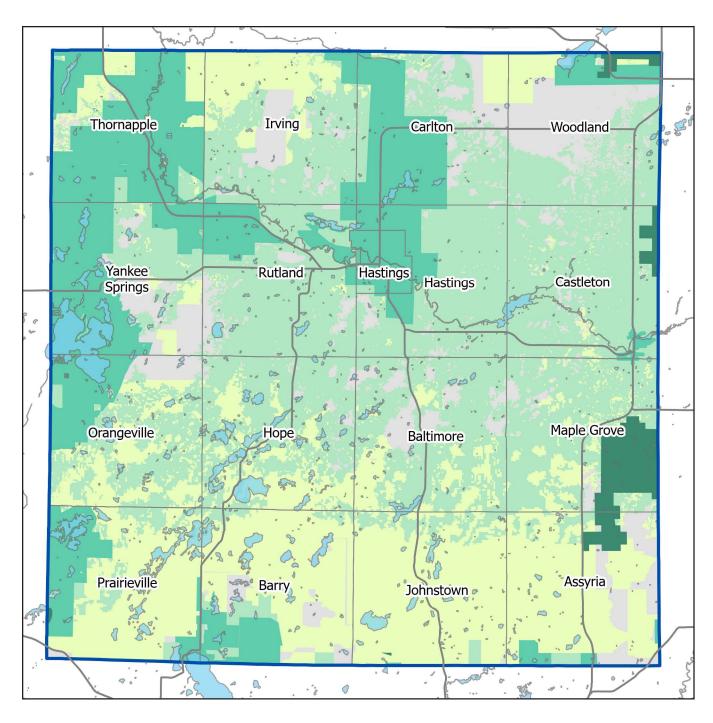
According to the data, most of the northern 3/4 of the County features 25MB download speeds. Faster 100MB speeds are largely located in higher-population areas. These include the City of Hastings, the M-37 corridor through Thornapple and Rutland Townships, and areas close to US-131 along the western border of the County. Even faster gigabit (1 Gigabyte per second) download speeds are available in small areas of the County, namely in far northeastern Woodland Township and east of M-66 in Castleton and Maple Grove Townships.

This data indicates that broadband infrastructure is typically strongest in areas with higher populations, as services are deployed to meet higher residential demand. Identified as an increasingly vital part of daily life, both the public and private sectors are seeking to fill connectivity gaps to bridge the "digital divide." Barry County may experience expansion of its broadband infrastructure due to reduced download speeds and areas of limited connectivity.

In recent years, the federal government has taken steps to improve nationwide broadband access. The FCC's Rural Digital Opportunity Fund grant program has been active in rural Michigan, seeking to expand internet connectivity in regions that may be financially unviable without subsidies. The 2021 Federal Infrastructure and Jobs Act allocated \$65 billion towards broadband deployment for the same purpose. Like rural electrification efforts during the 1930s, these federal programs seek to improve capacity in rural regions, giving them resources to compete in an ever-changing digital economy.

In addition to federal efforts, the State of Michigan is invested in expanding broadband connectivity across the state. Merit Network—a collaborative organization of Michigan's public universities—is pursuing the Michigan Moonshot Program which aims to identify areas lacking sufficient internet service and connect communities to resources. Because this is a more local program, it may be more open to improving service quality instead of simply providing connectivity.





Estimated Broadband Internet Speed, 2021

Barry County, Michigan



Unknown

Disclaimer: This map indicates the maximum speed available based on the broadband internet infrastructure in place. However, individual property owners may not have access to the speeds indicated due to local infrastructure deficiencies, capacity bottlenecks, or service provider throttling.





Alternative Energy

In order to preserve the natural, rural beauty of the County, the viability of the County's farmland, the precious ecosystems contained within the County, and the health, safety, and welfare of the County's residents, Barry County adopts the following policies with regard to the development of wind/solar energy facilities within its borders.

- » Renewable energy is important for the sustainability of ecosystems, food systems, economies, and communities. However, the large-scale positive impacts must be weighed against local negative impacts, including the health, safety, and welfare of the residents of Barry County.
- » On-site solar and wind energy systems provide ecological and economic benefits, at a scale that is desirable in a rural community and with fewer impacts on the immediate surroundings than utility-scale solar energy systems. Therefore, back yard and rooftop solar, and well as small-scale wind energy systems designed to power individual homes, businesses, institutions, or farms, should be encouraged.
- » Community Solar Gardens, in which a small number of nearby homeowners band together to construct a small solar energy facility that powers their homes, are also encouraged, provided they are small scale and do not have significant negative impacts on the surroundings or the natural environment.
- » Utility-scale solar energy systems ("solar farms") and large scale wind turbines should be developed with careful consideration of the impacts on local ecosystems, farmland, rural beauty, and the health, safety, and welfare of the County's residents. Specifically, in determining whether to approve a new solar farm or large-scale wind turbine, the County will take the following into account:
 - The County's natural beauty must be preserved, especially wetlands and woodlands. To the extent possible, existing wetlands and woodlands should not be removed for energy development. Alternative energy development (particulary wind turbines) should take place well away from lakes and other recreational areas.
 The County may also require the provision of pollinator habitat within solar farms, in order to promote a healthy ecosystem.
 - The County's agricultural systems must be protected. While the loss of some farmland to energy production is likely, the County will seek an appropriate balance of land uses to retain the vibrant food production economy that already exists in the community.
 - Nearby residents must be protected from glare, noise, vibration, and aesthetic degradation, through appropriate setbacks and, in the case, of solar farms, landscaping.
 - Alternative energy generation should be located in appropriate locations with regard to transmission
 infrastructure. Certain parts of the County do not have efficient access to long-distance electric transmission
 lines. Energy generation should not be located in this area, because of the need to erect unsightly and
 potentially hazardous high-tension power corridors in order to connect the new energy generation systems to
 the grid.
 - Alternative energy development should not exceed transmission capacity. The region's long-distance
 electric transmission lines have finite capacity. The County will limit the size and/or number of approved solar
 farms within its boundaries if the capacity of the transmission lines becomes insufficient for additional energy
 production.

Utility Scale Wind Siting Considerations

Utility Scale Wind Turbines have significant off-site impacts due to their height, noise, vibration, and motion. Therefore, any utility scale wind turbines located in Barry County must be carefully sited, with the following key considerations in mind:

- Utility scale wind turbines should not be sited in locations that disrupt key ecosystems, watersheds, or migratory bird flight patterns. Wetlands in particular should be protected.
- Utility scale wind turbines should not be sited in locations that will disrupt the quiet enjoyment of residents, particularly those that do not have lease or "Good Neighbor" agreements with the wind company.
- Uitlity scale wind turbines should not be located in places where they will aesthetically degrade the natural and historic beauty of the County, or where they will disrupt the recreational experience in the County's outdoor recreational areas, rivers, and lakes.

Solar Limit

The County may, at some point, hit its "solar limit." Barry County acknowledges the importance of renewable energy, but, as described in this section, other priorities, such as local ecosystems, agricultural production, transmission infrastructure capacity, and rural aesthetics, are also important. Solar energy takes up large amounts of land and holds them for decades, preventing other uses. Therefore, the County may restrict the size of new proposals, or not approve them at all, in order keep balance between the community's priorities.

Specifically, the County's "solar limit" shall be 9,100 to 15,200 of large, freestanding solar arrays, with 6,200 acres to 10,300 acres of that total being located within the County's zoning jurisidction. Small "back yard" arrays and rooftop arrays shall not be counted in this limit. The County determined the limit as follows:

- Barry County consists of approximately 369,280 acres, of which 253,600 (approximately 68%) are under County Zoning jurisdiction and 115,680 (approximately 32%) are under local zoning.
- 28,644 acres (apprroximatley 8%) of the County is water. The County does not support solar installations on water bodies in the County.

- The County also contains 4,389 acres of wetlands, many of which surrounding the bodies of water. These are highly susceptible to damage from solar installations, and should not be encumbered by
- The County Framework presented in this plan designates 9,942 acres of existing development - small towns, neighborhoods, and business areas as "Enhance" areas. These places are not intended to change in character, but are intended to be the "best version of themselves." Large scale solar does not fit into that vision.
- The County Framework also includes 22.889 acres designated for "Grow." Large scale solar would inhibit the planned growth.
- Subtracting out the acreage above leaves 303,416 acres in the County where large scale solar might be appropriate. The County must protect its natural beauty, rural character, and ecosystems. Therefore, no more than 3-5% of that land can be dedicated to large scale solar arrays - leaving a Barry County "solar limit" of 9,100 to 15,200 acres.
- Because 32% of the County is under local zoning, that that means that the "solar limit" for the County Zoning Jurisdiction is 6,200 to 10,300 acres. The rest of the solar land should be within local zoning jurisdictions.
- The limit is presented as a range to give the County flexibility. But it should be taken into account when reviewing large scale solar arrays, especially as the County approaches the limit.

Trails and Non-Motorized Transportation

During the current Master Plan update, Barry County also developed a Trailways Plan. The trailways plan outlines a detailed vision and action plan for further building out the non-motorized transportation and active recreation network in the County. The descriptions of the trails and parkways below are highlights of the natural assets in the County. For a more in-depth overview, please consult the 2022 Barry County Trailways Plan.

Hiking and biking trails are important for quality of life in a rural bedroom community like Barry County. They allow residents to explore the natural beauty of the County and provide recreational amenities that do not compromise rural character. Being largely rural in nature with pockets of urbanized areas, scenic views of farmland, and plentiful lakes, Barry County is in a prime position for a premiere non-motorized transportation system. In general, the County's non-motorized transportation system includes the following types of bike infrastructure:

- » Separated pathways or trails: Typically 8 feet or wider and intended for leisure biking and walking or jogging
- » Paved Shoulders: Typically 4 feet or wider and intended for rural roads and more serious cyclists that travel at faster speeds

There are two regional trails that run through Barry County:

- » North Country Trail is a multi-state trail system that runs from North Dakota to Vermont, with more mileage in Michigan than any other state. In the state, the trail runs across the Upper Peninsula, across the Mackinac Bridge, and through the western part of the Lower Peninsula to Ohio. Through Barry County, the trail runs through the Middleville State Game Area, the Village of Middleville, and Yankee Springs State Recreation Area before proceeding south into Kalamazoo County.
- » Paul Henry-Thornapple Trail is a regional trail running from Grand Rapids to Vermontville in Eaton County. In Barry County, it runs through Hastings and Nashville, and runs concurrently with the North Country Trail in Middleville. The trail is not yet complete, however. There are missing sections north of Middleville, between Middleville and Hastings, and between Hastings and Mckeown Bridge Park.
 Completing the Paul Henry-Thornapple Trail is

Barry County's top non-motorized priority.

Current Paved Shoulders System

In addition to the County's separated pathway/trail network, the County also includes several major thoroughfares that are fitted with paved shoulders 4-feet or wider. According to the 2019-2023 Barry County Parks and Recreation Plan, several major corridors in the County include paved shoulders. These corridors include:

- » M-66
- » M-37
- » M-43
- » M-179
- » Pine Lake
- » Patterson
- » Wildwood
- » State
- Cherry Valley

Coats Grove

Other Important Non-Motorized Transportation Efforts

The 2019-2023 Barry County Parks and Recreation Plan includes a complete inventory of the County's existing parks and trails system, as well as provides an action plan and roadmap for the future County parks and recreation system. Similarly, the Michigan Department of Transportation (MDOT) adopted the MDOT Grand Region Non-Motorized Plan in 2017 that includes details of the existing and planned non-motorized transportation system at a larger scale for several Counties including Barry, Kent, Allegan, Ottawa, Ionia, Newaygo, Oceana, Lake, Mason, and Montcalm. Both plans work in conjunction with this Barry County Master Plan, as well as the Barry County Trailways Plan to develop a regional non-motorized transportation network for residents and visitors to enjoy.



Non-Motorized Transportation System Planning

The County has several gaps in the non-motorized transportation system in which future paved shoulders would likely be beneficial. In general, the methodology behind planning locations for paved shoulders includes the following considerations:

- Completing major gaps in the system to connect existing paved shoulder routes to one another
- Planning for paved shoulders in areas of the County that are otherwise underserved in terms of nonmotorized transportation infrastructure
- Providing connections to regional recreation assets, such as connecting County (and local) parkland or trails to one another and providing access to natural features such as lakes
- Identifying primary roads within the County that are already paved that could be enhanced with paved shoulders in the future
- Connecting urbanized areas to rural areas through non-motorized infrastructure

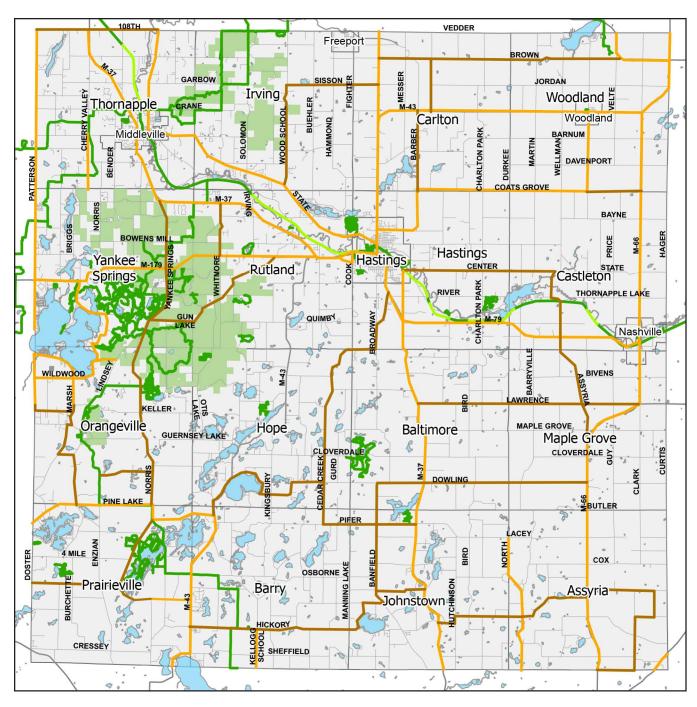
As for future bike trails, the 2019-2023 Parks and Recreation Master Plan and the Barry County Trailways Plan include additional detail pertaining to the planned areas and routes for future trails.

Non-Motorized Transportation System Implementation

For implementation of bike infrastructure, Barry County can seek grant funding through various State and local sources, such as the Michigan Department of Natural Resources Trust Fund (MDNRTF), the MDOT Transportation Improvement Program (TAP), and others. Further, consideration should be taken to monitor the road resurfacing schedule, as advertised by the Road Commission. Partnerships with the Road Commission could assist with the implementation of paved shoulder projects during road resurfacing activities.

The following map includes the County's existing and proposed trail and suggested paved shoulder routes.

https://www.barrycounty.org/departments_and_officials/advisory_boards_ and_commissions/parks_and_recreation/parks_and_trail_planning.php



Trails and Paved Shoulders

Barry County, Michigan





Parks

Barry County has an abundance or parks, recreation and game areas, natural areas, preserves and sanctuaries, and campgrounds and museums. The County is home to state parks, county parks, and local and municipal parks. The facility descriptions provided below are highlights of the County's park and natural lands inventory. For a detailed inventory, consult the 2019-2023 Barry County Parks and Recreation Plan. The Parks and Recreation Plan outlines a detailed vision and action plan for further building out the active recreation network in the County.



- Barry State Game Area and Target Range is an almost 17,000 acre nature preserve. The Barry State Game Area provides critical habitat for a myriad of game and non-game species and supports over 1,500 acres of high-quality natural communities. Barry State Game Area contains over 10,000 acres of forest and close to 800 acres of high-quality forest.
- Yankee Springs Mountain Bike Trail contains an 11.3-mile, single-track mountain biking trail for use. The trail contains several rocks, roots, climbs, and switchbacks, making it perfect for any adventureseeking mountain biker. The trail also contains several quick descends that pass through mixed pine tree forest areas. The mountain biking staging and parking are can be found just north of the intersection of Gun Lake Road and Yankee Springs Road near Deep Lake and the rustic campground.
- Yankee Springs Recreation Area's rugged terrain, bogs, marshes, lakes, streams and unique beauty of the park's 5,200 acres lend itself to many forms of recreation--metal detecting, hiking, biking, cross country skiing, snowmobiling, snowshoeing and ice fishing are popular winter activities. Nine lakes are located within the park boundaries providing fishing and water sports of all kinds during warm weather. A modern campground is located at Gun Lake, rustic camping at Deep Lake and equestrian and youth organization campgrounds are also provided. Bridle trails available.

- Middleville State Game Area is over 3,900 acres of forest and over 750 acres of high-quality forest, according to the Michigan Natural Features Inventory. The park contains numerous wetlands and vernal ponds.
- North Country Trail winds through the western half of Barry County through the Yankee Springs Recreation Area. The trail has numerous trailheads throughout the County.
- Paul Henry Thornapple Trail passes through farmlands, woodlands and small towns, along and over rivers and creeks. The scenic highlight of the trail is its close proximity to the Thornapple River. The trail is a four-season adventure for the outdoor enthusiast, living healthy and having fun. It passes through a safe and natural environment for individual, family, and organization use.



- » Barry County Veteran's Memorial Dog Park is a park in Hastings that allows off-leash dog socialization and exercise.
- » Bob King Park is the home of TangleTown, a handicap accessible play structure constructed in 1997. Bob King Park is a great place to take children of all ages. If parents feel their children are not quite ready to play in the huge play structure there is a smaller fenced in area with playground equipment designed for younger children. There are also tennis courts and a baseball diamond.
- » Calvin Hill Park is a 1.1 acre park which includes a basketball court, play equipment, a small skateboard park and a mowed open space, bordered by Park, Ellis and Front Streets. The property is the site of the former Calvin Hill School. A 20' by 30' pavilion is available to reserve for events.
- » Crane Park and Baseball Fields are located in Thornapple Township, but owned by the Village of Middleville and maintained by Thornapple Area Parks and Recreation (TAPRC). The park consists of 12 acres and offers three ball fields and gravel parking. The ball fields are used in-season as part of the TAPRC programming for youth and adult softball and baseball.
- » Duncan Lake and Boat Launch provides public access to boaters. The launch is located at the northern edge of the County, northwest of Middleville.

- Fish Hatchery Park is located next to Spectrum Health-Pennock on Green Street, Fish Hatchery Park, is the busiest park in Hastings. Fish Hatchery Park is a site for softball games, tennis matches, soccer tournaments, basketball games, picnics, a friendly game of horseshoes, and much more.
- » Gull Lake Township Park is owned by Prairieville Township and is at the northern most point of Gull Lake. The park has a boat launch, fishing dock, picnic tables, grills, and a swim area.
- » Lower Crooked Lake Park is located in Prairieville Township that has a boat launch and lake access.
- » McKeown Bridge Park sits on 23 acres along the Thornapple River. The park features natural trails, riverfront boardwalks, a kayak launch, and picnic areas. Barry County Parks and Recreation is planning improvements, including expanded trails and boardwalks, an additional picnic pavilion, and a playground.
- » Municipal Park is in Prairieville Township and contains a baseball field, gazebo, and playground.
- » Parker Road Park is a 5-acre park in Prairieville Township with connections to the North Country Trail, softball/baseball diamonds, a picnic shelter, and play structure. Parker Road Park is a small, forested natural area with wetlands.
- » Pine Lake Park is located on the south side of Pine Lake in Prairieville Township. This park boasts tennis and basketball courts, a baseball field, and forested trails and natural areas.





- Pine Lake Recreation Area is an 18-acre park with courts for playing volleyball, tennis and basketball, a ball field; play equipment, and pavilion with picnic tables, restroom and water pump. Those fortunate to live along Pine Lake's waterfront will find opportunities for boating, swimming, water skiing, riding personal water craft, and fishing just outside their door.
- Spring Park is Middleville's largest park (24 acres). The park offers a baseball / softball diamond used for league play, a small disc golf course, a picnic shelter, several outdoor barbecue grills, play equipment and picnic tables. This park also contains a unique spring-fed fen natural area which includes a rare sedge fen. The south 8 to 9 acres is undeveloped and in natural condition. A portion of the park is now a State Wetland Mitigation Site, meaning that wetlands were added to the park to compensate for wetlands removed elsewhere in the community. These wetlands will be permanently protected. Spring Park's shelter is available to reserve for events.
- Stagecoach Park is a 1.2 acre park adjacent to the Middleville Village Hall and functions as a trail head staging area, there are approximately 4.5 miles of the trail are paved and 6 miles are owned by the Village of Middleville. The scenic trail parallels the Thornapple River and offers stunning scenery. A series of exercise plagues and a handicap accessible fishing pier were installed in 2009 along the trail way
- Sweezy's Nature Area is a 19.15 acre natural area, the park features winding rustic footpaths and hiking trails through the hills, woods and wetlands surrounding the pond that gives the park its name. The park's trails offer a pleasant hike for all ages. Its woods and wetlands host a variety of birds and other wildlife for both the seasoned and budding naturalist to enjoy.

- Thornapple River Canoe/Kayak Launch -Middleville is located north of the Main Street Bridge and dam on the Thornapple River. The launch was constructed in 2016 with a handicapped accessible feature for launching both canoes and kayaks. This ADA compliant ramp is the only one of its kind on the Thornapple River. Those needing the handicapped accessible ramp should be aware that they must return to the ramp to exit the river. A concrete pad has recently been installed allowing easier access to the river for those folks not needing the ADA launch platform.
- Tyden Park is close to downtown Hastings, which is well known for having the Thornapple River peacefully winding through it. Some of the activities possible when visiting Tyden Park are walking/ running the short trail, volleyball games, basketball games, or canoeing/kayaking/floating in a tube down Thornapple River.
- **Upper Crooked Lake Park** is located in Prairieville Township has a boat launch and parking spaces on the shores of Crooked Lake.
- Wildwood Trails Park is located in the heart of a housing and retail development, the 20 acre park features 1.45 miles of rustic walking trails through a white pine stand, hardwoods and open meadows. A mountain bike trail was recently added. The trails are unpaved and the park functions as a natural open space.



- » Camp Michawana Campground and Retreat Center is located on 188 acres of beautifully forested, rolling hills with 1/4 mile of frontage on Long Lake.
- » Camp Thornapple is 32 wooded acres with 136 full hookup sites (electric, water and sewer), four water and electric sites, and three primitive sites on High Bank Creek that runs through the park.
- » Crooked Lake Campground and RV Park is a quiet full hook up camp on Lower Crooked Lake in Prairieville Township. There are 26 RV sites and 10 camp sites for roughing it. The sites have showers and waste disposal available. The campground rents boats, canoes, and kayaks.
- » Girl Scouts Heart of Michigan Campground Camp Merrie Woode is the oldest continuously licensed overnight camp in the entire state of Michigan. Located on Warner Lake, this camp is 216 acres chock full of fun and exciting adventures for your camper. Camp Merrie Woode features horseback riding, shooting sports, hatchet throwing, slingshot, swimming, boating, indoor and outdoor climbing walls, and more!
- » Indian Valley Campground and Canoe Livery has modern and rustic campsites for all types of camping units. Campsites by night, week, month, and season are available. Planned activities on Saturday with Wagon rides. Canoe or kayak the Thornapple River, 2 to 6 hour trips start or end at the campground. Excellent fishing on the Thornapple River at the campground, and you can rent a fishing boat, paddle boat or fish the spring fed pond.

- » Rivergate Family Campground is located on the Thornapple River outside of Hastings, Michigan with easy access to recreational Thornapple Lake.
- » Sharp Park Campground is a family-friendly campground that offers a beach for swimming, hiking trails, fishing and kayaking on a small no wake lake. The campground is bordered by state land and is close to Deep Lake, Gun Lake and Yankee Springs Recreational Area which offers additional recreational activities. Nearby businesses include a winery, local shops, golf courses, Gun Lake Casino and several local restaurants. The campground is surrounded by multiple small towns that offer events and attractions year-round.
- whispering Waters Campground is a long-term stay campground with the focus on seasonal camping.



- Barry County (Edger) Waterfowl Production Area. In 2007, the 160 acre Edger Waterfowl Production Area was acquired in 2007. In 2008, hedge rows were removed and former hay fields were converted to a mixture of native grasses and wildflowers. In 2010, 4 acres of wetlands were enhanced and restored for waterfowl production. The area contains 69 acres of grassland, 25 acres of wetlands and 66 acres of upland forest and other habitat. The mixture of wetlands and grasslands provides high quality nesting and brood rearing habitat for ducks such as mallards and wood ducks, geese, a variety of grassland songbirds and pollinator habitat for the monarch and other native bee species. Edger Waterfowl Production Area is jointly managed by the U.S. Fish and Wildlife Service and the Michigan Department of Natural Resources.
- Bernard Historical Museum is home to eight buildings and more than 40,000 artifacts. The museum's holdings date from prehistoric times to the 1930's and 40's and include items relating to Indian settlements, early Barry County settlers, and some of the doctor's medical equipment, now considered antiques. The museum sits on the north shore of upper Crooked Lake and is the perfect destination for history buffs, families, schools, or anyone interested in rediscovering our collective past.

- Historic Charlton Park features 310 acres along Thornapple Lake, with amenities including hiking, boating, swimming, fishing, a historic village, and a museum. The park has been called "the jewel of Barry County."
- Gertrude McPharlin Bauer Nature Sanctuary is a 20-acre preserve located along the steep slopes of the Highbanks Creek. There is approximately 100' of elevation change between the east and west borders of the preserve, much of it occurring in a dramatic 80' drop. The steep slope likely protected the land from logging and there is a diverse amount of species of large size on the preserve. Additionally, there is a significant diversity of spring flora on the slopes. There is a fairly diverse wet meadow along the creek that may have nesting Sandhill cranes.
- Gilmore Car Museum is North America's largest auto museum with over 400 vehicles on display and over 190,000 square feet of exhibit space. The Museum's 90-acre Historic Campus features numerous vintage structures including a restored and fully-functioning 1941 Silk City Diner, a recreated 1930s Shell Station, six on-site Partner Museums, and so much more.



- » Hidden Pond Preserve is a 67-acre preserve in Hope Township. The pond was formerly used as agricultural land until drain tiles were removed, creating the pond. Mowed trails go through open grassland and along forest edges, over a stream, then up a long, gradual hill to a restored prairie and pond.
- Pierce Cedar Creek Institute is a nature center, environmental education center and biological field station located on 850 acres with ten miles of hiking trails. It is 10 miles south of Hastings. The Institute's mission is to inspire appreciation and stewardship of our environment. Visitors will experience the beauty of wetlands, forests, marshes, streams, lakes, and prairies on the property. The hiking trails are open daily dawn to dusk with experiences such as the Storywalk on the Black Walnut Trail, the Play Space for children, as well as the terrace, which extends from the Visitor Center south side parking lot around the back of the building. There are many opportunities to relax, meet with family and friends, and enjoy the beauty of nature.
- » Long Lake Outdoor Center a large and unspoiled wilderness camp with rustic cabins and lodges for rental. The best remaining example of a CCC (Civil Conservation Corp) camp in Michigan and is listed in the National Register of Historic Places.
- **Lux Arbor Reserve** is a 1,557-acre nature preserve that is part of the W.K. Kellogg Biological Station.
- » Thornapple Lake Nature Sanctuary is a 60-acre sanctuary on the east side of the Thornapple Lake, where the Thornapple River enters the lake. The sanctuary encompasses shoreline both south and north of the Thornapple River. The primary natural community found on the sanctuary is floodplain forest. Visiting this sanctuary is challenging and best accomplished by canoe or kayak from the public boat launch from Superior Drive.

School Districts

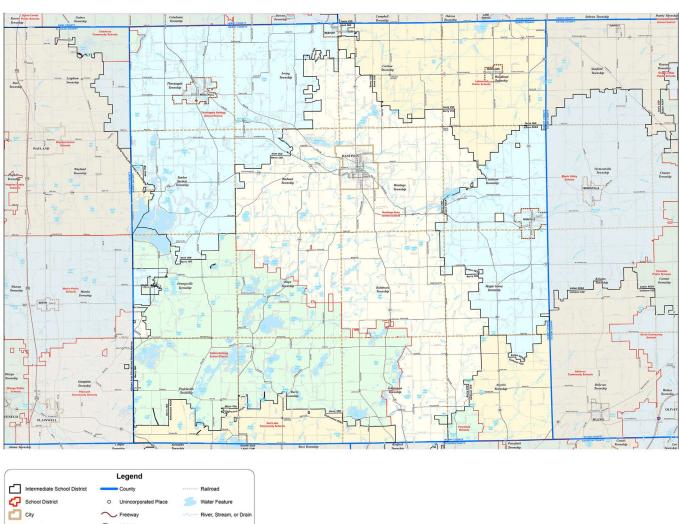
There are 11 school districts that serve students within Barry County, though only four high schools are located within the County (Thornapple Kellogg, Hastings, Lakewood, and Delton Kellogg). The school district boundaries are shown on the map below, from the Michigan Department of Technology, Management, and Budget.

Table 15: School Districts by High School Enrollment (2022-23 School Year)

School District	High School	Enrollment
Caledonia Community	Caledonia*	1,490
Gull Lake Community	Richland Gull Lake*	935
Thornapple Kellogg	Middleville Thornapple Kellogg	925
Plainwell	Plainwell*	829
Wayland Union	Wayland*	787
Hastings Area	Hastings	760
Pennfield	Battle Creek Pennfield*	661
Lakewood	Lake Odessa Lakewood	490
Delton Kellogg	Delton Kellogg	319
Maple Valley	Vermontville Maple Valley*	263
Bellevue	Bellevue*	187
Martin	Martin*	180

Source: Michigan High School Athletic Association

Figure 5. Barry County School Districts



^{*}Indicates High School Located Outside Barry County

Root Findings

Nine different authorities own and operate public water and/or sanitary sewer facilities in various places throughout Barry County. Generally, water systems are located in population centers like Hastings or Middleville. Sewer systems exist in those places as well, but they also exist elsewhere to serve lakefront communities and protect water quality.

Unpaved roads are common, especially in the County's rural areas. In some places, these roads are sufficient for local use, and do not need to be paved. However, local conditions may vary, and some unpaved roads may need to be paved to ensure safe and reliable access for residents.

In order to preserve the natural beauty, viable farmland, precious ecosystems, and the health, safety, and welfare of the County's residents, **Barry County** must abopt thoughtful and detailed zoning ordinances to regulate and control the development of utility-scale wind and solar energy facilities.

As a rural, lowdensity area, Barry County does not suffer from traffic congestion. However, many of its residents commute long distances, and benefit from a road system designed to connect to nearby job centers in other counties.

Barry County features a portion of the multi-state North Country Trail, as well as the regional (but not fully complete) Paul Henry-Thornapple Trail. These trails serve an important recreation and transportation function, while enhancing, rather than detracting from, Barry's rural character.

The central and southeast portions of the County are not served by regional nonmotorized infrastructure.

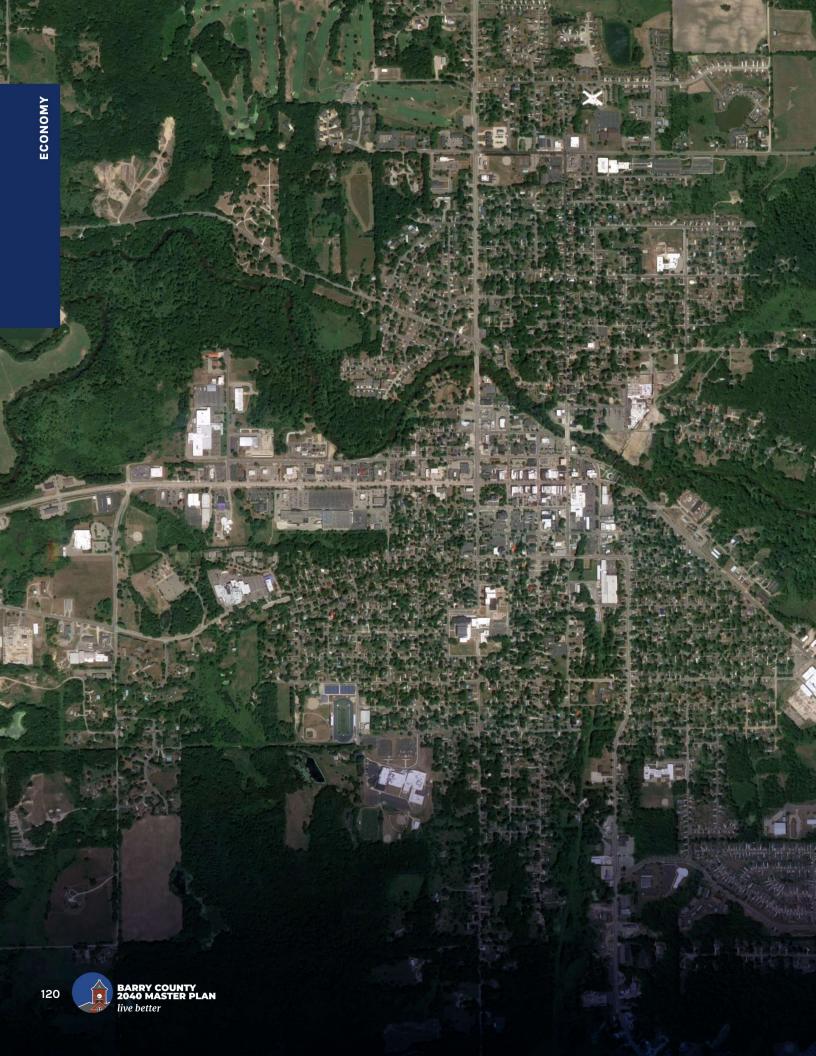
Resources are available for the continued buildout of broadband communications infrastructure in the County. Internet connectivity has become a vital component of infrastructure.

The County operates three parks: Historic Charlton Park, McKeown Bridge Park, and Paul Henry Thornapple Trail, a linear park. Recent investment in McKeown Bridge has made it a destination, while Historic Charlton has long been "the jewel of Barry County." The Paul Henry Thornapple Trail is the County's destination linear park.



ECONOMY OF BARRY COUNTY

The County Master Plan, especially the Future Land Use Map, should reflect market realities and position the County for fiscal sustainability. Therefore, the following pages contain analyses of the need for industrial, commercial, and residential land in Barry County, as well as an analysis of the fiscal impact of the recommended acreages of commercial, industrial, and residential land derived from the data analysis in this plan.



Industrial Land Analysis

The quantity of developed industrial land a community will need in the future is dependent upon its current employment base, infrastructure capacity, and local land use goals, as well as a myriad of other factors industries consider when choosing a new facility location.

This chapter assesses the regional industrial land within West Michigan and estimates the amount of industrial land that will likely be needed within Barry County.

Regional Industrial Market

Emerging global markets, heightened competition for market share, and customer demand for faster product delivery are all contributing to transportation as a key factor in site selection. Transportation is second only to labor availability and cost when selecting the right site for a new or expanded facility. The emphasis on transportation, highway accessibility in particular, reinforces a continuing trend of executives seeking effective transportation links with both suppliers and customers. "Just-in-time" delivery requirements, reduced inventories, and reduced costs of materials on hand are driving this requirement.

At the time of this Master Plan, West Michigan's regional industrial economy was in a place of strength and growth, with low vacancy rates, rising rents, and high demand for both skilled and unskilled labor. Rising interest rates and high materials costs were slowing the pace of industrial construction, but not slowing the pace of industrial productivity or labor demand.

Table 16: Industrial Productivity and Labor Demand

	2022		
	Q1	Q2	QЗ
Total Inventory (in SF)	149,248,810	148,990,379	148,897,799
Net Absorption (in SF)	25,699	1,468,858	531,346
Overall Vacancy	2.83%	2.33%	2.2%
Under Construction (in SF)	2,188,951	1,654,461	1,540,350
Overall Asking Lease Rates (NNN)	\$5.29	\$5.29	\$5.82

Source: Colliers International

With the continued growth of the regional industrial sector, the demand for new industrial land is clear. However, the question for Barry County is how much of that land should be planned in Barry, as opposed to larger, more urban counties like Kent, Kalamazoo, or Calhoun. As a rural bedroom community, Barry County must provide jobs for it residents, but need not strive to be a major industrial center.

Industrial Land Use Planning Standards

For land use planning purposes, it is necessary to estimate the amount of land that can reasonably be expected to develop for industrial uses. This enables capital improvements to be planned and programmed in advance, and that an ample supply of land is available to support local employment opportunities.

Employment Density Ratio

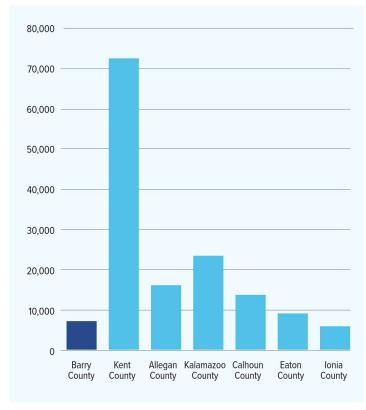
The employment/density ratio method is considered the most accurate predictor of industrial land use demand. If employment by industry can be projected, a worker density factor can be applied.

The US Census tracks the following industrial employment categories:

- » Transportation and Warehousing
- » Manufacturing
- » Wholesale Trade

In Barry County and its surrounding Counties, the number of industrial employees in the labor force is as follows:

Figure 6. Industrial Employment of Barry County Residents



Source: US Census 2020

73.2% of Barry County residents commute outside the County for employment (see Chapter 5). That means, of the 7,626 industrial workers that live in the County, only 2,044 actually work in Barry County.

The Ford Battery Plant in Marshall (which is in Calhoun County) will likely increase industrial employment in Barry County. However, because those workers will work outside Barry, there will be no impact on the acreage of land needed in Barry for industrial development.

There are approximately, 2,500 acres of industrial land in the County currently (see Chapter 3), or approximately 1.22 acres per Barry County resident employed in an industrial occupation at a job located within the County.

Projecting Industrial Job Growth

The industrial market in West Michigan is poised for continued strong growth in the short term, and likely in the long term as well. According to the US Census, industrial employment in the region grew from 130,309 in 2010 to 150,167 in 2020, a 15% growth rate.

Using the current 1.22 acres/employee ratio, and assuming that Barry County's share of regional industrial employment stays constant, following are three projection scenarios to 2030:

- » Conservative Scenario 10% Growth: If industrial job growth slows to a 10% increase between 2020 and 2030, Barry County will need approximately 2,743 acres of industrial land.
- » Moderate Scenario 15% Growth: If industrial job growth continues at approximately its current pace between 2020 and 2030, the County will need approximately 2,867 acres of industrial land.
- » Aggressive Scenario 20% Growth: If industrial job growth increases 20% between 2020 and 2030 the County will need approximately 2,992 acres of industrial land.

Therefore, the Future Land Use Map should call for between 2,700 and 3,000 acres of industrial land (200 to 500 acres beyond what is currently developed as industrial). Commercial/industrial mixed use areas should count towards this total.



Commercial Land Analysis

This section will analyze the market for commercial land in Barry County by analyzing the spending power of the County compared to the amount of money spent at retail and other commercial establishments within the County. This Gap Analysis compares the supply of a certain good or service within a community to the demand for that good or service, based on the spending power of residents. If the number is positive, that indicates pent-up demand for new commercial development. If the number is negative, that indicates an oversupply of a commercial business—and suggests that people are coming into the community to purchase goods.

Then, the "gap" is converted from a spending power amount (in dollars) to a number of additional square feet of retail space demanded (based on per-squarefoot sales).

In considering the results of these retail gap calculations for purposes of the Master Plan, it is important that the numbers not be viewed as an absolute determinant of the community's future. Retail gap is only one aspect. Local variations in buying preference, buying power, community desires, and other local characteristics and assets will greatly impact the future and outcome. The purpose of this analysis is, therefore, to give some insights which can contribute to a balanced approach in future economic development efforts and to create realistic expectations for the types of new retail development the County can hope to attract.

\$5M \$4.5M ■ Demand = total discretionary income Supply = amount spent in county \$4M \$3.5M \$3M \$2.5M \$2M \$1.5M \$1M \$.5M \$0 **Barry County** Kent County Allegan County Kalamazoo County Calhoun County **Eaton County** Ionia County

Figure 7. Retail Spending vs Spending Power

Source: ESRI Business Analyst

Regional Spending Power vs Sales

The chart below compares the amount spent on goods within a county to the total discretionary income of the residents of that county, for Barry and its neighbors. Discretionary income is income after taxes, housing, insurance, debt service, transportation, and other fixed costs are removed (generally 10% of gross income). If the amount spent is higher than the disposable income, then people must be coming into the county to buy things. If it is lower, that means people are leaving the county.

For all counties, including Barry, the vast majority of discretionary income is spent within the county. However, the size and direction of the gap in each county is important. In Kalamazoo, Calhoun, and Eaton Counties, total spending is higher than discretionary income. That indicates that people are coming into the county from other counties to shopping centers in the Kalamazoo and Battle Creek areas (and, in the case of Eaton County, shoppers from Lansing and other Ingham or Clinton County communities shopping in Delta Township and other Eaton communities).

Meanwhile, in Barry, Ionia, Allegan, and, oddly, Kent, spending power is leaving the county and being spent elsewhere. 12% of Barry's discretionary income, or \$45,829,325, is spent outside the county, which, by both percentage and raw amount, is the third largest in the region after Allegan (19%) and Kent (14%).

Impact of Online Sales: Some of the discretionary income not being spent in the county may be coming from online sales. According to Statistica, 14.5% of US retail spending is now conducted online. That number increased during the Covid-19 pandemic, shooting up from 11% in 2019 to a high of 16% in 2020 before settling back to the 2022 number.

If 14.5% of the Barry County spending gap is going online, that leaves \$39,174,072 of Barry County spending power that is supporting brick and mortar businesses outside the County – and which could be supporting businesses inside the County.

Land Analysis

The table below shows the approximate acreage of the major commercial clusters in Barry County.

Table 17: Acreage of Commercial Clusters in Barry County

Commercial Cluster	Approximate Acreage		
Hastings M-37/M-43 West	753		
Nashville M-66 South	66		
Downtown Hastings	54		
Hastings M-37 South	53		
Middleville M-37 North	49		
Downtown Nashville	28		
Middleville M-37 South	17		
Downtown Middleville	8		
Delton	77		
Other	10		
Total	1,115		

Source: McKenna Analysis (see Existing Land Use Map)

The total acreage of commercial land in Barry County is approximately 1,115 acres. Barry County's total discretionary income is \$428,370,797, with \$382,541,472 being spent within the County, which means Barry County's commercial areas experience \$343,086 in sales per acre per year.

In order to determine the recommended range of commercial land for the Future Land Use Map, the following scenarios examine the number of acres of commercial land that would be needed to "recapture" a certain portion of the spending by residents that currently leaves the County. Because it is likely impossible to recapture all of the spending, the levels are 25%, 50%, and 75%.

- » 25% Recapture: \$11,457,331 recaptured, at \$343,086 per acre = approximately 33 acres
- » 50% Recapture: \$22,914,662 recaptured, at \$343,086 per acre = approximately 67 acres
- » 75% Recapture: \$34,371,993 recaptured, at \$343,086 per acre = approximately 100 acres



Commercial Growth Analysis

Barry County is growing in population. It is also experiencing an increase in per-capita income. In 2030, according to the population projection in Chapter 5, the Barry County population will be 63,372 (2,227 new residents),

Meanwhile, the County's per-capita income increased from \$24,493 in 2010 to \$34,002 in 2020, according to the US Census. If that growth continues, combined with population growth, \$21,176,543 of new spending power will be added to the County.

Based on the analysis above, 14.5% of that spending will be done online and somewhere between 3% and 12% will be spent in other counties. Given that, the table below calculates the range of commercial land that should be planned for on the Future Land Use Map:

Table 18: Commercial Acreage Needed

	Spending	Commercial Acreage Needed
Existing In-County Sales	\$382,541,472	1,115
Recaptured Out-County Sales		33-100
25%	\$11,457,331	33
50%	\$22,914,662	67
75%	\$34,371,993	100
Economic and Population Growth		
Additional Spending Power in 2030	\$21,176,543	
Amount Lost to Online Sales	-\$3,070,599	
Amount Lost to Other Counties (12% Loss)	-\$2,541,185	
9% (25% Recapture)	-\$1,905,889	
6% (50% Recapture)	-\$1,270,593	
3% (75% Recapture)	-\$635,296	
Net New Spending Power	\$15,564,759 - \$17,470,648	42-47
Total Commercial Acreage		1,190 -1,262

Source: ESRI, US Census, McKenna Calculations



Residential Land Analysis

The population projection in Chapter 5 projects a population of 63,372 people in 2030, which means 2,227 new Barry County residents over the next 10 years. Those residents will need housing, but how much land will that housing need to take up?

Barry County currently has 61,045 residents spread over 577 square miles, for a population density of approximately 106 people per square mile, or 0.16 people per acre.

2,227 new residents, at the same population density, would require 356 new acres of residential land.

Currently, there are 15,114 acres of residential land in Barry County (not including residences on farms or other large rural parcels). Based on the projected population growth, Barry County will need **15,470 acres of residential land on the Future Land Use Map.**

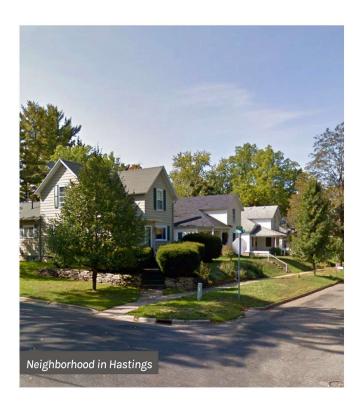


Table 19: Summary of Land Use Acreage Supply/Demand

	Residential	Commercial	Industrial
Existing Acres	15,114	1,038	2,500
Existing Percentage	4.1%	0.3%	0.7%
Acres Demanded	15,470	1,178	3,000
Demand Percentage	4.2%	0.3%	0.8%

Fiscal Impact Analysis

Different land uses produce different levels of tax revenue, and required different levels of spending to provide County services. Barry County's Master Plan should plan for a future that is fiscally sustainable.

Pennsylvania State University conducted a study of land uses in rural communities that showed that residential development must be off-set by commercial/industrial development and rural preservation in order to be fiscally sustainable. As shown in the table below, the cost of services per tax dollar for residential uses exceeds \$1, while other uses are below \$1, meaning their excess tax revenue is needed to offset losses on residential.

Table 20: Cost of Service per Tax Dollar by Land Use

Land Use	Cost of Services Per Tax Dollar
Residential	\$1.15
Commercial	\$0.14
Industrial	\$0.10
Farm/Open	\$0.07

Source: Pennsylvania State University

Based on the Industrial, Commercial, and Residential Land Analyses in this chapter, the following acreage should be set aside for those land uses on the Future Land Use Map. Once the appropriate land has been designated for those uses, the rest of the County should be planned for agriculture and rural preservation.

The following chart shows the potential fiscal impact of the development supported by the market, according to the analysis in this chapter. For the purposes of the chart, commercial and industrial development are shown at the top end of their projected range.

Barry County's total revenue expenditures in 2022 were **\$19,269,628**, and Barry County consists of 369,280 acres, so, overall, Barry County receives \$52 per acre in tax revenue and spends it on services. Based on the ratios in the Penn State study, the table below shows the per-acre cost of providing services to different land uses.

Table 21: Potential Fiscal Impact

Land Use	Acres	Cost of Services Per Tax Dollar	Expenditures Per Acre	Percentage of County Area	Percentage of County Expenditures
Residential	15,470	\$1.15	\$59.80	4.2%	43.7%
Commercial	1,268	\$0.14	\$7,28	0.3%	0.4%
Industrial	3,000	\$0.10	\$5.20	0.8%	0.7%
Farm/Open	320,988	\$0.07	\$3.64	87,0%	55.2%
Water	28,644	\$0.00	-	7.7%	0.0%
Countywide	369,280	\$1.00	\$52.00	100%	100%

The low percentage of residential land means that build-out according to the market, along with the land use planning later in this Master Plan, should keep the County on fiscally stable footing.

Root Findings

Barry County is a bedroom community where residents choose to live among natural beauty, and are willing to commute to job centers in other counties for jobs and retail.

demand for housing, industry, and commerce, when translated to land area needed to accommodate the market, totals just over 6% of the total area of Barry County, and just over 5% of the land area. This means only an additional 500-750 acres will be needed County-wide to accomodate predicted residential, commercial and industrial growth over the next 10 years.

The market

Nearby urban centers such as Grand Rapids, Kalamazoo, Battle Creek, and Lansing provide more jobs and amenities than can be consumed by their populations. Barry County residents fill those gaps.





THE PARTNERS OF BARRY COUNTY

There is a strong partnership environment currently at work within Barry County that has effectively allowed the County to advance key community values related to public health, safety and welfare. The Barry County Master Plan, recognizing those existing partnerships and how they can so effortlessly support local land use planning objectives seeks to continue to engage existing partners and find opportunities for new partners in working toward the vision for Barry County.



Barry County Partners

Partnerships are instrumental in the success of providing vibrant, sustainable, and prosperous communities. Specifically, partnerships can 1) leverage the effectiveness of a 'regional view' in community stability; and 2) allow for public sector/private sector collaboration in service delivery. This Plan recognizes Barry County's existing partnerships and supports seeking out new partnership opportunities.

Active Barry County Partnerships

Joint Planning Alliance

The Joint Planning Alliance (JPA) is a consortium of four local communities—the City of Hastings, Rutland Township, Hastings Township, and Carlton Township— and Barry County. The JPA is not a regulatory zoning body, but instead works together on broad planning issues. The JPA has also been instrumental in envisioning and coordinating infrastructure projects, and in acting as a coordination and communication vehicle between the adjacent communities. The JPA frequently appoints subcommittees to work on specific issues, such as trail extensions, corridor design, and major development projects.



Barry Community Foundation

The Barry Community Foundation, which is based in Hastings, provides grants and programs for the arts, culture, economy, environment, and health of Barry County. The Community Foundation is a key player in rural philanthropy and rural entrepreneurship using all forms of capital, opening up space in a converted church to community nonprofits for collaboration (social capital), writing job descriptions for local elected positions to improve candidate recruitment (intellectual capital), facilitating the retention of the library location downtown (reputational capital), the creation of the Youth Advisory Council to usher young adults into local leadership positions and discourage migration out of the community (moral capital), and, partnering with a local bank to foster loans for community businesses and start-ups (financial capital).









Blue Zones

Blue Zones is an international movement to increase longevity and quality of life. The Blue Zones organization, who provides lifestyle recommendations on everything from diet to recreation to housing, was identified as an opportunity by the Barry Community Foundation. Partnering with Blue Zones, the Foundation started "Activate Barry County," a multi-pronged effort aimed at supporting culture and health— and 'optimizing the Life Radius' or the area close to home where we spend 90 percent of our lives.

Thornapple Arts Council

The Thornapple Arts Council is a non-profit organization dedicated to "enriching Barry County through arts and culture by fostering education, appreciation, and participation in the arts." Partnering with Hastings and other area communities, the Arts Council hosts events throughout the year. Hastings Live, a series of concerts and events on Wednesdays and Fridays in the summer, is a driver of business and vibrancy for the city's downtown. The Arts Council also sponsors the Arts and Eats—a self-driving tour of Allegan, Barry, Calhoun, Kalamazoo, and Van Buren Counties that highlights artists from Hastings and surrounding communities.

Pierce Cedar Creek Foundation

Pierce Cedar Creek Institute is a mix between an environmental education center, nature center and biological field station located in Barry County. The Institute offers environmental education and sustainable land management programs to the community, instructing environmental stewards by communicating the core values of land conservancy, environmental responsibility and the pursuit of knowledge; provides scientific research grants and research partnerships with a consortium of area colleges and universities; and features over nine miles of hiking trails open to the public, free of charge, from dawn to dusk year-round.

Barry County Economic Development Alliance

The Economic Development Alliance is a county-wide organization providing services to local governmental partners, existing businesses and budding entrepreneurs.

The Alliance brings together resources; works with local businesses and entrepreneurs to assist them in accomplishing their goals and achieve success; and partners with communities to develop infrastructure and resources for existing businesses and new business development.



The GLPA works to protect and promote the health and responsible usage of Gun Lake and the interests of its property owners. By preserving and protecting this amazing resource and the riparian interests of property owners on and around the lake, the GLPA acts as an environmental steward and also safeguards resident property values.

The GLPA partners with the DNR, EGLE (formerly DEQ), township and zoning officials, the Gun Lake Tribe, the Gun Lake Improvement Board (GLIB), local law enforcement, Gun Lake Sewer and Water Authority, and community businesses and residents to accomplish its mission.





Barry County Partnership Opportunities

Barry County should consider additional partnerships for regional priorities such as:

- Attracting and directing investment in regional sustainability, such as stormwater management, flood plain and wetland protection, and green energy.
- » Encouraging a regional outlook by local businesses, including ensuring that business investment takes place in areas where infrastructure and housing are in place to support it.
- » Promoting the preservation of farmland and natural beauty, especially the Thornapple River watershed.
- » Building off existing efforts to complete a regional trail network, including connecting to Yankee Springs and the Iron Belle Trail.
- » Coordinating local policy, specifically zoning, especially with regard to potentially controversial topics such as alternative energy facilities and waterfront development.
- » Coordinating recreational activities and investments to strengthen the regional recreation system and prevent duplicate investments.

Potential partnerships that represent added opportunities for Barry County include:

State of Michigan

MI State Housing Development Authority (MSHDA)

MSHDA Mod - there is a critical need in rural Michigan for new affordable housing within areas experiencing current job growth. The program's intent is to use modular products in these critical need areas, thereby reducing the typical single-family construction timeframe and allowing this housing to be available at an affordable price point (less than \$200,000) and a reduced delivery time. Funding will not be awarded directly to the builders or suppliers of modular housing; instead, MSHDA will partner with local units of government and/or nonprofit corporations currently providing housing services to Michigan rural communities.

Michigan Economic Development Corporation (MEDC)

- » Placemaking Grants MEDC offers grants and loans to redevelop Michigan's downtowns and foster historic preservation.
- » Economic Development Collaboration
- » Business Incentives
- » Redevelopment Ready Communities
- » Brownfield Redevelopment

Michigan Department of Natural Resources (MDNR)

- » Recreation Grant Programs (Trust Fund, Passport, etc.)
- » Yankee Springs/Barry State Game Area

Environment, Great Lakes, and Energy (EGLE)

- » Invasive Species Outreach
- » Watershed Preservation
- » Wetland Preservation

Federal Government

- Community Development Block Grants are the most direct opportunity for a local community, but federal agencies such as the Army Corps of Engineers or the Environmental Protection Agency can also be important for local projects.
- Working with the Census Bureau to ensure a complete and accurate count of the residents of Barry County is important for future federal funding opportunities.
- **Opportunity Zones** The Opportunity Zone tax incentive was created to spur economic development and job creation by encouraging long term investments. Specifically, the Opportunity Zone incentive offers capital gains tax relief for new investment in designated areas. Benefits include tax forgiveness on gains on investments held for at least 10 years and deferral of tax on prior gains if the gain is invested in an Opportunity Fund. An Opportunity Fund is the investment vehicle used to invest in Opportunity Zone property. An Opportunity Fund can be used to create new businesses, new commercial or residential real estate, or infrastructure. Opportunity Funds can also be used to invest in existing businesses if it doubles the investment basis over 30 months. The incentive can also be combined with other incentives such as New Market Tax Credits (NMTC), Low Income Housing Tax Credit (LIHTC), and historic rehabilitation tax credits, adding a valuable tool for economic and community development in the city.
- **USDA Rural Development** A federal program that offers loans, grants, and loan guarantees to help create jobs and support economic development and essential services in rural communities.

Institutional and Public-Private Partnerships:

Institutions of Higher Education

- Kellogg Community College
- Grand Rapids Community College
- Kalamazoo Valley Community College
- Olivet College
- Kalamazoo College
- Davenport College
- Western Michigan University
- Michigan State University

Major Employers to Health Care

- Spectrum
- Bronson
- Borgess
- Metro/U of M
- Mercy
- Cherry Health

Sports and Entertainment

- Gun Lake Casino
- Firekeepers Casino
- Full Blast Battle Creek
- Grand Rapids Griffins
- Kalamazoo K-Wings
- West Michigan Whitecaps
- Kalamazoo Growlers
- Van Andel Arena
- Wings Arena

School Districts

- Hastings Public Schools
- Thornapple-Kellogg Public Schools
- Delton-Kellogg Public Schools
- Lakewood Public Schools
- Maple Valley Public Schools

"Alone, we can do so little; together, we can do so much."

Helen Keller



THE VISIONS OF BARRY COUNTY

The Barry County Master Plan was developed based in part on the land use visions articulated by the County Planning Commission and the Master Plan Steering Committee, as well as the many residents and visitors of the County that participated in the public engagement opportunities hosted in 2022.



The Visions of Barry County

The visions for Barry County articulated by the community, supported by the root findings of the physical and data analysis conducted, provide the foundation for the overall framework of the Master Plan.

The input process was kicked-off with a strategic planning session with the Barry County Planning Commission. A similar session was then held with the Master Plan Steering Committee. The feedback provided from these sessions provided insight and was used to develop the framework for the community outreach sessions to come.

Several opportunities for public engagement were then employed throughout the Summer of 2022. A series of community open houses were held at popular local events from July through September and included priority setting games, a visual preference survey, and various mapping exercises. Additionally, an on-line public survey was held during these same months to afford input and participation at a different level.

The chart not only summarizes the results of the input provided, but, using color, illustrates the commonality of the visions identified across sources for each of the four subject areas.

For each subject area, where the visions of each source intersect (same color), insight on community support and direction for prioritization is provided.



Root Findings Intersection of Ideas





Increase variety of housing allowed: type, density, cost

Allow for 'tiny homes' .. (i.e., cottage development)

Locate new housing developments near services



Provide for solar and wind energy facilities

Allow alternative energy facilities at both the individual and utility scale

Improve broadband availability throughout the County

Appy 'complete street' design to road improvements to address bike/pedestrian travel

Plan and develop trailways throughout the County

Prioritize the conservation of Barry County inland lakes through standardized waterfront zoning (addressing keyhole development, intensity of use, density, setbacks and lake access)

Discourage of the use of seawalls on inland lakes



Identify 'growth areas' within the County

Establish a policy and regulations for 'short-term' rentals



COMMUNITY OPEN HOUSES	PUBLIC SURVEY
Protect and provide for low density single-family housing	Encourage residential development in Barry County
Discourage/prohibit medium- and high-density residential development in rural areas	Increase housing options allowed in the County: type, ownership, location, cost
Discourage/prohibit platting in rural areas	
Allow 'tiny homes' and 'accessory dwelling units' (ADUs)	
Allow only individual solar and wind energy facilities; prohibit utility scale solar and wind energy facilities	Expand broadband accessibility in the County
Expand trailway and bike lane networks in the County	Allow individual solar energy facilities
Discourage on-street bike travel	Allow utility scale solar energy facilities in limited areas w/ restrictions
	Develop/improve bike lanes and trails
	Prohibit wind energy facilities
Preserve the rural landscape	Protect natural areas from development
Prohibit the use of seawalls on inland lakes	Limit density and intensity of waterfront development
Require natural/vegetative shorelines to protect the quality of inland lakes	Make waterfront standards the same across jurisdictions
	Require buildings to be setback from shorelines
	Adopt/apply natural area preservation techniques
	Develop/improve public lands
Prohibit commercial land use in rural areas	Identify specific areas to target for growth
Protect agricultural land use from sprawl	Encourage growth only in planned areas
	Attract land uses that generate jobs
	Encourage new commercial and business services
	Protect agricultural areas from development
	Apply farmland preservation techniques



FRAMEWORK OF BARRY COUNTY

The existing future land use maps for those communities within Barry County that have local planning/zoning were analyzed and translated into the Framework categories. This facilitated the development of a County Framework map that effectively takes into consideration the plans of these communities ... allowing for meaningful comparisons in boundary areas and the development of a Future Land Use Plan that can be viewed through a County-wide lens.

The Framework

The categories, as well as their locations on the Framework Map, were developed through an analysis of the Root Findings from the preceding chapters of the plan. The Root Findings are summarized below, and color-coded by Framework Category.



Preserve

Barry County is committed to not only maintain the County's high-quality neighborhoods and businesses, but also to identify areas in which the County's important natural agricultural lands can be preserved into the future even as the County continues to grow.

Some of the main reasons why specific areas in the County have been categorized as preserve include:

- To preserve natural features and watersheds.
- To encourage development in target areas to prevent further sprawl.
- To work alongside the agricultural community to save prime agricultural land as farmland areas continue to diminish nationwide.
- To maintain the County's highquality parkland.
- To maintain the County's rural character.



Enhance

Similar to preserve, areas within the County that have been identified as enhance are anticipated to remain within the same general land uses in the future. In the County framework, the enhance areas are typically located in urbanized areas, including historic town centers such as Hastings, Middleville, and Nashville. In this context, enhance has been utilized as more of a general term to describe certain improvements that can be made within these areas, while still maintaining the overall character. These improvements can include:

- Redevelopment and infill development within built-out
- Improving or implementing non-motorized infrastructure in neighborhoods.
- Adding sewer or water infrastructure to protect natural
- Improving communications infrastructure.
- Implementing beautification elements such as landscaping, tree planting, or public art.
- Increasing connectivity and efficiency of road networks, including potentially paving or redesigning roadways.
- Investment in parks and recreation.
- Improving the appearance of existing buildings or structures.



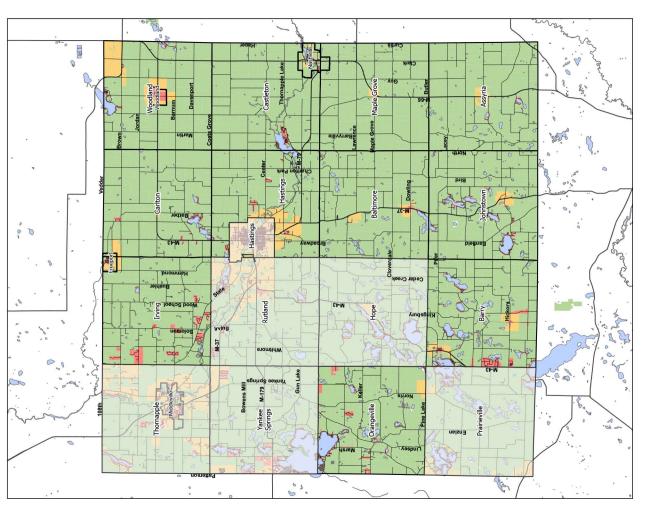
Grow

Large vacant and never-beendeveloped areas within the County that have been identified as prime locations for future development opportunities have been categorized as grow. Many of these areas are located along the M-37 corridor in the northern portion of the County, and other places where pockets of suburban development already exist. The goal of this framework category is to identify future land uses that fit with the surrounding character of specific areas as well as to help steer the County into a thriving and vibrant future through targeted development. By targeting growth to specific areas that have existing infrastructure and other key attributes, the County can preserve its overall rural and agricultural character. Growth could occur in:

- New residential neighborhoods
- New walkable, mixed use "town centers"
- New industrial or business parks



Geography	Places	Natural Resources	People	Infrastructure	Economy	Visions
Barry County is located in close proximity to west Michigan's largest metropolitan areas, but it retains a strong rural and agricultural character.	Agriculture and recreation- oriented areas remain the County's primary land uses.	The defining characteristics of the County are the abundance of water, farmland and rolling terrain.	Barry County has experienced an increasing population since 2010, with most of the population growth occurring in the northwestern portion of the County.	Eight different authorities own and operate public water and/or sanitary sewer facilities in various places throughout Barry County.	Barry County is a bedroom community where residents choose to live among natural beauty, and commute to other Counties for jobs and retail.	Growth should be encouraged only in planned areas. Identify specific areas to target for growth.
The abundance of preserved public lands and inland lakes and waterbodies makes the County an attractive place of residence and recreation.	Many communities are experiencing extensive suburban development, especially in the northwestern part of the County.	Barry County has 15 major inland lakes and nearly 250 smaller lakes. Gun Lake is the County's biggest lake and continues to provide recreation amenities for the region, and it is an economic driver for the area.	The population growth occurred despite a negative net migration rate - more people moving out of the county than moving in.	As a rural, low-density area, Barry County does not suffer from traffic congestion. However, many of its residents commute long distances.	Nearby urban centers provide more jobs and amenities that can be consumed by their populations. Barry County residents fill those gaps.	Increase options for varied housing choice (type, location, density, price point).
Most Barry County residents can commute to any of five major job centers (Kalamazzo, Grand Rapids, Holland, Battle Creek, and Lansing) in under one hour.	Due to its abundance of inland lakes and waterways, Barry County features a high number of lakefront residential areas.	The County has two major watersheds. 13 streams feed into the Grand River watershed and 9 streams flow into the Kalamazoo River.	If the migration rate reverses, the County could experience much faster growth—potentially reaching 80,000 or more people.	Unpaved roads are common, especially in the County's rural areas. In some places, but not all, these roads are sufficient for local use, and do not need to be paved.	The market demand for housing, industry, and commerce totals just over 5% of the land area of the County. This means only 500-750 acres of additional land area will be needed to accommodate predicted growth over the next 10 years.	Make waterfront standards the same across jurisdictions.
The combination of natural beauty, recreational amenities, and reasonable commutes to a number of job center makes Barry County an ideal "bedroom community."	Many Barry County residents work and shop outside of the County.	Water quality in watersheds is directly related to the land practices within the watershed. Low impact development standards in waterfront areas can help address this challenge.	Although the County's average age is older than the national average, the communities growing fastest feature younger average ages.	Internet connectivity has become a vital component of infrastructure. Resources are available for the continued buildout of broadband communications infrastructure in the County.	Barry County can preserve its rural character and beauty and be responsive to the market demands of its growing region.	Protect farmland and natural areas from development.
Residents seek out large lots and natural settings, and the beauty of the community must be preserved to retain that appeal.	While many lakefront residences may be used as summer cottages or vacation homes, increasing remote work policies may result in people using these houses as year-round residences.	Wetlands exist throughout the County, and are important in protecting watersheds and habitats.	Many residents are employed in manufacturing, education, and health care industries. The County's average household income is above the national average.	Barry County features a portion of regional and national trails. These trails serve an important recreation and transportation function, while enhancing Barry's rural character.	If Barry County plans to stay rural, while allowing for strategic pockets of development to accommodate market growth, it can maintain a fiscally responsible land use pattern.	Expand broadband coverage and high-speed Internet.
	As the County faces growth pressures, concentrating growth in appropriate areas can alleviate traffic demands while encouraging local shopping and other amenities.	Prime farmland exists throughout the County, especially in the eastern townships. Over 37,000 acres of farmland in Barry County have been protected through PA 116.	The County's existing housing stock is composed mostly of older single-family residences.	The central and southeast portions of the County are not served by regional non-motorized infrastructure.		Develop/improve bike lanes and trails.
	As a residential growth magnet in the region, balance with the County's primary land use visions (ag/rec land preservation; inland lake protection; accessibility) will be needed.	animal species listed as endangered in Barry County Plant and animal diversity could continue to decrease unless intentional actions are taken to protect vulnerable species.	Housing growth slowed in the County during the 2010s, though the rate of construction increased in the latter half of the decade.	The County operates three parks - Charlton Park ("the jewel of Barry County"), McKeown Bridge Park, which has experienced recent investment, and Paul Henry Thomapple Trail, the County's destination linear park.		Carefully regulate utility- scale wind and solar, while allowing residents and businesses to build green energy facilities on their properties with minimal red tape.
		Preservation, operational and reclamation standards that protect areas vulnerable to mineral extraction should be established.	Three in four Barry County residents travel outside of the County for work, with nearly one third commuting to Kent County.	In order to preserve the natural beauty, viable farmland, precious ecosystems, and health, safety, and welfare, the County must adopt ordinances to regulate utility-scale wind and solar energy.		



County Framework Barry County, Michigan

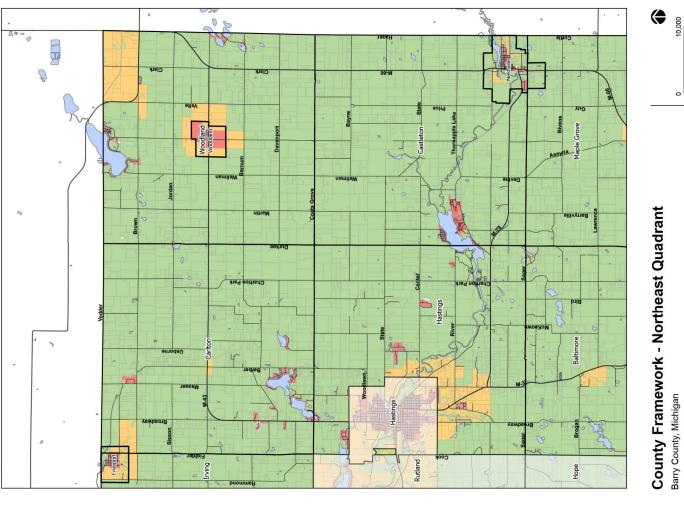


*Areas outside County Zoning Jurisdiction are faded.



20,000

0 10,000

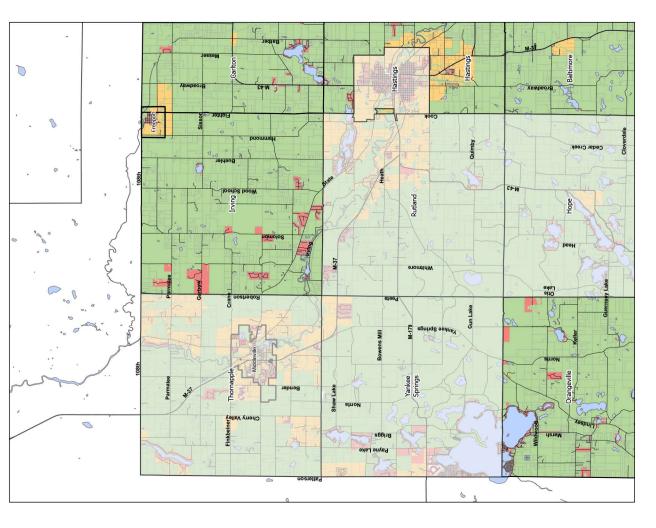






*Areas outside County Zoning Jurisdiction are faded.

MCKENNA



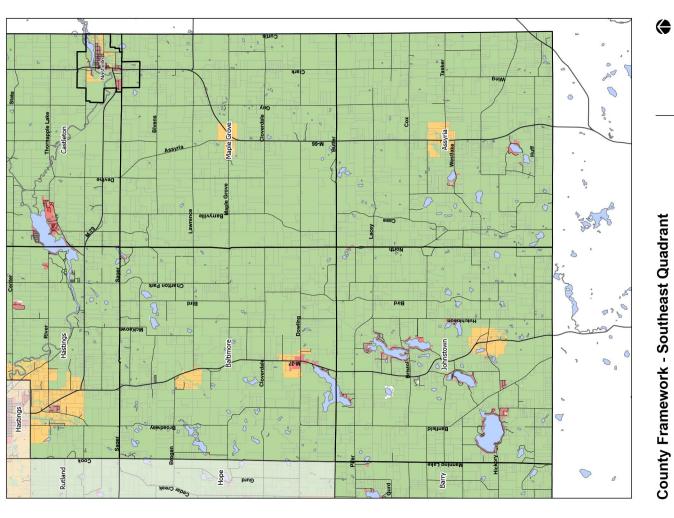




*Areas outside County Zoning Jurisdiction are faded.



MCKENNA



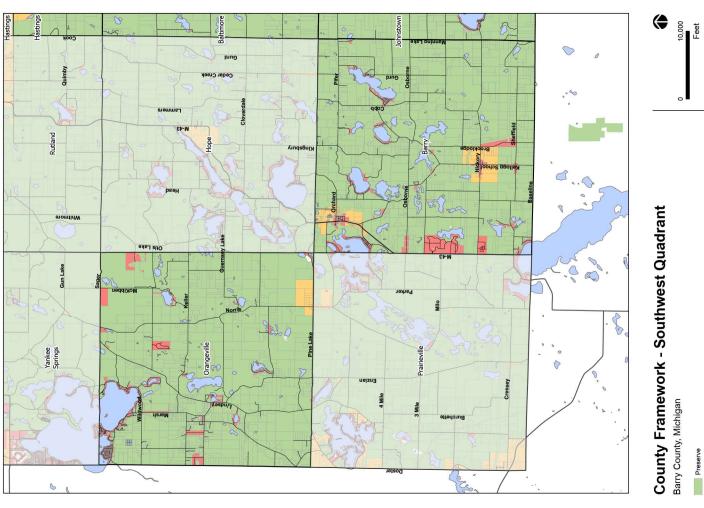
County Framework - Southeast Quadrant Barry County, Michigan



*Areas outside County Zoning Jurisdiction are faded.





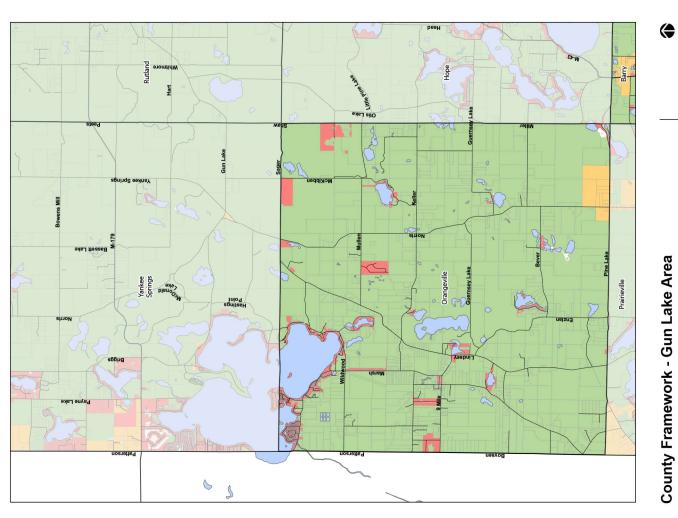






*Areas outside County Zoning Jurisdiction are faded.

MCKENNA



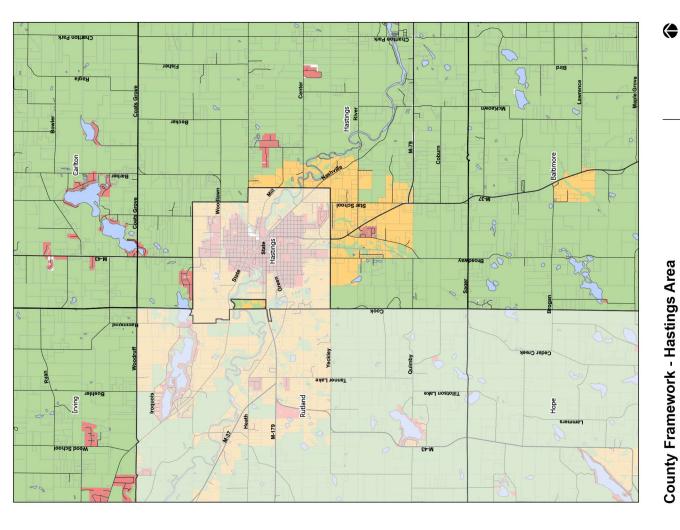
County Framework - Gun Lake Area Barry County, Michigan



*Areas outside County Zoning Jurisdiction are faded.



5,000 Feet



County Framework - Hastings Area Barry County, Michigan



*Areas outside County Zoning Jurisdiction are faded.



5,000 Feet



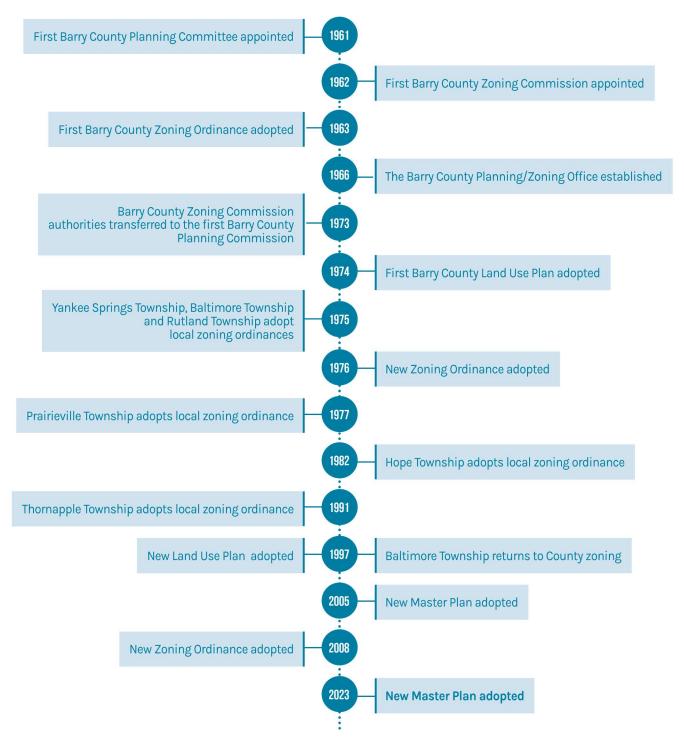
live better

THE PLAN FOR BARRY COUNTY

The Plan for Barry County presents a detailed Future Land Use Plan grounded in the framework structure of: preserve, enhance, and grow; a Zoning Plan that moves the framework forward by zoning district; and culminates in an Action Plan with detailed steps for implementation. A strength of this approach is the ability of the County Plan to both recognize and respond to the plans of those communities with local planning/zoning.

Barry County Planning/Zoning History Since 1961

The following timeline highlights the evolution of planning and zoning in Barry County, and how the practice has shaped the governance of Barry County today.



[cover page and flu map from two previous county plans	s]
cover	map
cover	map



Future Land Use

The Future Land Use Map was developed from the County Framework, with three Future Land Use categories specifically delineating the vision inside each of the three Framework categories, as shown below and described on the following pages.



Preserve Categories:

- » Agriculture
- » Natural Preservation
- » Recreation



Enhance Categories:

- » Historic Town Center
- » Lakefront Community
- » Neighborhood Preservation



Grow Categories:

- » Neighborhood Growth
- » Business Growth
- » New Town Center

Local Zoning Jurisdictions

Cities, villages, and townships within Barry County that have their own local planning and zoning are included on the Future Land Use Map. However, they are faded to show that they are not part of the County's zoning jurisdiction. The Future Land Use designations within the local zoning communities are based on the locally adopted Future Land Use Maps. The local categories have been aggregated into the categories for this plan.

By aggregating local planning into the County's overall framework, Barry County leadership can respect the decisions of local leaders, while at the same time promoting a unified vision for the entire County.





Agriculture

This area is mostly active farmland, agricultural businesses, or rural single-family homes. The goal of the Agriculture future land use category is to preserve important farmland in Barry County, preserve prime agricultural soils for farming or agribusiness uses, and to preserve the rural area of the Township. Lots associated with the Agriculture category are typically larger in size in order to ensure that sufficient land is available for viable farming.

Appropriate Land Uses

Appropriate uses include dwelling units matching the character and density of the surrounding uses, parks, agri-businesses, and farms including the keeping of large and small animals, including bees, chickens, and other domesticated farm animals, as well as growing crops...

Streets and Transportation

Streets in Agricultural Preservation areas are typically higher in speed and can accommodate larger vehicles transporting heavy equipment needed for agricultural purposes. Unpaved roads are appropriate for low-traffic local corridors.

Appropriate Zoning Districts

- » Conservation Reserve (CR)
- » Agriculture (A)
- » Rural Residential (RR), provided that the overall housing density does not exceed one unit per 10 acres, in order to ensure that rural character is preserved.





Natural Preservation

This designation identifies sensitive natural features, such as floodplains, wetlands, steep slopes, woodlands, and other areas that need to be protected not only from development, but also from agricultural uses that could be damaging to them.

Appropriate Land Uses

All areas should maintain uses which promote the inclusion of the public and provide recreational and gathering opportunities.

Streets and Transportation

Streets running through the Natural Preservation category should be minimal, as there is no need for local car access. Trails are encouraged, but should be unpaved unless they run along the side of a major roadway.

Building and Site Design

No buildings should be constructed within a Natural Preservation Area, unless specifically permitted by the State and Federal environmental regulatory bodies.

Appropriate Zoning Districts

- » Conservation Reserve (CR)
- » Natural Lakes and Rivers (NLR)



Recreation

This designation identifies park land and open space, including land owned by the County and State, as well as local communities. Areas within this designation can be used for both passive and active recreation. Natural features and developed parklands should be compatible with the surrounding landscape and neighborhood.

Appropriate Land Uses

All areas should maintain uses which promote the inclusion of the public and provide recreational and gathering opportunities.

Streets and Transportation

Existing pedestrian and cyclist trails should be maintained. Additional pathways and associated amenities (i.e. bicycle racks, water fountains, wayfinding signage, lighting, etc.) should be constructed as needed. The connection of such pathways to park lands is strongly encouraged.

Except for regional thoroughfares and highways, roadways should be low speed and designed for safe hiking, running, cycling, and, where appropriate in season, snowmobiling, cross country skiing, and snowshoeing.

Building and Site Design

There are no specific Building and Site Design recommendations in this Plan for the Recreation future land use category, although high quality architecture is encouraged. Buildings should be well lit, highly visible, but of scale and appearance that is consistent with their surroundings, and should provide public amenities. Parks should be maintained and upgraded as needed.

Sufficient parking should be provided for public facilities. Parking areas should be designed to minimize stormwater runoff and implement low-impact development techniques (pervious pavement, bioswales, etc.)

Appropriate Zoning Districts

- » Conservation Reserve (CR)
- » Natural Lakes and Rivers (NLR)
- » Recreational Lakes (RL)
- » Agriculture (A)



Historic Town Center

This Future Land Use Category designates the legacy communities with historic, dense cores that dot Barry County, including Hastings, Middleville, Nashville, and others. While these communities have local Master Plans and Zoning Ordinances that establish their specific character, their position as centers of commerce, culture, and life in the County are crucial to its economic vibrancy and quality of life.

Appropriate Land Uses

A wide variety of land uses are appropriate, as designated by local planning and zoning, with the overarching goal of preserving the historic character of Michigan small towns.

Streets and Transportation

Historic Town Centers should capitalize on their walkable character to promote pedestrianism and cycling. Roads should be designed for slow speeds, and local access. In some cases, bypasses may be appropriate to steer regional traffic away from walkable, dense, and/or historic areas.

Building and Site Design

New buildings, of all types, should be designed with quality materials and should be consistent with Michigan small town character in terms of scale, massing, and site design.

Appropriate Districts

Generally, these areas exist within communities that have local planning and zoning. However, the following categories may be appropriate where the Historic Town Center category extends into the County's jurisdiction.

- » Low Density Residential District (LDR)
- » Moderate Density Residential (MDR)
- » High Density Residential (HDR)
- » Mixed Use (MU)
- » General Commercial (GC)
- » Light Industrial (LI)
- » General Industrial (GI)





Lakefront Community

This Future Land Use Category is characterized by the existing residential development that surrounds many of the County's lakes. That development pattern has unique zoning and infrastructure needs in order to protect the lake's ecosystem, the recreational opportunities, and the overall rural and natural character.

Appropriate Land Uses

Typical uses include homes lining the water that are densely packed together, with very low densities (or even recreational or preserved land) inland. Commercial uses at intersections may be appropriate, and on larger lakes lakefront dining or lodging may be appropriate.

Streets and Transportation

Streets need to provide access to the homes and to recreational amenities. They may also serve as boat launches in some locations. Design speeds should be very low, due to the number of recreational activities that take place in close proximity, and the frequent need for overflow parking.

Trails are encouraged, especially along public lakefronts, but sidewalks are rare.

Building and Site Design

New homes should be designed with quality materials and should be consistent with surrounding homes in terms of scale, massing, and site design.

Businesses should respect the lakefront and the quiet enjoyment of private residences nearby.

Lakefronts for all developed land uses should respect the natural ecosystem, and the enjoyment of the lake and lakefront by all users and abutting property owners.

Appropriate Districts

» Recreational Lakes (RL)



Neighborhood Preservation

This Future Land Use Category is characterized by existing residential areas in the County. These areas are typically comprised of single-family homes in low-density neighborhoods, but other typologies and densities also exist. The purpose of this Future Land Use category is to retain the current character, while enhancing amenities and infrastructure to promote high quality of life.

Appropriate Land Uses

Typical uses include neighborhoods with densities between 1 and 4 dwelling units per acre, though densities up to 8 units per acre may be appropriate where infrastructure is sufficient. The neighborhoods are generally adjacent to town centers such as Middleville, Hastings, or Nashville, or along major corridors such as M-37 or M-43.

Importantly, new development in Neighborhood Preservation areas should be rare, and, when it occurs, it should be infill development that matches the existing character and density of the surroundings. The Neighborhood Growth category designates the appropriate areas for new residential development.

Streets and Transportation

In Neighborhood Preservation areas, streets should be well-connected to one another to provide access to major arterial roads as well as to adjacent neighborhoods. These streets have lower traffic volumes and are characterized by lower speeds. The streets should also have sidewalk or bike path infrastructure to provide local non-motorized access and connect to larger systems.

Building and Site Design

New homes should be designed with quality materials and should be consistent with surrounding homes in terms of scale, massing, and site design.

Appropriate Districts

In general, rezoning within this category is highly discouraged. Land designated Neighborhood Preservation should keep its zoning district in order to preserve the existing character. However, when rezoning does occur, it should be to whichever of the following categories most closely matches the existing character:

- » Low Density Residential District (LDR)
- » Moderate Density Residential (MDR)
- » High Density Residential (HDR) only when adjacent to an existing HDR District





Neighborhood Growth

This designation marks the locations where new neighborhood development is appropriate within the County.

Single-family houses, and other housing types such as townhouses, duplexes, quadplexes, and multi-family buildings are all appropriate. New neighborhoods are encouraged to contain a variety of housing types, to allow for a variety of price points and housing preferences.

Neighborhoods should be designed with connected street patterns, including connections to existing neighborhoods where possible, and should have amenities (such as parks and schools) within their boundaries. Businesses and retail should be nearby, along major corridors.

Appropriate Land Uses

Typical uses include residential dwelling homes and units, schools, parks, open space, and other compatible municipal or civic uses. Retail, schools, and other amenities should be located within nearby "Neighborhood Nodes", that may or may not be built as part of the same development.

Streets and Transportation

Streets should follow a connected pattern that respects topography and natural features, and therefore may not constitute a true "grid." Streets should feature elements such as sidewalks, pedestrian scale lighting, and a tree canopy. Streets can be classified as minor arterials or major collectors.

Building and Site Design

Sites should be designed to give homes a front and back yard (or, in the case of two-family buildings, nearby usable green space), while maintaining a human, walkable scale that promotes social interaction and reduces unnecessary and unused lawn space.

Buildings should be designed with quality materials and consistent with architectural styles common in west Michigan. Alternative architectural styles may be appropriate in some neighborhoods, provided that the unique design enhances the general character of the area.

Appropriate Districts

Determinations of density should be made based on available infrastructure and the character of surrounding areas.

- » Low Density Residential District (LDR)
- » Moderate Density Residential (MDR)
- » High Density Residential (HDR)



Business Growth

Business Growth areas are designated for the expansion of commercial and industrial uses, to ensure sufficient jobs, tax base, and retail amenities for Barry County residents. As noted previously in this plan, Business Growth areas, while important, are limited in size due to the availability of jobs and shopping in adjacent counties.

Appropriate Land Uses

Appropriate uses include office, light manufacturing, artisan production, food and beverage production, and research and development uses, as well as commercial businesses such as retail stores, personal services, and restaurants.

Parking areas, outdoor storage, and loading zones should be properly buffered and landscaped.

Streets and Transportation

Business uses are typically served by major arterial and principal arterial roads, which are characterized with higher volumes of traffic, heavier vehicles, and faster speeds. These roadways should be designed to allow for regional connectivity, as well as pedestrian access. Roadside landscaping and other beautification elements should be considered in these areas due to the high volumes of both motorists and pedestrians traveling to these areas.

Building and Site Design

Buildings should be constructed of high-quality materials which wrap around the entire building and feature attractive signage. Robust landscaping should be installed throughout the site. Commercial buildings should be supported by sufficient but not overly excessive parking areas. Large areas of parking should be broken up with landscaped islands and trees.

Appropriate Districts

The specific appropriate district should be determined by availability of infrastructure and the character of the surroundings.

- » Mixed Use (MU)
- » General Commercial (GC)
- » Light Industrial (LI)
- » General Industrial (GI)





New Town Center

This future land use category is designed to encompass mixed uses to promote new live/work/play developments in appropriate places in the County, while preserving rural character. In New Town Centers, land uses can include bottom floor restaurants, offices, and businesses with upper floor multi-family units or businesses, tucked within an otherwise rural environment. This development pattern has a deep history in Barry County and throughout the Midwest, and is generally called a "hamlet."

Appropriate Land Uses

In New Town Centers, appropriate land uses include multi-family and two-family residential developments alongside commercial developments. Low-intensity businesses such as small retail stores, personal services, small offices (including medical offices) should populate ground floors of buildings. Residential uses or office uses should be on upper floors.

Streets and Transportation

Streets in New Town Centers should provide connections to principal arterials and major arterial roads. Within developments, streets should provide safe walking and biking opportunities on both sides of the street. Additionally, on-street parking should be included in development design with the absence of cul-de-sacs or dead-end roads.

Building and Site Design

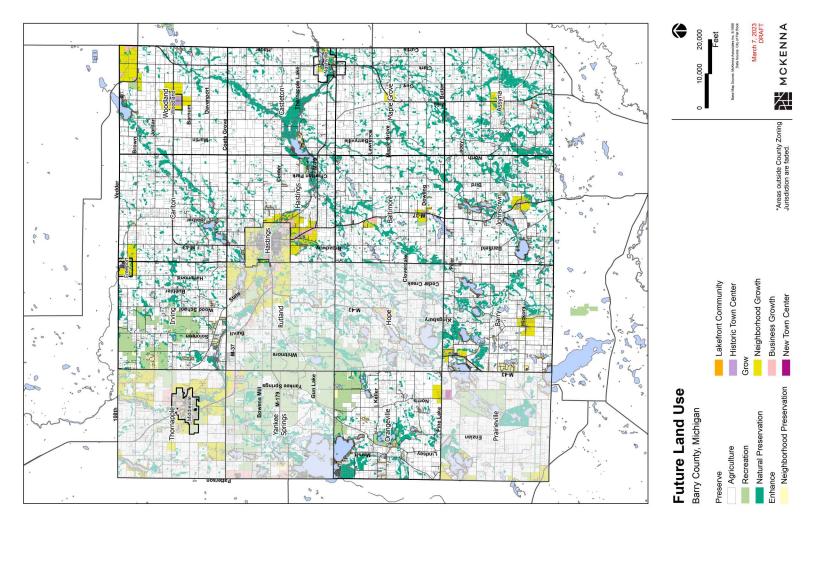
Buildings should be built with high-quality materials and should be architecturally compatible with surrounding neighborhoods. Buildings with a connection to the street, including designs with attractive front facades, entrances, and porches are all highly encouraged. Open spaces should be functional and allow for recreational enjoyment and the preservation of natural features. Architectural variation is highly encouraged to create a character on long and connected facades.

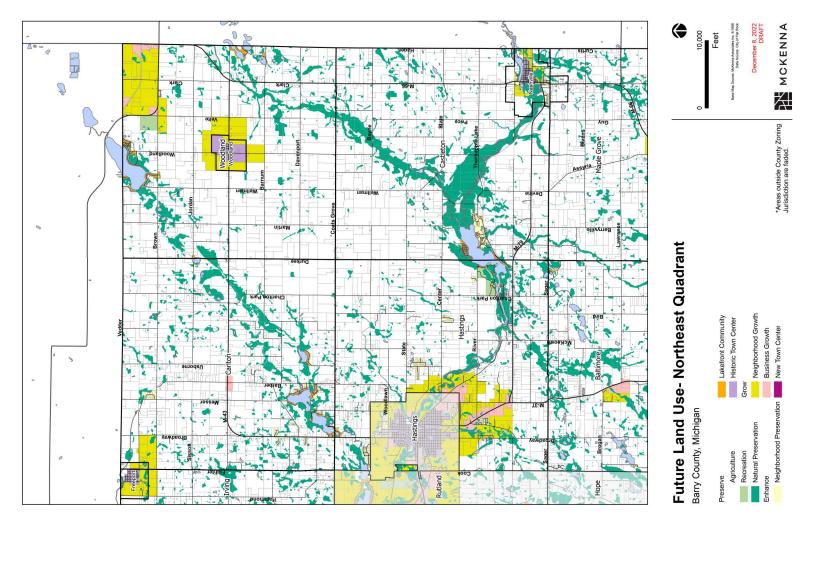
Parking areas may be located in the front, side, or rear yards for buildings, but, where practical, buildings should front the street and provide parking to the rear. Large areas of parking should be broken up with landscaped islands and trees. Parking space requirements may vary based on the location of the development and availability of shared parking.

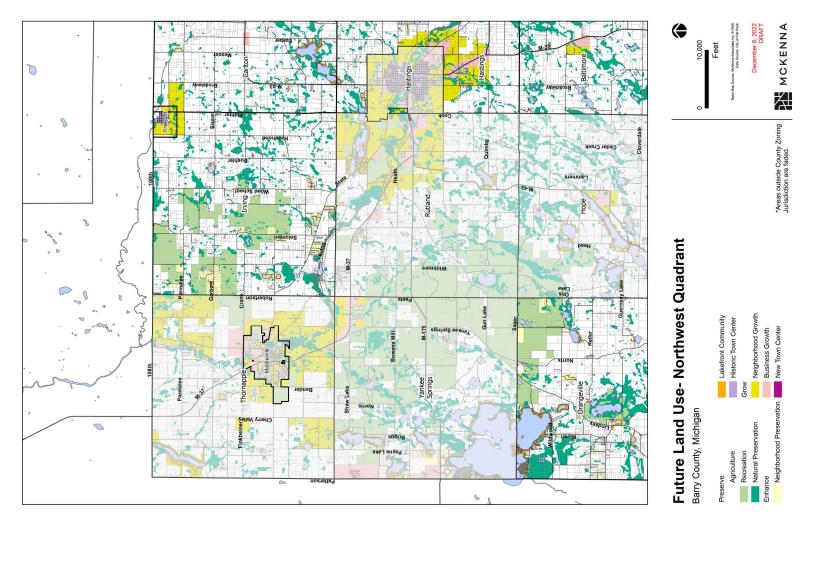
Appropriate Districts

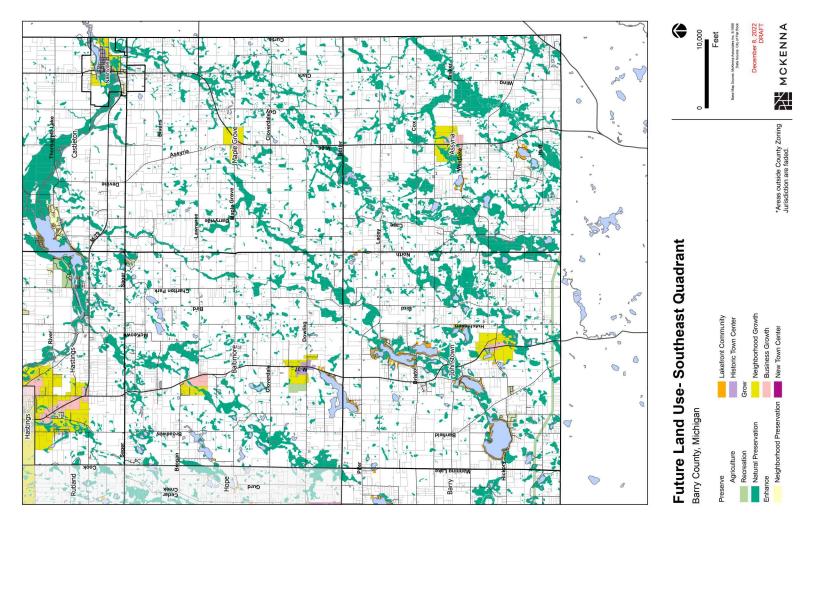
- » Mixed Use (MU)
- » Planned Unit Developments

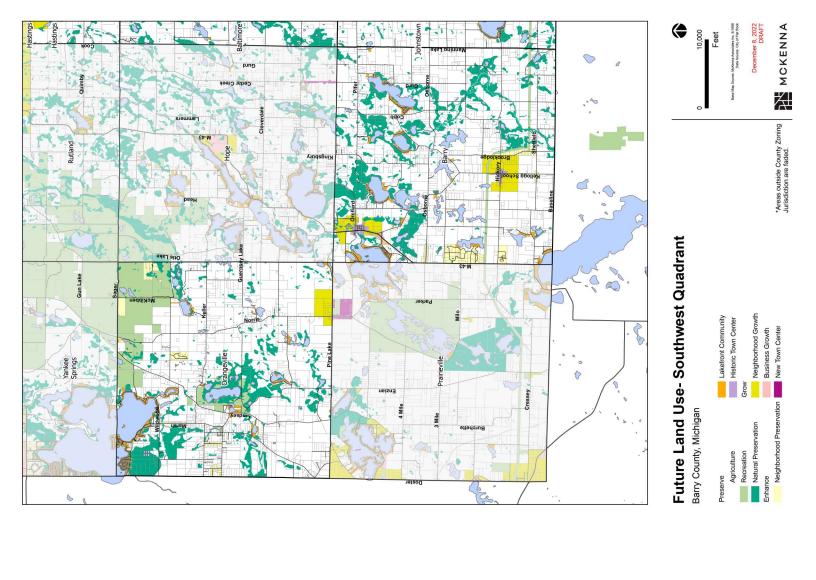
Intentionally left blank

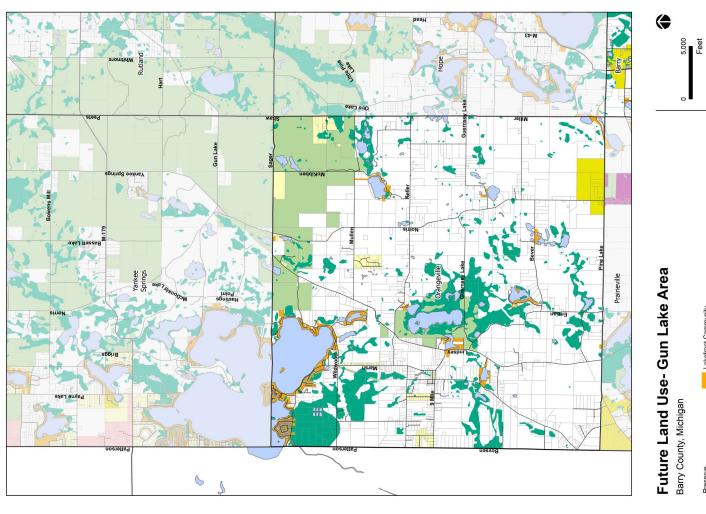








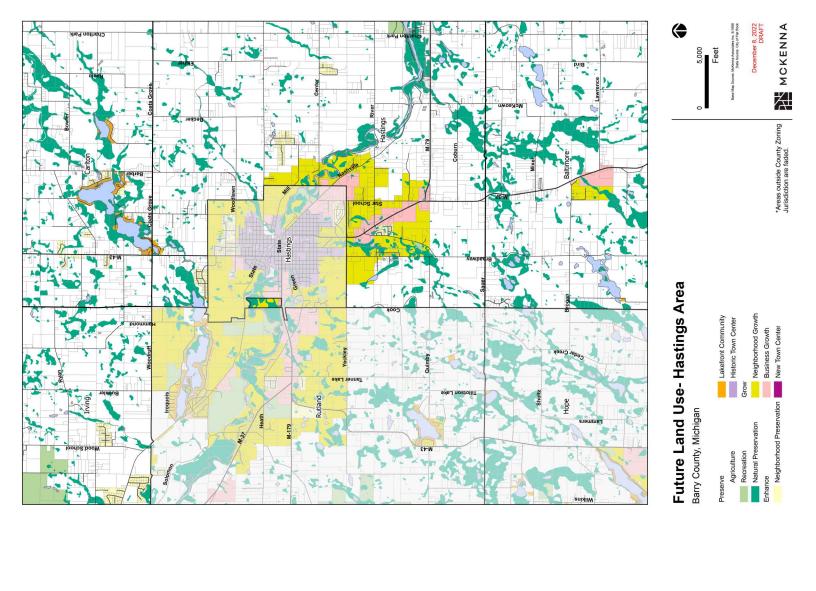












Zoning Plan: Impact on County Zoning Decisions

The table on the following page shows the Barry County Zoning Districts that would appropriately implement the vision of the Framework and Future Land Use Categories. Rezoning requests should be reviewed against this table to determine whether the requested district is supported by this Plan.

Framework "Hard Edge" vs Future Land Use "Soft Edge"

The Framework Map and the Future Land Use Map were designed to provide guidance on rezoning decisions in the following manner.

Framework categories should be considered "hard edges." A rezoning should only be approved within a given Framework category if the district is listed as appropriate for that category in the following table. The purpose of this hard edge is to preserve the County's rural and small town character. If an area is designated for preservation or enhancement, the zoning districts should reflect that, and should not allow development that dramatically changes the character.

Future Land Use categories, on the other hand, should be considered "soft edges." With the large geography of the County, it is possible that a detailed evaluation of a zoning proposal determines that a given site is more appropriate for Business Growth than Residential Growth, or the other way around, even if that is contrary to the Future Land Use Map. It is also possible that additional locations for New Town Centers may be identified.

Within the Preserve and Enhance framework categories, the Future Land Use categories can be considered even more fluid. There may be important natural features in an otherwise agricultural area, for instance, or a neighborhood near a lake may require a zoning district other than RL to preserve its character.

In those instances, and others like them, rezoning to a district that is not listed within the Future Land Use category in question, but is listed within the Framework category in question, would be appropriate.

Impact on Local Zoning Decisions

The Framework and Future Land Use Maps are designed to be compatible with local planning and zoning, where such planning and zoning exists. Therefore, it is anticipated that zoning decisions that are compatible with local Master Plans will also be compatible with this Master Plan. However, in instances where the County has an advisory role in the decision, the County Planning Commission should use the Framework and Future Land Use Maps in the manner described above to guide their recommendation process.

Table 22: Zoning Plan

Framework Category	Future Land Use Categories	Zoning Districts	Key Rezoning Guidelines
Preserve	Agriculture	CR Conservation Reserve A Agriculture RR Rural Residential	Rural Residential (RR) should only be used when the overall housing density does not exceed one unit per 10 acres, in order to ensure that rural character is preserved.
	Natural Preservation	CR Conservation Reserve NLR Natural Lakes and Riv	Rezoning generally discouraged except to preserve natural features.
	Recreation	CR Conservation Reserve NLR Natural Lakes and Riv RL Recreational Lakes A Agriculture	Rezoning generally discouraged ers except as necessary for recreational amenities.
Enhance	Historic Town Center	LDR Low Density Residenti MDR Moderate Density Res HDR High Density Resident MU Mixed Use GC General Commercial LI Light Industrial GI General Industrial	idential communities that have local planning
	Lakefront RL Recreational Lakes Community		Other districts may be appropriate depending on character and infrastructure.
;O;	Neighborhood Preservation	LDR Low Density Residenti MDR Moderate Density Res HDR High Density Resident	idential designated Neighborhood Preservation
Grow	Neighborhood Growth	LDR Low Density Residenti MDR Moderate Density Res HDR High Density Resident	idential be made based on available
	Business Growth	MU Mixed Use GC General Commercial LI Light Industrial GI General Industrial	The specific appropriate district should be determined by availability of infrastructure and the character of the surroundings.
	New Town Center MDR Moderate Density Residential HDR High Density Residential GC General Commercial I-1 Light Industrial		cial density and intensity towards the edges of the "Town Center."
			Planned Unit Developments are also appropriate ways of implementing this Future Land Use category.

Action Plan

The Barry County Master Plan is based upon the defining vision to build upon the County's existing assets and take advantage of opportunities that can attract new development and residents to the community while conserving the County's natural beauty and resources. Simply put, the plan for Barry County is to continue as an economically-, environmentally- and socially -sustainable community.

The Root Findings and Framework upon which this Plan is based should be reviewed often and be considered in decision-making by the County. Successful implementation of this Plan will be the result of actions taken by elected and appointed officials, County staff, the Planning Commission, public agencies, and private citizens and organizations.

This section identifies and describes actions and tools available to implement the Plan. Broadly stated, the Plan will be implemented through:

Planning and Zoning: Evaluation of the County's Zoning Ordinance, and if necessary, amendments to regulations required to better implement the recommendations of this Plan. Evaluation of the recommendations of this Plan must occur at regular intervals to ensure that the overall vision for the future development of the County remains relevant.

Infrastructure Improvements: Infrastructure improvements are generally funded through pubic funds and are tangible 'bricks and mortar projects. Improvements to the County's motorized and non-motorized circulation system, as well as measures that mitigate storm water and groundwater challenges, also fall into this category.

Economic Development: This category includes the economic and physical development of the County. These improvements include a wide range of activities from physical development activity to promotion and marketing, and may be completed by public or private entities, or some combination thereof.

Parks and Recreation Improvements: The Master Plan seeks to supplement the work of the Barry County Parks and Recreation Plan – adopted in December of 2022.

Natural Resource Protection Measures: Many natural resource protection programs/measures work toward building a sustainable community. They typically include community outreach efforts and incentivized best practices.

The tables on the following pages represent a detailed summary of all of the recommended implementation activities, who is responsible for completing the activity, and available funding resources for each activity.

KEY					
Priority Timeframe		ame	Respon	sibility (Color)	
Α	Most Important	1	w/in one year		Project Lead
В	Very Important	2	1-3 years		Key Participant
С	Important	3	3+ years		Contributor

RESPON	SIBILITY (ABBREVIATION)
во	Business Owners
BRA	Brownfield Redevelopment Authority
BZ	Blue Zones
СС	County Commission
СМ	Community Members
cs	County Staff
DDA	Downtown Development Authority
JPA	Joint Planning Alliance
MDOT	Michigan Department of Transportation
NC	Neighboring Communities
PS	Public Schools
RC	Road Commission
SOM	State of Michigan

FUNDING	
Public	Includes public funds from the County operating budget, County, and State funding. May also include local government bonds and grants.
Private	Includes funds from private sources such as grant monies, corporate funding, or property owners
TIF	Tax increment financing provided by an authorized body.

ACTIVE PLANNING							
			RES	PONSIBI	FUN	FUNDING	
PROJECT	PRIORITY	TIMEFRAME	COUNTY	OTHER GOV'T	PRIVATE	PUBLIC	PRIVATE
Develop a Planning Commission Annual Report/Work Plan every year and identify work items rooted in the implementation elements of the Master Plan	В	1	PC CS			•	
Coordinate the County's Capital Improvement Plan with Master Plan implementation priorities.	В	1	PC CC CS			•	
Review and update the Master Plan every five years, at a minimum.	С	3	PC CC CS			•	
Periodic adjustment to the Master Plan will be required. Supplemental plans for specific issues or areas may be prepared as amendments to the Master Plan, such as a corridor plan or a character area plan.	С	3	PC CC CS			•	
Pursue and support cooperative planning efforts with Barry County communities engaged in local planning and zoning.	С	3	CC BCS	JPA NC		•	

STRATEGIC ZONING							
			RESPONSIBILITY			FUNDING	
PROJECT	PRIORITY	TIMEFRAME	COUNTY	OTHER GOVT	PRIVATE	PUBLIC	PRIVATE
Conduct a technical review of the Zoning Ordinance to identify amendments needed to allow/improve implementation of the Master Plan.	А	1	PC CS			•	
Amend the Zoning Ordinance consistent with the findings of the Technical Review.	A	2	PC CC CS			•	
Routinely review and initiate amendments to the Zoning Map that will ensure consistency with Zoning Ordinance amendments and implement the Master Plan.	А	2	PC CC CS			•	
Amend the Open Space Preservation Development option within the Zoning Ordinance to incentivize exceptional design and community benefits.	В	1	PC CC CS	JPC NC		•	
Develop rural character design standards as a guide for the design and layout of non-residential development within the County's rural and sub-rural areas.	В	1	PC CC CS	JPA NC		•	
Use the Zoning Plan to periodically evaluate the relationship between the Master Plan and the Zoning Ordinance and the planning/decisions of the County.	С	3	PC CS			•	
Continuously investigate best management practices and successful approaches to the protection of the area's water resources, soils and natural vegetation to inform zoning ordinance development and guide land use decisions.	С	3	PC CS	JPA NC	СМ	•	•



NATURAL RESOURCES									
				RESPONSIBILITY		RESPONSIBILITY		FUN	DING
PROJECT	PRIORITY	TIMEFRAME	COUNTY	OTHER GOVT	PRIVATE	PUBLIC	PRIVATE		
Explore reductions in impervious parking area requirements.	А	1	PC CC CS			•			
Work with Barry County communities to develop a County-wide waterfront/shoreline protection approach that incentivizes low-impact development, waterfront setbacks and vegetative shoreline buffers.	A	2	PC CC CS	NC	СМ	•	•		
Develop and adhere to storm water best management practices to minimize the negative impacts that land use can have on runoff and water quality.	A	2	PC CC CS			•			
Allow/encourage the use of permeable materials in new development/redevelopment.	В	1	PC CC CS			•			
Prohibit the use of phosphorus-based fertilizers and other potential contaminants in the maintenance of public infrastructure and property.	В	1	CC CS			•			
Wetlands are regulated by state law, but local land use policies should also be developed to protect this important natural feature.	В	2	PC CC CS			•			
Support and explore a variety of mechanisms for open space acquisition, to include land dedication, conservation easements, and outside funding for the public purchase of environmentally significant lands.	В	3	CC CS		СМ	•			
Administer the County's farmland preservation programs, land banking program and related zoning incentives in a single coordinated strategy to effectively preserve the County's prime farmland and/or large tracts of undeveloped agricultural land.	В	3	CC CS		СМ	•	•		
Develop a plan to inventory, evaluate, protect, and enhance the green infrastructure system of Barry County, consisting of a series of interconnected habitats, natural features, and related amenities.	С	3	PC CC CS	JPA NC	СМ	•	•		

INFRASTRUCTURE									
					RESPONSIBILITY			FUNDING	
PROJECT	PRIORITY	TIMEFRAME	COUNTY	OTHER GOVT	PRIVATE	PUBLIC	PRIVATE		
Use the County's asset management plan and capital improvement plan to coordinate infrastructure expansions/upgrades in direct consideration of planned growth areas.	А		CS			•			
Convene discussions among local jurisdictions about infrastructure growth plans, specifically regarding sewer/water, options for alternate energy facilities, and broadband.	А	2	cs			•			
Prioritize the improvement of motorized and non-motorized transportation systems that connect population and job centers.	А	3	CC CS	BZ MDOT RC	СМ	•	•		
Actively foster the build-out of broadband communications infrastructure in the County.	А	3	CC CS		CM BO	•	•		
Support implementation of the Barry County Trailways Plan through capital improvement planning; zoning and site plan review decisions; and education/advocacy efforts.	В		PC CC CS	BZ JPA NC		•			
Support implementation of the Barry County Parks & Recreation Plan through capital improvement planning; zoning and site plan review decisions; and education/advocacy efforts.	В		PC CC CS	BZ JPA NC		•			
Implement low-impact development standards and techniques.	В	2	PC CC CS			•			
Seek Blue Zones support in Complete Streets policy development, technical training, facility audits, and community engagement in the County.	С	3	CC CS	BZ		•	•		

ECONOMIC DEVELOPMENT							
			RESPONSIBILITY		LITY	FUNDING	
PROJECT	PRIORITY	TIMEFRAME	COUNTY	OTHER GOVT	PRIVATE	PUBLIC	PRIVATE
Designate areas of growth and concentrated development in the County.	А	1	CS PC			•	
Develop a fiscally responsible development plan.	А	2	CC CS PC			•	
Target housing development of density toward designated growth areas to lower utility and transportation costs, support local employers, and protect the County's agricultural lands.	А	2	PC CC CS	BZ MDOT RZ		•	
Investigate ways to evolve Barry County's tourism and recreation industry (e.g., hiking, biking, paddling) to diversify the economic base of the region.	С	2	CC CS		BO CM	•	•
Support enhancement of community gateway entrances through zoning standards and infrastructure improvements.	С	3	PC CC CS	BZ MDOT RZ		•	
Promote Barry County as a commuter community to Grand Rapids, Kalamazoo, Holland, Lansing, and Battle Creek.	С	3	cs	DDA	во	•	•

COMMUNICATION/EDUCATION/ADVOCACY							
			RESPONSIBILITY			FUNDING	
PROJECT	PRIORITY	TIMEFRAME	COUNTY	OTHER GOVT	PRIVATE	PUBLIC	PRIVATE
Adopt a clearly stated and advertised board recruitment and appointment process.	А	1	CC CS			•	
Establish an orientation and training plan for each board.	А		CC CS			•	
Engage in continuing educational development regarding land use planning techniques, practices and policies.	А	1	CC CS			•	
Build site plan review skills to take advantage of the opportunity to impact site design and fully realize the objectives of the County's zoning standards, especially those designed specifically to address key land use issues.	А	2	CS PC			•	
Involve community members in County planning and zoning activities and decision-making.	А	3	CC CS PC			•	
Develop a strategic platform for collaboration that 1) reinforces existing joint efforts, 2) identifies new partnerships; 3) identifies partnership projects, and 4) establishes a communication medium for identified partners.	В	2	CS	BZ JPA NC PS		•	
Continuously inform and educate the public on the overall planning goals of the County and the regulatory measures developed to achieve those goals.	В	3	CS PC			•	
Participate with and/or monitor area advocacy and service organizations. Invite representatives of these organizations to Planning Commission meetings to share ongoing projects, programs and new land use concepts and proposals.	С	3	CS PC	BZ		•	
Routinely engage in community outreach to get input on Barry County land use issues—host education sessions on topics related to identified Work Plan Items to obtain feedback; promote public education; and, encourage partnerships.	С	3	CS PC	BZ JPA NC PS	СМ	•	



MCKENNA

124 East Fulton Street, Suite 6B Grand Rapids, MI 49503 **mcka.com** HARVEY CONSULTING

N 8th Street Kalamazoo, MI 49009

Staff Acknowledgments

Rebecca Harvey, AICP, NCI	Project Director, Harvey Consulting
John Jackson, AICP	President, McKenna
Christopher Khorey, AICP	Project Manager, McKenna
Jeff Keesler	Project Planner, McKenna
James Kilborn	Project Planner, McKenna
Danielle Bouchard, AICP	GIS/Mapping, McKenna
Carrie LeitnerArt	t Director / Graphic Design, McKenna

