

Brown Township Master Plan Revised 2024

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PREFACE

In June of 1976 the Board of Trustees of Brown Township officially adopted its Permanent Zoning Ordinance.

During the summer of 1985 the Township Zoning Board became the Township Planning Commission. The Commission worked on a Land Use Master Plan, completing the work in 1991.

In June of 2004, the Commission completed a major revision of the Ordinance and several amendments have been added since that time.

The Commission completed another revision of the Brown Township Land Use Plan in December of 2012. Members of the Commission at this time were Delbert Nolan, Jeffrey Kenny, Jeff Wagar, Tim Joseph and Shann Wagar. Members of the Brown Township Board of Trustees in 2012 were Ford Wagar, Pamela Tompke, Cheryl Schaefer, Tim Joseph and Jeffrey Westheimer.

In 2019, the Brown Township Planning Commission began writing a new Zoning Ordinance and then updating the Master Plan to its current state. The work was completed in 2023. Commission members at that time were Robert Wood, Sandra Nelson, Scott Hughey, Tim Joseph and Tony Lamb.

Members of the Brown Township Board of Trustees in 2023 were Paul Adamski, Tim Joseph, Deborah Knudsen, Melissa Hughey, and Paul Wondolowski.

VISION STATEMENT

Brown Township is a rural residential community located in the Manistee River Valley. It has a beautiful natural landscape of hills, woods, streams and lakes, and a portion of the Township overlooks the Manistee River. Homes on large acreage and farms are the primary land uses in the Township.

Brown Township continues to actively support the rural residential lifestyle. The Township promotes and encourages land use practices that protect the natural environment and the rural character of the area, and works diligently to ensure that open space, views, wildlife and water resources are preserved. This is accomplished through careful land development and stewardship, as well as continued cost-efficient rural services and responsive government.

PURPOSE

The purpose of the Master Plan is to set goals for future land use in Brown Township. The goals are derived from these things:

- guidelines set by the County Planning Department
- goals set by the previous Brown Township Planning Commission
- Brown Township resident survey responses
- an examination of current land use trends

The Master Plan also serves as a framework, upon which the Brown Township Zoning Ordinance is based. Both documents follow these fundamental purpose statements:

- Promote public health, safety, and welfare.
- Provide for thoughtful development of the Township.
- Promote stewardship of forest, agriculture, and the natural environment.
- Minimize conflict among residents.
- Increase the use of resources in accordance with their character and adaptability.
- Limit the improper use of land.

BROWN TOWNSHIP

As Presently Zoned

<u>Five Districts</u>	<u>Minimum Size Required</u>
Agriculture, Forestry and Rural Residential District	10 Acres.
Big Manistee River Corridor District	10 Acres
Crawford Heights Residential District	40,000 sq. ft. (9/10 of an acre)
Chief Lake Residential District	20,000 sq. ft. (just less than ½ acre)
Bialik Residential District	15,000 sq. ft. (just over 1/3 acre)

Brown Township has roughly 23,040 acres in it.

Agriculture, Forestry and Rural Residential District has approximately 15,308 acres (66.4%).

Big Manistee River Corridor District has approximately 7,613 acres (33%).

Crawford Heights Residential District has approximately 14 acres (0.1%).

Chief Lake Residential District has approximately 40 acres (0.2%).

Bialik Residential District has approximately 65 acres (0.3%).

Just over 99% of the parcels in Brown Township have a 10-acre minimum size zoning requirement.

Approximately 6,183 acres in Brown Township are in the Manistee National Forest, or 27%.

Approximately 822.4 acres in Brown Township are owned by the Little River Band of Ottawa Indians, or 3.6%.

INTRODUCTION

Brown Township is a rural community located near the center of Manistee County, Michigan. It is an area of abundant natural beauty, forested land and river valleys, fruit and farmland, clean air and changing seasons.

Throughout the last one hundred and sixty-seven years, the township has retained its rural character. Homes are located amidst farms and forests. In recent years, Brown Township has experienced an increase in population mostly through large farm families. There has also been a recent increase in agriculture practices in the form of marijuana grow facilities and other specialty crops.

The task of the Planning Commission in preparing this Master Plan has been to document and evaluate past and present practices in an attempt to determine their relevance to possible future growth within the township.

The information presented in the Township Overview is current. It was decided that an update of the existing Master Plan would be best for our planning purposes. The plan will be reviewed periodically and kept current through updates and revisions.

Planning is a continuous and dynamic process. Information from the Master Plan may be used to guide and direct future growth and development in an orderly manner. In this way, the township can ensure efficient and effective use of available resources and provide a community which reflects the needs, interests and desires of its residents.

More specifically, the Township Master Plan will aid in maintaining the physical environment of the township as a setting for human activities. Thoughtful planning will help provide residents with a functional, beautiful, healthy and interesting place to live.

The Brown Township Master Plan is hereby dedicated to all residents in Brown Township in the interest of their health, security, and well-being.

THE PLAN

PART I - HISTORY OF BROWN TOWNSHIP

The land of present-day Brown Township has all been formed since the last glacier retreated about 10,000 years ago. A moraine that was at the face of this glacier makes up most of the township. River channels from glacial melt water cut deeply into the moraine. About 5,000 years ago, when the Great Lakes were much higher, a bay from Lake Michigan extended through the township along the course of the present Manistee River.

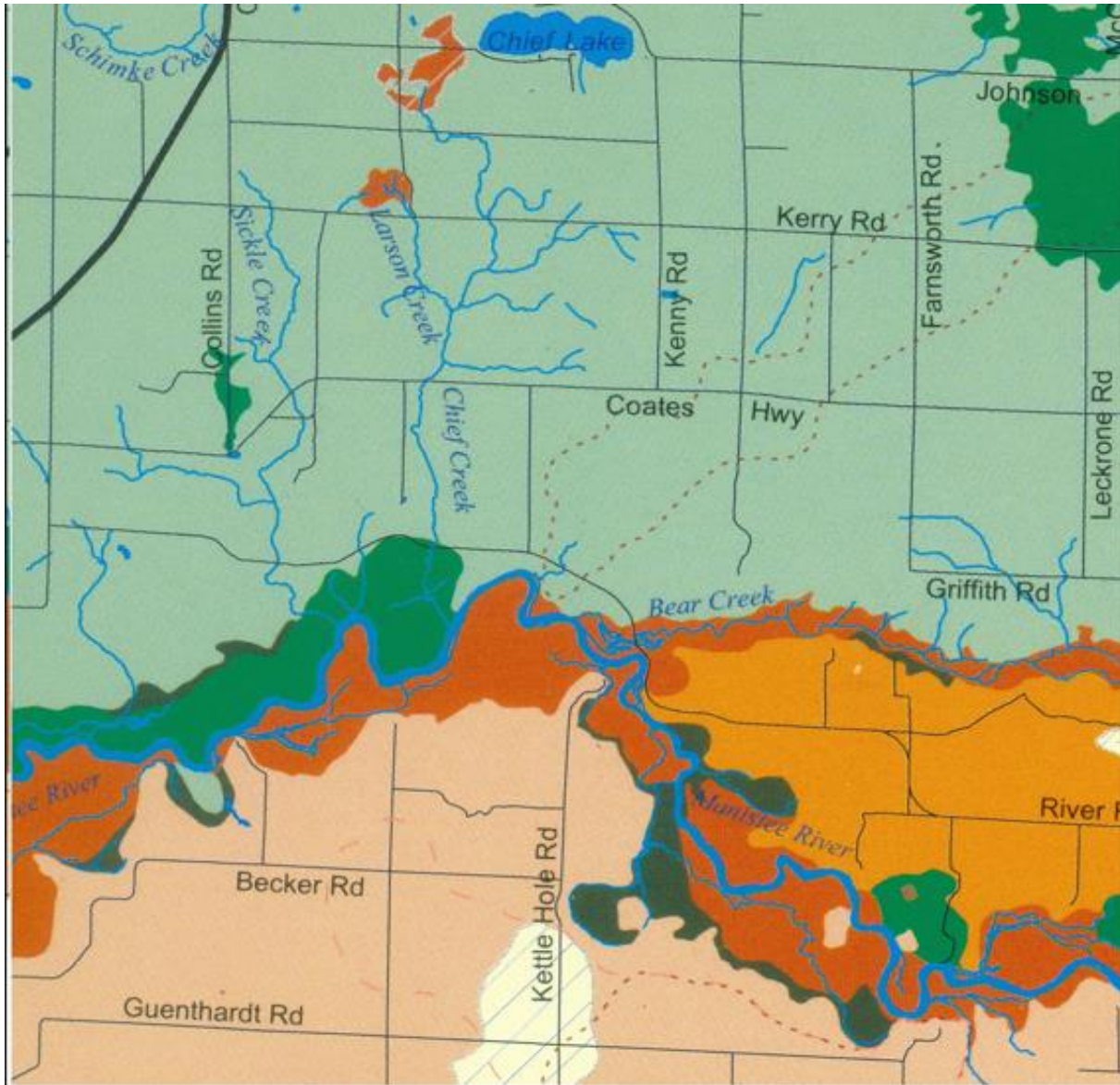
As land changed following glacial activity, the Manistee River and adjoining streams provided mobility and food while the adjoining land provided ideal habitat for human occupation. Because of this, Native American sites, usually temporary campsites, may be found near any of the watercourses in Brown Township. Two archeological sites have already been identified by the State of Michigan: one near Riverview Cemetery and the other near the junction of Bear Creek and the Manistee River. Both are thought to have been summer fishing camps of the Late Woodland Period (about 1,000 years ago). Artifacts found include pottery shards, arrowheads, chipped stone tools and the debris from making tools. Animal bones and seeds representing food remains also were recovered.

It is not known when the Native American tribes fully lived in the Manistee County area, which is known to the Little River Band of Ottawa Indians (LRBOI) tribe as Naaminitigong, meaning land under the trees. There is some conflicting evidence for prior habitation noting that the Anishinaabek were always here, and the mound builders and 'Paleo-Indians' merely evolved into Anishinaabek (now known as the Ottawa). Recent archeological discovery supports the transitional story as cache pits were found that had been in continual use from BC to the 'modern' Anishinaabek along the Grand River, according to Jonnie Sam, director of the Historic Preservation Department for the Little River Band of Ottawa Indians (LRBOI).

The book 'Our People Our Journey' notes that the Ottawa Indians had formally established themselves into Michigan around 1400-1500 with first European contact being around 1615 A.D. Thus, Indigenous peoples lived in the area followed by French fur traders. In 1763, France gave up Canada to the British, which included the area of Brown Township. In 1783 the Revolutionary War ended, and Brown Township became a territory of the United States.

The 1836 the Ottawa Indians were approached by the federal government to sign a Washington Treaty recognizing the tribe. The treaty was important as it addressed the lands in the area to facilitate Michigan's transition from a territory to a state. The reservation that was created was located on the Manistee River, to provide a permanent home that gave the Ottawa Indians access to traditional hunting and trapping territories along the Manistee River system. In 1837-1839 the United States government surveyed the area that is now known as Brown Township. An early interpretation of Brown Township's forests, grasslands and wetlands is made from the 1837 – 1839 General Land Office Surveys as shown below overlaid onto current roads for reference. This established the original section lines, corners, and quarter corners. All current lines are based on this original survey.

Brown Township Pre-Settlement Landcover and Vegetation



When the reservation was not in use by the Ottawa Indians, lumbermen usurped the use of the land. Logging activity undoubtedly began with the arrival of the first lumbermen in Manistee in the early 1840's. Shortly after 1850, some of the loggers then built homes for their families in the present area of Brown Township, which served as permanent logging camps. Those thought to have settled by 1855 include Stephen Smith, Henry L. Brown, Oliver Miller, Harvey Cone, Henry Sargent, James O'Neil, Murdock McNeal, John Shores, Richard Flanders and their families.

In 1855, a renegotiated Treaty of Detroit between the United States and Ottawa and Chippewa nations moved part of Brown Township into the Manistee Indian Reservation (the southern part of the Township). A clause in the treaty required the Ottawa Chippewa tribe to disband. The LRBOI is the political successor of nine of 19 historic bands of the Grand River Ottawa people. Following the 1855 treaty, the nine Bands from whom the Little River Ottawa descend, established a major settlement known as "Indian Town" on the Pere Marquette, near present day Custer in Mason County, Eden Township. In 1936, 1948 and the 1970s attempts were made by the tribe to reaffirm their relationship with the federal government. Although these attempts at reaffirmation with the federal government failed due to the disbanding clause, the LRBOI did finally receive reaffirmation of its relationship with the federal government on Sept. 21, 1994, under a law that passed that year. There are currently around 4,000 members enrolled in the LRBOI with approximately 65% living in Michigan and over 40% spread across nine western Michigan counties, according to tribal Ogema, Larry Romanelli. Ogema comes from the Anishinaabemowin word ogimaa meaning chief.

Loggers cut trees which were the best and closest to their mills without regard to ownership of the land. The harvest of trees likely peaked during the 1870's and 1880's. Lumber barons bought the land and set up organized lumber camps, cutting nearly all trees. Trees in Brown Township were cut, and the logs were floated to the Manistee sawmills. Logging camps were built in the Township for winter use while the timber was being cut. These camps were major settlements – but temporary. Each could be described as a little city with food preparation, storage, blacksmith shops, animal husbandry facilities, housing and more.

Manistee County local government was organized in 1855. Brown Township was one of the three original townships created. It was nine times its present size. As farmers moved into the wilderness and developed their acreage, the size of the township was steadily reduced as new townships were established and set up their own local government.

In the first 50 or so years of Brown Township (approximately 1850-1900), most residents depended on the logging industry for their main source of income. Even as agriculture became more prominent around the turn of the century, the combination of warm weather farming chores and winter logging work was common for the people of the township.

In 1862, John O'Neil moved onto a farm in the northwest part of the township and earned for himself the honor of being called the "first practical farmer in Manistee

County". Within a short time, others followed him to the area and a post office named Norwalk was established in 1863 as the second post office in Manistee County.

Within a decade, Brown Township farmers were producing 5,500 bushels of grains and over 5,000 bushels of potatoes annually. Their produce along with all surplus livestock was sold to loggers in nearby camps, with little need for transport to Manistee markets which was a day's journey away. This provided an economic advantage to township farmers because of the ready and assured markets and reduced transportation costs.

In 1866, a young logger, Sulvaneous Haines, wrote to his parents in Dundas County, Ontario, describing the wonderful land in Brown Township. His parents, the Christopher Haines and another family, the Joseph Archers, came and settled on Sections 10 and 11. Others followed, and eventually there were about 50 people who migrated from Dundas County to Brown Township. Other residents came from areas throughout the United States with a few coming from Norway.

Two roads have been especially important in Brown Township history although both have been rerouted several times. The first main supply road built by loggers had a portion that ran along the north side of the Manistee River, today's River Road. This encouraged a steady file of travelers through the township and facilitated commercial activity. In 1857, Potter and Rogers, a logging firm, opened a store on the road to provide travelers and residents with needed goods. Later, John Paape operated a hotel, saloon, and livery stable at his home on the supply road. The North / South portion of the road, known simply as the "State Road", is today's U.S. 31. For about fifty years, several businesses at Norwalk served travelers and residents alike on this road.

The Manistee and Northwestern Railroad was built through the northwest corner of the Township in 1887 and provided rail service for the next 94 years. The Manistee County Land Use Plan lists the Norwalk district as a "special and unique environment" in Manistee County (refer to the map in Appendix B). Several historic storefront buildings and the Old 31 railroad crossing are part of this designation.

Another road, Coates Highway, was advocated as the route for a proposed M-55 state highway from Manistee to Cadillac and Lake City. A Kaleva-based country doctor, W.E. Coates, pushed for the route through Brethren, Harrietta, and Boon to Cadillac. The route was not chosen, but in his honor Coates Highway was named for him.

The first one-room school was undoubtedly built in the township shortly after the local government was organized in the 1850's. Over the years, seven additional schools were built to provide for students in the wide geographic area of the township. Eventually two schools, Brown Town, near Chief and Norwalk were called High Schools and offered classes through the tenth grade. These buildings are now gone.

At least three churches have served the religious needs of township residents. Around 1880, a mission Catholic Church was built on the northwest corner of Kerry and Chief roads in section 3. No evidence is available to tell what became of the structure. In 1902, members of a Mennonite congregation built a small church on Kerry Road at the

corner of Farnsworth. A Lutheran Church was built in 1884 by members of the Scandinavian Lutheran Society on what is now U.S. 31. The building burned in June of 1916 and was rebuilt on its original foundation. Both the Mennonite Church and the Norwalk Lutheran Church presently have active congregations.

Three Schneider brothers, bachelor farmer/lumber mill owners on Chief Creek, wanted to meet women with an eye for marriage. They built a dance hall on their farm in 1889, holding periodic dances. Their plan worked as they were soon married. They then gave the dance hall to Brown Township which became the existing township hall location. At the north entrance, the ticket window for purchasing tickets to the dance can be seen.

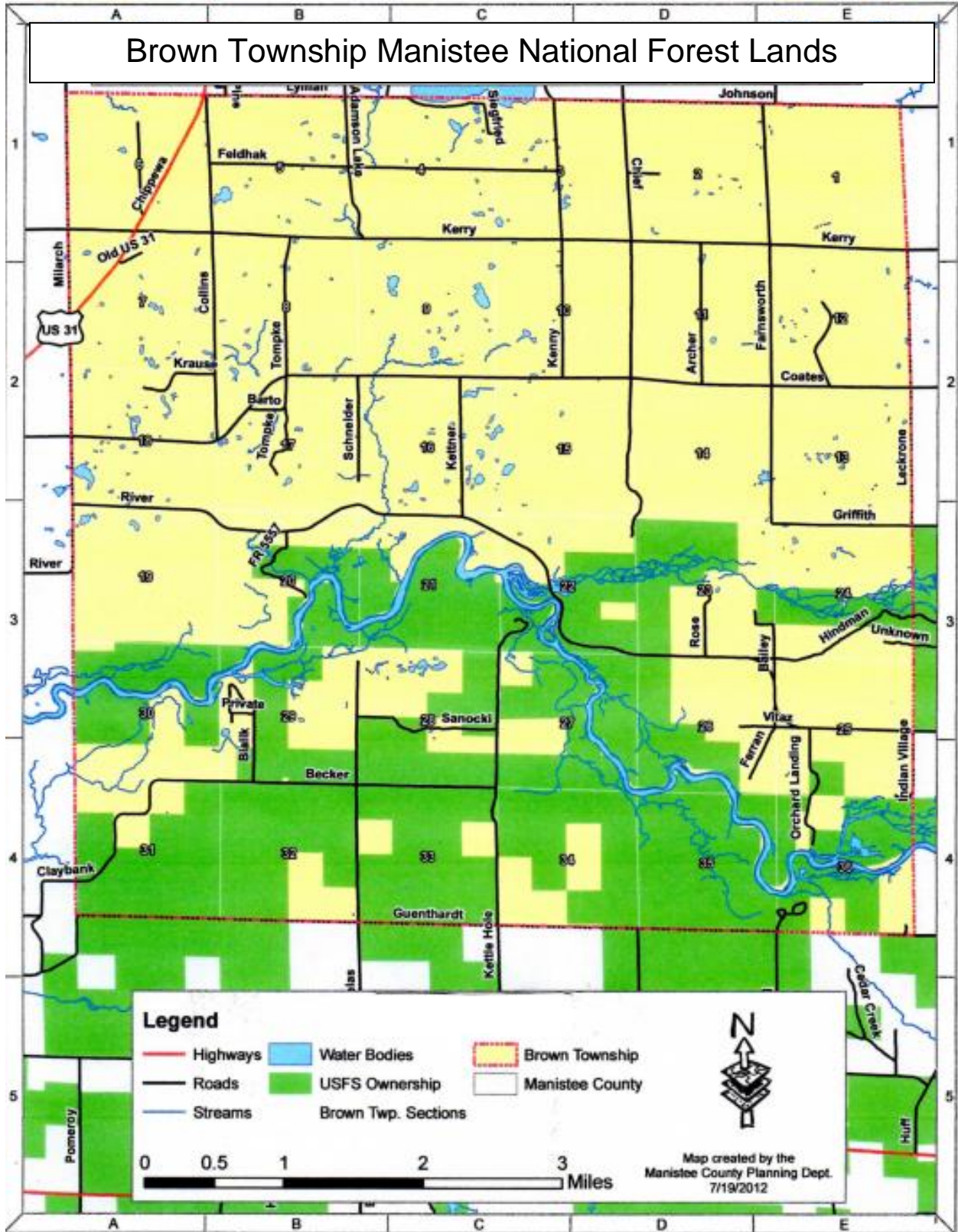
By the turn of the century, Brown Township farms were among the most successful in the county. A total of 153 farms had an average value of \$1,750.00 with an average of 100 acres under cultivation. Township farmers were producing over 30,000 bushels of potatoes annually as well as large amounts of grain, livestock, and apples. The average farm income per household was around \$300.00 per year.

By the end of the 1800's logging had exhausted the resource. Many of the Manistee-based lumber companies were ceasing operation or relocating to the western United States. Efforts were made to sell the spent timber lands that lumber barons had owned. The land was deeded over to the Manistee Land Company in the early 1900's. The company was set up to sell cut-over lands to immigrants, presumably for farming.

Manistee County was in an economic depression as early as 1910, which only got worse in the 1920's and quite bad by the time of the Great Depression in the 1930's. This is reflected in Brown Township's and Manistee County's decreasing population during that time.

During the Depression many farms faced economic failure. In Brown Township, as in most of northern Michigan, it was reflected in vast amounts of land being lost due to nonpayment of property taxes. The system of selling land on tax sale to new owners did not work, as the new owners also were unable to pay their taxes. The solution was to transfer those lands to public forests. Today those lands are held as part of the state forest (north part of Manistee County) and in Brown Township as part of the USDA Forest Service.

Also, during the 1930's the Civilian Conservation Corps (CCC) came into existence. This included the CCC Camp at Lake Eleanor in Brethren. Work by camp participants, the US Forest Service and the newly created Soil Conservation District played a large part in the reforestation of this part of Michigan. In Manistee County the Soil District, Cooperative Extension Service and the Forest Service conducted a county-wide, citizen lead land use planning effort for restoration of natural resources in the county. Cooperation between business, state, federal and private landowners resulted in reforestation, public forests, natural rivers, a rebirth of hunting and fishing, stabilized soils and renewed agriculture.



Agriculture was probably the primary occupation of Brown Township residents in the century between 1865 and 1965. Due to the national decline of small farms in recent years and the added mobility afforded by automobiles, township residents have turned to employment in commercial and industrial areas in the nearby city of Manistee and elsewhere. However there has been a recent renewed interest in farming with the arrival of Amish and Mennonite families and the recovery of several large farms in the area.

The Brown Township Planning Commission acknowledges and thanks Jonnie Sam, Kurt Schindler and Steve Harold of the Manistee Historical Society for providing us with much of the preceding historical information.

POPULATION

According to the 2020 United State Census, there are 704 residents in Brown Township*. The 2010 Census listed the total number of residents as 747. In 1910, the population was 752 residents. The population declined to 513 residents in 1950 and rose sharply in 1970 to just under 700 residents.

HISTORIC POPULATION		
YEAR	BROWN TOWNSHIP POPULATION	MANISTEE COUNTY POPULATION
1860	219	** 975
1870	* 459	5,988
1880	* 533	12,532
1890	726	*** 24,233
1900	799	27,856
1910	* 752	26,690
1920	731	20,899
1930	562	17,409
1940	521	18,477
1950	513	18,524
1960	507	19,402
1970	689	20,393
1980	631	23,019
1990	588	21,265
2000	717	24,527
2010	747	24,733
2020	704	25,032
* BROWN TOWNSHIP LOST TERRITORY, ** MANISTEE COUNTY LOST TERRITORY *** MANISTEE COUNTY GAINED TERRITORY		

There are 246 households in Brown Township. The average household size is 2.45 persons. There are 345 female residents (54.2%) and 281 male residents (45.8%), with a median age of the township residents of 55.6 years. Following is an age distribution:

Under 5 yrs.	24	(approximately 4%)
5-19 yrs.	74	(12%)
20-64 yrs.	350	(56%)
65 and over	178	(28%)

The statistics were formulated from the 2020 United States Census Data.

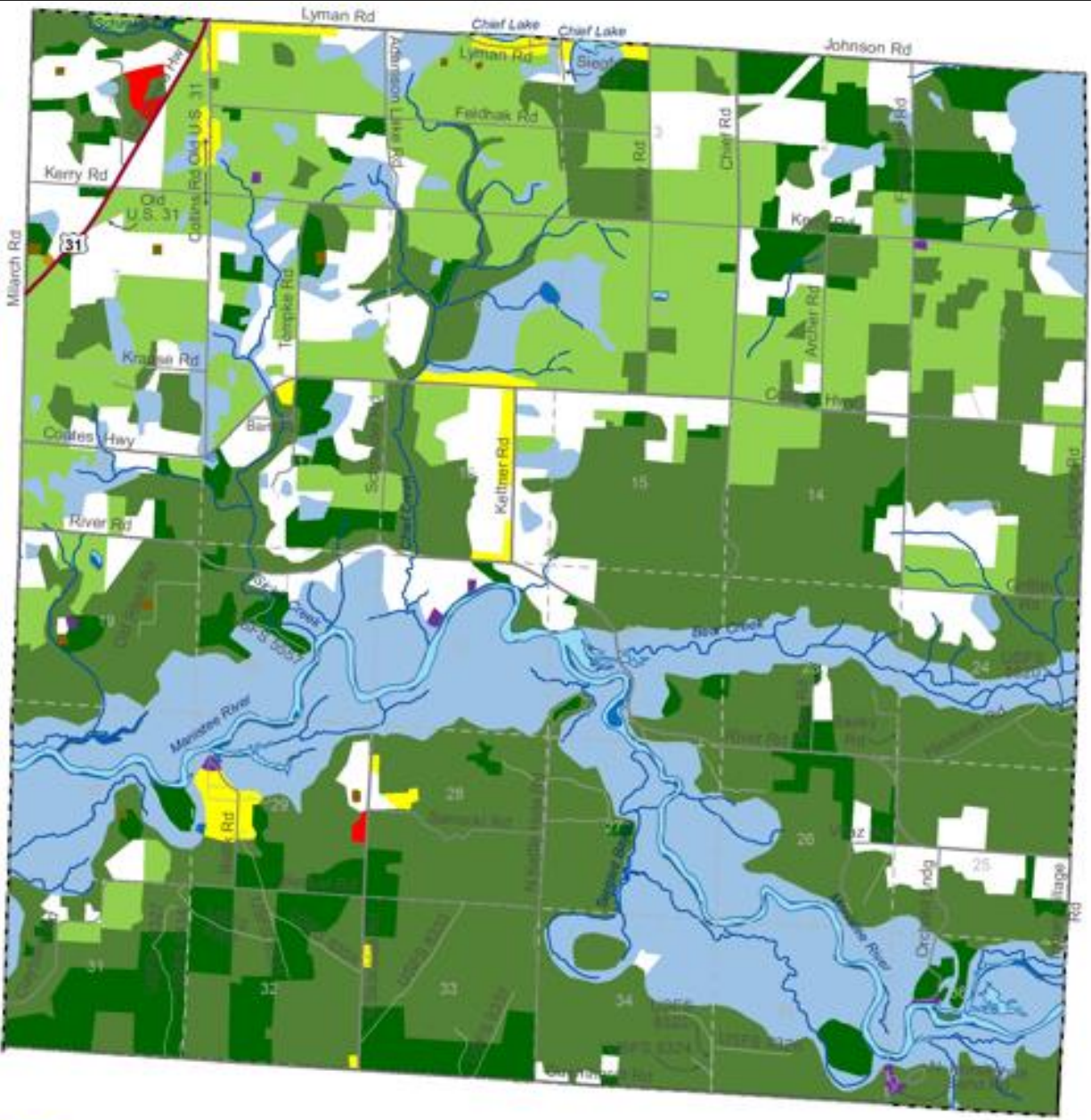
Note: * Indicates that our estimated township size is trending upwards in the last couple years due to large farming families who have recently moved into the township.

PART II - Recent and Current Patterns of Land Use and Development

In the early 1980's Michigan funded a statewide effort to create a detailed look at land use and land cover using air photography. The photos were digitized so that computerized maps could be generated. Manistee County did this process again using air photos from 1993. The data is old but does provide a realistic picture of land use/cover and change for Brown Township.

During the period that this data covers, one can see that there has been relatively little change in land use.

Brown Township 1978 Land Use

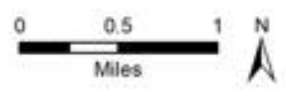


- Residential
- Commercial & Service
- Industrial
- Extractive
- Open & Other
- Agricultural

- Rangeland
- Forested/Deciduous
- Forested/Coniferous
- Water
- Wetland

Map Prepared by:
Northwest Rural Planning
LIAA

Source: Center for Shared
Solutions, MIRIS



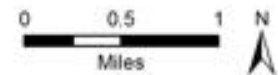
Brown Township 1993 Land Use



- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Residential | Agricultural |
| Commercial & Service | Rangeland |
| Industrial | Forest/Deciduous |
| Trans., Comm., Utilities | Forest/Coniferous |
| Extractive | Water |
| Open & Other | Wetland |

Map Prepared by:
Northwest Rural Planning
LIAA
March 2022

Source: Center for Shared
Solutions, MIRIS



The total acres of cropland were 3,521.27 acres in 1978 and 3,499.95 acres in 1993 - a net reduction of 21.32 acres. Loss of cropland agriculture was not a result of development. Instead, it went fallow. In some areas, fallow fields shifted back into cropland.

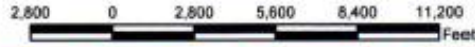
Orchards in 1978 shifted to other land uses in 1993.

- 2.32 acres to residential
- 86.06 acres to cropland
- 53.94 acres to fields
- 3.82 acres to coniferous forest

Total acres of orchards in 1978 was 268.55 acres and in 1993 it was 131.96 acres – a net reduction of 50%. But of that, 86 acres shifted to cropland. This is all an indicator in change of type of agriculture.

Brown Township 2011 Land Use

District: MANISTEE CONSERVATION DISTRICT
 Legal Description: T22N - R15W
 BROWN TWP, MANISTEE CO.
 MICHIGAN



Legend

- hydro_l_mi101
- Section Corners
- Roads
- Civil Divisions
- LABEL**
- Broadleaved Forest (Generally Deciduous)
- Christmas Tree Plantation
- Commercial Services, Institutional
- Aspen, Birch
- Cemeteries
- Coniferous Forest
- Cropland
- Emergent Wetland
- Herbaceous Openland
- Lake, Pond
- Lowland Conifer
- Lowland Hardwood
- Mobile Home Park
- Neighborhood Business
- Northern Hardwood
- Open Pit
- Other Agriculture
- Other Upland Conifer
- Outdoor Recreation
- Permanent Pasture
- Pine
- Rail Transportation
- Reservoir
- Sand Dune
- Sand and Gravel
- Shrub/Scrub Wetland
- Shrubland
- Single Family, Duplex
- Utilities, Waste Disposal
- Water Transportation
- Wells
- Wooded Wetland

In recent years, Brown Township has seen an increase in the growth of hemp and marijuana. In 2018, a ballot proposal to legalize marijuana passed on the state, county and township level. Currently, there are two fully operational grow facilities and two that are in the construction phase.

In Brown Township there are:

- 822.36 acres owned by Little River Band of Ottawa Indians
- 6569 acres owned as Federal Lands
- 32 Miles of Rivers and Streams

HOUSING

There are 417 total housing units in the township. Of the 417 units, 246 are occupied and 171 are vacant. Of the 171 that are vacant, one is a rental, nine are for sale, ninety are seasonal/recreational and thirty-five are vacant for other reasons.

There are no motels or hotels located within Brown Township, however, there are approximately 1100 rooms or hotel units available within Manistee County. Typical occupancy rate is approximately 36% with two overnight visitors. The potential peak permanent and seasonal average population is over 800. In addition, there are several camping accommodations (rustic, water and electric, full RV) such as those at Matson's Big Manistee River which includes one Lodge, four Cabins and over fifty camp sites as well as several additional campsites at Rally Point Veterans Campground. Brown Township does not have access to public water and sewage service. Therefore, each of the housing units maintains its own water well and septic system. Most homes have one or more complete bathrooms. Of the 246 permanent housing units, heating sources include propane, oil, wood, and electric heat. The 2020 Census reports that the Median Home Value in Brown Township is approximately \$157,100, while the median rent is \$841 for the 7% of residents who do rent.

ECONOMY

Most of Brown Township residents live within 15 miles of the city of Manistee. That is the closest city to which people go to shop, have things repaired, obtain medical and other services, seek social life, and find work. Relatively few job opportunities are provided in the township. Therefore, most people who make up the work force of Brown Township, go to Manistee or elsewhere to work. However, with increased access to high-speed internet, more individuals are choosing to work entirely at home on-line.

According to the 2010 Census data, there are 406 persons between the ages of 16-64 making up the total labor force in Brown Township. 232 drive alone, 83 carpool, 0 use public transportation, 27 work at home. The majority give their drive time as somewhere between 10 and 45 minutes with a mean travel time of 28 minutes.

The following is a breakdown of the occupations held by residents of Brown Township.

Management, business, science	99
Service Occupations	93
Sales and Office Occupations	49
Natural Resources, Construction and Maintenance	50
Production, Transportation, Materials Moving	74
	<hr/>
Total work force	365

The preceding information on occupations was taken from the US Census Bureau, Fact Finder# DP03, entitled Selected Economic Characteristics. Based on data collected from the 2020 Census, the mean or average household income for Brown Township is \$50,714 (+/- \$9,680), with the per capita income of approximately \$26,126 (+/- \$6,715).

The economy of Brown Township is largely dependent on the events and economy of the areas beyond our borders. Yet Brown Township is an important contributor to the broader areas as the Township provides rural, wooded, uncrowded, unhurried, close to nature settings in which persons working outside of the township can reside. The township contributes to the tourist industry with tourist-related services and a natural environment. Several features in the township bring visitors to the area. Among them are the Big Manistee River, Bear Creek, and Chief Lake and the various water access sites attracting fishing and boating. Forested areas providing hunting opportunities. Brown Township also contributes to the lumber industry with its timber resources and sawmills, as well as to the local markets with its fresh fruit, vegetable, and marijuana operations.

AGRICULTURE AND FOREST

Agriculture in Brown Township is almost completely located North of the Manistee River. Most acreage is devoted to forage in either pasture or hay production. Corn, Cereal Rye, Wheat, and Oats are regularly grown within the township, usually in rotation with Hay. Cucumbers, mushrooms, blueberries, and Christmas trees are specialty crops grown within the township. In the past the township was home to commercial orchards (cherries & apples), however there are none in operation today. The township has many small home orchards throughout. With the legalization of marijuana, the township has active marijuana indoor and outdoor grow facilities. The township also has marijuana processing facilities where raw plant is turned into the final product for end use.

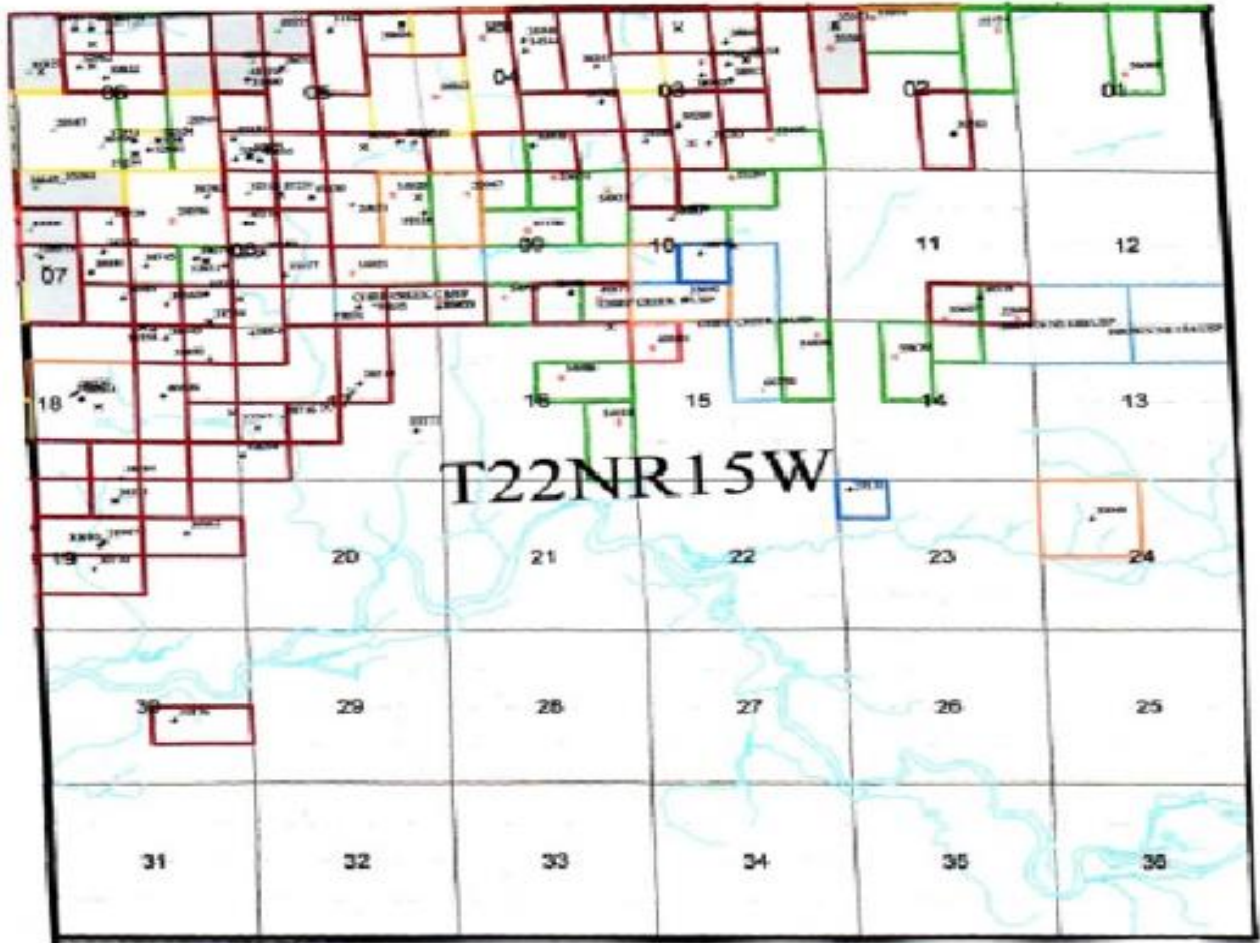
There is a wide variety of livestock raised within the township. The most numerous species is cattle. The township has multiple beef herds as well as the only dairy in Manistee County. The township has multiple horse farms, and many residents who own horses, own 1 to 2 horses. There are farms that raise sheep and/or goats located in the township, and many residents have chickens, both laying hens and meat chickens.

A large percentage of the township is covered in forest. Packaging Corporation of America, Little River Band of Ottawa Indians, and USDA Forest Service all have larger tracts of land within the township. Many of the private parcels are completely forested and many landowners have woodlots located on their properties. Although Pine plantations are common throughout the township, south of the Manistee River the dominant forest type is Oak-Pine, while north of the river northern hardwoods are found.

MINING

Since 1969, approximately 188 permits to drill have been issued in Brown Township, but not all those were drilled as fifty-five permits expired without drilling. Eighty-seven permitted locations were reported as “Dry Holes” after drilling, eleven locations were reported as “Oil Wells” and thirty were listed as Natural Gas”. Some of the wells have since been plugged with restoration ongoing or completed at the locations. Crude petroleum, natural gas, and natural gas liquids are being extracted from wells in Brown Township. The oil and gas field services necessary for those wells are provided by several different companies from outside of Brown Township. Their services include everything from exploration through production of oil and gas. We also have one small gravel pit, and a few locations providing topsoil.

Brown Township Oil and Gas Drilling Units



LEGEND:

DRILLING UNIT TYPES

FIELD SPACED INACTIVE (grey) ACTIVE (green)	80-240 (SHALAND CO) 80-ACRES INACTIVE (grey) ACTIVE (blue)	ANTENNA UNIFORM SPACING PLAN INACTIVE (grey) ACTIVE (light blue)
GENERAL SILE 36-ACRES INACTIVE (grey) ACTIVE (yellow)	90-ACRE GAS ACT INACTIVE (grey) ACTIVE (yellow)	40-ACRES & MORE ANTENNA (S.O. 5-1-05) INACTIVE (grey) ACTIVE (light blue)
GENERAL SILE 40-ACRES INACTIVE (grey) ACTIVE (light blue)	WOLUNTARILY POOLED (PNE) 80-ACRES INACTIVE (grey) ACTIVE (yellow)	40-ACRES ANTENNA (S.O. 10-12-05) INACTIVE (grey) ACTIVE (pink)
SUPERVISORS ORDER 1-75 (80-ACRES) INACTIVE (grey) ACTIVE (light blue)	8-300 SPACING EXCEPTION INACTIVE (grey) ACTIVE (light blue)	80-ACRES ANTENNA (S.O. 11-9-04) INACTIVE (grey) ACTIVE (yellow)
SUPERVISORS ORDER 1-80 (60-ACRES) INACTIVE (grey) ACTIVE (dark blue)	9-1000VMS ORDER 12-4-75 (80-ACRES) INACTIVE (grey) ACTIVE (light blue)	ANTENNA TWIN WELL (S.O. 10-9-05) INACTIVE (grey) ACTIVE (pink)
20-ACRE ALDOR (S.O. 8-7-04) INACTIVE (grey) ACTIVE (yellow)	SUPERVISORS ORDER 18-2007 (80-ACRES) INACTIVE (grey) ACTIVE (light blue)	RETAINS 12-1-05 INACTIVE (grey) ACTIVE (yellow)

WELL TYPES

● OIL	○ LOCATION (REBELLER)	◇ DRY HOLE
● GAS	○ GASOLINE (DISPENS)	○ PLUGGED WELL
● GAS CONDENSATE	○ GAS STORAGE	○ SLANT
○ OTHER	○ GAS INJECTION	○ SURFACE LOCATION
○ OTHER	○ WATER INJECTION	○ OBSTRUCTIONAL
○ OTHER	○ OTHER INJECTION	○ HORIZONTAL

INFORMATION PROVIDED HEREIN IS SUBJECT TO THE TERMS OF THE AGREEMENT AND IS PROVIDED FOR YOUR INFORMATION ONLY. THE INFORMATION IS NOT GUARANTEED TO BE ACCURATE AND IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PROVIDED. THE INFORMATION IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PROVIDED. THE INFORMATION IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PROVIDED.



10/2005-10/2005

CONSTRUCTION

There are self-employed general building contractors and several masons in the township. Several residents have their own excavation services. Other residents provide a variety of associated building trades (plumbers, electricians, etc.) and services.

MANUFACTURING / PROCESSING

Wood products (flooring, siding and pallets, etc.) are manufactured in the Township. In addition, there are some Central Processing Facilities (CPF) in Brown Township with petroleum and related products that are processed within the township and then piped towards Kalkaska for further refinement and separation. Currently Brown 10 is still active, but CPFs such as Brown 7 and Brown 19 have been decommissioned. Restoration for Brown 19 has been completed in 2019, while Brown 7 is in process of dismantling with restoration expected to be completed in 2023. Natural gas is processed at Fisk Road processing plant.

WHOLESALE TRADE

Fresh fruits, vegetables, mushrooms, maple syrup, dairy, and eggs as well as firewood are part of the wholesale trade picture in Brown Township.

SERVICES

One Brown Township resident has a privately owned campgrounds/trailer park. One resident runs a licensed beauty shop. There is also one excavation business. These are all located in private residences and exist in accordance with current local zoning regulations.

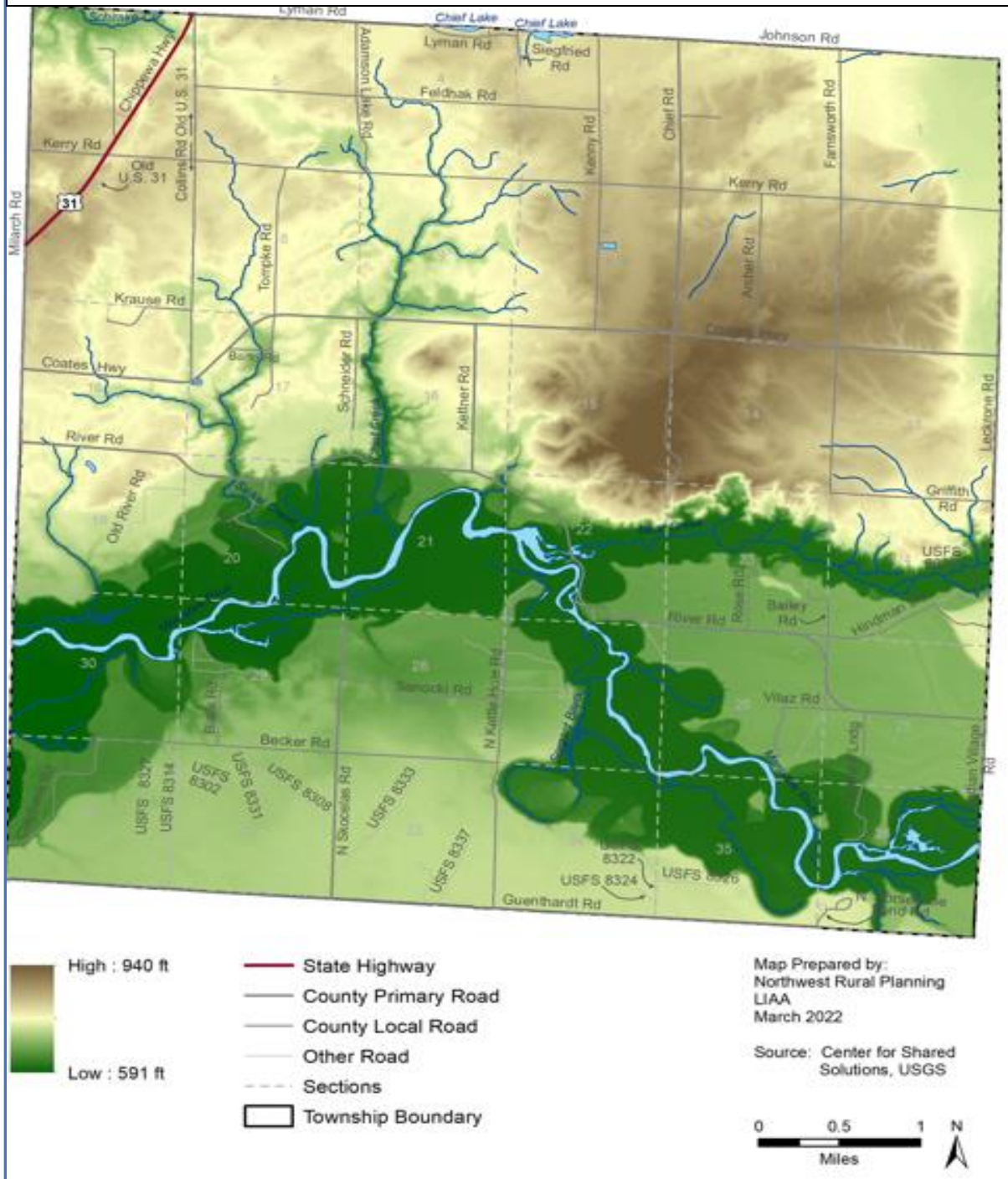
NATURAL SYSTEMS

The natural systems inventory presented here describes components of the physical environment of Brown Township.

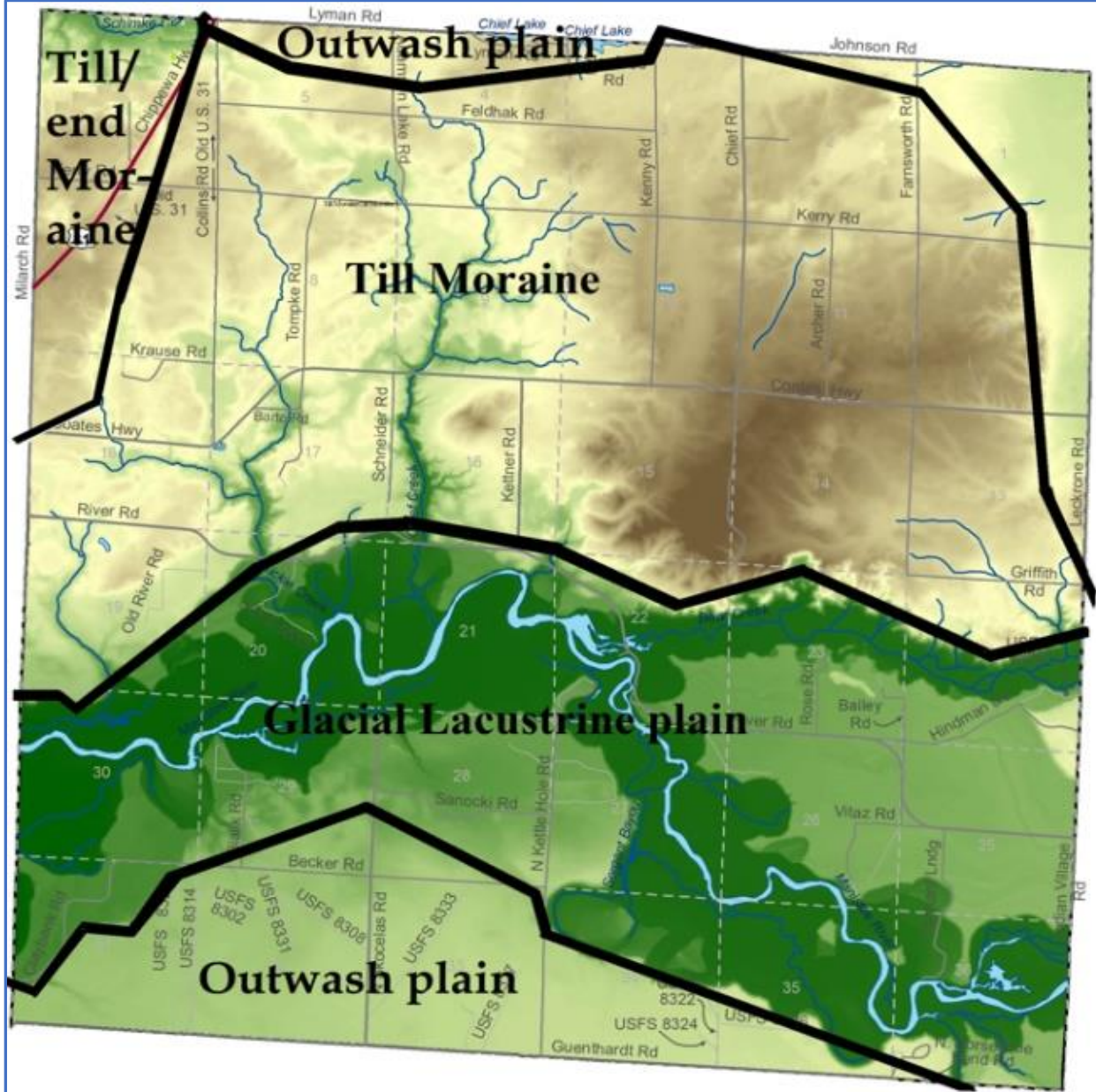
TOPOGRAPHY AND VEGETATION

Topography refers to the physical features of an area such as landforms, elevations, slopes, and drainage. The present-day topography of Brown Township was formed centuries ago by the movement of glaciers. For example, much of the northern half of Brown Township is part of the Manistee Moraine. This network of hills was created by water running off the edge of a stationary glacier. The relief of the region (variation in height) is the result of both glaciations and the elastic rebound of the land after the weight of the continental ice caps retreated. The relief varies from an altitude of 590 feet above sea level at the Big Manistee River in Section 30, to the highest point of 935 feet above sea level in the southeast corner of section 15. The map illustrates topographic conditions in Brown Township.

Brown Township Digital Elevation Model



Brown Township Digital Elevation Model with Area Identification



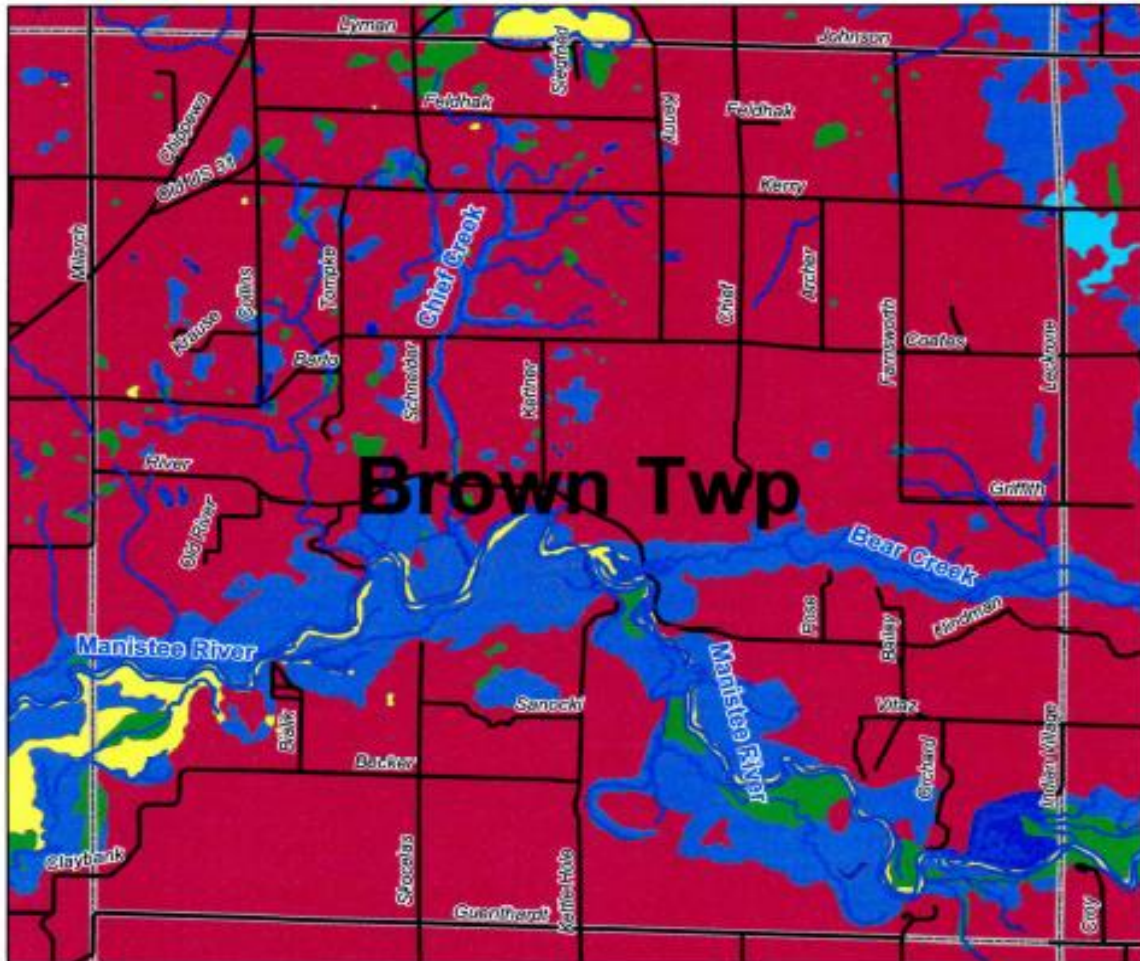
Hills and lowlands are plentiful within the township. These geological features of the landscape are a non-renewable resource that provide scenic vistas and add beauty to the area. Trees and other vegetation existing on hillsides serve a practical as well as an aesthetic function. Disturbance of slopes can result in the loss of soil stability and can cause erosion. When vegetation is removed from hillsides, the resulting erosion and increased runoff cause siltation in downstream waters, which can damage downstream wetlands. For these reasons, there should be no development permitted on the hillsides with severe slopes. Brown Township is divided into seven major drainage areas or watersheds. Watersheds are the areas around a creek, river, or lake that drains into that creek, river, or lake. Thus, any water that does not evaporate or soak into the ground flows downhill to a particular body of water. Groundwater movement follows a similar pattern. Therefore, it is possible to make an educated guess as to the direction septic wastes and underground liquid industrial pollutants will travel. This consideration is important in locating new subdivisions, water wells or major disposal sites.

Local governments have an important role in protecting the surface water, ground water, drinking water and wetlands. Local zoning ordinances often fill the gaps in state and federal regulations. Prevention of groundwater contamination through zoning is often conducted with site planning standards in the zoning ordinances and spelled out in our community's wellhead protection plans with guidance from the Michigan Wellhead Protection Program. Proactive protection of wetlands and surface waters (lakes and rivers) is mostly an issue of how to treat shorelines and is addressed by setbacks, vegetation belts, buffers, and density of development (parcel size and impervious surfaces). Information sources used for establishing these items are the Michigan Surface Water Information Management System and from Michigan State University.

The following map shows the major watershed areas in Brown Township. The Big Manistee River lies in the lower third of the township and roughly divides it from east to west. A more detailed description of the river is found in the Surface Water section of this document.

Brown Township Wetland Types

District: MANISTEE CONSERVATION DISTRICT
 Legal Description: T22N - R15W
 BROWN TWP. MANISTEE CO.
 MICHIGAN



CLASS

- Upland
- Aquatic Bed
- Emergent
- Forested
- Open Water/Unknown Bottom
- Scrub-Shrub
- Streambed
- Unconsolidated Bottom

Legend

- hydro_mi101
- Roads
- Civil Divisions



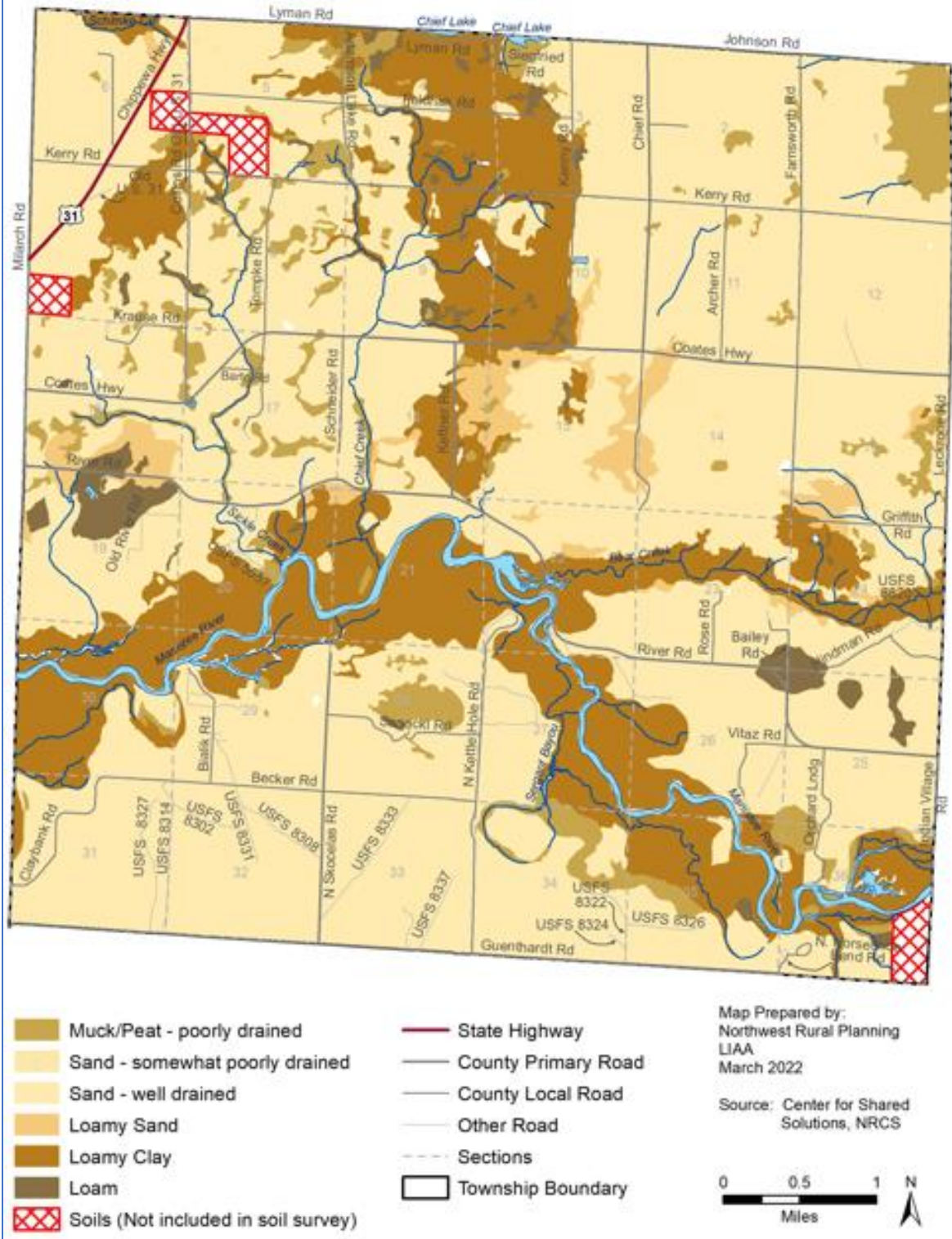
SOILS

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers and foresters use the surveys to evaluate the potential of the soil. Planners, community officials, engineers, developers, builders, and homebuyers can use the surveys to plan land use. Conservationists, teachers, and students, and specialists in recreation, wildlife management, waste disposal, and pollution can use the surveys to help them understand, protect and enhance the environment.

There are four main types of soils in Brown Township: sandy, loamy sand, loamy-clay, and wetland complex. Figure (6 pg.17) is a simplified soil map that shows the locations of these four main soil groups in the township.

Brown Township General Soils



Soils that make up the Big Manistee River Valley possess limited ability to handle commercial or industrial development, making this area unsuitable for home or commercial development.

Most of the land in the northern half of the township is loamy-sand soil. These are more fertile than sandy soils, but still not excellent production soils. They are droughty, with rapid water intake. Drainage is usually not needed because of the rapid percolation. Crop or timber productivity will be higher than on plain sandy soils. These soils are stable and lend themselves toward better building sites. Septic tank and pollution discharge can move rapidly through loamy-sand soils. Therefore, larger drain fields may be necessary, and the use of drywells should be discouraged.

The soil conditions described above combined with lake effect produce unique farming conditions in the Northern half of Brown Township. This area is particularly well suited to growing fruit and vegetables. Irrigation is usually necessary in these areas.

The areas surrounding the Big Manistee River and Bear Creek are composed of sand and wetland complex. Wetland complex soils can be made up of muck, organics, sands, clays, and loams. These soils are generally not rated for agricultural use or timber potential. Soils that make up the Big Manistee River Valley possess a limited ability to handle wastes or industrial development, making this area unsuitable for home or commercial development.

OIL and GAS

Brown Township is on the southern edge of the Niagran reef, an oil trend that is found in Northern Michigan. In general, since February 1969, approximately 188 permits to drill have been issued for the township. Not all permitted well locations were ever drilled, with 55 permits expiring. Eighty-seven (87) permitted locations were reported as dry holes after drilling. Eleven (11) locations reported as oil wells and thirty (30) wells reported as gas well. There is no additional foreseen activity in Brown Township in the future (according to EGLE).

There is one active production facility in Brown Township named Chief Creek, with compressed gas that is pumped into the Michicon system. The second production facility named Brown 7 is no longer active and is currently decommissioned and scheduled to be dismantled.

SURFACE WATER

Manistee County has about 9,600 acres of scattered lakes, reservoirs, and ponds. These water areas range from less than 5 acres to more than 2,100 acres. Some lakes are marshes and exhibit all stages of filling by vegetation. Most of the lakes are in the western half of the county. Among the largest ones are Portage Lake, 2,110 acres; Bear Lake, 1,744 acres; Manistee Lake 1,148 acres; Tippy Dam Pond, 1,086 acres; Arcadia Lake, 242 acres, and Bar Lake, 240 acres (Michigan United Conservation Club).

Three flowing watercourses are discussed in this section. They are: the Big Manistee River, Chief Creek and Big Bear Creek. These Waterways and their surrounding wetlands provide important natural drainage and water filtering functions. They provide recreational opportunities such as canoeing, fishing, hunting, hiking, and scenic enjoyment. Figure 8 (pg. 21) shows the river, creeks, and wetlands in Brown Township.

Brown Township is home to outstanding trout and salmon fishing waters, especially the Big Manistee River and Bear Creek, a blue-ribbon trout stream. In fact, in 2009 a world record 41-pound 7 and ¼ ounce Brown Trout was caught in the Manistee River in Section 21 of Brown Township. The Manistee River is also a bass, pike, walleye, and sucker fishery. There are two well-developed access sites administered by the U.S. Forest Service on the Manistee River: at Rainbow Bend and near the mouth of Bear Creek. In addition, the Township has many miles of smaller trout streams, mostly flowing through private lands.

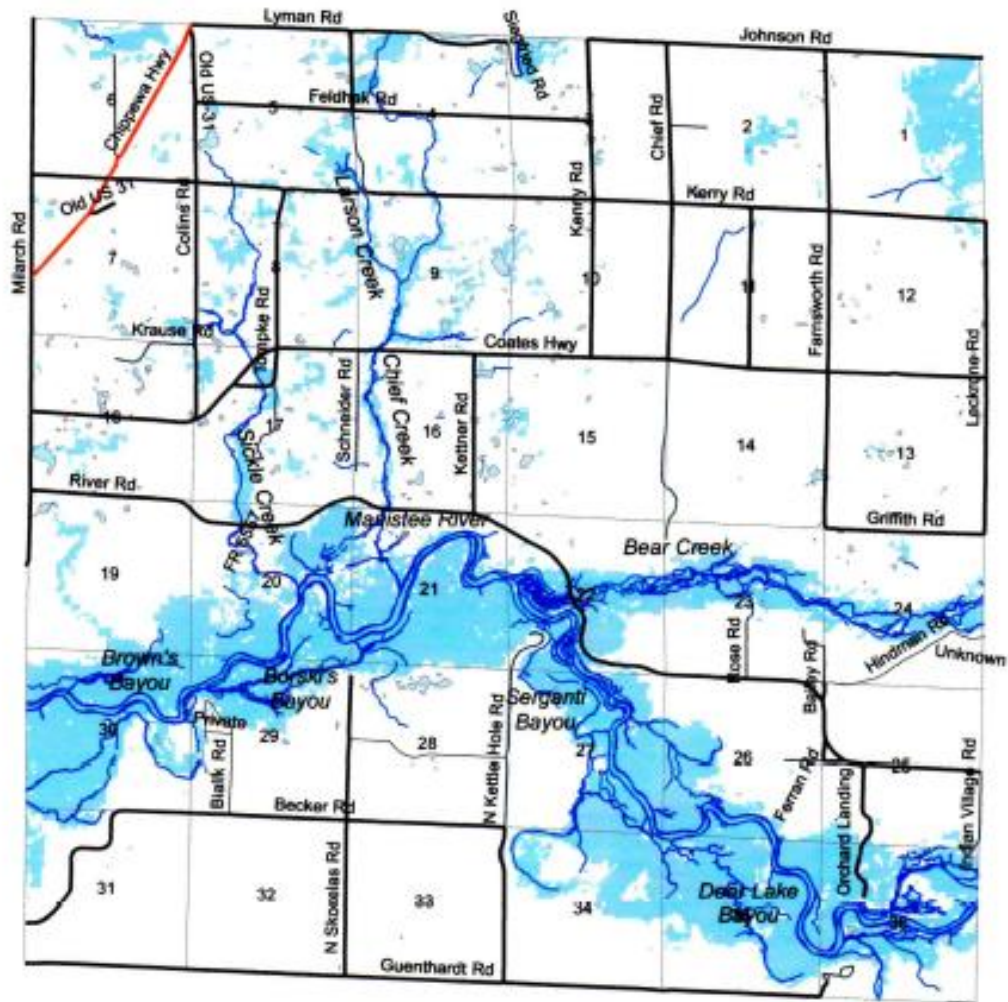
The Manistee River

On March 3, 1992, the Manistee River from the Michigan Department of Natural Resources boat ramp below Tippy Dam to the Michigan State Highway 55 bridge was classified as a National Wild and Scenic River. The classification of the stretch of the river is Recreational and its total length is 26.0 miles. Eight miles of the wild and scenic Manistee River is in Brown Township. In the spring and fall, high numbers of anglers are attracted to the superb salmon and steelhead runs. The river supports a variety of other recreational uses including wildlife viewing, hiking, canoeing, and hunting. Most of this information came from the pamphlet called National Wild and Scenic Rivers.

Several locally significant sites along the Big Manistee River were identified in a "Natural Areas Inventory Report" of March 1989. The report was prepared by Gary A. Reese, an ecologist with the Michigan Department of Natural Resources. These "natural areas" were determined to be undisturbed from the way they were prior to European settlement. The report recommended that protection of these natural areas be provided for in Brown Township's Zoning Ordinances.

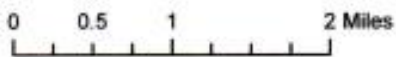
The following map shows the locations of these sites that are identified as: Brown's Bayou (section 36); Borski's Bayou (sections 20,21,and 29); and Deer Lake Bayou (section 35).

Brown Township Rivers, Creeks, and Wetlands



Legend

wetlands



(Michigan National Land Cover Data 1999)

Manistee County Planning Dept. Jan. 2011

Protective zoning measures would help ensure the retention of certain values associated with the river, including scenery, high water quality, cold water fishing, archeological sites, recreational opportunities, plant and wildlife species, and the preservation of natural areas.

Bear Creek

Big Bear Creek enters Brown Township on the east edge of Section 24. For nearly four miles the water winds through section 23 to where it empties into the Big Manistee River on the west edge of Section 22. Although it is larger than many rivers in the state, residents usually drop the "Big" and refer to it as Bear Creek. Bear Creek was one of the original sites for Coho Salmon planting by the Michigan DNR. Plantings began in 1966 and continued for about three years. At one time, Bear Creek was a nationally famous Brown Trout stream, and fishermen would flock to its banks for the caddis fly hatch. However, in recent years, the trout have been severely depleted by a combination of spawning bed silting up and salmon tearing up the beds and feeding on the trout spawn.

Land along Bear Creek is predominately publicly owned, having been purchased by the federal government from Consumers Power during a period from 1984-1986. Bear Creek has no convenient access between the area where River Road crosses just above the mouth of the river and Coates Highway crosses in Dickson Township. This seven-mile stretch of creek has remained relatively undisturbed due to inaccessibility.

The creek meanders through a swampy valley that ranges in width from a quarter mile to nearly one-half mile. The flowing water sometimes forks off into several channels and often cuts new channels as old channels become blocked by fallen trees. Because of this, canoeing the stream, while possible and rewarding, is a difficult proposition.

Chief Creek

Chief Creek originates from lowlands on the south side of Chief Lake. It flows from there for about three and one-quarter miles in a southerly direction to a place where it empties into the Manistee River at Potter's Landing. It is entirely within Brown Township (Section 4,9, and 21), and flows entirely through privately owned property.

At its beginning and end, Chief appears to run across marshy land, but for about one and three-quarter miles in the center of its length it runs in a valley that reaches to eighty feet below the surrounding surface.

The Creek is not narrower than seven feet through (Section 16,21), and twice that width in shallow places. There are many springs in the banks of the valley. Five or more smaller streams feed into Chief Creek in Section 9. The water of the creek is clear except after a rain fall or during the spring melt, when its flow increases to as much as ten times normal, and the water turns a tan color from the mud in it.

Brown trout, Steelhead, and Salmon come up Chief Creek to spawn. The fish are stopped in section 16 by Schneider Dam. Partly because of its inaccessibility and past uselessness as pasture or farmland, due to its steep slopes, the Chief Creek Valley has a lot of undisturbed wildness left in it. Deer, raccoon, otter, beaver, mink and sometimes bear live there in addition to a large number of interesting birds, plant and insects.

CLIMATE

The influence of Lake Michigan on the climate in this area is strong throughout most of the year. Because of the prevailing westerly winds, spring and early summer temperatures are cooler than would normally be expected at this altitude. Similarly, in the fall and winter, temperatures are milder. This amelioration of climate is responsible for the diversified agriculture carried on in western Michigan.

The following information was recorded between 1970-2002 at Manistee Michigan. In winter, the average temperature is 25.4 °F at Manistee. The average daily minimum temperature is 18.8 °F degrees. The lowest temperature during the period of recording was -22 degrees, occurred on February 17, 1979. In summer, the average temperature is 67° F at Manistee. The average daily maximum is 75 °F. The highest temperature recorded was 99 °F which occurred on July 26,1955.

The average annual total precipitation is 33.27 inches. Of this total, 19.8 inches or about 59%, usually falls in May through October, which is the growing season for most crops. The heaviest 1-day rainfall on record was 3.9 inches at Manistee (June 26, 1969). Thunderstorms occur on about 37 days each year, and most occur between May and September. The average seasonal snowfall is 57.4 inches. The greatest snow depth at any one time during this period of record was 75 inches recorded on February 13, 1982. In Manistee, on the average, 48 days per year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 18 inches in December 1963.

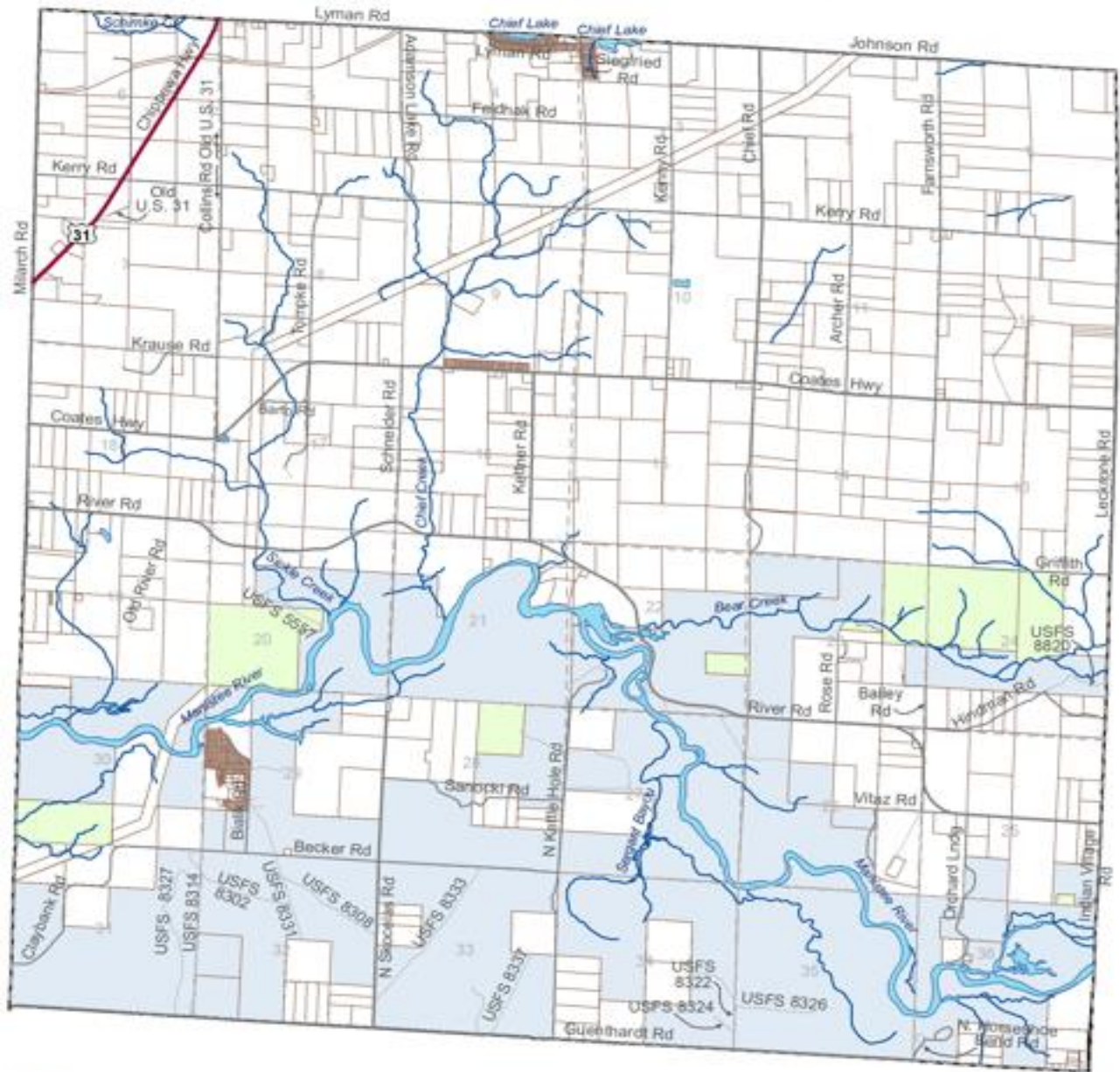
The average relative humidity in mid-afternoon is about 64%. Humidity is higher at night, and the average at dawn is about 81 %. The sun shines 62% of the time possible in summer and 31 % of the time in winter. The prevailing wind is from the southwest. Average wind speed is highest, around 12 miles per hour, from November to April.

The average date of the last freezing Temperature in the spring is May 12th, the average date of the first freezing temperature in the fall is October 12th. The freeze-free period or growing season averages 153 days annually. This information was obtained from the United States Department of Agriculture.

COMMUNITY SYSTEMS

An understanding of an area's existing land uses is critical to the planning process. An inventory of the types, location, and intensity of specific uses is presented in the following section to help develop a picture of the unique aspects of Brown Township. The availability of public and governmental services such as roads, utilities, and schools are also included.

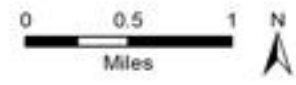
Brown Township Parcel Lines Showing Subdivisions



- Subdivisions
- Little River Band of Ottawa Indians
- Manistee National Forest
- State Highway
- County Primary Road
- County Local Road
- Other Road
- Sections
- Parcel Lines
- Township Boundary

Map Prepared by:
Northwest Rural Planning
LIAA
April 2022

Source: Manistee County
Equalization, Center for
Shared Solutions



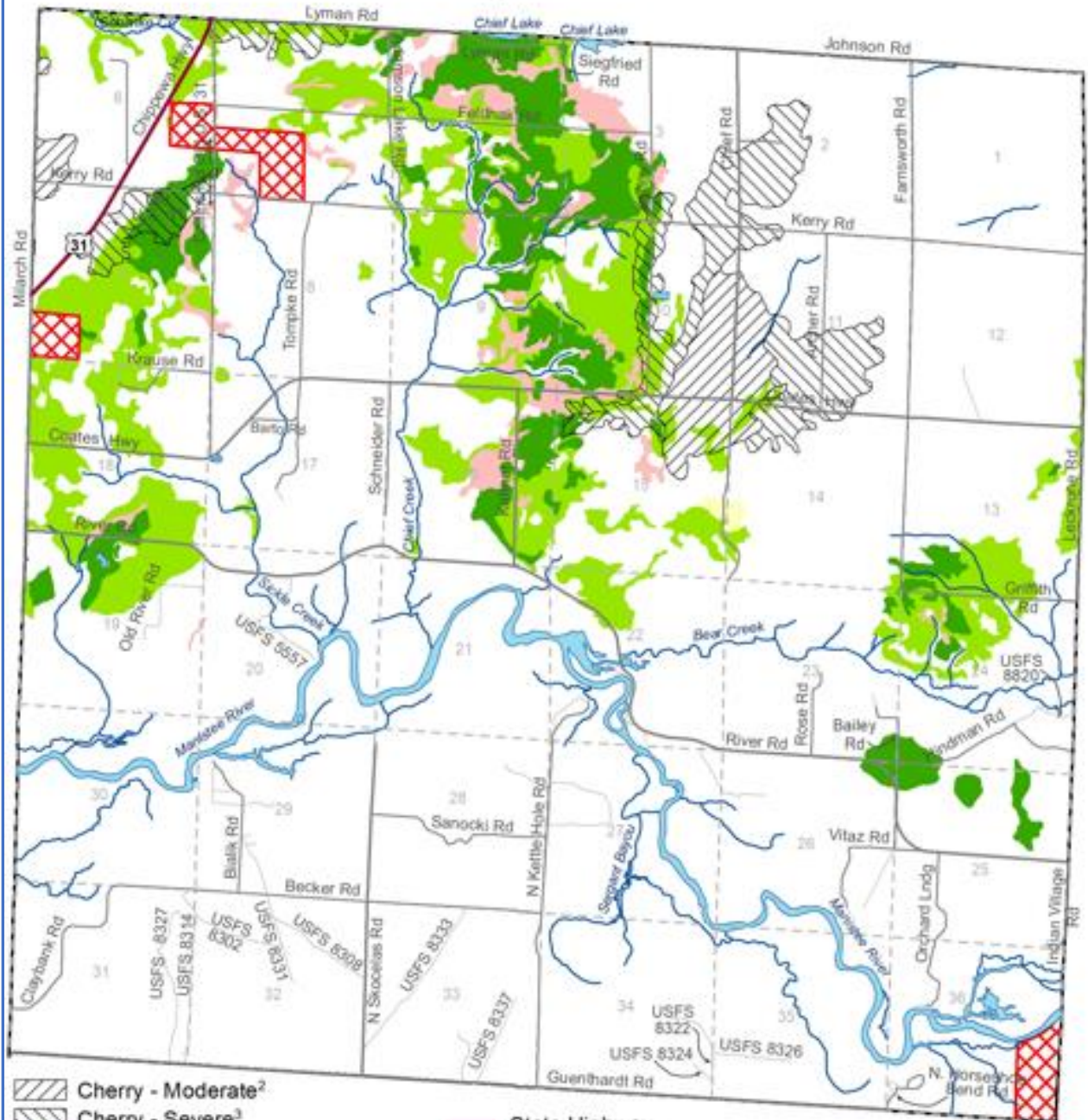
Agriculture

Farming has been slowly declining in Brown Township. Early settlers cleared much of the hardwood areas and attempted to grow crops. These hardwood areas have mainly sandy soils that are unsuitable for growing many of the common crops. Much of the area is better suited to specialty crops than to row crops. Harsh changes in temperature in the spring are mitigated by Lake Michigan, and thus the western part of Manistee County is ideal for growing orchard crops and specialty crops.

In 2002, farmland made up 46,442 acres in Manistee County (USDA National Agricultural Statistics Service). The major crops were apples and tart cherries. Sweet cherries, peaches and strawberries also are grown.

Vegetables are grown in some areas of Manistee County. Dry beans, cucumbers for pickles, carrots, and asparagus are among the vegetables grown. Christmas tree plantations make up a significant acreage in the area. Dairy, livestock, grain crops, and hay also are important to the farming community. For the most part, the agricultural acreage in Brown Township corresponds to those areas designated as being unique fruit sites or as having exceptional farmland potential.

Brown Township Prime Farmlands



- Cherry - Moderate²
- Cherry - Severe³
- All areas are prime farmland
- Farmland of local importance
- Farmland of unique importance
- Prime farmland if drained
- Slight¹
- Soils (Not included in soil survey)

- State Highway
- County Primary Road
- County Local Road
- Other Road
- Sections
- Township Boundary

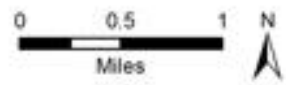
Map Prepared by:
Northwest Rural Planning
LIAA
March 2022

Source: Center for Shared
Solutions, NRCS, Red Tart
Cherry Site Inventory

¹ Note: These soils exist in this part of Michigan but are not found in Brown Township

³ Note: Severe difficulty overcoming limits of production

² Note: Moderate difficulty overcoming limits of production



Residential

Rural residential housing, where the ten-acre rule applies, occurs throughout Brown Township almost exclusively in the form of single-family dwellings. Most housing tends to be located along primary and improved local roads. Residences are most often located close to the road frontage for convenience and to facilitate winter snow removal from driveways. The only areas within the township that are zoned residential are: a strip of land about one-half mile long on the north side of Coates Highway known as Crawford Heights, section 9; a similarly sized strip south of Chief Lake, section 4; and Bialik, in section 29, that is approximately 65 acres in size.

Commercial/Industrial

No land in Brown Township is currently zoned for industrial or commercial use, although commercial activity does exist in the township. There is one campground facility that operates along the Big Manistee River. Additionally, there are several farm related businesses that exist. Business examples include Cream Cup Dairy that bottles milk, a storage shed builder, a greenhouse builder, and during the summer, there are produce stands along the roads. These businesses and commercial activities fall under the heading of major home-based enterprise, home occupations or special use.

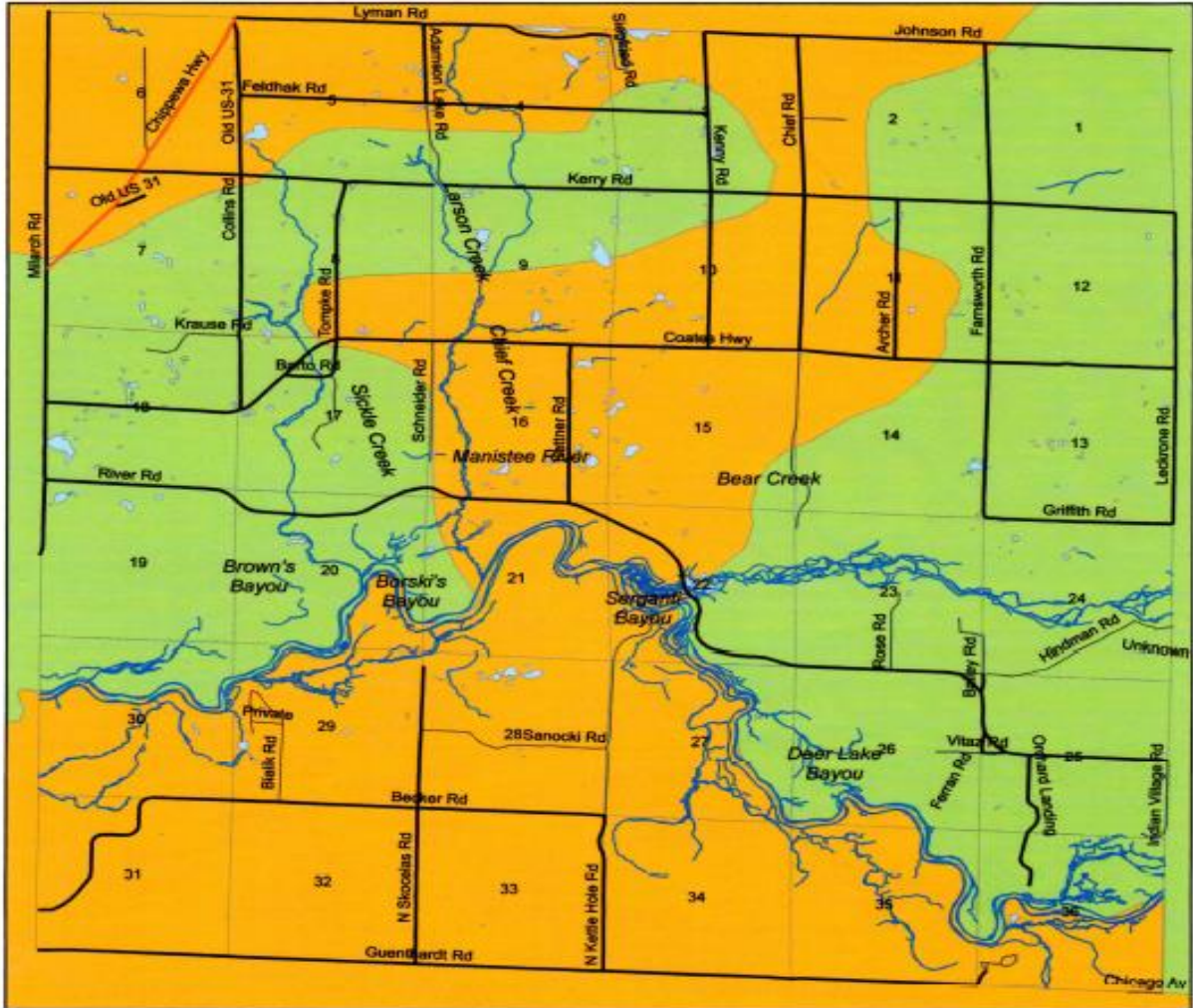
PUBLIC/GOVERNMENT FACILITIES AND SERVICES

In Brown Township there are no shopping centers or public water and sewage systems, however, basic services are available.

Electricity

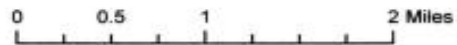
Electricity is provided by two electric utility companies, Cherryland Rural Electric Co-op Association of Grawn, Michigan which sells power to the north and east section of the township, and Consumers Power Company of Jackson, Michigan which sells power to the south and west sections of the township. Both are versatile and meet the needs of incorporated or heavy use areas and individual homeowners. Solar and Wind Energy options for home use are of interest with some applications found in the Township. Commercial Solar and Wind Energy projects are allowed in the Agriculture, Forestry and Rural Residential District.

Brown Township Electric Utility Services



Electric Utilities

- Cherryland REA
- Consumers Power

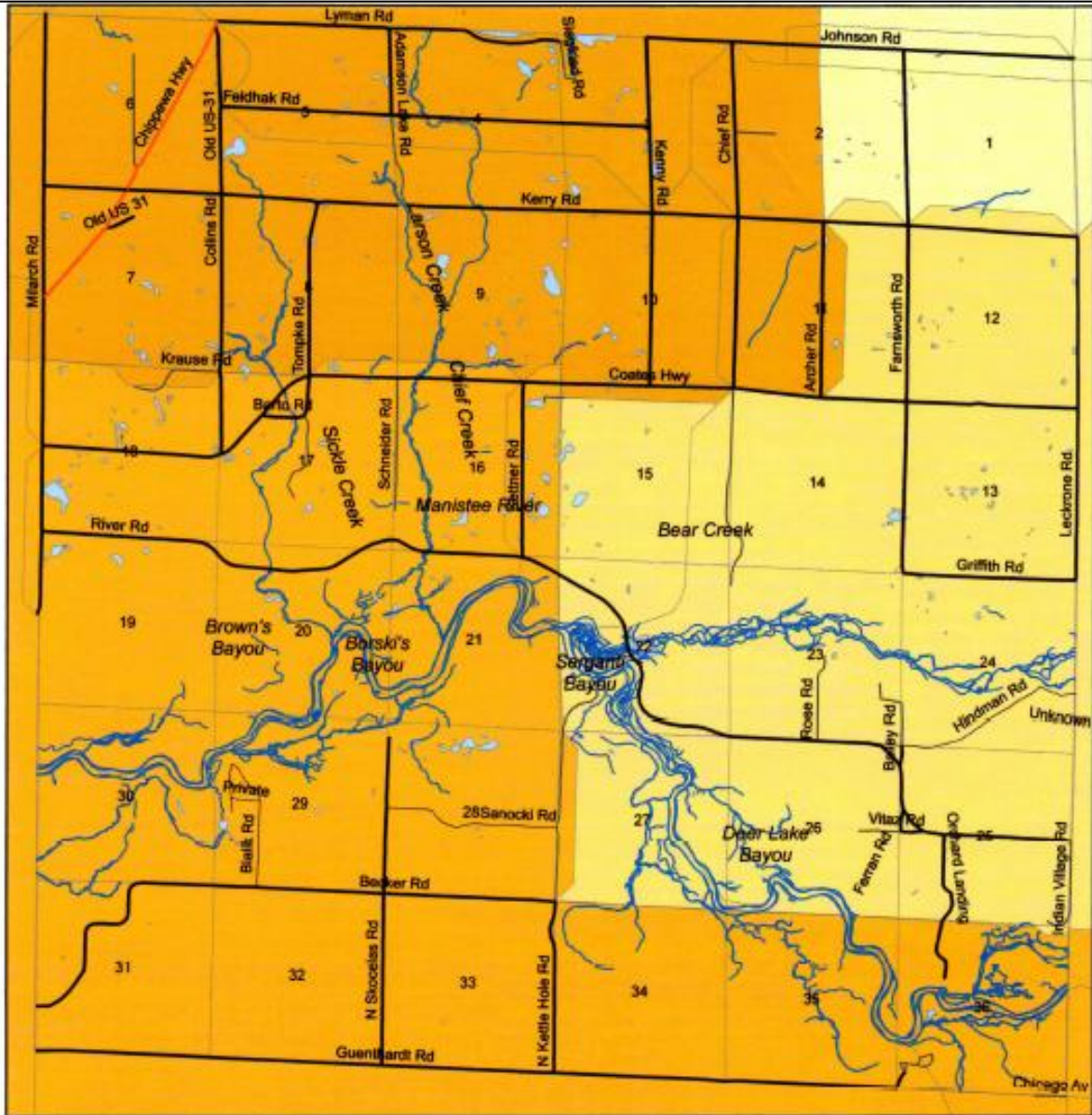


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Telephone

There are two telephone companies operating within our township which provide four separate exchanges. The Onkama exchange is (889-), the Manistee exchange is (723-), both exchanges are part of the Michigan Bell system. The (477-), and the (362-), are part of the Kaleva system. Generally, telephone service is available everywhere, though installation charges will be higher where a considerable distance of phone line must be installed. Many people also have cell phones and computers that can be used for communications and have dropped their land lines.

Brown Township Telephone Services



- Telephone Service**
- Kaleva - 362
 - Brethren - 477
 - Manistee - 723
 - Onekama - 889



Manistee County Planning Dept. Jan. 2011

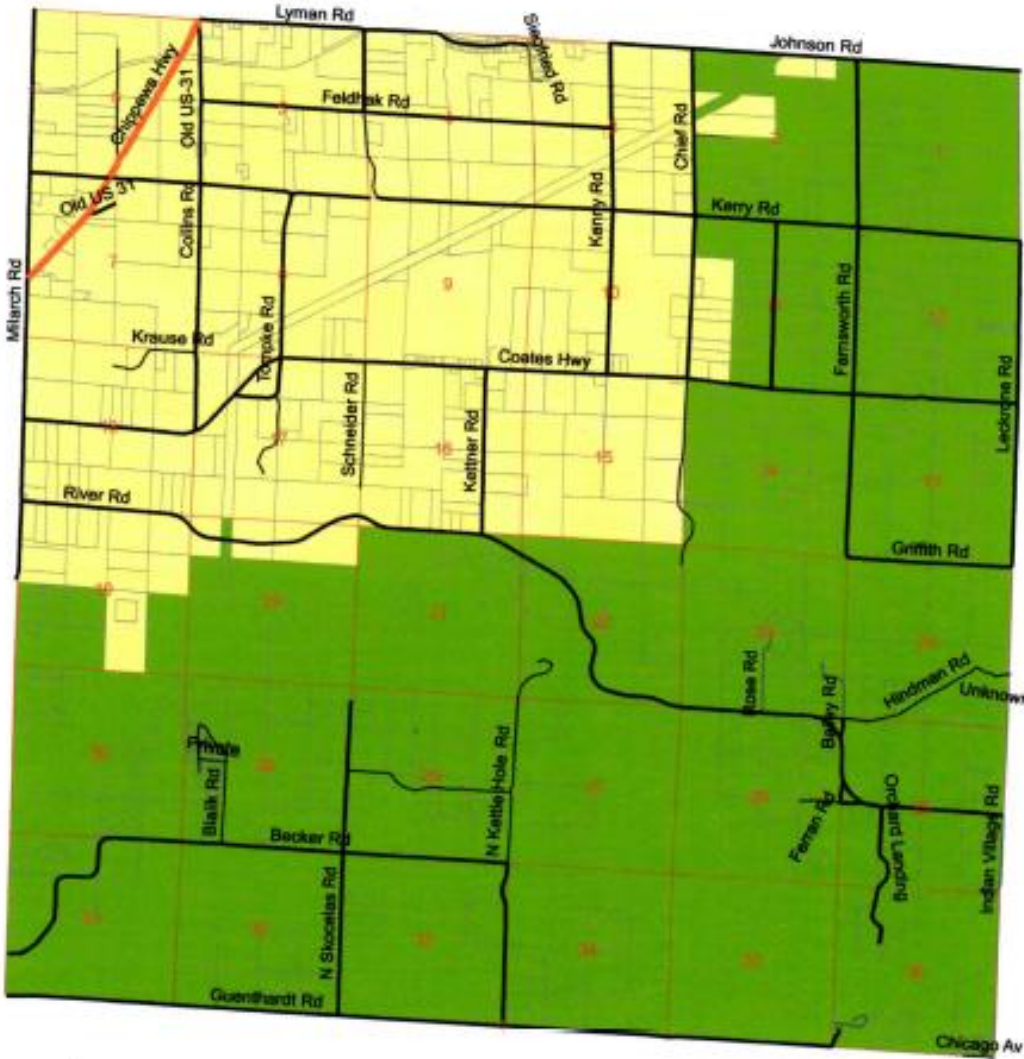
Churches

There are two churches located in Brown Township. They are: The Pleasant View Mennonite Church, located on Kerry Road at Farnsworth Road, and the Norwalk Lutheran Church on U.S. 31.

Education / Schools

The Township is serviced by two public school districts, an ISD (Intermediate School District) in Manistee and the Casman Alternative Academy, also in Manistee. Public school students are bused to schools in the surrounding communities. (Figure 14 pg. 34) There is one private school building in Brown Township that serves the Amish community.

Brown Township School Districts



School Districts

- Kaleva Norman Dickson
- Onekama



Most children south of the Manistee River and on the east side of Brown Township go to the Kaleva Norman Dickson Schools (KND). It is a K-12 school, located in Brethren. Children in other parts of the township go to the Onekama Consolidated Schools in Onekama. It also is a K-12 school.

Two parochial schools within Manistee County offer a variety of educational programs from pre-school through high school. Trinity Lutheran School is located in the city Manistee. It has a K-5 program. Manistee Catholic Central, a K-12 school, is also in Manistee. Neither school provides bus service to students residing in Brown Township.

The Casman Alternative Academy is a charter school serving grades 7-12. Their enrollment is between eighty and one hundred students. Additionally, Michigan Great Lakes Virtual Academy is available to any student who wishes to learn on-line.

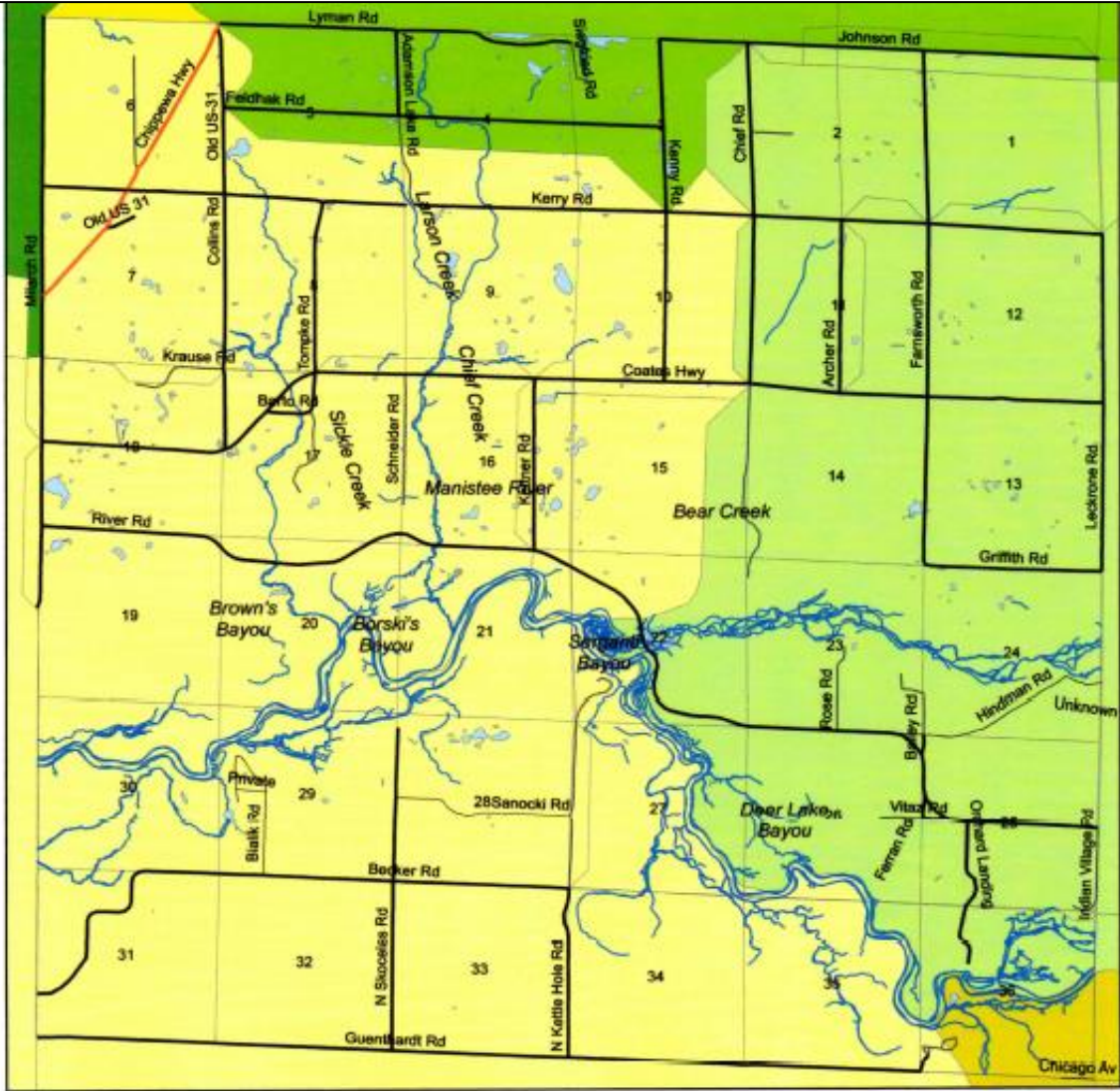
Brown Township is also within the service area of the West Shore Community College, a two-year higher education institution, the main campus of which is located in Scottville, about 20 miles south of Manistee. Recently, the College expanded by adding an off-campus site in downtown Manistee. This makes college classes much more accessible to Brown Township residents.

Additionally, every district in Manistee County participates in a "school of choice" program whereby students may choose to attend any other school within the County, regardless of where they live in the County. Finally, home schooling is becoming a more popular option and is taken by some families in Brown Township.

Post Offices

Although there are no actual post offices located within Brown Township, the post offices of the surrounding communities provide mail services for residents. All of these offices are within the Traverse City regional area, with zip code prefix of 496. Most of the residents receive mail from the Manistee Post Office. The Kaleva Post Office serves those residents who live on the northern edge of the township, on Feldhak Road, Lyman Road, and in the Chief Lake area. The Brethren Post Office serves those who reside on the eastern side of the township. A very small area in the Northwest corner of the township is served by the Onekama Post Office.

Brown Township Zip Codes and Post Offices



Post Offices

- Manistee 49660
- Bear Lake 49614
- Wellston 49689
- Brethren 49619
- Kaleva 49645
- Onkama 49675



Manistee County Planning Dept. Jan. 2011

Township Facilities

Brown Township is governed at the local level by its Township Board consisting of an elected supervisor, clerk, treasurer, and two trustees. A sexton (in charge of township cemeteries) and a zoning administrator, in charge of issuing land use permits, are employed by the township.

The township owns and maintains the Brown Township Hall, located on Coates Highway, east of Schneider Road. A warranty deed indicates that the township purchased the building in 1889 from Casper and Joseph Schneider. The hall serves as a meeting place for the township board, the planning commission, zoning board of appeals, and other related purposes. It is also the polling place for registered township voters. There are township office facilities. Board members conduct meetings and store records in filing cabinets. The taxes and the like are collected in their respective homes.

The Brown Town Hall can accommodate gatherings of approximately 75 people, and can be rented by township residents for a nominal fee. The hall is used on a rental basis between 10-15 times per year. The building consists of a 36' x 28' main room, and a 12' x 15' attached kitchen, and two small bathrooms. A concrete ramp to the east door provides handicap access to the building. The parking lot is partially blacktopped and there are three picnic tables set on a small patio area to the south of the building. The lot (approximately two acres) is enclosed on three sides by a chain-link fence.

The township also owns a 40 acre mostly wooded parcel on Schneider Road, a quarter mile south of Coates Highway. The property was previously used as a dump site until 1975. Since that time, it has reverted to woods / forest.

Cemeteries

Five cemeteries are located with Brown Township. They are: Pleasant View cemetery on Kerry Road, maintained and owned by the Mennonites, Schoolhouse (Kerry Road between Tompke and Collins roads), Norwalk (beside the Norwalk Lutheran Church on U.S. 31), Riverview and Miller (both on River Road), The Lutheran Church maintains its own cemetery. Miller is private. Maintenance of the other two is the responsibility of the township.

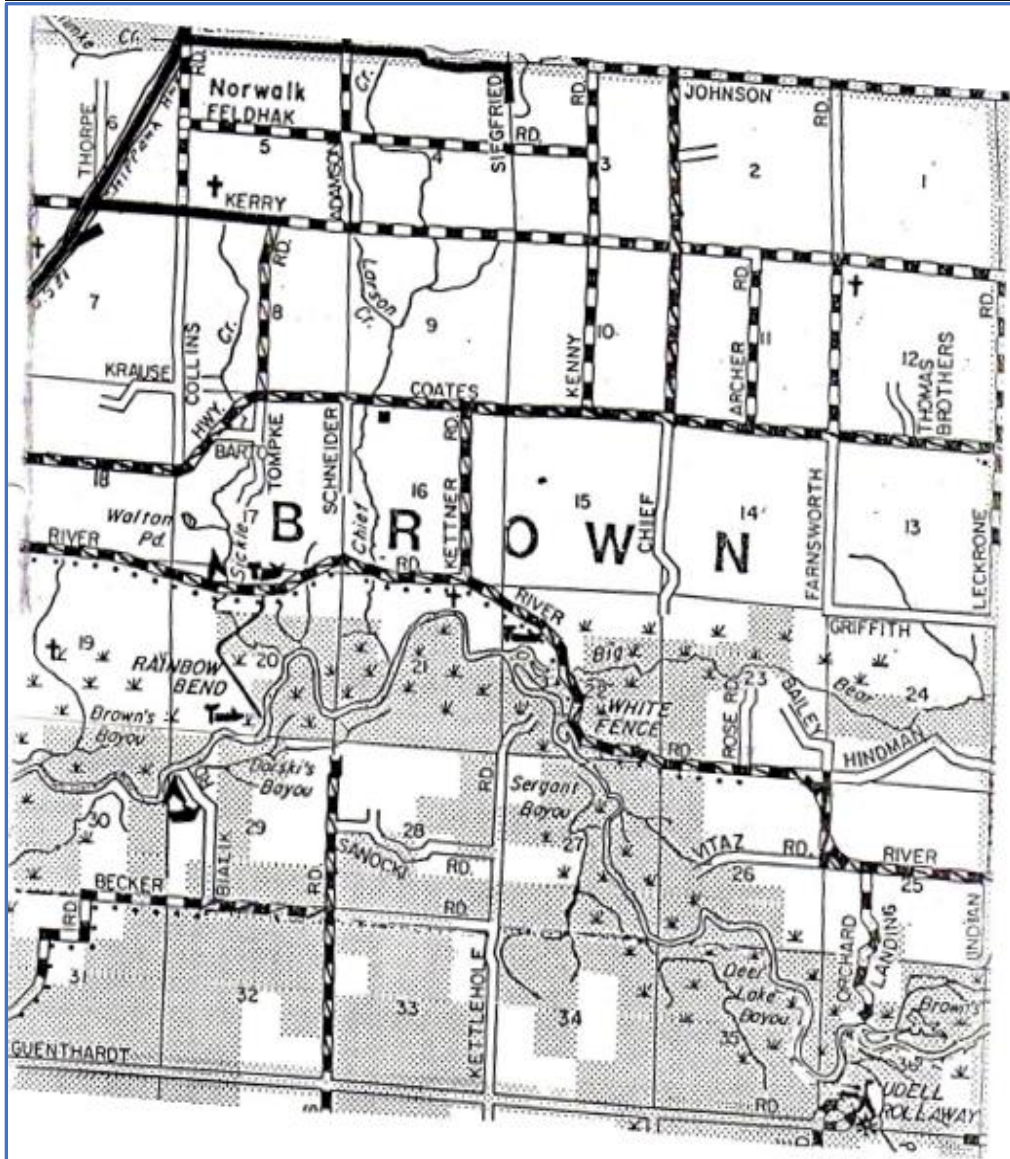
Recreation

The proximity of Brown Township to the northwest coast of Lake Michigan affords residents opportunities for boating, swimming, and other water sports. There are 20 private campgrounds located within Manistee County (one is in Brown Township). A state park and six federal campgrounds also serve the Manistee area. Six golf courses are located in Manistee County. Several downhill and cross-country skiing facilities are











located within an hour's drive of Brown Township. Manistee offers a variety of sight-seeing attractions including: several museums, historically significant churches, Victorian vintage homes and commercial buildings, the Ramsdell Regional Center for the Arts and the Vogue Theater. There is a River Walk that runs the length of River Street in downtown Manistee and the Little River Casino is on US-31, just north of town.

Within the boundaries of Brown Township, there exists a variety of natural recreation opportunities associated with a rural, scenic environment. Hiking, fishing, bird-watching, hunting, cross-country skiing, and canoeing are some readily available options. The eight-mile stretch of the Big Manistee River bisects the Township. It is an important natural recreational feature. On the south side of the river, Mattson's Big Manistee River Campground has campsites available from rustic to modern camping. It offers private boat docks and launch ramps. The U.S. Forest Service maintains two public boat launch sites in Brown Township. They are at Rainbow Bend (section 20) and at the mouth of Bear Creek (section 22). The below Figure illustrates recreation facilities within Brown Township.

Brown Township Recreational Areas and Facilities



RECREATIONAL FACILITIES

- Township Hall 
- Picnic Grounds 
- Private Campground 
- Public Campground 
- Scenic Lookout 
- Scenic Route 
- Boat Launch 
- Cemetery 
- US 31 
- Manistee National Forest 

In 2016, Brown Township set goals and objectives as part of a county-wide Parks and Recreation Plan. At that time, the goals set were as follows:

- 1). Continue collaboration with all municipalities within the County.
- 2). Improve water access.
 - public access at Chief Lake
 - support USFS restructuring of Bear Creek Boat Launch
- 3). Create a community gathering place at Brown Township Hall.
 - ADA access
 - picnic shelter
 - improve playground equipment
 - resurface parking lot
 - build retaining wall on north bank along Coates Hwy.
- 4). Acquire land for recreation development on west side of hall.
- 5). Support trail development.
 - establish a trail development team
 - collaborate with USFS for trail location and development
 - bridge development at Bear Creek

Transportation

The following is a report on all transportation forms that are available to Brown Township residents. Included is information on public transportation systems as well as statistics on road use and maintenance.

Public Transportation

Manistee has chauffer and taxi services available along with a shuttle provider, Dial-A-Ride, which is a Manistee county-wide Transportation service. A phone call will summon a bus to any location in the township twice each day. The nearest air travel is available in Manistee at Blacker Airport, which can handle commercial as well as commuter flights with Cape Air. Cape Air has daily commercial service between Chicago O'Hare Int'l Airport (ORD) and Manistee Co. Blacker Airport (MBL). Cape Air participates with the TSA Pre-Check program. Cape Air also has a codeshare agreement with American Airlines, as well as an interline agreement with United Airlines, Delta, Jet Blue and Alaska Airlines servicing Chicago O'Hare. Victorian Car Port provides rental cars at the Manistee County Blacker Airport. The Little River Casino Resort shuttle provides service between their property and the Airport.

Finally, regarding a section of the Manistee National Forest and the remote LIS landing / signaling station on Skocelas road near to Becker Road, an Airport Overlay District may be established. If this location becomes a part of a defined and established district in Brown Township, then that section of the zoning district located within the recommended airport safety zones and which encompasses this LIS landing and signaling station shall comply with the added rules and guidance consistent with Manistee Blacker Airport overlay District per recommendation of FAA, MI Aeronautics Commission and MDOT. Development near this location shall compliment airport

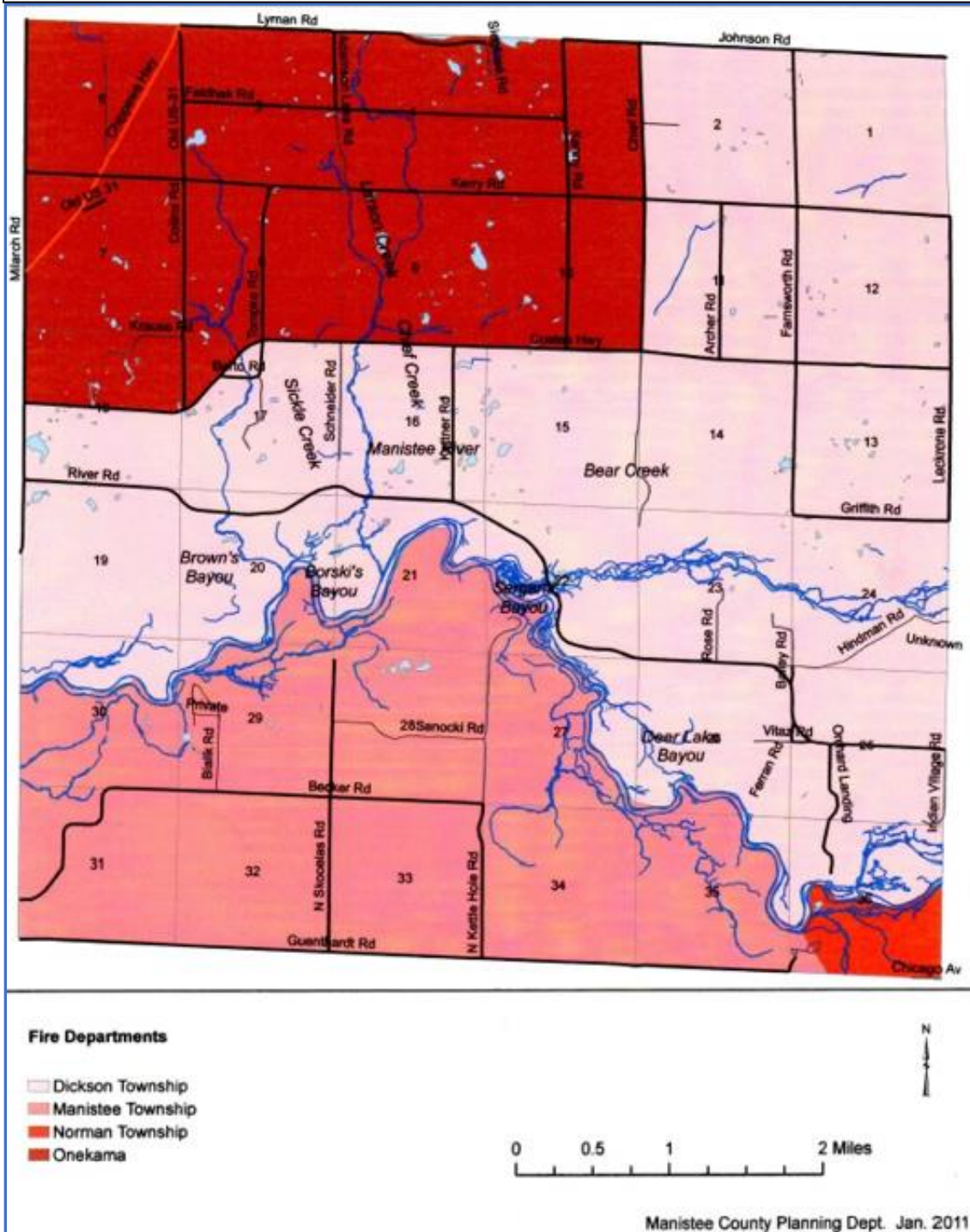
activities with regards to compatible land uses, heights of buildings, communication towers, and natural features along with restrictions on lighting that may create a hazard to safe landing or taking off of aircraft, and consistent with recommendations in the airport approach plan.

Emergency Services

Brown Township is within the jurisdiction of the Manistee County Sheriff's Department. In addition to police patrol, the Sheriff's Department has the responsibility for serving papers and providing county jail facilities. The tribal police enforce laws in tribal lands within the Township.

Three volunteer fire departments (Dickson Township, Onekama Township, and Manistee Township) are under contract to provide services to Brown Township. Locations of service areas are located on the appropriate map. All local departments have entered into a mutual aid agreement to assist at large fires. All departments are dispatched through the Manistee County Sheriff's Department with a county wide fire department phone number. All three township fire departments provide emergency medical services. Most of its members have First Responders training including C.P.R. training. Munson Healthcare Manistee Hospital (MHMH) operates an ambulance service for the entire county.

Brown Township Fire Service Areas



Solid Waste Disposal

Brown Township provides a garbage disposal service to residents who haul their own household refuse to the township hall on the first and third Saturdays of each month. The garbage is collected in a garbage truck for removal to a landfill in Stronach Township. Brown Township is part of a county wide recycling program. At present, people of Brown Township may bring recyclables such as cardboard, certain plastics, cans, and bottles. Township residents may also choose to hire a disposal service to collect trash weekly from their homes.

Freight and Parcel Service

Freight service for large items is available from five or more motor freight companies with offices in Manistee, Ludington or Cadillac. Smaller parcels can be shipped by United Parcel Service. Both motor freight and U.P.S. will pick up and deliver either at terminals in Manistee or at a shipper's location in Brown Township.

Roads

Brown Township has a network of Manistee County Road Commission (MCRC) Act-51 County Certified paved and unpaved (gravel and dirt) roads. The figure below indicates the MCRC Act-51 County Certified Roads within Brown Township Figure 18 (pg.42) The main branch of the network is Coates Highway which runs through the center of the township in an east-west direction.

A major highway, U.S. 31, runs through the northwestern corner of the township. US-31 is the main State Highway connecting route along the west side of the lower peninsula that connects Manistee County with the adjacent counties and beyond.

The main branch of the County Road network is Coates Highway (County Primary Road) which runs in an east-west direction and serves as a major connecting link between US-31 and the communities of Brethren, Chief, and Kaleva. Coates Highway is generally considered to be the rural County Road within Brown Township that generates the highest vehicular traffic including commercial traffic.

River Road (County Primary Road) is also a key branch of the County Road network that runs in an east-west direction across the Township, on the north side of the river, and connects to various U.S. Forest Service sites and the Big Manistee River and Big Bear Creek.

There are 71.65 miles of County Roads within Brown Township which includes 21.42 miles of County Primary Roads and 50.23 miles of County Local Roads. Approximately 28.32 miles (40%) of the roads are paved and approximately 43.33 miles (60%) of the roads are un-paved (gravel or dirt). Additionally, 6.30 miles of the 71.65 miles are

MCRC Act-51 County certified in the adjacent Townships (1.40 mile of Lyman Road and 2.40 mile of Johnson Road in Bear Lake Township, and 2.00 mile of Leckrone Road and 0.50 mile of Indian Village Road in Dickson Township).

Routine maintenance for County Roads within the township such as but not limited to blading gravel and dirt roads, pot-hole patching, roadside mowing, tree and brush removal, shoulder maintenance, brining gravel and dirt roads, plowing and treating roads (Winter maintenance), and other miscellaneous routine maintenance work is performed by the MCRC and primarily funded by the MCRC using Michigan Transportation Funds (MTF) that are generated by the State of Michigan fuel taxes and vehicle registration fees.

During the Winter, the MCRC plows/treats approximately 67.25 miles of County Roads within the township and approximately 4.40 miles of County "Seasonal Roads" are typically not plowed/treated during the Winter.

Improvements to County Local Roads and County Primary Roads (not eligible for federal and/or state aid) within Brown Township are funded by the township and the MCRC with a cost share in accordance with the most current MCRC Policy #A-17; "Cost Share Program for Road and Drainage Projects". Improvements to roads that border adjacent townships are sometimes funded by the MCRC and each adjoining township if both townships agree to having the project completed.

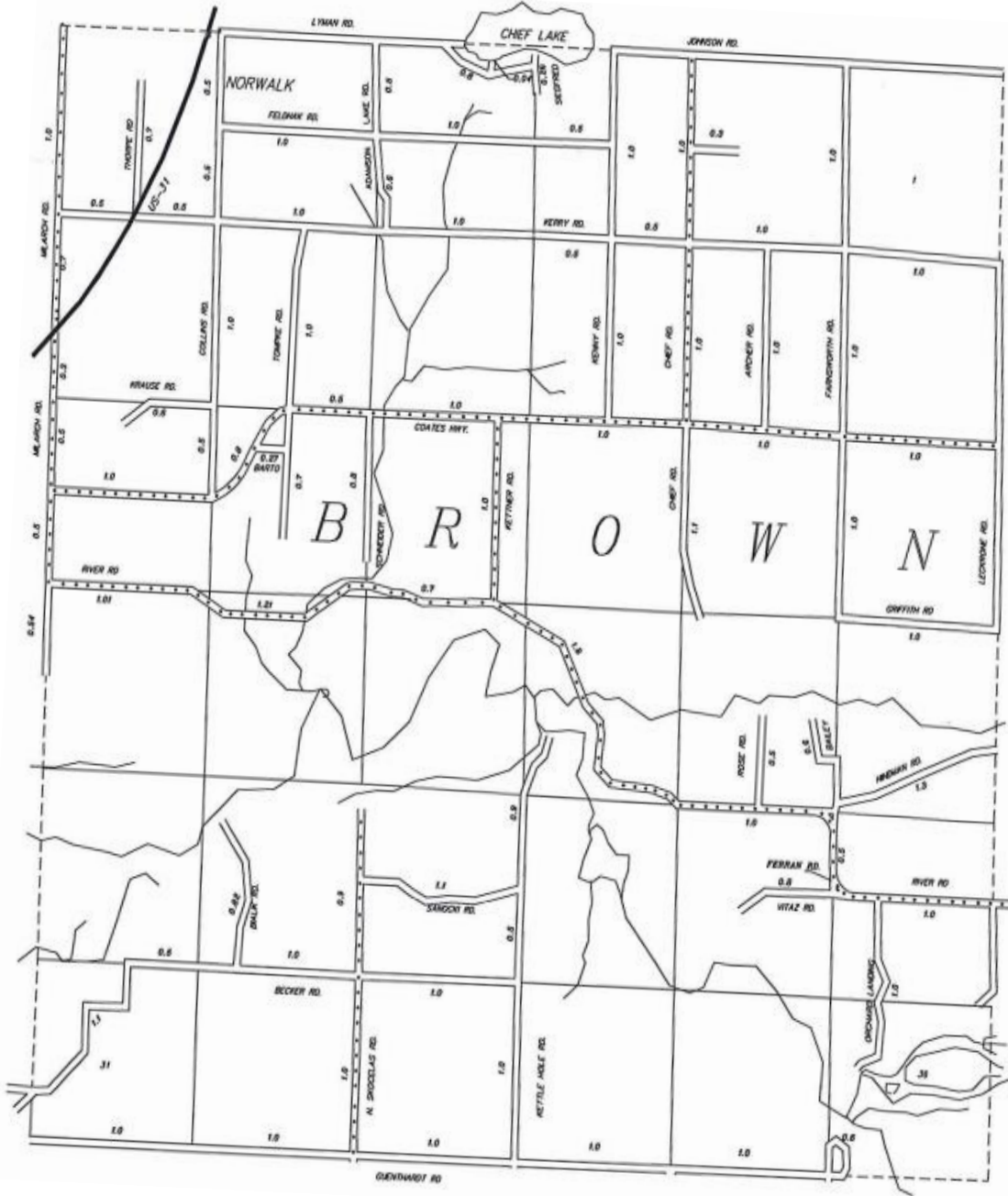
Brown Township has been working with the MCRC on projects over the past number of years with a cost share and will likely work with the MCRC on future projects subject to township and MCRC funding availability and priorities.

Recent projects that were completed or are in the process within Brown Township are as follows:

1. Milarch Road 2016 Reconstruction and Paving South of River Road (East)
2. Milarch Road 2020 Resurfacing from US-31 to 1.60 mile North of US-31
3. Lyman Road and Siegfried Road 2022 Resurfacing from 0.40 mile East of Adamson Lake Road to the end of the road
4. River Road 2022 Resurfacing from 0.24 mile West of Rose Road to High Bridge Road
5. Lyman Road 2023 Resurfacing from US-31 to 0.40 mile East of Adamson Lake Road.

The MCRC submits a "Call for Projects" (for projects for the following construction year) to Brown Township and the other 13 townships in Manistee County typically in the Spring of each year. The MCRC then typically prepares and submits preliminary cost estimates for potential projects to the townships for their consideration based on requests received.

Brown Township Primary and Local Roads



LEGEND

- COUNTY LINE _____
- CORPORATE LIMITS - - - - -
- STATE TRUNKLINE **—————**
- COUNTY PRIMARY **—————**
- COUNTY LOCAL _____
- ADJACENT COUNTY **|||||**
- CITY OR VILLAGE _____
- STREET _____

PRIMARY ROAD SYSTEM IS 21.42 MILES
 LOCAL ROAD SYSTEM IS 43.93 MILES

I HEREBY CERTIFY THAT ALL OF THE ROADS ON WHICH LENGTHS HAVE BEEN ENTERED ALONG THE ROAD BANDS OF THE ATTACHED TOWNSHIP AND ENLARGED SECTION MAPS ARE UNDER THE JURISDICTION OF THE MANISTEE COUNTY ROAD COMMISSION.

I FURTHER CERTIFY THAT THE ROADS SHOWN HEREIN ARE NORMALLY OPEN TO AUTOMOBILE TRAFFIC BETWEEN MAY AND OCTOBER.

R. Rishel MARCH 9, 2022
 CHAIRMAN DATE
 ROBERT RISHEL



PATTERNS of LAND USE AND DEVELOPMENT

The following summary presents a description of population and land use in Brown Township with references to past, present, and future anticipated conditions.

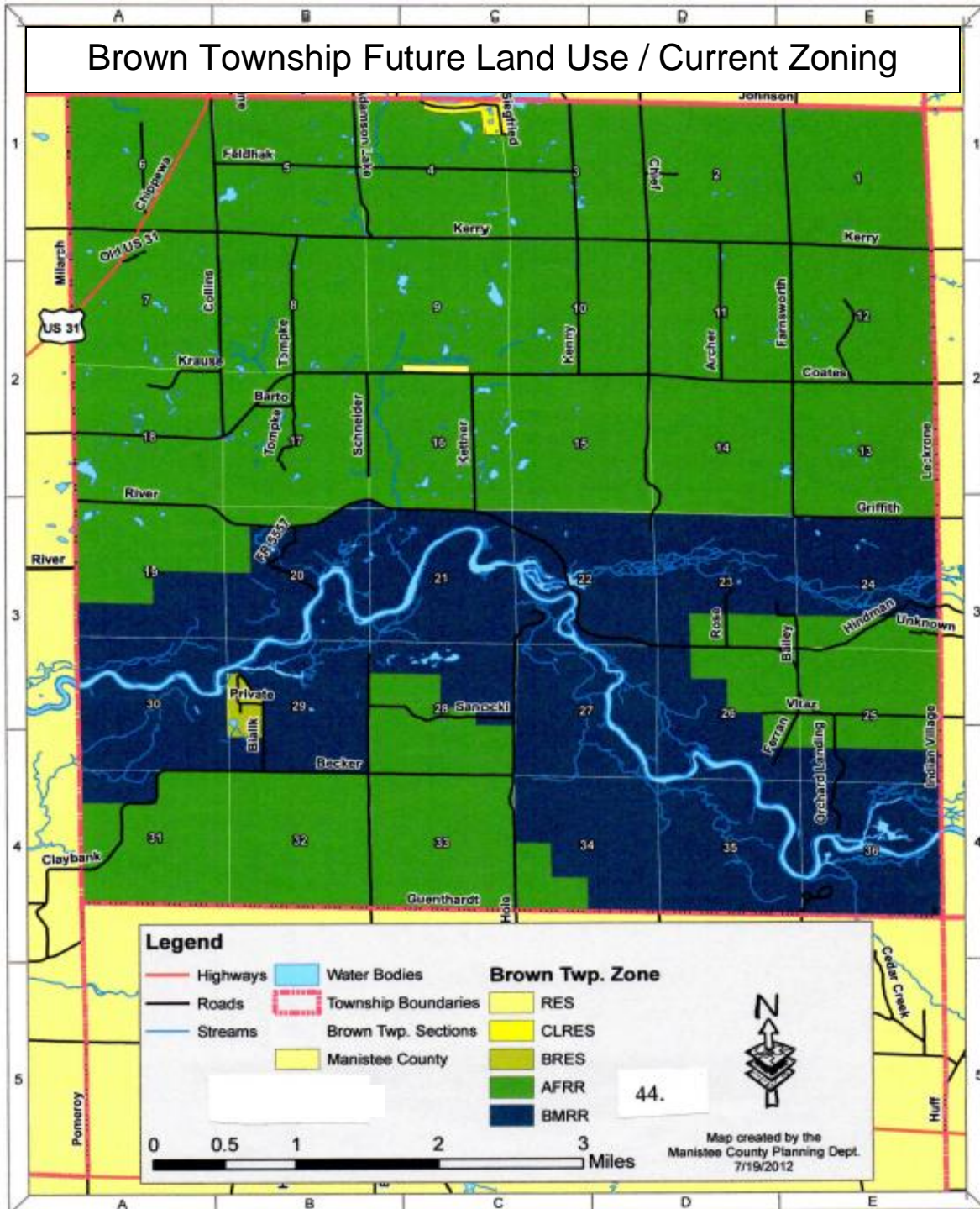
In 1910 the population was seven hundred and sixty. The population has had several up and down cycles; and in the 2020 census the population was seven hundred and forty-seven. The township population has varied by only two hundred people between 1910 and 2010. It seems reasonable to assume it will stay in this range. Brown Township is a rural township where change has been slow.

The biggest change in land use over the last 100 years is the advent of zoning and the changes in parcel size. Timber and farming were the two largest occupations. Over the years, the timber industry has faded, and the farms have become smaller. The timber that is now harvested comes from isolated timber on private acreage and large tracts on National Forests Service land. More people are now living on ten to forty acres while not engaging in Farming. The zoning reflects the changes within the township by zoning these parcels as rural residential.

Our survey speaks to this change. In 2012, 152 people responded to this question on the survey that read, "What is the main use of your land in the township?" At that time, 55% of respondents noted residential, 17% indicated farming and 28% said recreation. In response to the 2022 survey, 82% of respondents noted residential, 12% noted farming and 6% said recreation. In addition, when questioned about keeping the ten-acre minimum parcel size 70% of the 2012 respondents wanted to maintain that minimum while 30% did not. In 2022 that ratio only increased as now 76% want to maintain that minimum, while 24% do not.

Another big change in land use is the Federal Government's acquisition of thousands of acres of forested land. Approximately 6,183 acres in Brown Township are in the Manistee National Forest, or 27% (Figure 19, pg. 44). 822.4 Acres, or 3.6% of Brown Township, has recently been purchased by the Little River Band of Ottawa Indians.

The Big Manistee River and Bear Creek have been here for all of these ownership changes. They are a valuable resource and irreplaceable. Because of their value to all of us, they have been separately zoned as the Manistee River Corridor.



RES indicates the Crawford Residential District
 CLRES indicates the Chief Lake Residential District
 BRES indicated the Bialik Residential District
 AFRR indicates Agriculture, Forestry and Rural Residential District
 BMRR indicates Big Manistee River Corridor District

GOALS and OBJECTIVES

This section of the Master Plan is intended to serve as a statement of long-range goals for the future growth and development of Brown Township and take account of resident's responses to surveys and questionnaires. Each of these stated goals provides a general description of an ideal condition or situation for Brown Township. Actions for progressing toward the goal are stated in the form of objectives. The given strategies are a means of accomplishing the objectives.

UPDATING THE MASTER PLAN

Goal: To ensure that the Brown Township Master Land Use Plan provides guidance and direction for the zoning commission development and updates of ordinances as well as a workable basis for the township decision-making, reflecting current conditions within the township and the county.

Objective: To maintain the Brown Township Master Land Use Plan on a regular basis by incorporating new information relevant to changes within the township and the county.

Strategy: Members of the Brown Township Planning Commission will review the Township Plan on a yearly basis for clarifications, corrections, or proposed change management, especially with regards to the Manistee County Land Use Plan.

LAND USE PLANNING

To promote public health, safety, and welfare, the Brown Township Planning Commission has developed the following Master Plan Goals and Strategies. This is an effort to provide guidelines that will direct future growth and development within Brown Township in a thoughtful manner.

GOAL I: Ensure that the Brown Township Master Plan provides a workable basis for Township decision making, defining a direction for future land use, pursuant to the Michigan Planning Enabling Act, MCL 125.3801.

OBJECTIVE: Review each section of the current Zoning Ordinance to ensure that it supports the vision of the Master Plan.

STRATEGY: Adopt the revised Master Plan.

STRATEGY: Adopt and provide for the enforcement of the revised Zoning Ordinance.

GOAL II: Preserve the rural character of Brown Township.

OBJECTIVE: Maintain the Ag/Forest and Rural Residential district, as having the greatest amount of open space, relative to the other districts.

STRATEGY: Keep the 10-acre rule in the Ag, Forest, and Rural Residential district.

STRATEGY: Establish limits on the subdivision of land, in accordance with the Land Division Act of 1967, Act 288.

STRATEGY: Limit the number of signs and bright lights along the roads and highways, to maintain our characteristics as a “Dark Skies” township.

STRATEGY: Do not pursue the establishment of commercial and industrial districts at this time.

GOAL III: Promote public health, safety, and welfare.

OBJECTIVE A: Maintain or improve water quality.

STRATEGY: Coordinate and cooperate with Tribe (LRBOI) on their regular water quality testing program as well as install water monitoring wells at former dump sites. Establish a baseline for water comparisons.

STRATEGY: Require building setbacks from water bodies.

STRATEGY: Require functioning septic systems.

STRATEGY: Consistent with associated Manistee County Goals; ensure that the general welfare of the residents of Brown Township now, and for future years to come, is not infringed upon by the removal of any unnecessary water use from its watershed or aquifers. Any withdrawals of water from Brown Township’s watershed or aquifers which have no direct benefits to the residents of the township, and which do not increase public safety, health, or welfare shall be prohibited.

OBJECTIVE B: Reduce blighted and/or contaminated areas in the Township.

STRATEGY: Obtain a written reclamation plan with designated timelines from EGLE regarding the retired sweetening plant on Collins Rd.

OBJECTIVE C: Determine if standing dead conifers or overgrown Christmas tree plantations currently are a fire hazard in any area of the Township.

STRATEGY: Collaborate with the US Forest Service, the DNR, the Conservation District and private landowners to make such a determination and offer an assessment of wildland fire risk to the owner. The planning Commission will write the assessment.

OBJECTIVE D: When making decisions on constructive road improvements, obtain a “road use count” from the Manistee County Road Commission prior to any commitment.

GOAL IV: Practice stewardship of forests, farmland, and the natural environment.

OBJECTIVE A: Advocate for the promotion and enhancement of Brown Township's recreational amenities.

STRATEGY: Continue the reclamation and productive use of the former dump site on Schneider Rd., including the preservation of open spaces for recreation purposes.

STRATEGY: Maintain the current forestry plan along with the development of and use of a trail system.

STRATEGY: Promote the development of sidewalks, bike lanes and trails in Brown Township to create safe, non-motorized options for citizens. Encourage universal accessibility to all recreation sites, while increasing the recreational opportunities for all ages.

OBJECTIVE B: Advocate for expansion of fishing access for the public, including the use of public road ends throughout the county, particularly where they provide lake access.

STRATEGY: Improve public access at Chief Lake

GOAL V: Provide for orderly development using Township resources in accordance with their character and adaptability.

OBJECTIVE A: Define acceptable commercial activities for each district.

STRATEGY: Incorporate those definitions into the revised Zoning Ordinance.

STRATEGY: Increase Brown Township's ability to attract and retain technology-based businesses including home-based business, by monitoring opportunities and development of high-speed internet for expansion of broadband services throughout the township.

OBJECTIVE B: Maintain or reduce the improper use of the land.

STRATEGY: Monitor the number of variances granted for non-conforming use in specific districts to establish a baseline.

OBJECTIVE C: Determine possible improvements for added waterway access to both improve and expand fishing and canoeing/kayaking access in the Township.

STRATEGY: Collaborate with U.S. Forest Service, DNR Fisheries, EGLE, the Sportfishing Association, the Tribe and the Spirit of the Woods Conservation Club to gather input.

OBJECTIVE D: Advocate for a community recreation facility. Link agencies and programs for after-hours recreation programs.

GOAL VI: Minimize conflict among residents regarding land use issues.

OBJECTIVE A: Maintain or reduce the number of zoning-related complaints each year.

STRATEGY: Create a complaint form that is accessible to residents. Use complaint form to track number of complaints and create a baseline for improvement.

OBJECTIVE B: Increase the number of residents using the Township website.

STRATEGY: Ensure that updated Police Power Ordinances and the Zoning Ordinance are posted on the Township website for easy resident access.

PROCEDURE FOR WRITTEN COMPLAINT RESOLUTION

When a Township Official is made aware of a complaint in a verbal manner, then they may advise on whether further action is needed as well as possible actions which may be taken. However, before any action on the part of the Township may proceed, the Township must be provided with a written complaint. The written complaint may be provided by the concerned resident, alternately the Township Official may or has the option to formalize the complaint in written form. In this way the concern can be reviewed and addressed by committee, with various possible actions considered before further steps are taken.

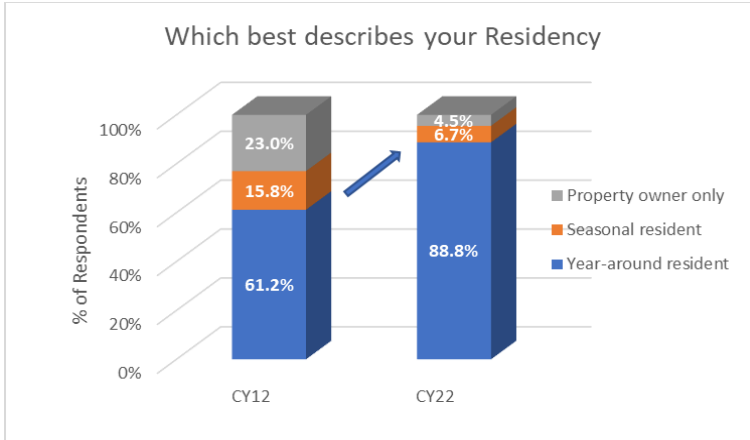
Process for Resolution of Complaints

1. Obtain a written complaint – The COMPLAINT FORM can be provided to the Township resident or can be obtained online via www.browntownshipmi.com where the COMPLAINT FORM can be obtained and printed or filled out electronically. Note: A written record provides vital background information such as the date and nature of the complaint as well as details such as who, what, when and where. In this way a timeline and baseline can be established, and improvements can be measured and verified.
2. Determine scope of the concern – Determine if the complaint concerns an issue which may be a violation of any Township or County Ordinance, or any State or Federal law.
 - a. If NO violation is determined – A Township Official, and/or mediator if needed, may talk to the involved person(s) to find a common ground for understanding and a path to resolution of the concern. Efforts shall first be taken to resolve disputes through mediation.
 - b. If a violation of an Ordinance or Law is determined – A Township Official and/or Authorized Local Official may talk to the involved person(s) to both raise awareness of and identify the violation and possible remedies. Where necessary, the complaint may be raised to the Zoning Board of Appeals, Local Authorities or State, Federal Authorities.
3. Establish and Maintain a Complaint Database – The Township Official shall enter the written COMPLAINT FORM, along with efforts taken to resolve or minimize the concern, including all remedies.
4. Yearly Complaint Database Review – Annual summary reports of complaints, including scope of complaints, timelines, measured improvements, as well as remedies shall be made available or presented to the Township Board.

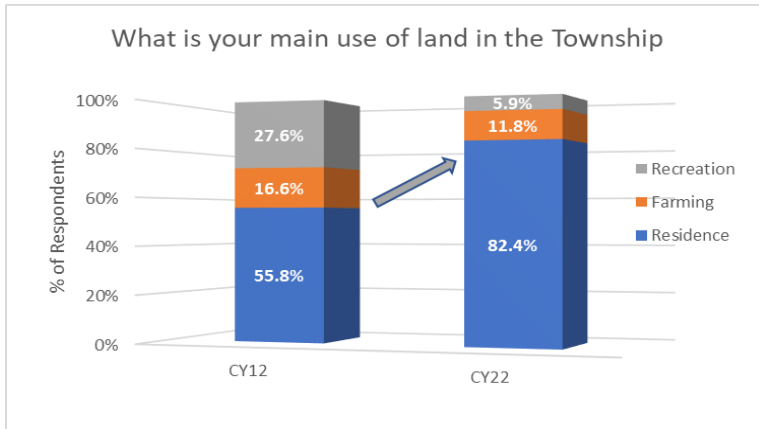
APPENDIX A

2022 BROWN TOWNSHIP SURVEY RESULTS WITH COMPARISONS TO 2012 BROWN TOWNSHIP SURVEY RESULTS

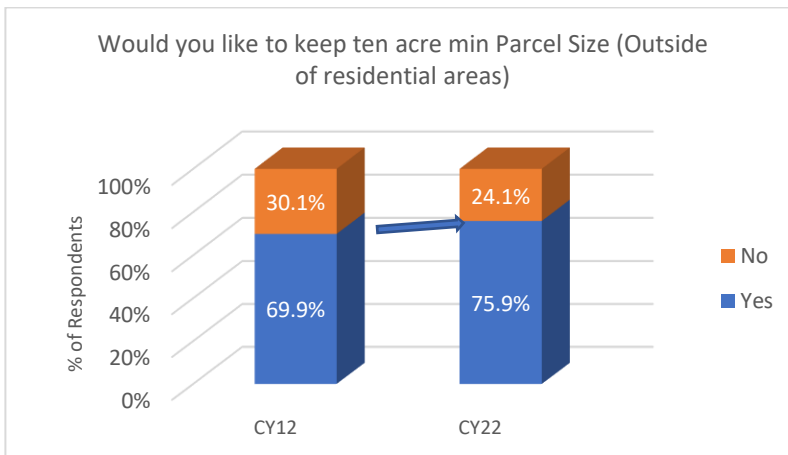
Every landowner in Brown Township had access to the 2022 survey by means of a survey questionnaire placement made available and/or passed out during the elections to links made available on the Township website. The questions posed are as indicated in the charts with a graphic comparison of the responses from 2022 with 2012. Key considerations are also highlighted from the responses.



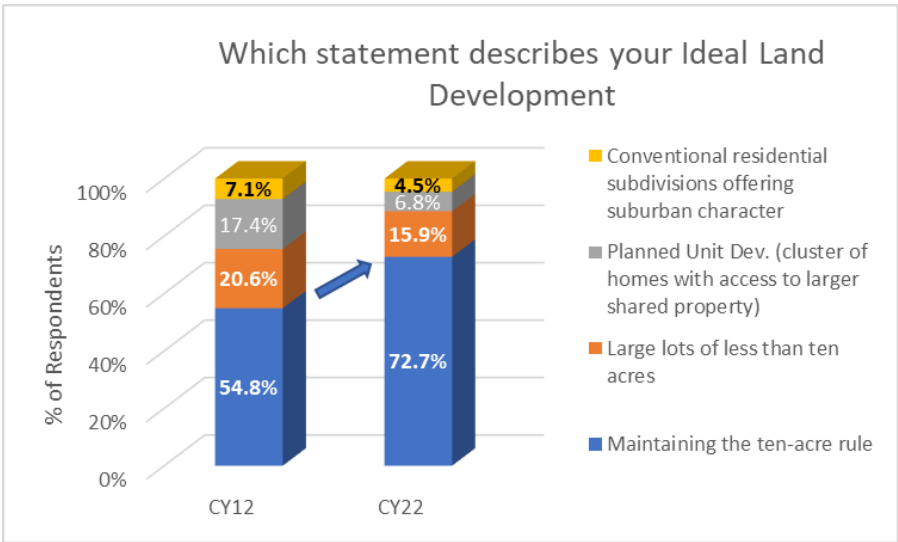
Key Considerations:
The year-round residency has increased significantly over the last decade



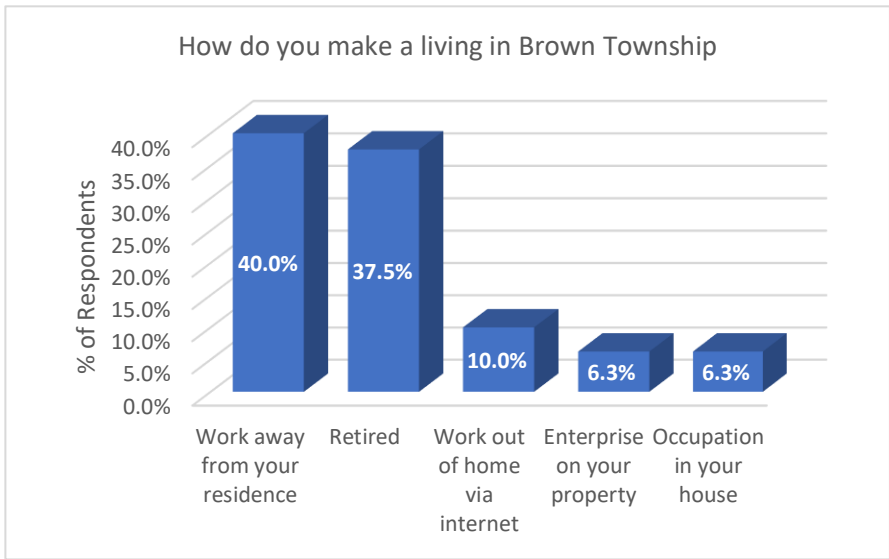
Key Considerations:
Residency as a main use of land has increased significantly over the last decade



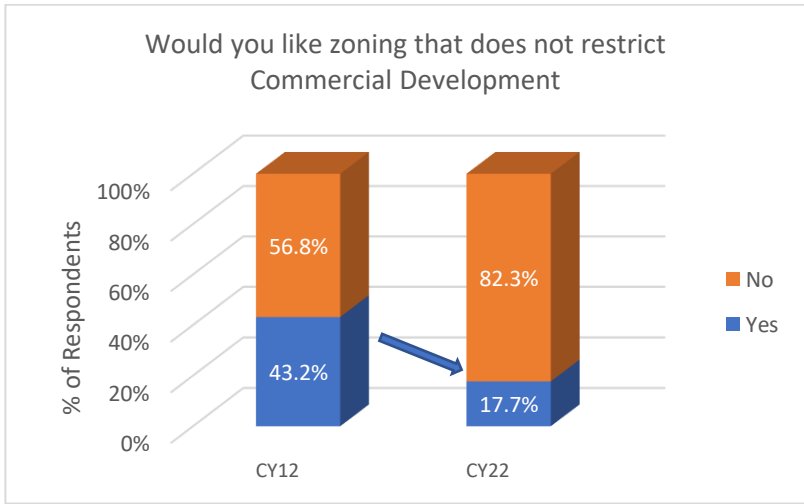
Key Considerations:
The intention to keep the 10 Acre minimum parcel size has increased over the last decade.



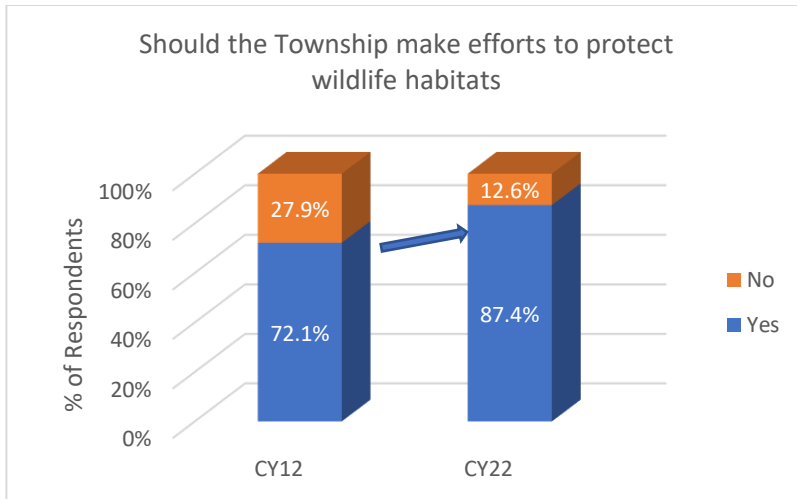
Key Considerations:
The position to maintain the 10-acre rule has increased significantly over the last decade.



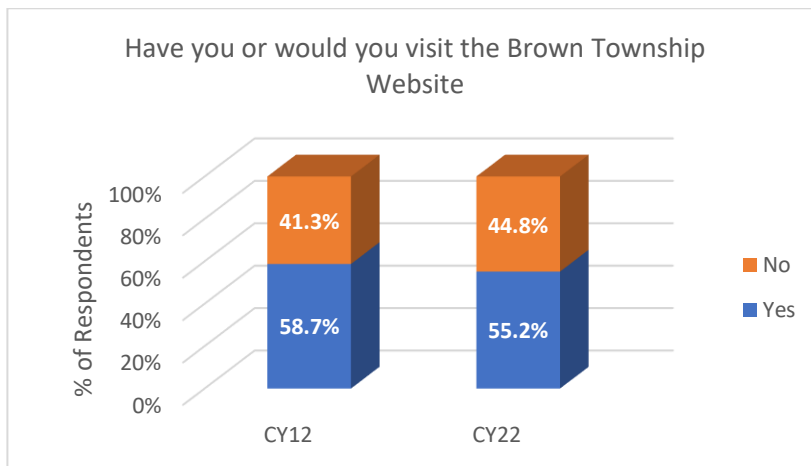
Key Considerations:
This question was new in the CY22 Questionnaire, and not presented in the CY12 Questionnaire and so is shared here for informational purposes with no comparisons to the past.



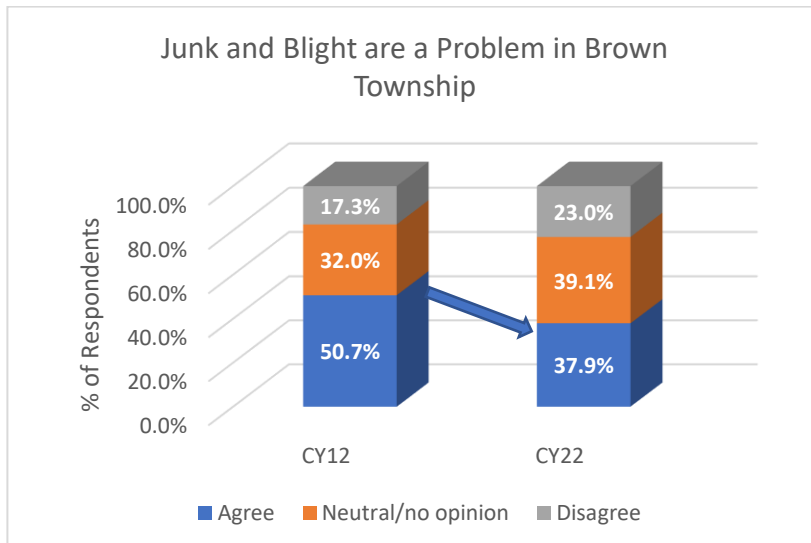
Key Considerations:
The desire to maintain current zoning restrictions (restrict commercial development with zoning) has increased significantly over the last decade.



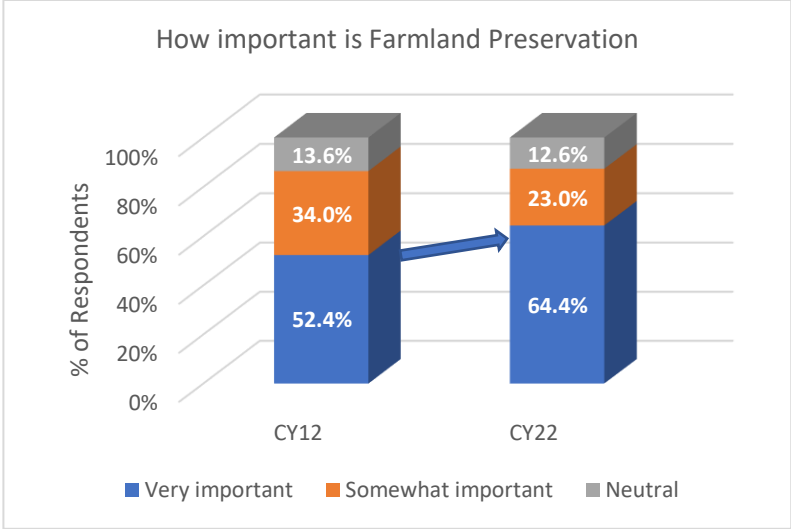
Key Considerations:
The intention to protect the wildlife habitats has increased significantly over the last decade.



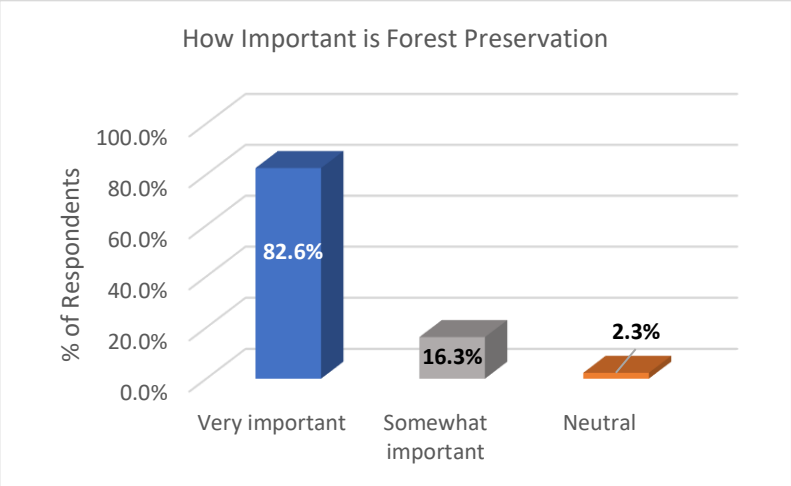
Key Considerations:
Interest in and visitors to the Brown Township website have been consistent over the last decade



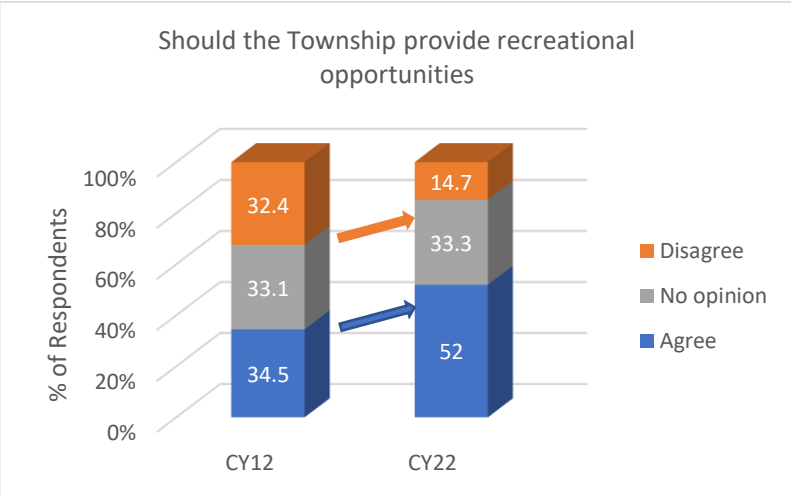
Key Considerations:
Concerns to Junk and Blight have decreased over the last decade.



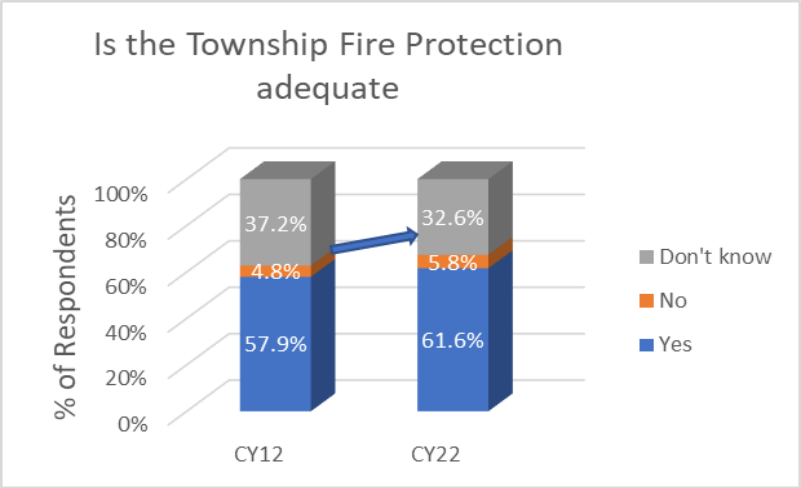
Key Considerations:
The intention to preserve Farmland has increased significantly over the last decade.



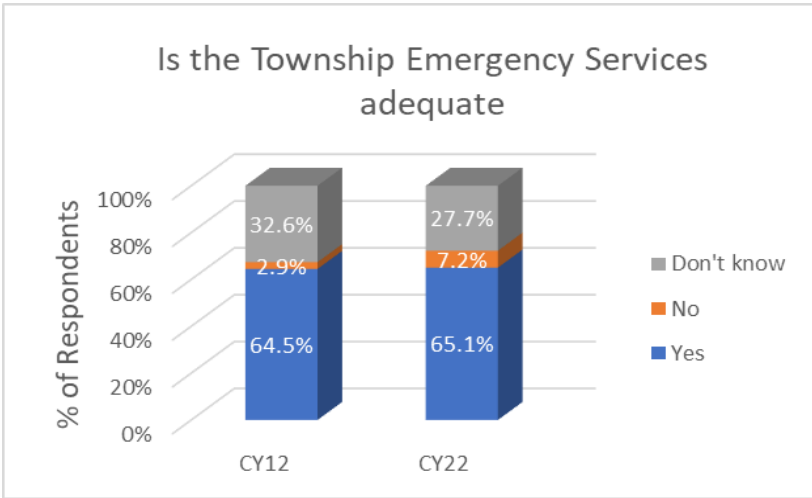
Key Considerations:
This question was new in the CY22 Questionnaire, and not presented in the CY12 Questionnaire and so is shared here for informational purposes with no comparisons to the past.



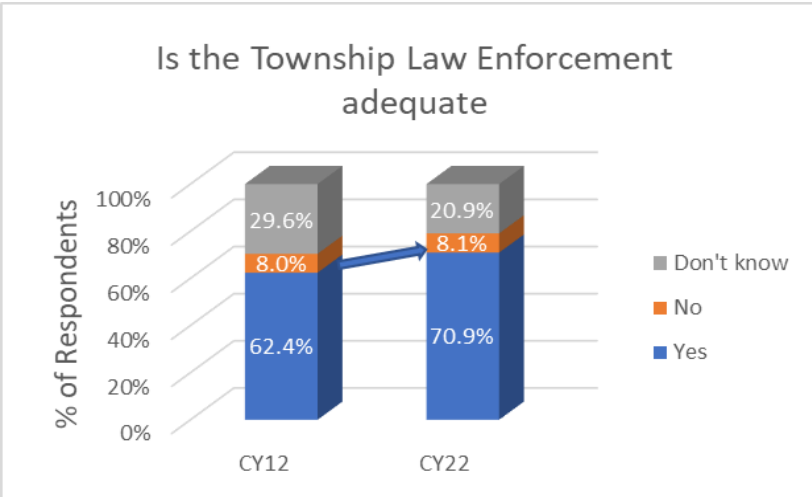
Key Considerations:
The interests for the Township to provide recreational opportunities has increased significantly over the last decade.



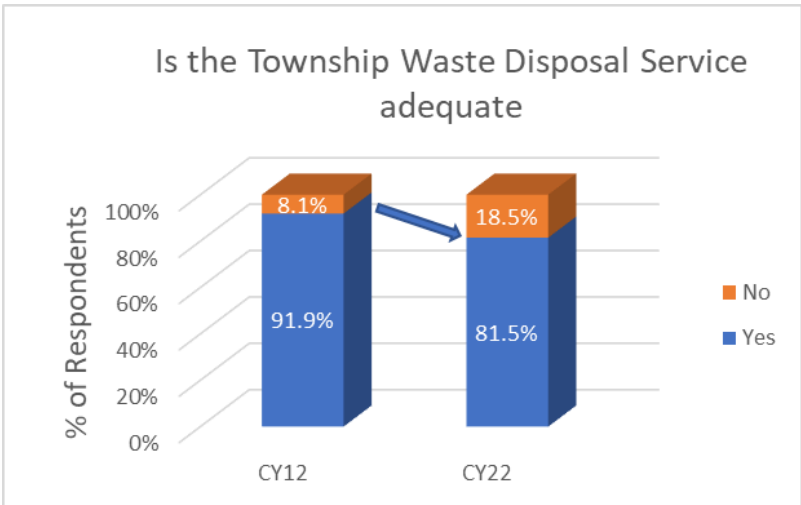
Key Considerations:
 Respondents who consider the Fire Protection as adequate have increased slightly over the past decade.



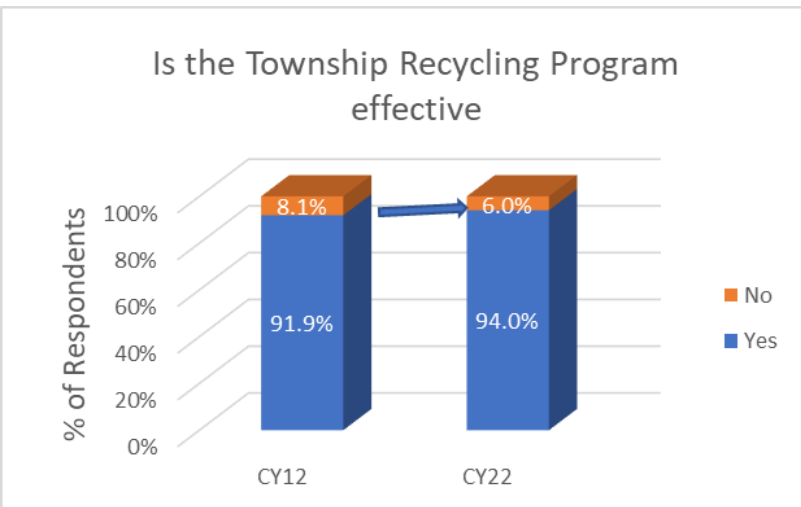
Key Considerations:
 Respondents who consider the Emergency Services as adequate have been fairly steady over the past decade.



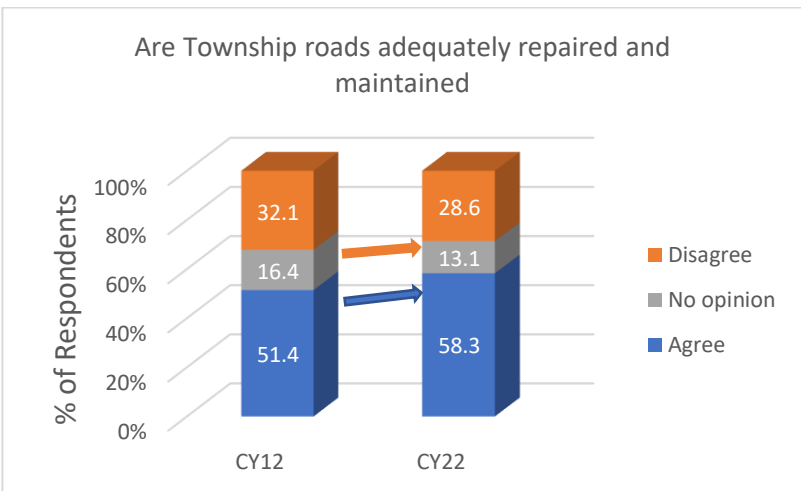
Key Considerations:
 Respondents who consider the Law Enforcement as adequate have increased slightly over the past decade.



Key Considerations:
 Respondents who consider the Waste Disposal Service as adequate have decreased over the past decade.

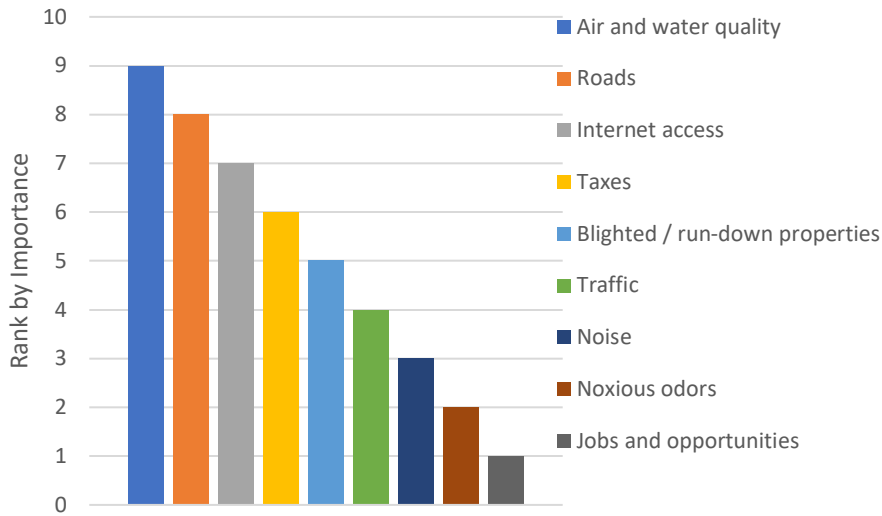


Key Considerations:
 Respondents who consider the Recycling Program as effective have been fairly steady over the past decade.



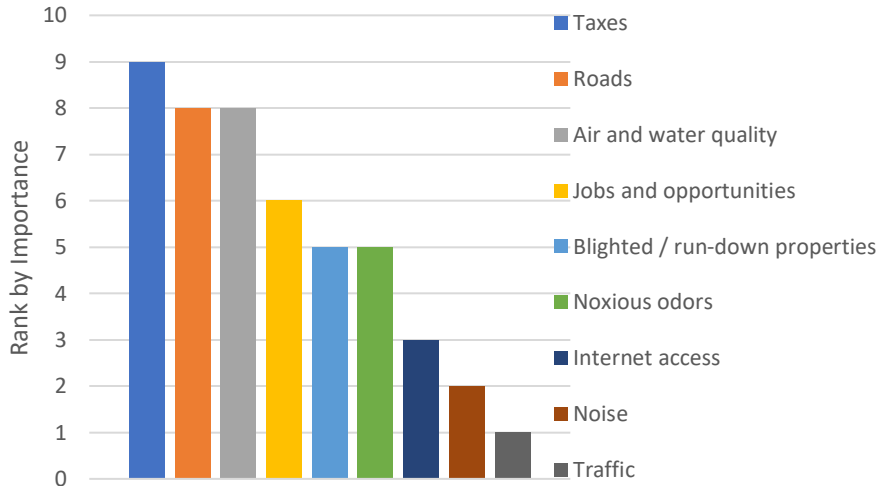
Key Considerations:
 Respondents who consider the Roads to be adequately repaired and maintained have increased over the past decade.

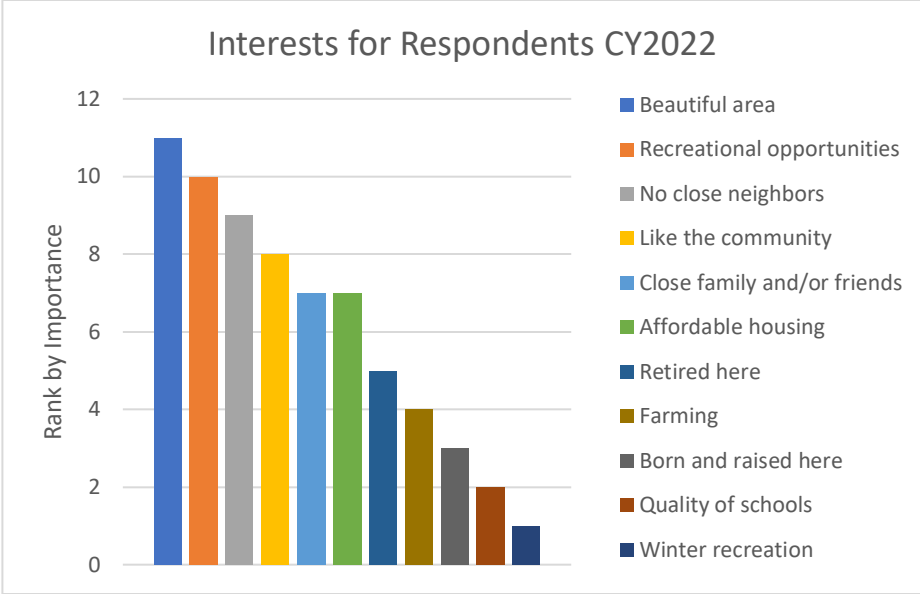
Concerns for Respondents CY2022



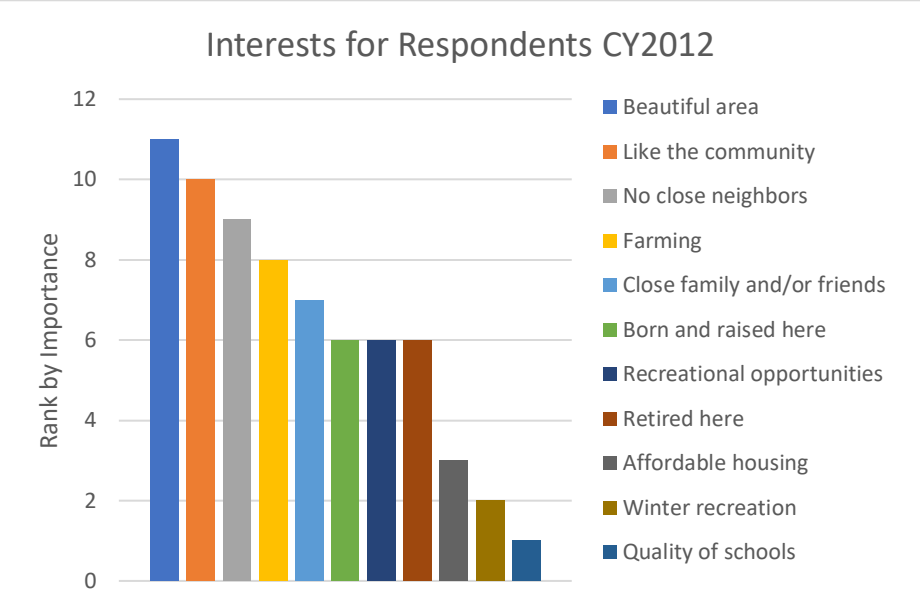
Key Considerations: Taxes, Air and Water Quality, Roads and Internet access are the top four concerns for respondents in 2022. This is consistent to 2012, except for Jobs and Opportunities replacing Internet Access.

Concerns for Respondents CY2012





Key Considerations: Beautiful area, Recreational Opportunities, No Close Neighbors, and Like the community are the top four considerations for respondents in 2022. This is consistent to 2012, except for Farming replacing Recreational opportunities.



APPENDIX B

ADDITIONAL RESOURCE AND INFORMATIONAL MAPS

Brown Township Croplands, 2011

Brown Township Farmland Classification, 2011

Brown Township Postal Addresses Issued, 2011

Brown Township Zoning Map Revised and Historic 2011

Manistee County Drilling Units, 2022

Brown Township Areas or Features for Green Infrastructure, 2011

Brown Township Base Map, 2022

Brown Township Zoning Districts, 2022

Brown Township Zoning Districts with Parcel Identifications, 2022

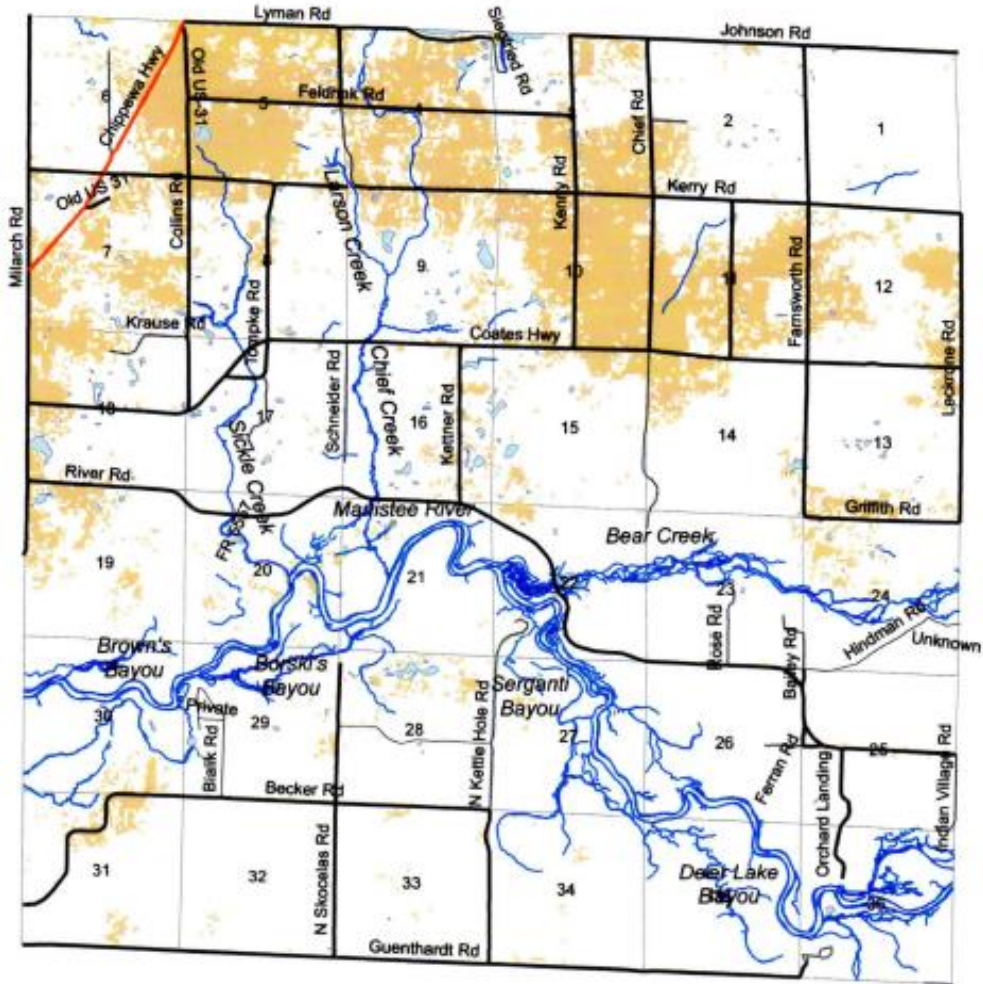
Brown Township Septic Limitations and Areas of Poor Filter, 2022

Brown Township Septic Limitations and Areas of Poor Percolation, 2022

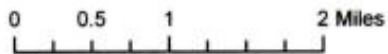
Brown Township Soil Types and Areas, 2022

Brown Township Special and Unique Sites and Features, 2022

Brown Township Croplands



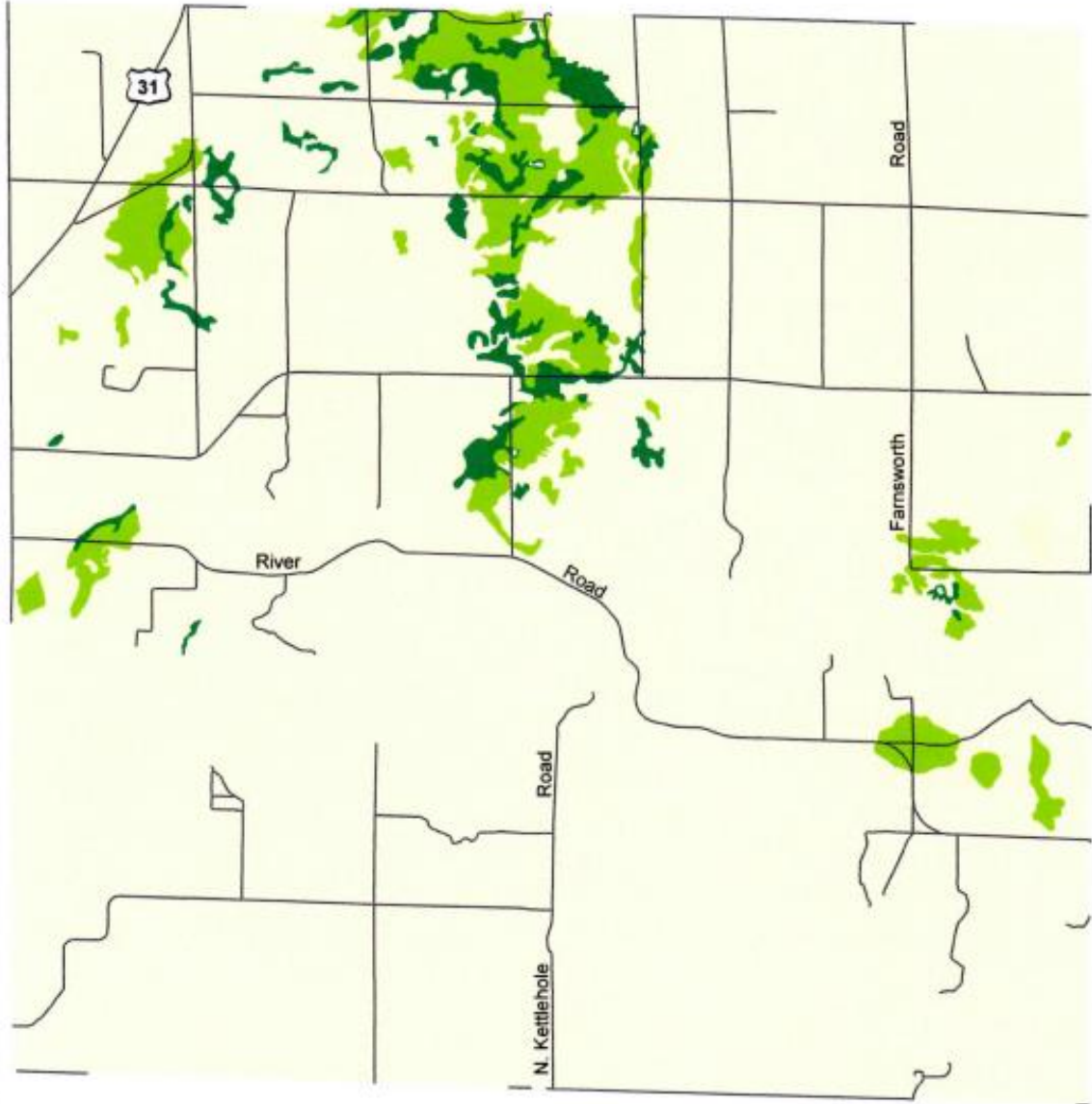
Legend
 Cropland



(Michigan National Land Cover Data 1999)

Manistee County Planning Dept. Jan. 2011

Brown Township Farmland Classification



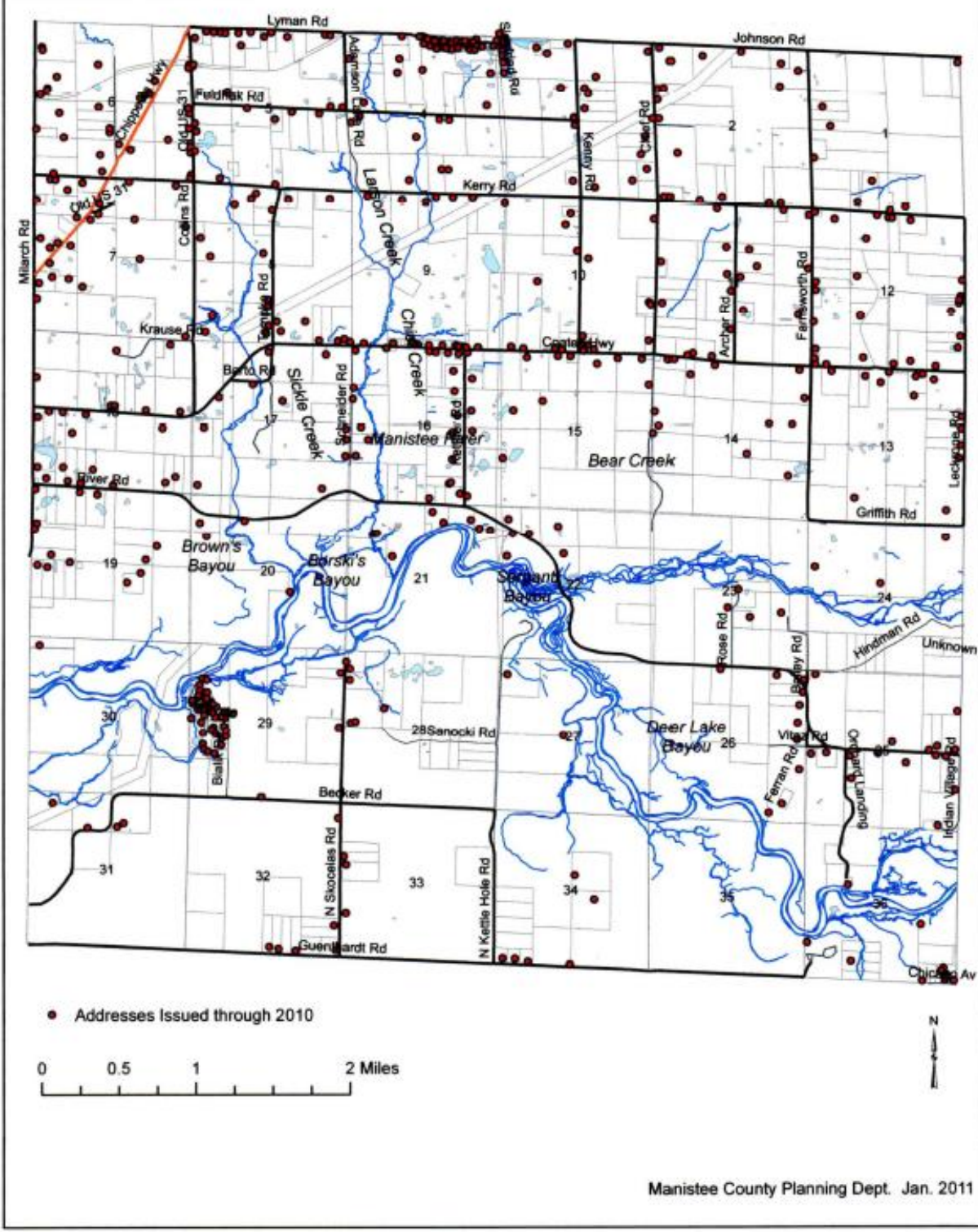
Farmland Classification

- Not prime farmland
- All areas are prime farmland 1,071 acres
- Prime farmland if drained 430 acres

0 0.5 1 2 Miles

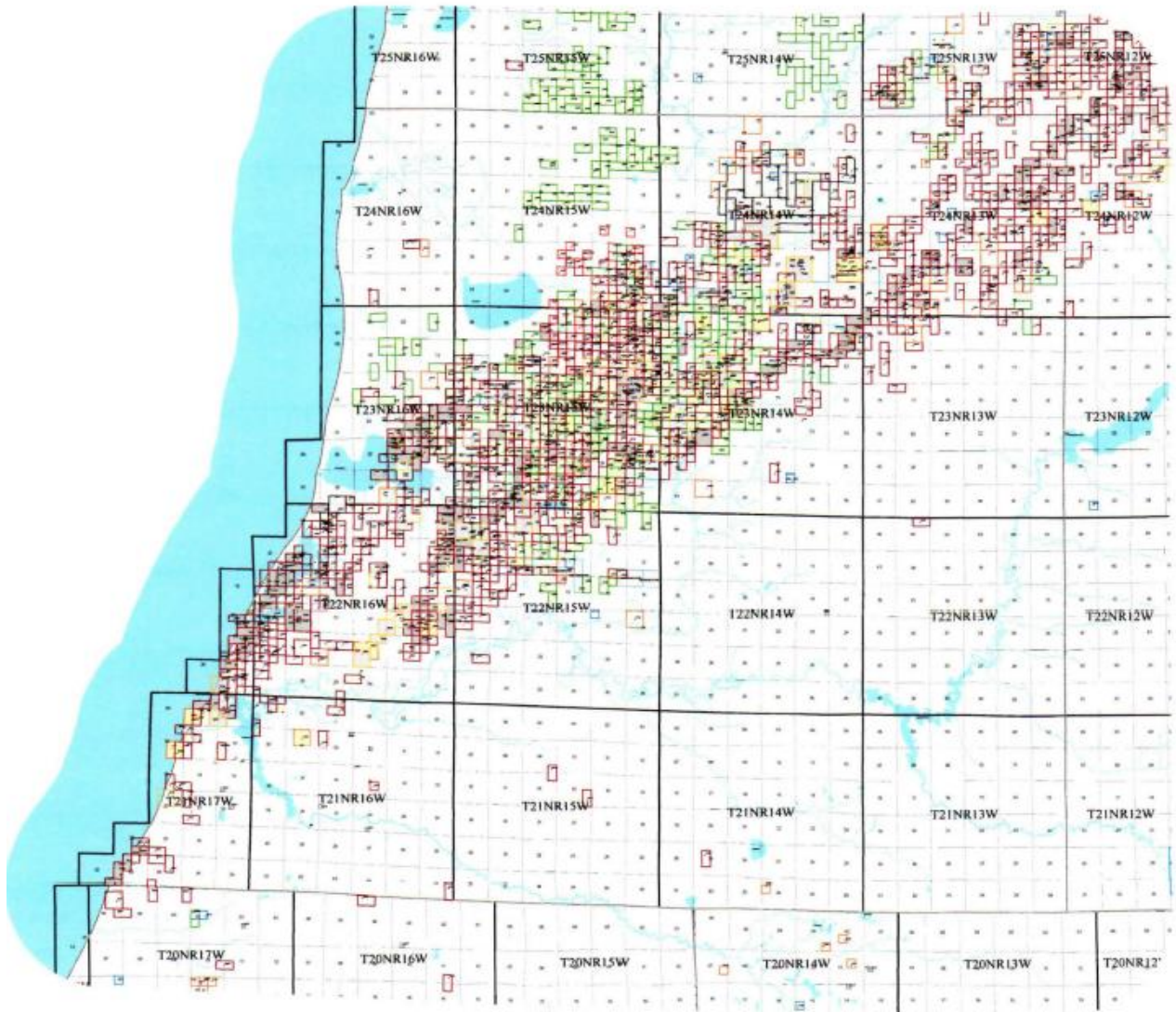
Map by Grayling MURA office
SER 2-2011
S:\MURA\Stew\Ben Lossen\arcstaff\BrownTwp_Map

Brown Township Postal Addresses Issued



Manistee County Planning Dept. Jan. 2011

Manistee County Drilling Units



LEGEND:

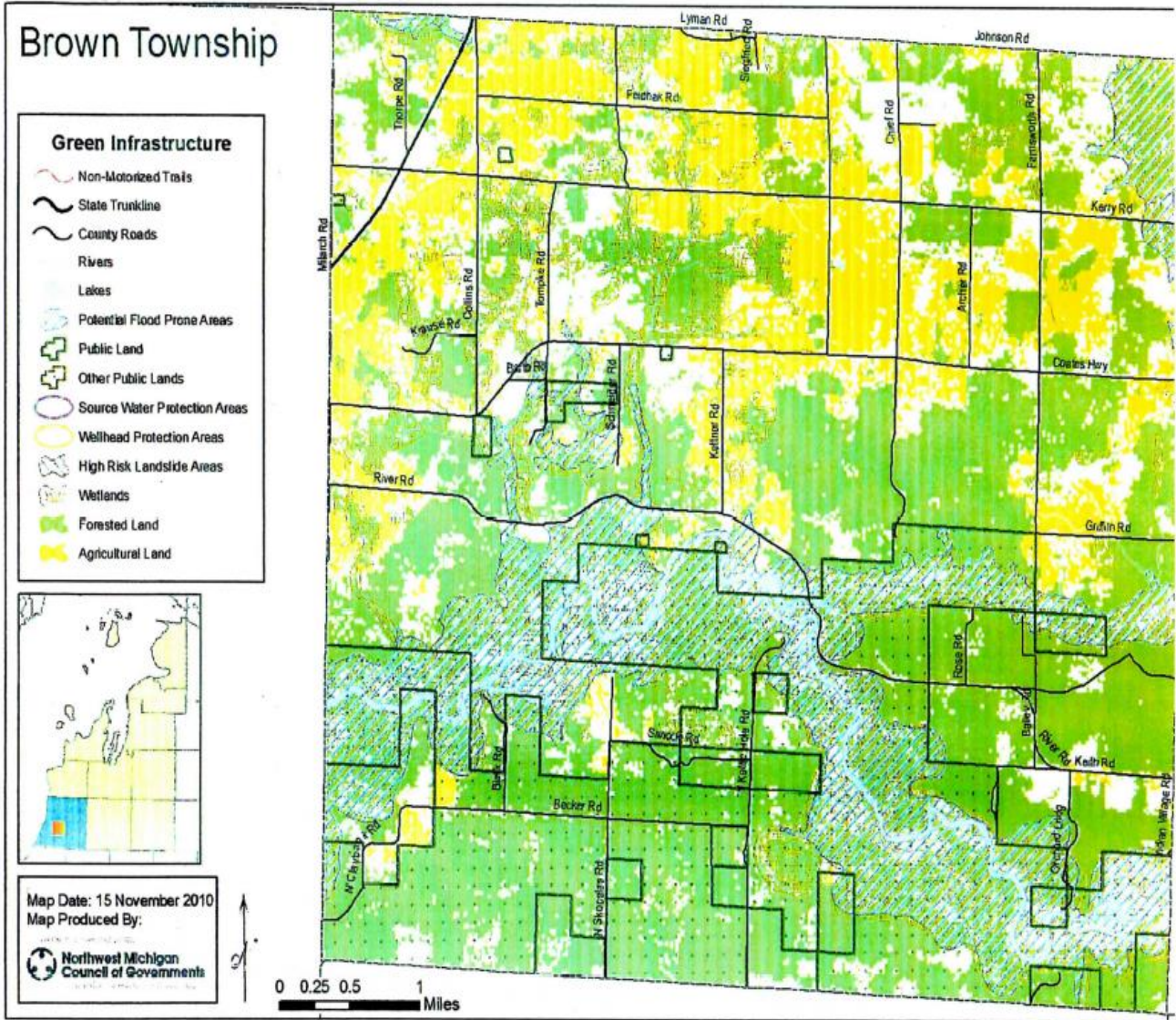
FIELD SPACED INACTIVE (light green) ACTIVE (dark green) GENERAL RULE 10-ACRE (light blue) ACTIVE (dark blue) GENERAL RULE 40-ACRE (light purple) ACTIVE (dark purple) SUPERVISORS ORDER 1-73 (80-ACRES) (light pink) ACTIVE (dark pink) SUPERVISORS ORDER 1-86 (140-ACRES) (light brown) ACTIVE (dark brown) 20-ACRE ALBION-SCTP (S.O. 9-7-84) (light yellow) ACTIVE (dark yellow)		S.O. 2-81 (OAKLAND CO. NEAG. 40-ACRES) INACTIVE (light blue) ACTIVE (dark blue) 160-ACRE GAS ACT (light yellow) ACTIVE (dark yellow) VOLUNTARILY POOLED (PRE R303) (light green) ACTIVE (dark green) R 303 SPACING EXCEPTION (light purple) ACTIVE (dark purple) SUPERVISORS ORDER 12-6-75 (80-ACRES) (light pink) ACTIVE (dark pink) SUPERVISORS ORDER 18-2007 (40-ACRES) (light brown) ACTIVE (dark brown)		ANTRIM UNIFORM SPACING PLAN ACTIVE USP (light green) INACTIVE (dark green) 40-ACRE S. MICH ANTRIM (S.O. 3-3-95) (light blue) ACTIVE (dark blue) 40-ACRE ANTRIM (S.O. 10-12-87) (light purple) ACTIVE (dark purple) 80-ACRE ANTRIM (S.O. 14-9-94) (light pink) ACTIVE (dark pink) ANTRIM TWIN WELL (S.O. 24-8-05) (light brown) ACTIVE (dark brown)		PRIVATE CLAIMS INACTIVE (light yellow) ACTIVE (dark yellow)		WELL TYPES: ● OIL ○ LOCATION (UNDRILLED) ◇ DRY HOLE ☆ GAS ⊖ GAS/BRINE DISPOSAL ✕ PLUGGED WELL ★ GAS CONDENSATE ⊕ GAS STORAGE ✖ SLANT □ OTHER ⊗ GAS INJECTION × SURFACE LOCATION △ BOW ⊙ WATER INJECTION ○ HORIZONTAL ⊕ OTHER INJECTION	
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INFORMATION PROVIDED HEREIN IS ACCURATE TO THE BEST OF OUR KNOWLEDGE AND IS SUBJECT TO CHANGE ON A REGULAR BASIS. WITHOUT NOTICE, WE WILL THE DEPARTMENT OF ENVIRONMENTAL QUALITY, RESOURCE MANAGEMENT DIVISION, OFFICE OF OIL, GAS AND MINERAL DEVELOPMENT. SHOULD MAKE EVERY EFFORT TO PROVIDE CORRECT AND ACCURATE INFORMATION. WE DO NOT WARRANT THE INFORMATION TO BE AUTHENTIC, COMPLETE, FACTUAL, OR TRUTHFUL. IT IS SO NOTICED THAT THIS INFORMATION BE COMBINED WITH SECONDARY SOURCES AS A MEANS OF VERIFICATION. INFORMATION IS PROVIDED ON A "AS IS" AND "AS AVAILABLE" BASIS. THE STATE OF MICHIGAN DISCLAIMS ANY LIABILITY, LOSS, INJURY, OR DAMAGE OF ANY KIND AS A CONSEQUENCE, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE, INFORMATION, AND APPLICATION OF ANY OF THIS INFORMATION.

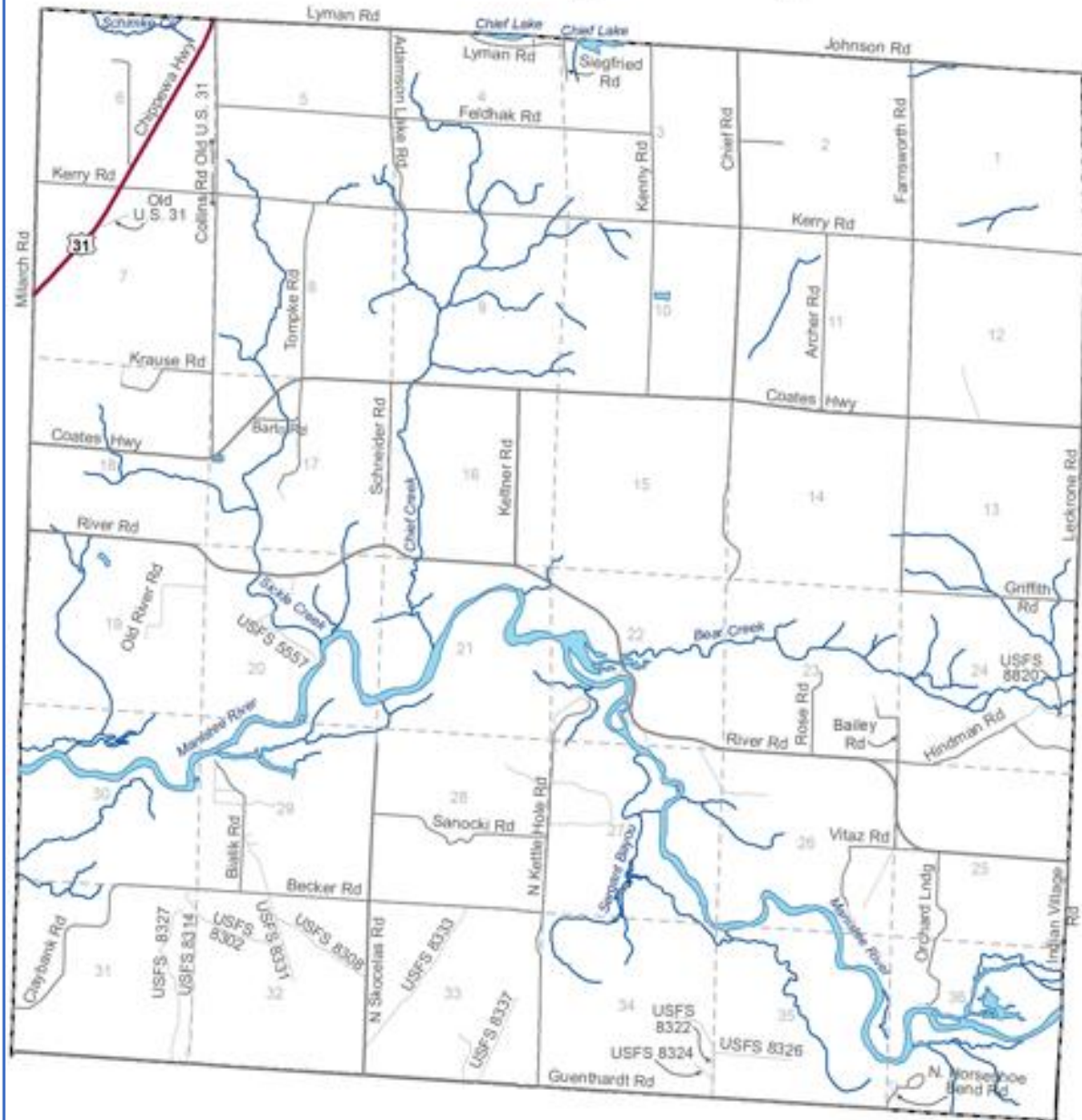
0 2 4 Miles

DEQ (UPDATED - 1/1/2017)

Brown Township Areas or Features for Green Infrastructure



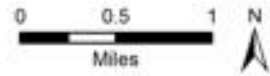
Brown Township Base Map



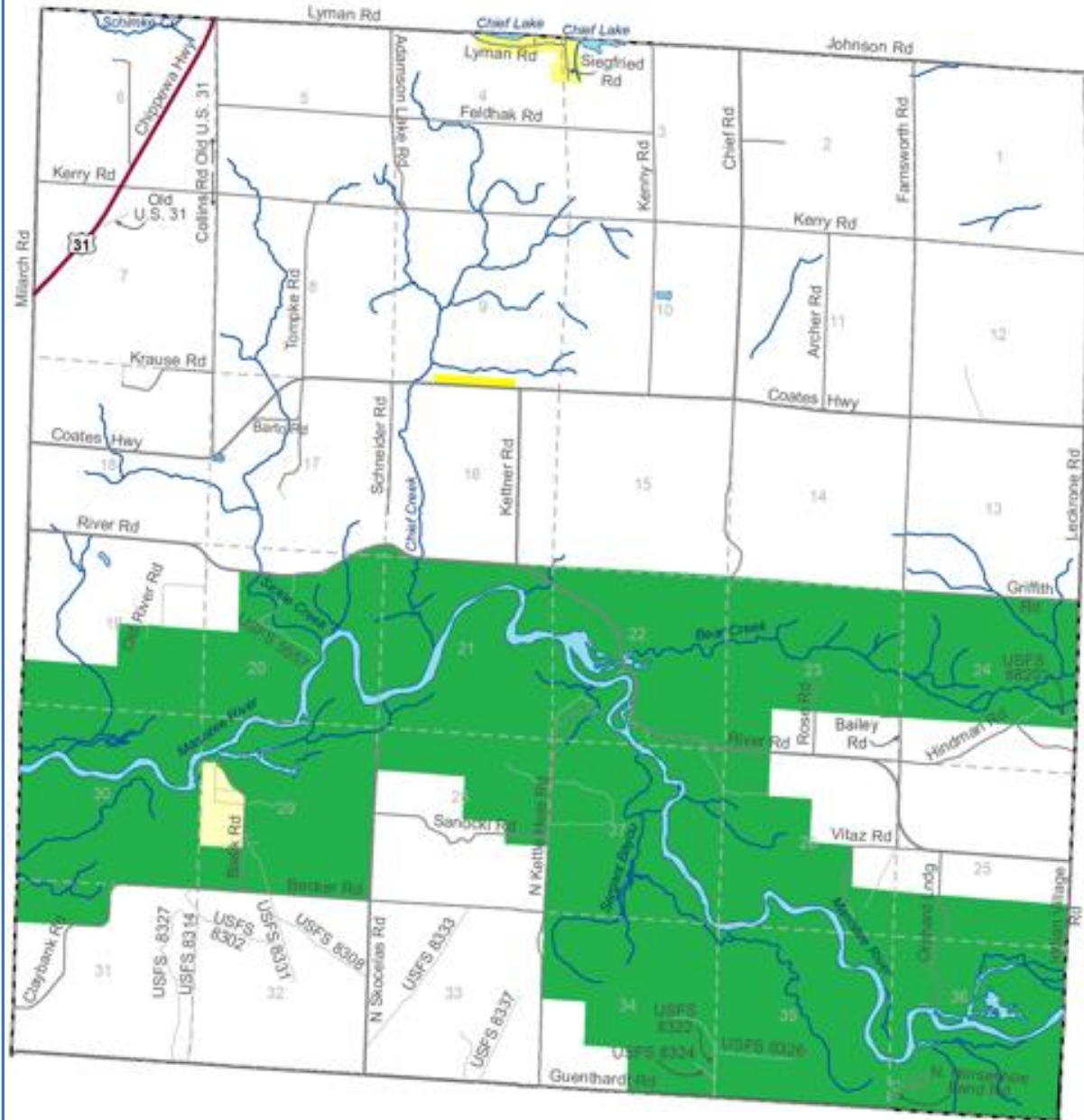
- State Highway
- County Primary Road
- - - County Local Road
- Other Road
- - - Sections
- ▭ Township Boundary












Map Prepared by:
Northwest Rural Planning
LIAA

Source: Center for Shared
Solutions



Brown Township Zoning Districts



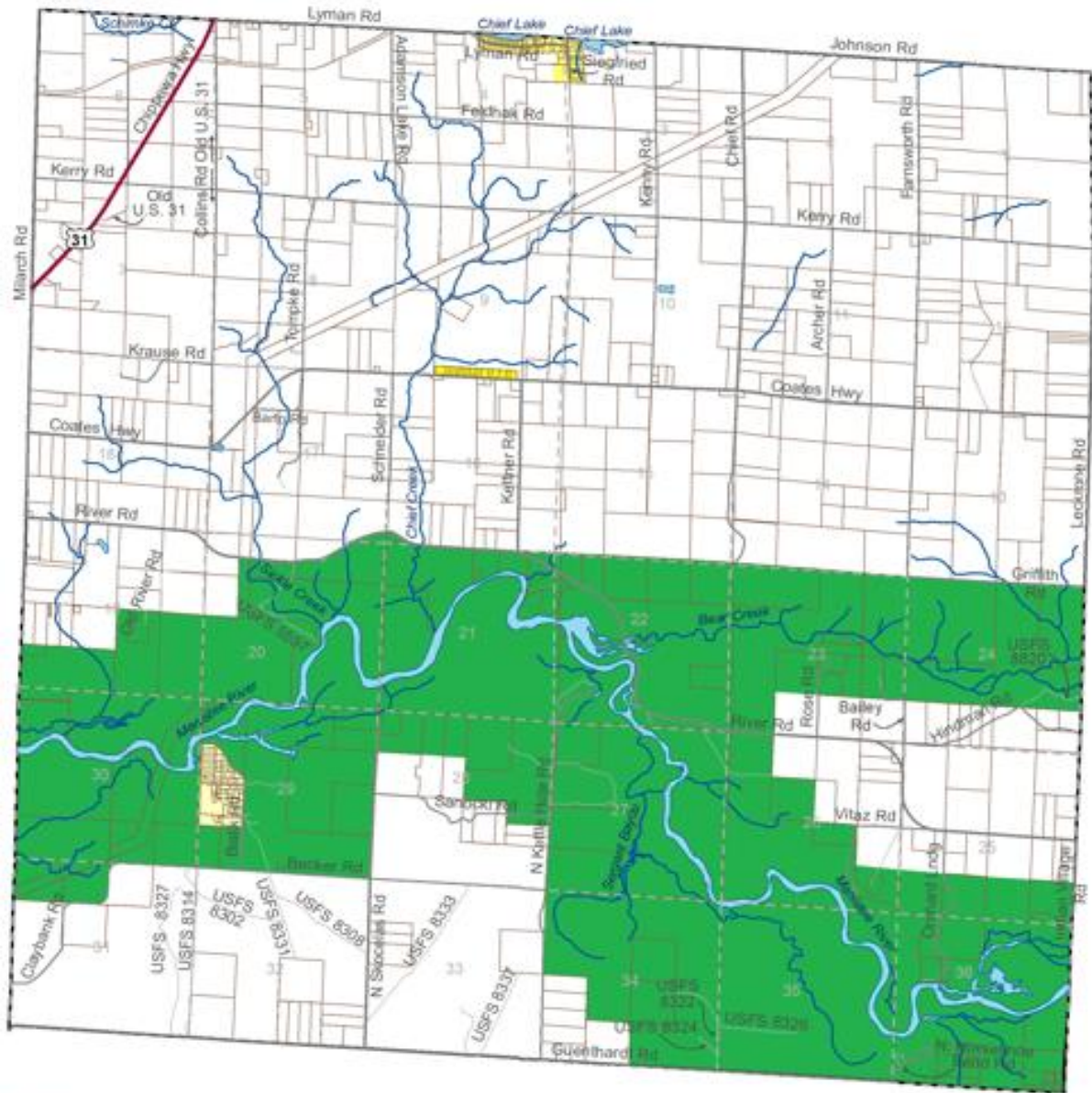
- | | |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|  Big Manistee River Corridor |  State Highway |
|  Ag Forest Residential |  County Primary Road |
|  Bialik Residential |  County Local Road |
|  Chief Lake Residential |  Other Road |
|  Crawford Heights Residential |  Sections |
| |  Township Boundary |













Map Prepared by:
Northwest Rural Planning
LIAA
March 2022

Source: Center for Shared
Solutions



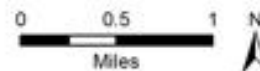
Brown Township Zoning Districts with Parcel Identifications



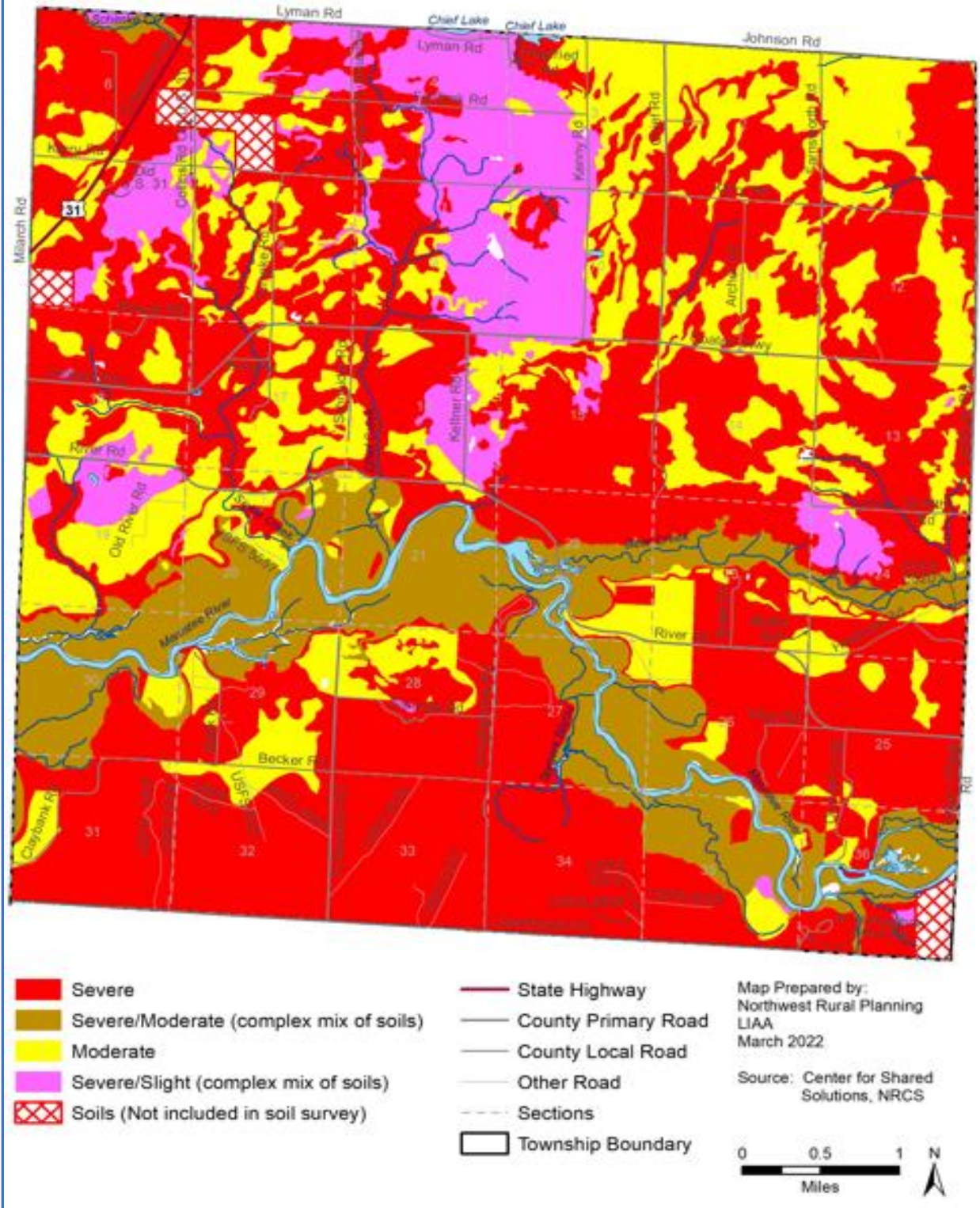
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|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|  Big Manistee River Corridor |  State Highway |
|  Ag Forest Residential |  County Primary Road |
|  Bialik Residential |  County Local Road |
|  Chief Lake Residential |  Other Road |
|  Crawford Heights Residential |  Sections |
|  Parcel Lines |  Township Boundary |

Map Prepared by:
Northwest Rural Planning
LIAA
March 2022

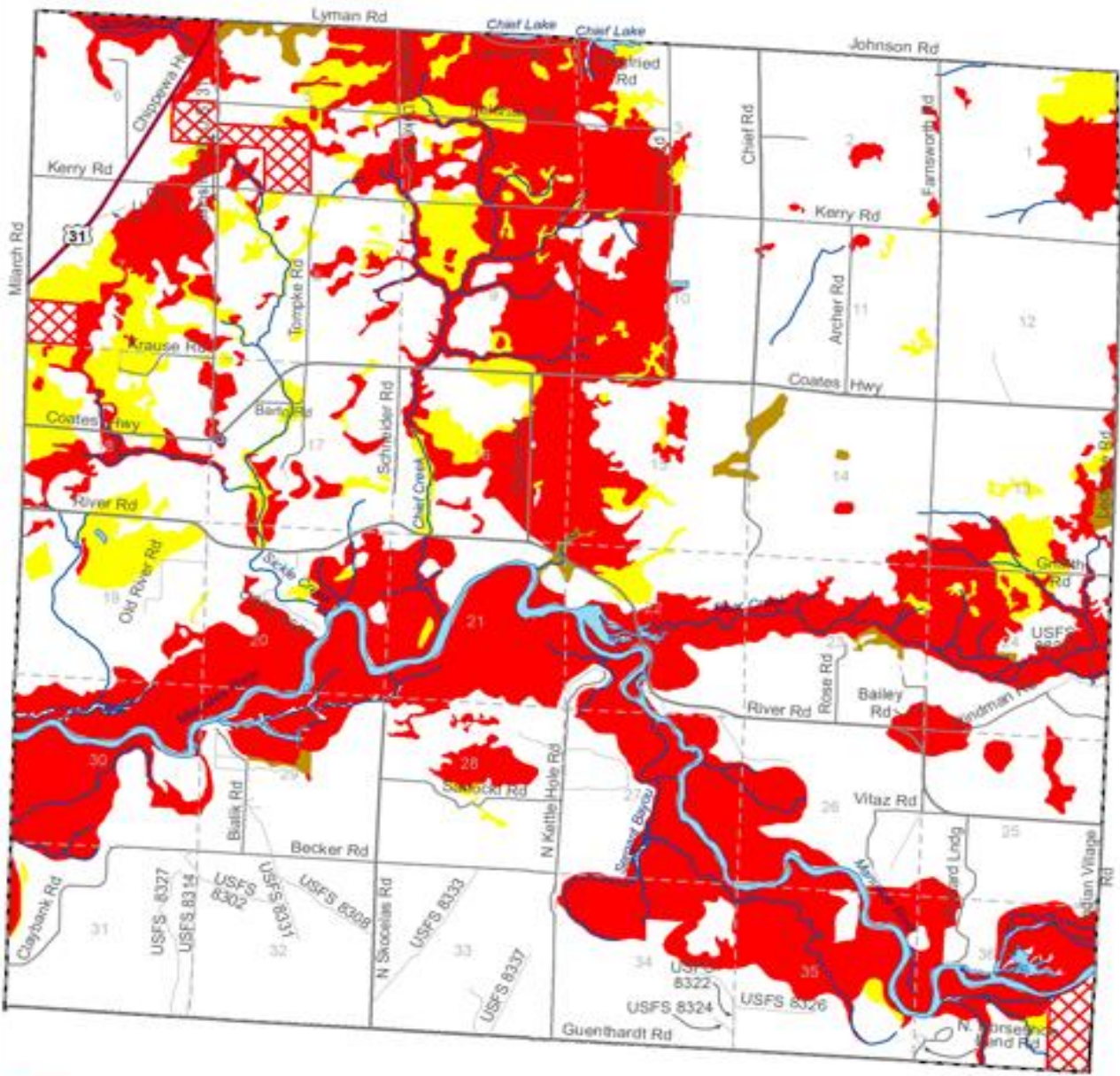
Source: Center for Shared
Solutions



Brown Township Septic Limitations and Areas of Poor Filtration



Brown Township Septic Limitations and Areas of Poor Percolation



- Severe
- Severe or moderate/Slight (complex mix of soils)
- Moderate
- Slight
- Soils (Not included in soil survey)

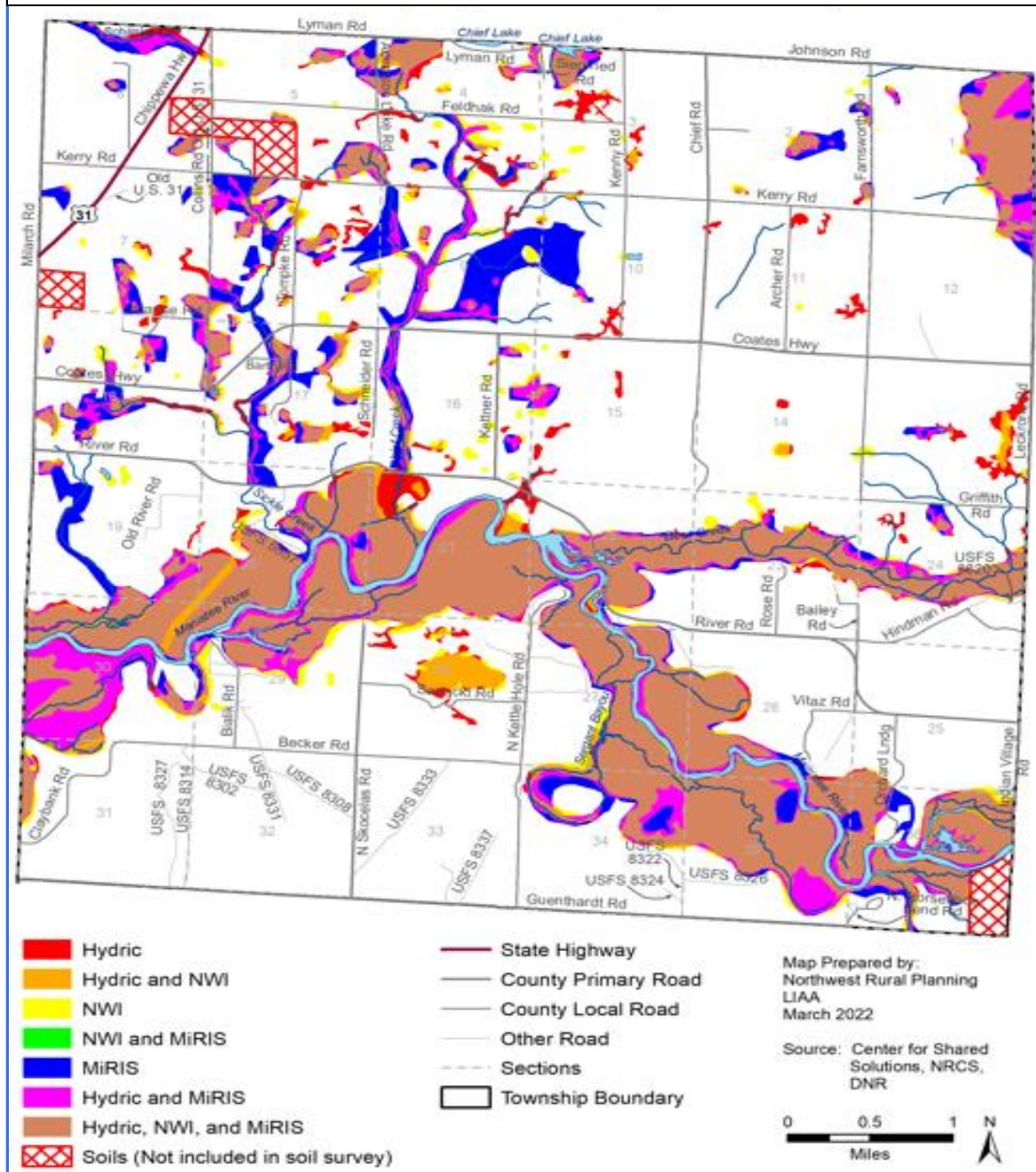
- State Highway
- County Primary Road
- County Local Road
- Other Road
- Sections
- Township Boundary

Map Prepared by:
Northwest Rural Planning
LIAA
March 2022

Source: Center for Shared
Solutions, NRCS



Brown Township Soil Types and Areas

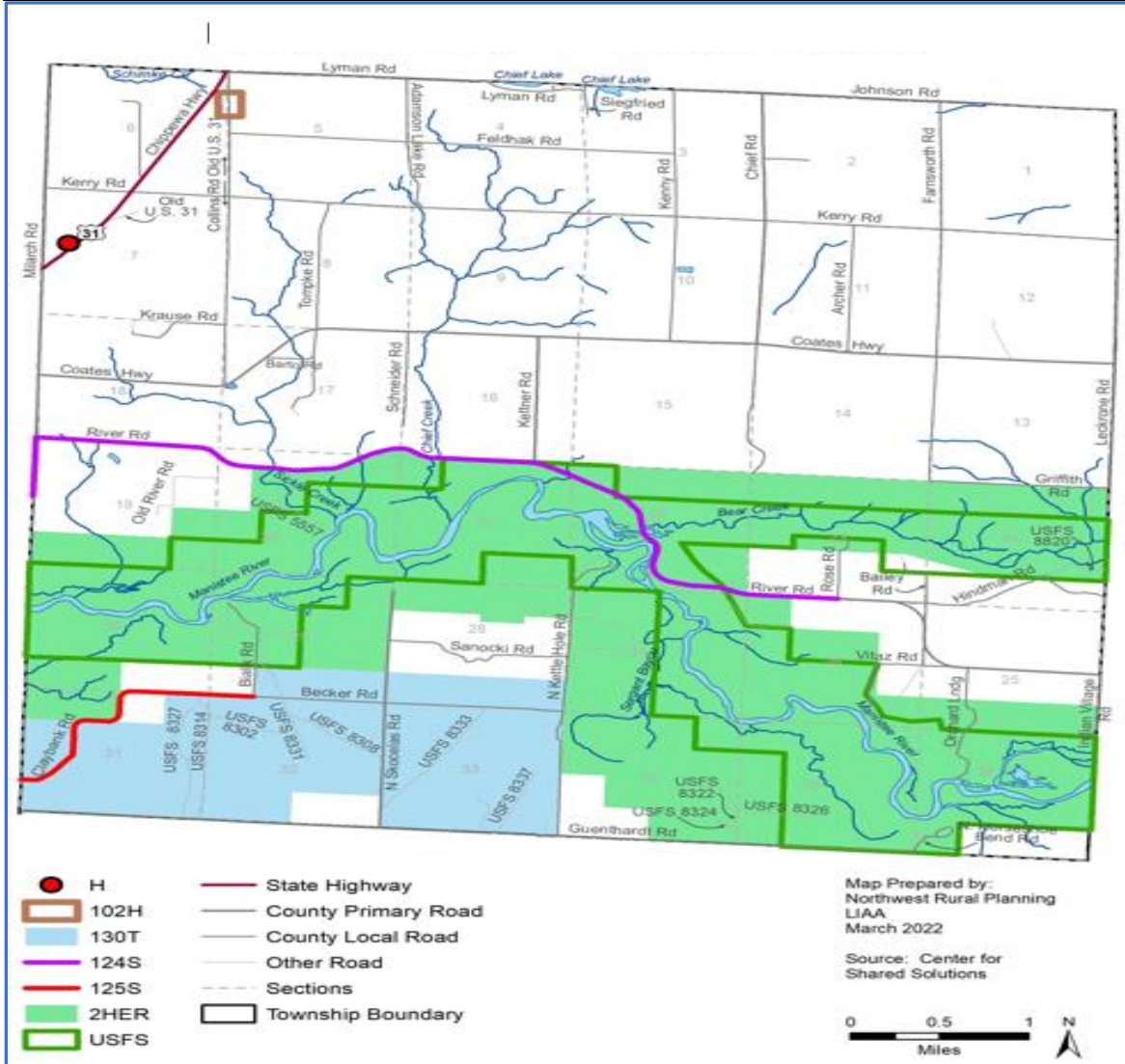


Hydric (Hydric Soils) are areas with soils defined as either permanently or seasonally saturated by water.

NWI = are areas within the National Wetland Inventory,

MiRIS = are areas within the Michigan Resource Inventory System Wetlands

Brown Township – Special and Unique Sites and Features



The ID Map Designations are consistent with and pulled from the 1997 County Plan (Vol. I, page 58+).

ID Map Designation	Special Site or Unique Feature	Comments
H	Norwalk Lutheran Church	Historic Building on Nat'l Register of Historic Places
102H	Norwalk Historic District	Historic storefront buildings and Old US-31 railroad crossing
130T	South Brown Township Forest	Public ownership block of land, scenic area, deer habitat and timber resource
124S	River Road, from Rose Road west	Scenic road through Big Manistee River corridor
125S	Claybank Road	Scenic road west and south from Becker Road
2HER	Big Manistee River (including Bear Creek)	Historic sites, archeological sites, National Wild and Scenic River, bayous, wetlands, dominant public ownership, limited motor vehicle access, "U" valley glacial geological formation, habitats for rare, endangered, and threatened plant life and animal species, unique water features such as springs, meanders and oxbows.
USFS	Approximate Boundary	Federal designation of Big Manistee Recreational River and Bear Creek Scenic River