

A photograph of a duck swimming in a pond. The duck is in the center-left of the frame, facing right. The water is rippled and reflects light. In the background, there are reeds or tall grasses. The overall scene is peaceful and natural.

# CLAY TOWNSHIP

# MASTER PLAN 2012

Adopted by the Clay Township Planning Commission:  
September 12, 2012

Adopted by the Clay Township Board of Trustees:  
October 15, 2012



# **Clay Township Master Plan 2012**

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**Adopted by the  
Clay Township Board of Trustees  
On October 15, 2012**

## **Acknowledgements**

### **Board of Trustees**

**Thomas H. Krueger, Supervisor  
Lisa M. White, Clerk  
Connie S. Turner, Treasurer  
Tom Fetter Trustee  
John Horvath, Trustee  
Joanne Shirkey, Trustee  
Karen Straffon, Trustee**

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**Dorothy DeBoyer, Chair  
Anthony Antkowiak, Vice-Chair  
Kathy Schweikart, Secretary  
John Blair  
Lesly Cahill  
Christine Holcomb  
Edward Keller II  
Thomas Krueger  
Whitey Simon**



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## ***THE VISION***

“Create a local vacation destination full of recreational opportunities, while protecting the environmental, historical, cultural and residential character of the community.”

## **THE DOCTRINE**

- I. Administrators of this Master Plan must separate themselves from decision-making which is based on the many pressures, both politically and emotionally, applied by self interest groups and individuals.
- II. Administrators of this Master Plan must avoid short-range decisions inconsistent with the long-range strategies herein, which will result in the incremental destruction of the intent of this Plan.
- III. Administrators of this Master Plan are charged with an ethical and professional responsibility for obtaining a strong working knowledge of this policy document. This entails understanding the doctrine, the visions, the strategies, the programs and the overall intent of this Plan.



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## PURPOSE OF THE MASTER PLAN

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The Master Plan is a comprehensive document that will provide policy direction to Clay Township over the next several decades; it is intended to guide the future decision-making process as related to land use and development, as well as overall community quality of life within the Township.

The Master Plan is Clay Township's official policy guide for physical improvement and development. It is comprised of both short and long term programs and policies. Since many factors influence land use development patterns, the plan is comprehensive in scope and coverage. It covers the use of land and buildings, the movement of vehicles and pedestrians through public rights-of-way, and the provision of public facilities such as parks, schools and utilities.

The Master Plan serves as an aid for every day decision making. The goals, programs and policies outlined in the Master Plan guide the Planning Commission and Township Board in their decision making on zoning, subdivision approval, capital improvements, and other matters relating to land use and development. This every day guide provides a stable, long-term instrument for decision-making.

It ensures that individual developments are moving toward the common vision and ensures that public dollars are spent wisely. The Master Plan also provides a basis for refining the zoning ordinance, subdivision regulations and other development codes, all of which aid in the implementation of planning policies adopted as part of this plan.

Finally, the Master Plan can serve as a marketing tool to promote Clay Township as a unique place to live and establish a business. By promoting the community vision, officials can use the plan to attract new families and desirable investment to the community for years to come.

## THE PLANNING PROCESS

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Clay Township last adopted/amended its Master Plan in 2002. This plan served as the blueprint for development in Clay Township until the adoption of this plan. A Master Plan is generally a 20-year document. However, in developing counties like St Clair County, plans are often updated more frequently in order to consider changing conditions within the community and its relationship, economically, socially and environmentally, within the larger regional setting.

It is essential that the Master Planning process be conducted within a public forum, opportunities must be provided for public participation and input if it is to be truly representative of the community as a whole and become a successful document. The support of the community can also facilitate implementation. An approach that has been used successfully when planning for the future of a community involves preceding the planning process with an exercise designed to develop "a vision of the future" for the Township.

### **P.A. 33 of 2008:**

The State of Michigan passed enabling legislation in 2008 which consolidated the three different planning acts. This legislation gives local municipalities, through its designated planning commissions, the authority and responsibility to create a long-range plan for development. This ensures that incremental improvements are in line with the long-range vision for the community.

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## HISTORY OF CLAY TOWNSHIP

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Sometimes understanding the history of a Community helps us to understand the decision-making, growth characteristics, successes, and even failures that created the Community character in Clay today.

We have taken excerpts and edited information from the Algonac-Clay Township Historical Society's award winning "The Chronicle" to provide a brief history of Clay Township. Visit the website [www.achistory.com](http://www.achistory.com) for a plethora of interesting history and facts about the Community. The information below is only a fraction of the information that this group has provided on the website and choosing which information to include in this Master Plan proved extremely difficult.

Clay Township is located at the southern end of St. Clair County. The Community is surrounded on east and south by two of its greatest assets, Lake St. Clair and the St. Clair River. To the north and west are the townships of Cottrellville and Ira, respectively. Adding to the beauty, recreation and environmental assets of Clay Township are Harsens Island, Dickinson Island and Russell Island.

Clay is one of the four townships that originally comprised the entire area of St. Clair County. The other townships were Cottrellville, St. Clair, and Desmond (the settlement of Desmond maintained its title until the year 1835, when the Honorable Daniel B. Harrington laid out the plan of a village, which now bears the name Port Huron). The settlement of Clay predates the organization of the county, May 8, 1821. Clay was organized as a township in 1822 under the name of Plainfield and remained so until 1828, when the name was changed to Clay. It was changed because there already was a Plainfield Township in Allegan County. The first supervisor was Harvey Stewart.

The Township of Cottrellville once included all the territory of Clay. In 1828, the residents of Clay voted to separate from Cottrellville. In 1837, Ira Township was formed by taking the western part of Clay Township. By 1840, Clay Township had a population of 387, including Algonac. Algonac was laid out in 1836; but the original plat in the Register of Deeds office, in Port Huron, is undated. Some records give 1843. Algonac was incorporated by the St. Clair County Board of Supervisors in 1867 and by an Act of the Michigan Legislature in 1893.

In 1894, the Rapid Railway System constructed lines out Gratiot Avenue to Mt. Clemens. Later, it extended the line to Port Huron by way of the river communities. The advantages of the southern portion of St. Clair County were realized and summer residents began building permanent homes and cottages along Anchor Bay and the St. Clair River between New Baltimore and Marine City. The line enjoyed great prosperity as a quick means of reaching the water front communities.

This success attracted competition. The Shore Line System built a line from Detroit out Jefferson Avenue through Grosse Pointe to Mt. Clemens in 1900. It then extended the line along the St. Clair River to Port Huron. In 1901, the Shore Line was purchased by the Rapid Railway System. The interurbans carried freight as well as passengers and mail; such as, milk, produce and provided commodities for many businesses along the route. The Detroit and Port Huron Shore Line Railway from Detroit to Port Huron ran through Mt. Clemens, Chesterfield, New Baltimore, Anchorville, Fair Haven, Algonac, Marine City, St. Clair and Marysville. An additional line, called the "Short Cut", was built from Anchorville directly to Marine City. The route that the interurban traveled is identified today by Short Cut Road that goes east out of Anchorville to Marsh Rd., just west of Marine City. However, the interurban tracks went further east to intersect with tracks that traveled along M29 (designated M27 at that time) and the St. Clair River.

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The interurban tracks going to Algonac from the Perch Point Stop traveled along the northern boundary of the St. John's Marsh and turned south and traveled along the eastern boundary of the Marsh and exited at M29. You can see the track bed running north from the present DNR parking lot across from Cheers Restaurant. The tracks turned east as they crossed M29 and ran along the right side of the highway. The interurban right of way is still apparent from Cheers Restaurant to Margaret Jean's Restaurant because of the distance the telephone and electrical poles are set back from the highway. The tracks continued east past the old Chris Craft plant to Michigan St, where the tracks turned north to Marine City.

Today, as we drive along the Dyke Road, through the St. John's Marsh, we find it difficult to imagine the troubles motorists endured before this link between Perch Point and Pearl Beach became a reality. The only route from Algonac to Fair Haven was around Beauvais Creek. The one lane wooden bridge slippery with clay, its timbers groaning and shuttering, threatening to drown itself in the murky waters below whenever a vehicle set wheel upon it. James W. Gilbert, on one of his many trips on the D. U. R. (Interurban) through the northern edge of the marsh, envisioned in 1915 a road which would be built across the marshy river frontage. There were many obstacles to overcome: the questions of right of way, the court injunctions by land owners, and the skepticism of old residents. But the three and one half miles of Dyke Road became a reality. Today the "impossible project" is a memorial to "Jim" Gilbert, the man who would not give up. The final section of the road from Pearl Beach to Algonac was dedicated in 1924. This road connection opened the area for more growth.

The most well known development in the area is The Colony because of the gate house and the simulated lighthouse that housed the tower that provided the water system for the subdivision. The development was created by the Will St. John & Co. of Detroit and the plat was approved by Clay Township and signed by the Clerk, D. A. Pontius, on March 4, 1926. The land area was created by dredging canals on each side of the platted property. The canals were approximately (75) feet wide and (6) feet deep. It originally was designed as a private gated community comprised of (179) lots, all of which have river and/or canal accessibility. Colony Drive is a dead-end street approximately 1-3/4 miles long. Mr. St. John owned all of the Pointe Tremble Prairie, which subsequently was named the St. John's Marsh.

Included with the The Colony development was an eighteen hole golf course named The Colony Golf Club that was located in the marsh on the east side of the road a little over one mile north of the entrance to The Colony subdivision. The original plans for the golf course included platted lots surrounding the course; the platted lots did not materialize. The course was built by dredging canals around the designated area and using the dirt to form a dyke. Then the water was pumped out of the enclosed area. The course was open to play in the 1930's and it was played by many famous people, including the great golfers Walter Hagen and Gene Sarazen. During World War II, the course rough was plowed and sugar beets and corn were grown there. The course was opened again a year or two after the war and then the course was abandoned. In later years, the clubhouse burned and the golf course returned to its natural state, a marshland. Until the 1970's the chimney and a part of a wall of the club house was still visible from the highway; however, now that's gone. Much of the dykes around the course are still visible at lower water levels. The entrance to the golf course still exists. The Michigan Department of Natural Resources erected a monument designating the "St John's Marsh Wildlife Area" at the driveway entrance. Two other major developments were formed by dredging canals and using the dirt for fill.

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The St. John Drive development was platted and approved by the Township and signed by the Clerk, Neal P. Merrill, on August 20, 1935. There originally were (78) lots and the street is about one mile long. It was named the Roy T. Gilbert Supervisor's Plat St. Johns Drive.

The Anchor Bay Drive development was created by Will and Luella St. John and Frank Wallace. The plat was approved by the Township and signed by the Clerk, D. A. Pontius, on June 23, 1921. There are (408) lots and the street is a little over two miles long.

There were smaller developments in the area, such as the Avers Subdivision in Pearl Beach which was approved on November 13, 1917. There are (16) lots in the development. The Ventura Beach development that was approved on January 30, 1920 was created by Frank G. and Isabella Baxter and Howard G. and Mabelle Witherspoon.

Along with shipping and shipbuilding industries, there were three salt mines that operated in Algonac and Clay Township. The Algonac Salt Company and a salt company operated by Mark Moore and Charles DeBeau, both located on Pointe du Chene, and the Walton Salt Association operated by Albert Miller located in Pearl Beach, just east of the current Sassy Marina. They were short lived businesses, with the Walton company lasting the longest, 20 years.

## HARSENS ISLAND AND THE FLATS

The Harsens Island, St. Clair Flats, Algonac and Mainland Clay Township area is considered one of the largest fresh water deltas in the world. This delta also extends into Canada to the southeast. It is a unique area in that it is comprised of several major waterways. The St. Clair River, the North, South, Middle and Sni Bora Channels. There are numerous smaller channels, cuts, bays and water highways called the Big and Little Muscamoot, Goose, Baltimore, Fisher, Maybury, etc., and natural and dredged canals and ditches. Some waterways are navigable and some are not. The largest islands in the American portion of this delta are Harsens Island and Dickinson Island (formerly known as Laughton, then Stromness). There are several strings of small islands that extend from the large islands. This area is known as the St. Clair Flats. For years the delta has been called the Venice of America.

Early missionaries and explorers called the lower St. Clair River area The Great Green Meadows. The land through which the river flows is level, so level that a traveler wrote over 100 years ago, "another barrel of water would overflow the fields."

An unusual natural feature is that the delta was formed by the St. Clair River. One would think that the silt would be deposited by Lake St. Clair, since the river is its outlet. However, geological investigation proves that the deposit of fine sand and clay is derived by the action of waves on the shores of Lake Huron and river tributaries and from the St. Clair River itself, instead of Lake St. Clair, as would be expected.

The earliest industry on the delta, the Harsens Island, St. Clair Flats area, was fur trading between the French and Indians. As early as 1615 Frenchmen had come to the shores of the St. Clair River, then known as the River Huron, to trade for the fine furs trapped by the Indian tribes.

Harsens Island later became British territory. The dividing line ran along the North Channel, but a later survey moved the line to the South Channel and gave it to the United States. This area has been under the control of France, Great Britain and the United States.

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Harsens Island , the largest island on the delta, was named after Jacob Harsen, a gunsmith, who arrived there about 1778. He purchased the island from the Indians. Isaac Gravereat, Harsen's son in law, came with him. Gravereat died shortly after arriving, leaving his wife and four children with Harsen's family of 5 sons, Bernard, James, Francis, William and Jacob II and 2 daughters, Mary and Sarah. These families were the first white settlers between Detroit and Mackinac.

A survey of the island was made after the deaths of Bernard and Mrs. Gravereat. The survey divided the island into five parts, approximately 640 acres each, a part for each of Jacob Harsen's surviving children. The four parts were sold off in various acreage sizes through the years including parts of the homestead acreage. The balance of Harsens Island was shown as Unimproved Marsh and Low Prairie.

Harvey Stewart was the pioneer of the family of Stewarts who settled on the island early in the 1800s. Mary Gravereat was Stewart's second wife. He managed a distillery at that time. It was one of the first distilleries in Michigan, and at one time during the War of 1812 served as a British fort. The families living on the island moved to Detroit for a period during the War of 1812, but returned after a short time. The whiskey produced at the distillery was used for trade with the Indians who brought furs and wild meat to Stewart's settlement. Stewart was also Clay Township's first supervisor, serving from 1828 to 1833 and again in 1842.

In 1818, Aura P. Stewart persuaded John K. Smith to teach at the first school on the island, which was the first school in St. Clair County. While there were only three families on the island, pupils from across the channel brought enrollment to twelve. In addition to the Harsens and Stewarts, the principal families in the area were the Chartiers, Minnies, Basneys and the Hills. Very likely, the Chartier, Shorkey and Basney families are descendants.

During this era, the North Channel was the main shipping channel, because it had the water depth for the ships of that time. There was a problem with a sand bar out in the bay at the outlet of the North Channel. The ships upon arriving at the bar would have to drop anchor. There were smaller boats that would be used to unload some of the cargo to reduce the ship's draft. The ships would then continue past the bar to deeper water with the smaller boats following. Upon reaching the deeper water, the cargo would be reloaded onto the ships and they would proceed. That is how Anchor Bay got its name.

From 1821 to the end of the century, the area was primarily used for agriculture on the higher, drier lands of Harsens and Dickinson Islands. However, there were periods when other enterprises contributed to the area. Beginning in 1840 and continuing until the Civil War, shipbuilding was a prominent activity on Harsens Island. The schooner Island City was built there in 1859, as well as a number of other ships, including several of the Newberry Fleet based in Detroit. Also, prior to construction of the St. Clair Flats Ship Canal along the South Channel in 1856, many people were employed to transfer cargo across the bar to and from ships anchored in Anchor Bay, as previously described.

Dredging of the 6000 foot long ship canal on the South Channel initially took place in 1856, and the channel was widened and further deepened in 1857, 1872 and 1886. This opened the door to the resort era in the area by allowing steam ferries to service the route between Detroit and Port Huron. A number of resort hotels quickly developed along the South Channel, including the famous Joe Bedore's Hotel. At first, the White Star Steamship Line served the area, making no less than 13 stops in The Flats itself. Round trip fare between Detroit and Port Huron was 50 cents. The most famous steamship on this route was the Tashmoo, which was fondly referred to as the Glass Hack. From her launching in 1899 until the end of her service in 1936, the Tashmoo was the undisputed queen of the St. Clair Flats run.

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The resort era overlapped the Prohibition era, and the island became very popular because of being on the Canadian border. Nearly everyone in the area was a Rumrunner of sorts in those days. It was almost impossible to catch anyone in the marsh and canals because there were so many places to hide. A combination of events brought the Island's resort area to an end. The sinking of the Tashmoo, the end of prohibition, the automobile and the succession of costly hotel fires were among them. The only hotel surviving today is the Idle Hour, now a private club, the Idle Hour Yacht Club. In addition, The Old Club, organized in 1872 as the private Lake St. Clair Fishing and Shooting Club, is still in existence.

In 1921, a few men who had a vision of the future, ventured to lease a large acreage of marsh below Harsens Island for right of way for a road. Nearly one hundred acres were given to the County so the State could build this road which was a necessity. In March 1926, a group of residents met and formed the Green Drive Committee. The first committee consisted of Jules W. Bern, Chairman, Wm. H. Green, Jr., Louis W. Lindeman, Otto Helm, Wm. J. Windisch, Secretary, Jas. Clay, Wm Beyster and Jas. Bell. It was the efforts of these individuals and those who followed on the committee that resulted in the existence of Green Drive.

## RUSSELL ISLAND

Russell Island is located between Algonac and Walpole Island and separates the St. Clair River into the North and South Channels. The south side of the Island is separated from Harsens Island by a narrow channel called the Indian Cut, which runs between the North and South Channels. Russell Island is actually (3) islands, comprised of approximately (200) acres, divided by canals and cuts and connected by wooden bridges. It is a private island with more than (100) cottages; there is no public land on the island. The only access to the Island is by private boat or the passenger ferry "Islander", presently owned and operated by Bud Breitmeyer. However, for many years, in the early part of the century, passenger steamships such as the Tashmoo, Wauketa and the Owana made regular stops at Russell Island during the summers. The "Islander" docks next to the Walpole Island ferry at the U. S. Customs and Immigration dock in the Algonac city park

The first person to attempt to settle on Russell Island was Christian Frederick Denke, a Moravian missionary from Nazareth Hall, PA. He came in the spring of 1802 to establish a mission for the Chippewas with the permission of Chief Nangi who was camping on Pointe du Chene. Denke was staying with the Harsen family while he was building a cabin on Russell Island. Denke finished the cabin on Russell Island and continued to work with the Chippewas. He translated Bible passages and hymns into the Chippewa language, by candlelight, at a hand-hewn table. However, the Chippewa's were more hungry for food than for the word of God and Denke's small crop of potatoes and tobacco did not last long. They eventually became hostile toward Denke because they blamed him for the government's action prohibiting liquor sales to the Indians. He then abandoned the mission on Russell Island in March 1803.

Lewis I. Brakeman and his wife Candace are known to have settled there shortly after the War of 1812. It appears that Brakeman's right to the land north of Canoe Cut was recognized under an agreement with the Harsens who owned and occupied the private claims on the upper part of Harsens Island. \*\* This property was later called Indian Island.

A portion of the Island came into the ownership of Ernestus Corning. In 1855, he and his wife Harriet conveyed ownership to Samuel Russell.

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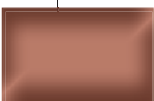
Samuel Russell owned Russell Island from 1855 to 1858. Mr. Russell was one of the most prominent men in the county and held many positions of trust. He was a man in politics, and was connected by ties of kinship with one of the oldest and most cultured families in the State. He was Custom House Officer in 1856, Clay Township Justice of the Peace in 1861, Sheriff of St. Clair County in 1865 and 1866 and was Clay Township Supervisor in 1862, 1869, 1871, 1875 and 1876. Mr. Russell died at Algonac, December 31, 1879. The Island was named after this prominent pioneer.

About 1905, Algonac businessmen put up \$1,700, obtained through voluntary subscription and taxes, in order to secure control of Russell Island from the Detroit, Belle Isle. & Windsor Ferry Co., to create a summer resort.

They constructed Camp Algonac, a tent city also called White City, on Russell Island. Excursions ran from Pittsburgh, PA, Cincinnati, OH, Terre Haute, IN and other inland cities. The passengers arrived in Detroit by train, took the steam boats to Algonac and were ferried to the Island in naphtha launches to the dock at Camp Algonac. An advertisement boasted "In All The World, No trip Like This." The Island was described as the "Gem Of The Great Lakes." The camp was approximately (187) acres, in the center of which was a beautifully shaded oak grove of (43) acres with walks, swings and rustic seats. There was a constant moving panorama of steam ships passing the island averaging one every four minutes. Twelve to twenty huge freighters at one time passing up and down the South Channel was a common sight. The population of the Island sometimes numbered 2,000 at a time.

The original plat of the island was revised in 1920 to provide additional drainage through the construction of a longitudinal canal commencing at the upper end of the Island on the North Channel. In 1927, the lower island was made habitable by a canal paralleling the South Channel and intersecting the Canoe Cut at right angles.

The Russell Island Property Owners Association represents the local interests of the Islanders, maintains the Association playgrounds and docks, subsidizes the passenger ferry. The only transportation to get about the Island is by bicycle, powered golf cart or by foot. Once each spring and fall, an auto caravan is scheduled and Champions Ferry makes a special trip to enable cottagers to transport the kind of articles and equipment which require a car. In the winter cottagers cross to Harsens Island, leave their cars at the Grand Pointe Cut and walk up the shore and cross Indian Cut. Despite the fact that there comes a time when the spring thaw and an ice jammed river make the Island inaccessible, there is a firm determination on the part of most Islanders against joining Harsens and Russell Island by a road. Cottagers are quite willing to sacrifice the obvious convenience of driving to their back doors for the privilege of being far from the multitude of problems which seem to invariably accompany the automobile.



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**CLAY TOWNSHIP  
ST. CLAIR COUNTY, MICHIGAN  
PLANNING COMMISSION RESOLUTION TO ADOPT MASTER PLAN**

WHEREAS, the Michigan Planning Enabling Act (MPEA) authorizes the Planning Commission to prepare a Master Plan for the use, development and preservation of all lands in the Township; and

WHEREAS, the Planning Commission prepared a proposed new Master Plan and submitted the plan to the Township Board for review and comment; and

WHEREAS, on September 12, 2012 the Clay Township Board received and reviewed the proposed Master Plan prepared by the Planning Commission and authorized distribution of the Master Plan to the Notice Group entities identified in the MPEA; and

WHEREAS, notice was provided to the Notice Group entities as provide in the Michigan Planning Enabling Act; and

WHEREAS, the Planning Commission held a public hearing on September 12, 2012 to consider public comment on the proposed new Master Plan, and to further review and comment on the proposed new Master Plan; and

WHEREAS, the Planning Commission finds that the proposed new Master Plan is desirable and proper and furthers the use, preservation, and development goals and strategies of the Township;

THEREFORE BE IT HEREBY RESOLVED AS FOLLOWS:

1. **Adoption of 2012 Master Plan.** The Planning Commission hereby approved and adopts the proposed Master Plan, including all of the chapters, figures, maps and tables contained therein.
2. **Distribution to Township Board and Notice Group.** Pursuant to MCL 125.3843 the Township Board has asserted by resolution its right to approve or reject the proposed Master Plan.
3. **Findings of Fact.** The Planning Commission has made the foregoing determination based on a review of existing land uses in the Township, a review of the existing Master Plan provisions and maps, input received from the Township Board and public hearing, and with the assistance of Community Planning & Management, PC, and finds that the new Master Plan will accurately reflect and implement the Township's goals and strategies for the use, preservation, and development of lands in Clay Township.

The foregoing resolution offered by Commissioner Schweikart.

Second offered by Commissioner Cahill.

Upon roll call vote the following voted:

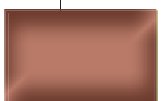
"Aye": Krueger, Schweikart, Simon, Holcomb, Cahill, DeBoyer.

"Nay": None

Absent: Antkowiak, Keller, Blair

Therefore it is resolved.

*Kathie Schweikart*  
Planning Commission Secretary



## RESOLUTION TO ADOPT CLAY TOWNSHIP MASTER PLAN

At a regular meeting of the Township Board of Trustees of the Township of Clay, County of St. Clair, State of Michigan, held in the Clay Township Meeting Hall on Monday October 15, 2012 at 7:30 p.m. with the following in attendance:

PRESENT: Supervisor Krueger, Clerk White, Trustee Straffon, Trustee Fetter, Trustee Horvath, Trustee Shirkey

ABSENT: Treasurer Turner

The following preamble and resolution was offered by Shirkey and supported by Straffon:

**WHEREAS**, the Michigan Planning Enabling Act (MPEA) authorizes the Planning Commission to prepare a Master Plan for the use, development and preservation of all lands in the Township; and

**WHEREAS**, on October 15, 2012 the Clay Township Board received and reviewed the proposed Master Plan prepared by the Planning Commission and authorized distribution of the Master Plan to the Notice Group entities indentified in the MPEA; and

**WHEREAS**, notice was provided to the Notice Group entities as provided in the MPEA; and

**WHEREAS**, the Planning Commission held a public hearing on September 12, 2012 to consider public comment on the proposed new Master Plan, and to further review and comment on the proposed new Master Plan; and

**WHEREAS**, the Township Board finds that the proposed new Master Plan is desirable and proper and furthers the use, preservation, and development goals and strategies of the Township;

**WHEREAS**, the MPEA authorizes the township Board to assert by resolution its right to approve or reject the proposed Master Plan;

### **NOW THEREFORE BE IT RESOLVED THAT:**

- 1. Adoption of 2012 Master Plan:** The Township Board hereby approves and adopts the proposed 2012 Master Plan, including all of the chapters, figures, maps and tables contained therein. Pursuant to MCL 125.3843 the Township Board has asserted by resolution its right to approve or reject the proposed Master Plan and therefore the approval granted herein is the final step for adoption of the plan as provided in MCL 125.3843 and therefore the plan is effective as of October 15, 2012.
- 2. Distribution to Notice Group.** The Township Board approves the distribution of the adopted plan to the Notice Group.
- 3. Findings of Fact.** The Township Board has made the foregoing determination based on a review of existing land uses in the Township, a review of the existing Master Plan provisions and maps, input received by the Planning Commission and public hearing, and finds that the new Master Plan will accurately reflect and implement the Township's goals and strategies for the use, preservation, and development of lands in Clay Township

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Roll Call vote was as follows:

AYES: Krueger, White, Straffon, Fetter, Horvath, Shirkey

NAYES: None

ABSENT: Turner

This Resolution was adopted on October 15, 2012.

*Lisa M. White*

Lisa M. White

Clay Township Clerk

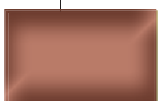
**CERTIFICATION**

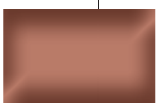
The undersigned Clerk of the Township of Clay, hereby certifies that the foregoing constitutes a true and complete copy of a Resolution adopted by the Clay Township Board of Trustees of the Township of Clay, County of St. Clair, Michigan at a meeting held on October 15, 2012 at which six (6) members of the Township Board were present and voted as indicated, that said meeting was held in accordance with the Open Meetings Act of the State of Michigan, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been made available as required by said Act.

*Lisa M. White*

Lisa M. White

Clay Township Clerk





**CLAY TOWNSHIP**  
Master Land Use Plan



# REGIONAL ANALYSIS

1

# What to Take From This Section

## OVERVIEW

The Master Plan for Clay Township was last adopted in 2002 (an amendment to the Master Plan). Since that time the Community has determined that a new Plan is necessary to take the Township into the next decade. In addition, the State now requires that Master Plans are reviewed every five (5) years to ensure that the goals and objectives of the community are still accurately portrayed.

This Section is the first Section of the Plan. The remainder of the Plan will include sections on demographics, existing land use, physical features, goals and objectives, residential areas, nonresidential areas, community facilities, and transportation among others.

### Clay Township Facts

- Clay Township became a Township in 1828.
- The 37 square mile township includes Harsen's Island, Russell Island, Dickinson Island, Out Islands and Flats, and St. Johns Marsh.
- Ferry Service connects Harsen's Island with the Mainland.
- Clay Township is a center of water recreation and a public pier is located off M-29 at Pearl Beach.
- The Colony Tower, at the southwest corner of Clay Township, has been a registered landmark since the 1920's.
- At one point, the 136 foot Colony Tower housed a 60,000 gallon water tank. It provided water to the Colony's residents.
- Harsen's Island and the St. Clair Flats combine to create one of the largest inland fresh water deltas in the world.
- The Michigan Department of Natural Resources maintains two access sites on Harsen's Island, One on the South Channel and one on the Middle Channel.
- St. John's Marsh is also managed by the DNR and sports an access site and areas for fishing.
- As of 2000 Clay Township had a population of 9,822 at the time being the second highest populated Township in St. Clair County.

Adapted from the Clay Township website

## REGIONAL LOCATION

Clay Township is located at the southern tip of St. Clair County. The Township shares a boundary with Ira and Cottrellville Townships along Genaw and Angling Roads, surrounds the City of Algonac and contains approximately 37 square miles of upland.

The Township is approximately 23 miles south of Port Huron, 7 miles from the City of New Baltimore, and approximately 40 miles to downtown Detroit.

## M-29 GROWTH CORRIDOR

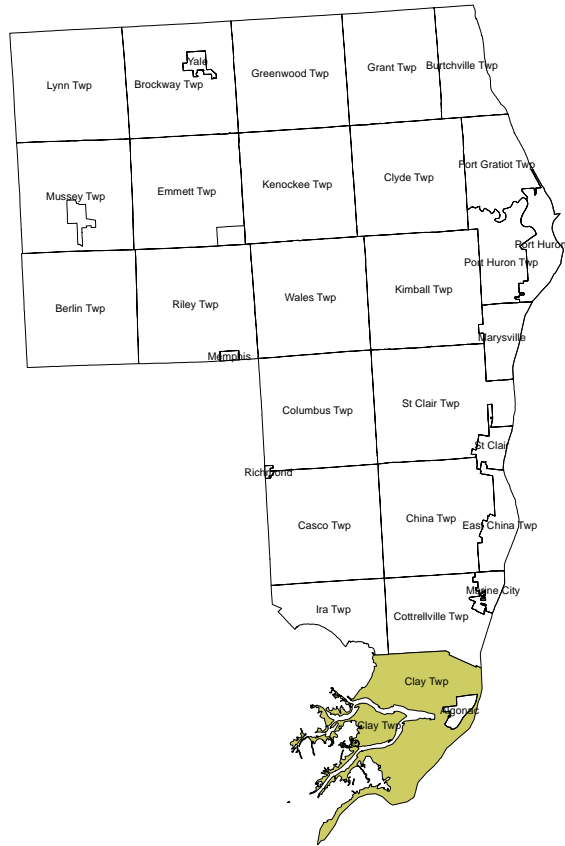
Clay Township lies within the M-29 growth corridor which runs the length of St. Clair County essentially along the coastline. The corridor is made up of a total of twelve (12) communities. These twelve (12) communities account for approximately sixty (60) percent of the total County population.

While I-94 provides the main access in and out of the Township and County on a regional level, M-29 provides the main local access to many of the County's shoreline communities.

As shown in the following text, the County recognizes the importance and impact of the presence of M-29 by establishing the M-29 corridor as the main growth area of the County over the next twenty (20) years.

## INFLUENCE OF STATE OWNED LAND

Clay Township has three (3) major State owned and maintained land holdings and/or parks. These three (3) areas account for well over 7,000 acres of land within the Township. The Algonac State Park is approximately 1,450 acres according to State records (1,300 in Clay Township), the St. Clair Flats consists to approximately 3,400 acres while the St. Johns Marsh is approximately 2,500 acres in size. While these acreages reduce the impacts typically associated with residential or commercial development and also preserve naturally significant areas along the coastlines, the Township receives taxes from these properties, however the rates at which the State pays taxes on these properties are lower than a privately owned parcel of land.



Community	2000	2008
Ira Township	6,966	7,265
Clay Township	9,822	9,662
Algonac	4,613	4,355
Cottrellville Township	3,575	3,931
Marine City	4,652	4,422
East China Township	3,630	3,990
City of St. Clair	5,802	5,879
St. Clair Township	6,423	6,945
Marysville	9,684	10,147
City of Port Huron	32,338	31,229
Fort Gratiot Township	10,691	11,300
Burtchville Township	3,956	3,960
<b>M-29 Corridor Total</b>	<b>102,152</b>	<b>103,085</b>
<b>St. Clair County</b>	<b>164,235</b>	<b>171,214</b>
<b>Percentage Total of Entire County</b>	<b>62%</b>	<b>60%</b>

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## IRA TOWNSHIP MASTER PLAN

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### Rural Conservation

The Rural Conservation District encompasses the largest portion of the Township, including the north, central and eastern sections of the Township and envisions lots of 3.5 acres or greater. This is consistent with the current development patterns of the area. This is also the most sparsely developed portion of the Township. It is the area of the Township in which public sewer service is never expected to be available. Finally, most of the Township's remaining farmland is confined to this area. The majority of these farms are typically hobby or recreation farming activities. This is the predominate land use within that area which abuts Clay Township on the east side of M-29. The majority of that land area which abuts both Ira and Clay Townships is part of the St. Johns Marsh and will likely not be developed.

### Urban Moderate Density

The Urban Moderate Density designation plans for densities consistent with 7,200 square foot lots. This is the Township's most dense single family designation. These areas are planned where public sewer and water infrastructure is existing along the water side of M-29 or Dixie Highway. The plan envisions redevelopment of this area due to higher land values along the waterfront. Finally, the Plan does recognize that several existing businesses are located throughout this area as well.

### Planning Influence

As noted above, with the presence of the St. Johns Marsh there will likely be very little influence from a land use planning perspective from Ira Township on Clay Township.

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## COTTRELLVILLE MASTER PLAN

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### Agriculture and Rural Residential

The Agriculture and Rural Residential category establishes those areas where crop farming, animal raising, and rural residential estates can coexist in a very low-density setting. Densities in these areas are not planned to exceed 0.2 unit per acre. In most instances, individual lot sizes would be 5 acres or more in area. Cluster or open space development techniques are encouraged where large tracts of land can be maintained in their natural state by clustering home sites on smaller lots. Open spaces should be connected by undeveloped natural corridors that allow wildlife to move safely between the large open areas. In order to qualify for clustering of smaller home sites, natural open spaces must be set aside in perpetuity. Dedication of these areas to the Township, the County parks authority, or to a local land conservancy are just a few examples of preservation mechanisms that are possible.

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## Waterfront Residential

The Waterfront Residential land use group is intended to promote the historical importance of the St. Clair River in the development of the River Road corridor's residential areas. Densities in this area are expected to be in the range of 1 – 3 units per acre, in recognition of the available sanitary sewer and water service. The character of this area is also very important, and the historical "resort" or "vacation" orientation of the development should not be lost.

## Open Space

Areas designated as open space on the Land Use Plan are primarily dominated by significant natural features such as woodlands, wetlands and floodplains. The intent of this category is the preservation and enhancement of existing natural features to the maximum extent possible. Uses should be very low-impact, such as passive recreation and conservation areas, as more intense development of these areas would likely be constrained by the natural features of the site. While development in surrounding areas should be designed to exert minimal impacts on sensitive natural features, open space areas should be appropriately incorporated into adjacent residential development as well as utilized as natural buffers between land uses of different intensities.

## State Park

The Township anticipates the continued use of the Algonac State Park and recognizes this as an important resource for residents inside and outside of Cottrellville Township.

Above text taken from the Cottrellville Township Master Plan

## Planning Influence

The vast majority of the boundary between Clay Township and Cottrellville Township is planned for Agriculture and Rural Residential which envisions lots of at least five (5) acres in size. Two other land uses can be found along the mutual boundary. Those include the State Park as well as Waterfront Residential. The Waterfront Residential designation anticipates the preservation of the current character in this area. Therefore it does not appear that the planning policies of Cottrellville Township will greatly impact Clay Township.

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## CITY OF ALGONAC

### One Family Residential

The City of Algonac Master Plan does not provide any specific density expectations. It does however anticipate a total of approximately 4,839 dwelling units within the entire City. Of which a total of 2,843 of them would be single and two family residences. It can be assumed that the existing single family residential densities were envisioned by the Master Plan. One Family Residential is the primary land use designation found along the City and Clay Township's mutual boundary.

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### Multiple Family Residential

As a part of the overall calculations for future swellings within the City, a total of 1,996 dwelling units were foreseen as being multi family units. Aside from this total, no mention was made in the Plan in terms of overall multiple family residential. Those areas between Fruit and Summer Streets were shown as Multiple Family Residential as was the land area behind the commercial development on the north side of Pointe Tremble Road.

### Marina Residential

The Master Plan calls for the development of these areas with boating facilities, boat orientated commercial and some multiple family residential to further promote Algonac as a tourist areas which would add to the tax base. This area is located to the south of M-29 or Pointe Tremble Road as one enters the City.

### General Business

The Master Plan recognizes that the land area on the north side of Pointe Tremble was already developed for commercial purposes such as auto sales, auto service stations, etc, and in an effort to allow such uses the right to expand planned the area for such.

### Planning Influence

The City of Algonac has a long established land use pattern which will likely not have a drastic impact on the land use decisions of the Township. The outlying areas of the City have a slightly different character than those in the immediate downtown which more closely match those within the surrounding Township properties

## Urban and General Services - 10 Years and Urban and General Services - 20 Years

The Urban and General Services District (UGSD) is along the eastern and southern shore and in inland communities of Adair, Allenton, Avoca, Berville, Capac, Goodells, Memphis, Rattle Run, and Yale. These are areas of existing higher residential, commercial, and – in several cases – industrial use densities. Investing in public infrastructure will lead to even higher densities which are capable of supporting infrastructure and a full-range of public services. With planned developments and proper provision of public services, the UGSD has more than sufficient land area to accommodate all of the residential, commercial, and industrial growth expected within St. Clair County between 2008 and 2030. The UGSD anticipates a 20-year planning period during which higher density development and public services will be focused and directed. The 10-year and 20-year boundaries closely approximate the differences between existing water and sewer service areas and planned water and sewer service areas. By directing growth toward this district, the County hopes to preserve the rural character and agricultural quality that exists in the northwest part of the county.

## Sensitive Environments

Sensitive Environments are the county's wetlands, floodplains, forests, and stream corridors. These areas are sensitive because of the land and vegetation, and they are valuable as habitat for the animals that live there. They also have economic value. People like to live in areas where birds chirp and deer leave tracks in the snow. Tourists like to visit pleasant places where quiet abounds. These are the characteristics of sensitive areas. It is important to remember that the influence of these Sensitive Environments goes beyond their immediate physical boundaries. Animals that live within Sensitive Environments require adjacent buffer zones to roam without danger from humans and to avoid being considered pests.

## Forest Preservation Areas

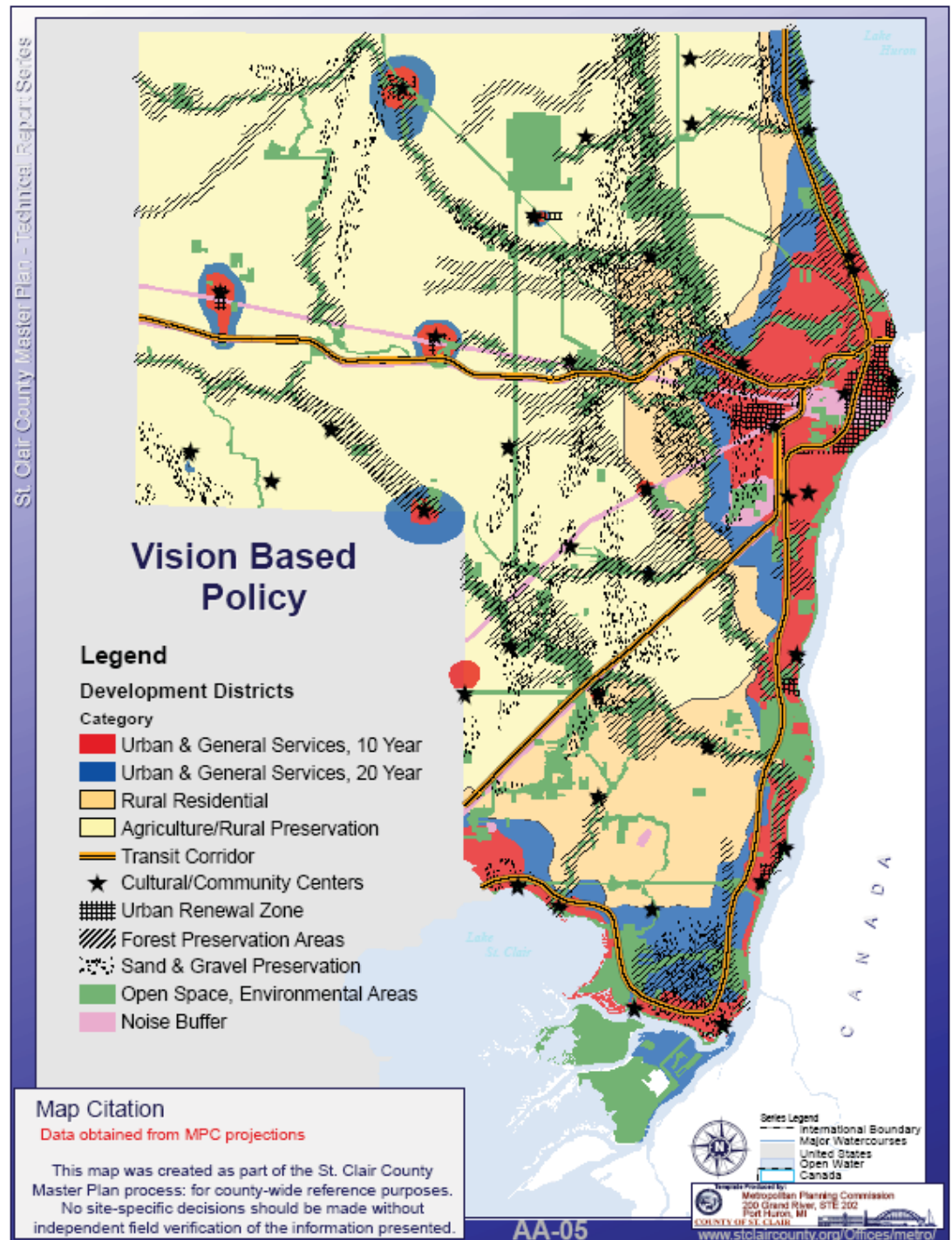
St. Clair County was once home to vast forests. Only six general forested areas still exist within the county, but they are neither large nor contiguous. In some places, woodlots within these Forest Preservation Areas are separated by several acres of open land. Forest Preservation Areas are like roses near the county's most developed urban centers. As such, they are greenbelts that buffer dense development from less-dense development, help define rural character, and provide a refreshing get-away for city dwellers and rural residents.

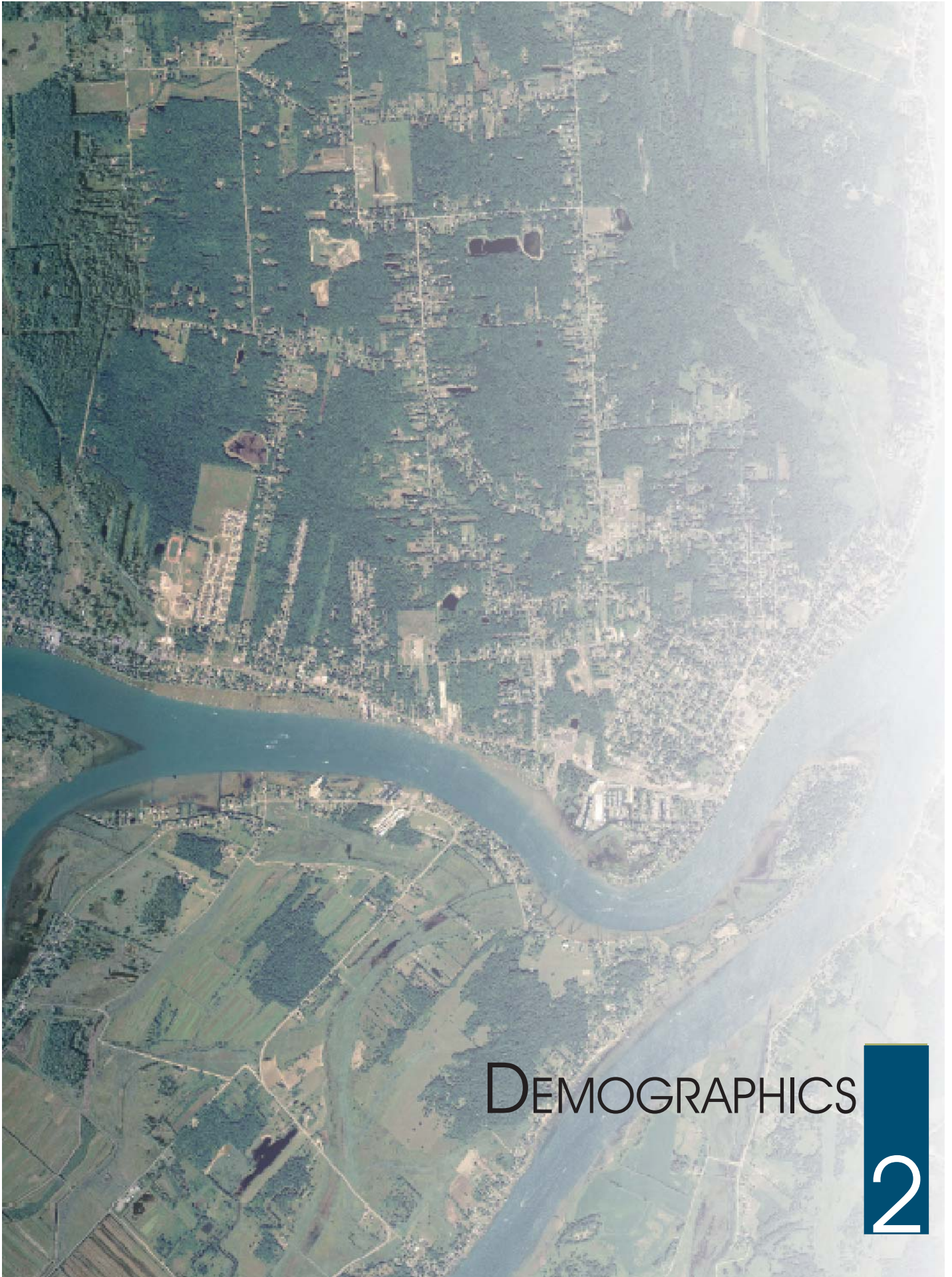
## Sand and Gravel Resources

Sand and Gravel Resources are areas where sand and gravel deposits still exist in the county. These deposits are currently being mined in small quantities and are in danger of being taken for granted. However, as populations grow in St. Clair County, sand and gravel resources will become important assets for use in private septic systems, for building foundations, and as roadbeds.

## Transit Corridor

Between 2007 and 2020, the major employment center within St. Clair County is expected to shift from the Port Huron/Marysville area to the southern part of the county. However, the primary residential centers will remain in Port Huron and Marysville. Therefore, a public transportation corridor will be desirable, if not necessary, to help people travel from their homes to places of employment and to regional shipping and educational centers. Buses would likely be the primary public vehicles on this corridor, but other forms of public or non-motorized transportation could also be possible.





# DEMOGRAPHICS

2

# What to Take From This Section

## AGING OF CLAY TOWNSHIP

As is the case with many communities in Southeast Michigan, the overall median age of the residents of Clay Township continues to rise. Over the last two decades, this age increase has become very evident. The median age has increased by over three (3) years, while the number of people above age 55 continues to grow. However, the increase of middle age and seniors is subtler than in other parts of Southeastern Michigan. The number of pre-school and school-aged children remained fairly constant from 1990-2000, unlike neighboring areas in the region.

## POPULATION GROWTH FOLLOWING 2000-2008 DECLINE

Although Census data shows a slight population decline between 2000 and 2010, SEMCOG's overall predictions foresee overall population growth in the Township through 2030, an increase of 2,292 persons over the 30 year period (2000-2030) respectively.

## DECLINE IN HOUSEHOLD SIZE

Consistent with national, statewide, regional, and county-wide trends, the number of persons residing in one household has continued to decline since 1980. The average household size in Clay Township is lower than the county-wide and statewide average. Less people per household in turn yields a greater number of households from 1990 to 2000 the persons per household declined from 2.63 to 2.5. The number of households, therefore, increased during this period from 3,365 in 1990 to 3,934 in 2000.

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## INTRODUCTION

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The purpose of this examination is to identify the characteristics of the population and local employment base and to reveal what trends are occurring and what opportunities may exist for future land use development activities. The characteristics of a community's population are among the key ingredients given consideration in the long-range planning process.

Historical and current population trends have several useful applications. They are especially relevant in identifying the need for various types of community facilities. Future land use and public utility demands are also related to population growth trends and demographic characteristics. Conclusions and the potential planning policy implications of this data are also noted.

- Population change over time
- Age characteristics
- Household characteristics
- Population projections
- Employment characteristics

The most current available population data for Clay Township is employed in the examination of each of the topics. Wherever possible, comparable data for St. Clair County is also included. Information for the County is provided for the purpose of understanding the relationship of the Township to the southeast Michigan metropolitan area.

## POPULATION CHANGE

Since the 1960s and 1970s, the Detroit Metropolitan area has been characterized by population growth and by a significant geographical shifting of population. Evidence of this phenomenon can be seen from the data presented in Tables 2-1 and 2-3.

The City of Detroit, the largest city in the region, has shown continued decreases in population, most of which occurred between 1970 and 1980. Between 1970 and 2000, the City of Detroit lost 561,623 people, a decrease of 46.6 percent. This trend continued between 2000-2010 with another substantial loss of approximately 25 percent of the City's population.

Opposite the City of Detroit's declining population trend was an increase of population in the outer counties. In addition to the City of Detroit's population declines, Wayne County experience declines as a whole, albeit substantially less than the City. Thus, it can be seen that many of the residents moving from Detroit and Wayne County have located to suburban and rural areas throughout the remainder of the Tri-County area and in other areas of the metropolitan region. Data in Table 2-3 documents regional population trends. As evidenced, St. Clair County experienced relatively stable growth, with only a one percent decline over the last 10 years. Macomb County had the most significant growth, increasing its population by approximately 7 percent.

As with many communities throughout southeast Michigan, the Township saw a decline in the total population for the first time in a number of decades. The Township, until the last decade had been subjected to considerable and consistent population growth for nearly 50 years. It has been one of the fastest growing communities in St. Clair County since 1940. This is likely due to urban services and infrastructure being available as well as the Township's location on the water. Table 2-1 shows Clay Township's population growth since 1970 relative to abutting governmental units.

Population change for Clay Township and its neighboring communities between 1970-2010 is shown in Table 2-2. Census data accounts for years 1970-2010.

Table 2-1 Comparative Growth					
Community	1970	1980	1990	2000	2010
Clay Township	6,732	8,518	8,862	9,822	9,066
Algonac	3,684	4,412	4,551	4,613	4,110
Cottrellville Township	2,194	3,075	3,301	3,575	3,559
Ira	3,612	4,316	5,587	6,966	5,178
St. Clair County	120,175	138,802	145,607	164,235	163,040

Table 2-2 Comparative Growth (% Increase)				
Community	1970-1980	1980-1990	1990-2000	2000-2010
Clay Township	1,786 (21)	344 (4)	960 (10)	-756 (-8)
Algonac	728 (17)	139 (3)	62 (1)	-503 (-11)
Cottrellville Township	881 (29)	226 (7)	274 (8)	-255 (-7)
Ira	704 (16)	1,271 (23)	1,379 (9)	-1,788 (-26)
St. Clair County	18,627 (13)	6,805 (5)	18,628 (11)	-1,195 (-1)

2-3 Regional Population Trends									
Area	1990 pop.	Change 1980-1990		2000 pop.	Change 1990-2000		2010 pop.	Change 2000-2010	
		Number	%		Number	%		Number	%
Clay Township	8,862	344	4	9,822	960	9.7	9,066	-756	-8
St. Clair County	145,607	68,051	5	164,235	18,628	11.3	163,040	-1,195	-1
Macomb County	717,400	22,800	3	788,149	70,749	9	840,798	52,829	7
Oakland County	1,083,592	71,799	7	1,194,156	110,564	9.3	1,202,362	8,206	1
Wayne County	2,111,687	-226,204	-10	2,061,162	-50,525	-2.5	1,820,584	-240,578	-12
Wayne County (ex. Detroit)	1,083,713	-50,839	-5	1,109,892	26,179	2.4	1,106,807	-3,085	-3
City of Detroit	1,027,974	-175,365	-14.6	951,270	-76,704	-8.1	713,777	-237,493	-25

## AGE

Age characteristics are among the more important demographic variables. They are useful as an indicator of an anticipated demand for various types of municipal services and programs, including parks, employment needs, job training, day-care, schools, and services to various other age groups, including the elderly. The Township's future use needs are also related to its age configuration.

### Median Age

The steady aging of the nation's population was among the more important trends shown by the last four censuses. After many communities reached a high in 1950, many locations witnessed their median age decline the following two decades (1960 and 1970). These declines were largely a response to the high birth rates that occurred during the baby boom years following World War II. However, that trend has changed dramatically and with the aging of the baby boom children since that time. Lower fertility rates and increasingly longer life spans have also contributed to the increase.

As noted below, the median age of a resident within the Township has risen substantially over the last three (3) Census periods. As of 2010, the median age of a resident in the Township was 48.8 years, while the County's still rose but was significantly lower than the Township's at 41.3 years of age.

Table 2-4 Median Age			
	1990	2000	2010
Clay Township	37.1	40.9	48.8
St. Clair County	32.9	36.4	41.3

## POPULATION BY AGE LIFE CYCLE

By reviewing the various age categories that the US Census found for Clay Township's population, it is possible to determine how various segments of the population have changed over time and what impact these changes have had on the Township growth.

Age	1990		2000		Change	2010		Change
	Number	%	Number	%		Number	%	
Under 5	536	6	500	5.1	-36	373	4.1	-127
5-9	590	6.7	628	6.4	38	390	4.3	-238
10 - 14	590	6.7	677	6.9	87	463	5.1	-214
15-19	610	6.9	628	6.4	18	551	6.1	-77
20-24	560	6.3	424	4.3	-136	413	4.6	-11
25-44	2662	30	2771	28.2	109	1,745	19.3	-1026
45-54	1189	13.4	1584	16.1	395	1,675	18.4	91
55-59	417	4.7	735	7.5	318	852	9.4	117
60-64	474	5.3	509	5.2	35	779	8.6	270
65-74	785	8.9	764	7.8	-21	1,122	12.3	358
75+	449	5.1	602	6.2	153	703	7.8	101
Totals	8862	100	9822	100	960	9,066	100.0	756

A more meaningful picture of the township's population age distribution is possible when the individual age categories shown on the previous table are combined into a smaller number of groups, which more closely resemble identifiable stages of a normal human life cycle. Selected categories and the age intervals that they represent include: pre-school (0- 4), school (5-17), family formation (18-44), middle age (45-64), and seniors (65+). The percent of the Township's population that falls into each of these categories is shown in table 2-6. Available information for 2000 and 2010 is shown. Similar data for St. Clair County is also provided for comparison purposes. Each of the life cycle stages reflected in the following table has important meaning for planning.

Category	2000		2010	
	Clay Twp.	St. Clair County	Clay Twp.	St. Clair County
Pre-School (0-4)	500 (5.1%)	10,074 (5.9%)	373 (4.1)	9,288 (5.7)
School Age (5-17)	1,721 (17.5%)	31,209 (18.2%)	1,404 (15.5)	33,588 (20.6)
Family Formation (18-44)	3,407 (34.7%)	62,821(36.6%)	2,158 (23.9)	47,461 (29.2)
Middle Age (45-64)	2,828 (28.8%)	45,768 (26.7%)	3,306 (36.4)	49,032 (30)
Seniors (65+)	1,366 (13.9%)	21,853 (12.7%)	1,825 (20.1)	23,671 (14.6)
Totals	9,822	171,725	9,066	163,040

The pre-school and school-age categories, for example, offer useful indicators of future school enrollment trends and the adequacy of existing facilities to meet these needs. The pre-school age population has shown a significant decrease from 2000-2010. This trend was apparent as well in the decade between the 1990-2000 Census as well. These decreases were opposed by significant increases in those residents in the Middle Age and Senior categories.

## HOUSEHOLDS

The U.S. Census Bureau has two (2) categories that it uses to describe living arrangements: households and families. A household is one person or a group of persons occupying a housing unit. The number of households and occupied housing units are, therefore, identical. Families, on the other hand, consist of two (2) or more persons, related to each other, living in a household.

Table 2-7 Household Growth Trends

			Change 1990-2000				Change 2000-2010	
	1990	2000	Number	%	2010	Number	%	
Clay Twp.	3365	3,934	569	14.5	3,947	13	.3	
St. Clair County	52882	62,072	9190	14.8	63,841	1,769	2.8	

Accompanying these increases in household growth was a decline in the size of the average household. At the national level, household size has declined steadily since 1950, when it stood at a level of 3.37 persons per household. By 1980, it has declined to 2.75 persons per household and to 2.59 persons in 2000.

Consistent with broader national and regional trends, average household size in Clay Township has declined in the past three (3) decades. Several factors which may be responsible for this decline that includes birth rate patterns, the distribution of the population on the age spectrum, and lifestyle changes. The first of these factors is referred to as the "baby-boom echo." America experienced a well-documented population growth period following the World War II, commonly known as the baby boom. Children born during this period have reached the childbearing years and have started their own families, creating an echo of the first boom. This echo is not producing the same number of persons that occurred earlier due to significant declines in the birthrate. Women today are having fewer children than their mothers did. Fewer children means smaller families and reduced household sizes. Population distribution patterns also impact household size declines. The aging of the baby boom generation has begun to increase the proportion of those persons that are no longer considered to be likely candidates for parenthood.

Finally the increasing number for single-person households has contributed to this trend. Improved medical care has resulted in an increasing number of persons over the age of 65, many of whom are widows or widowers creating single-person households. Young persons have also shown a tendency to marry later and delay having children until later in their lives. Another consequence of this delay is a corresponding decision to have fewer children. Increases in the divorce rate have also increased the number of new households and contributed to the decline in their overall size.

Such a decline must be considered when analyzing future housing needs in conjunction with population projections, as housing units will be occupied by far fewer people. It is estimated that Clay Township will continue to show a decline in household size, thus increasing the amount of households.

Table 2-8 Household Size

Household Size	1980	1990	2000	2010
Clay Township	2.83	2.63	2.5	2.29
St. Clair County	2.92	2.73	2.62	2.52
Michigan	2.84	2.66	2.56	2.49
United States	2.75	2.63	2.59	2.59

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## POPULATION AND HOUSEHOLD PROJECTIONS

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Projections provide a basis for anticipating future land use and various community service demands. As noted in the previous discussion, the factor that will have the greatest influence on these demands is the anticipated number of new households.

Every five years, SEMCOG prepares a series of Small Area Forecasts for each of the 233 local units of government in the southeast Michigan region. The forecasts include the anticipated number of persons, households, and jobs within each community for each ten-year interval between 2010 and 2035. The SEMCOG forecasts, including the projected number of households and persons per household are in Table 2-9. These forecasts anticipate that by 2035, the population of Clay Township will have reached approximately 11,572 persons.

However, according to the 2010 Census, the population of the Township is on the decline based on current economic conditions. It seems very improbable that by 2035, the population will increase to the level that SEMCOG predicts. This is based on current population trends, existing economic and housing conditions and trends, as well as available land within the Township.

Table 2-9 SEMCOG Forecasts					
Clay Township	1990 Census	2000 Census	2010 Census	2020 SEMCOG	2035 SEMCOG
Population	8862	9822	9066	10,711	11,572
Households	3365	3934	3947	4304	4718

## EMPLOYMENT CHARACTERISTICS

A good measure of the Township's economy and its relationship to southeast Michigan's economic base is employment by place of work collected by the U.S. Census Bureau as well as estimates produced by SEMCOG. SEMCOG estimates that approximately 1,341 workers were employed in Clay Township in 2005. Other projections anticipate that the number of workers in Clay Township will slightly increase to 1,614 by the year 2015 and to 1,984 by the year 2025.

Table 2-11 Employment by Place of Work

Community	2005	2015	2025
Clay Township	1341	1614	1984
Algonac	768	823	893
Cottrellville Township	359	369	401
Ira Township	1078	1154	252
St. Clair County	62384	68123	71661
Clay Twp % of County	2.15%	2.37%	2.77%

In 2005, SEMCOG calculations report the employment of 1,341 in Clay Township. Their future projections predict a slight increase in the number of jobs in the county, reaching 1,984 persons employed in the Township by 2025. Clay Township accounts for 2.15 percent in relationship to the total number of jobs in St. Clair County.

Table 2-12 Employment By Industry

	Clay Township	St. Clair County	Twp. % of County
Natural Resources and Mining	C	214	N/A
Manufacturing	164	9434	1.74
Wholesale Trade	16	1826	0.88
Retail Trade	241	9116	2.64
Transportation & Warehousing	0	2027	2.76
Utilities	C	1225	0
Information	C	1263	N/A
Financial Activities	97	4442	2.18
Professional, Scientific, & Technical	90	2536	3.55
Management of Companies	0	105	0
Administrative	C	2803	N/A
Education	207	5504	3.76
Health Care and Social Assistance	28	8932	0.31
Leisure and Hospitality	209	6429	3.25
Other	173	4074	4.25
Public Administration	C	2454	N/A

C - Confidential. At the sub-regional level, SEMCOG blocked the employment numbers for communities that did not meet minimal publishing conditions in order to keep local establishments confidential. These conditions follow the rule, set up by Michigan law and the U.S. Bureau of Labor Statistics, that no numbers may be published if a cell contains: 1) fewer than three establishments, or 2) an establishment with 80 percent or more of that cell's employment.

Retail Category	St. Clair County Actual Sales (x \$1,000)	Percentage of Total	Clay Township Sales (per household) (x \$1000)	Estimated Sales (Current)	Estimated Sales Households (2020)	Estimated Sales Households (2030)
Motor Vehicle and Parts Dealers	341,189	15.6%	5,143.1	20,942.8	22,136.0	23,334.3
Furniture and Home Furnishing Stores	40,209	1.8%	606.1	2,468.1	2,608.7	2,749.9
Electronics and Appliance Stores	45,017	2.1%	678.6	2,763.2	2,920.7	3,078.8
Building Material and Garden Equipment and Supplies Dealers	143,368	6.5%	2,161.1	8,800.2	9,301.6	9,805.1
Food and Beverage Stores	181,968	8.3%	2,743.0	11,169.5	11,805.9	12,445.0
Health and Personal Care Stores	97,814	4.5%	1,474.5	6,004.0	6,346.1	6,689.6
Gasoline Stations	157,474	7.2%	2,373.8	9,666.0	10,216.7	10,769.8
Clothing and Clothing Accessories Stores	71,485	3.3%	1,077.6	4,387.9	4,637.9	4,888.9
Sporting Goods, Hobby, Book and Music Stores	27,978	1.3%	421.7	1,717.3	1,815.2	1,913.4
General Merchandise Stores	316,525	14.4%	4,771.3	19,428.8	20,535.8	21,647.5
Miscellaneous Store Retailers	41,364	1.9%	623.5	2,539.0	2,683.6	2,828.9
Nonstore Retailers	47,712	2.2%	719.2	2,928.6	3,095.5	3,263.1
Arts, Entertainment and Recreation	26,074	1.2%	393.0	1,600.5	1,691.7	1,783.2
Accommodations	19,766	0.9%	298.0	1,213.3	1,282.4	1,351.8
Food Services and Drinking Places	134,277	6.1%	2,024.1	8,242.1	8,711.7	9,183.4
Health Care and Social Assistance	499,316	22.8%	7,526.7	30,648.9	32,395.1	34,148.8
Total	2,191,536	100.0%	33,035.4	134,520.1	142,184.4	149,881.6

## COMMERCIAL NEEDS

By making some assumptions about spending habits and disposable income, it is possible to estimate the potential current and future commercial acreage needs which generated by the spending habits of the residents of Clay Township. The spending habits for particular retail segments for Township residents were assumed to be the same as those of all of St. Clair County (for which detailed economic census information is available). This percentage breakdown is then applied to the total disposable household income for each household in the Township which then yields total dollars spent in each retail segment specifically for Clay Township residents. This number is then divided by estimated sale amounts per square foot for each retail segment to determine the total number of square feet of commercial space supported. Then based on typical building to land ratios, an estimated commercial acreage which can be supported based on the disposable income of the community can be determined. These calculations are prepared for current household projections (2009) as well as projections for 2020 and 2030.

The purpose of generating the calculations for commercial acreage is to use them to support future land use decisions within the Plan. Based on these calculations, a total of approximately 49 acres of commercial land use can be supported within the Township in 2009. (This does not include the specialty markets of the boat or marina industry. The census does not provide detailed information for such retail activities). According to the existing land use study conducted in 2009, the Township has a total of approximately 152 acres of commercial land use (exclusive of marinas) over 100 acres in excess of what projections show the Township residents can support. This large discrepancy between what the statistical data show can be supported by the community and what has actually been developed can likely be explained by the large seasonal influxes of visitors and fisherman to the area.

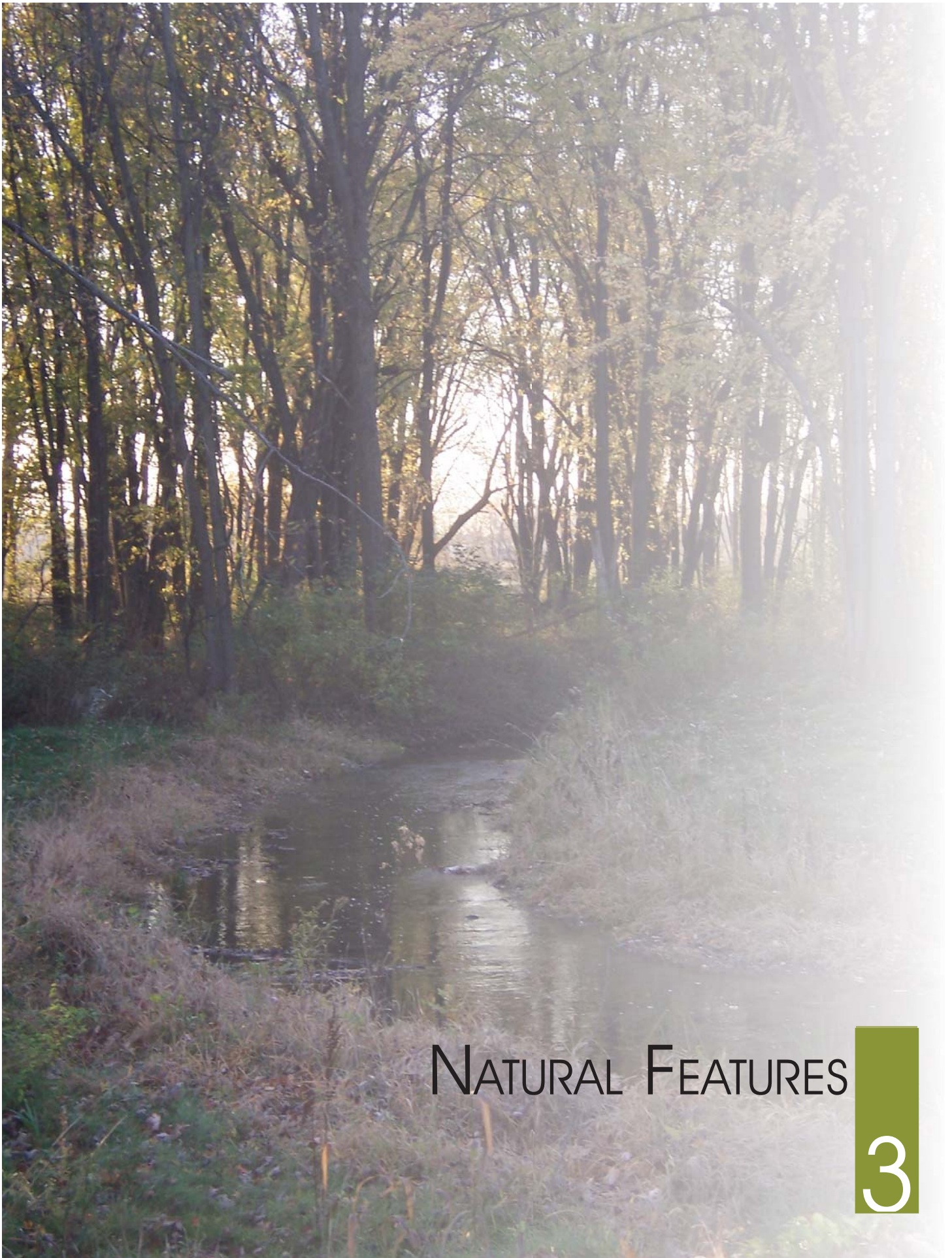
Sales per Square Foot	Square Feet Supported by Study Area (Current)	Estimated Commercial Acreage (Current)	Estimated Square Feet Supported by Study Area (2020)	Estimated Commercial Acreage (2020)	Estimated Square Feet Supported by Study Area (2030)	Estimated Commercial Acreage (2030)
500.0	41,885.5	3.8	44,271.9	4.1	46,668.6	4.3
187.0	13,198.4	1.2	13,950.3	1.3	14,705.6	1.4
237.0	11,659.2	1.1	12,323.4	1.1	12,990.6	1.2
119.0	73,951.0	6.8	78,164.3	7.2	82,395.8	7.6
282.0	39,608.2	3.6	41,864.8	3.8	44,131.2	4.1
251.0	23,920.3	2.2	25,283.1	2.3	26,651.8	2.4
282.0	34,276.7	3.1	36,229.6	3.3	38,190.9	3.5
259.0	16,941.6	1.6	17,906.8	1.6	18,876.2	1.7
210.0	8,177.8	0.8	8,643.7	0.8	9,111.7	0.8
282.0	68,896.6	6.3	72,821.9	6.7	76,764.2	7.0
221.0	11,488.6	1.1	12,143.2	1.1	12,800.6	1.2
221.0	13,251.8	1.2	14,006.8	1.3	14,765.1	1.4
221.0	7,241.9	0.7	7,654.5	0.7	8,068.9	0.7
282.0	4,302.4	0.4	4,547.5	0.4	4,793.7	0.4
282.0	29,227.5	2.7	30,892.7	2.8	32,565.1	3.0
221.0	138,682.6	12.7	146,584.0	13.5	154,519.4	14.2
	536,709.8	49.3	567,288.6	52.1	597,999.2	54.9

Based on SEMCOG projections, by the year 2020, commercial acreage projections only rise slightly too just over 52 acres and then to 54 acres by the year 2030. Therefore, based on simple economic calculations, no additional general commercial acreage is necessary. However destination or specialty type commercial uses may still be viable based on the previously described influxes of visitors spending additional dollars above and beyond that of Township residents.

## Estimated Commercial Needs

<b>CLAY TOWNSHIP HOUSEHOLDS</b> <ul style="list-style-type: none"> <li>2009 4,072</li> <li>2020 4,304</li> <li>2030 4,537</li> </ul>	<b>2009 ESTIMATED COMMERCIAL ACREAGE REQUIREMENTS</b> <ul style="list-style-type: none"> <li>49.3 Acres</li> </ul>
<b>HOUSEHOLD DISPOSABLE INCOME</b> <ul style="list-style-type: none"> <li>\$33,035</li> </ul>	<b>2020 ESTIMATED COMMERCIAL ACREAGE REQUIREMENTS</b> <ul style="list-style-type: none"> <li>52.1 Acres</li> </ul>
<b>2009 ESTIMATED CURRENT COMMERCIAL ACREAGE</b> <ul style="list-style-type: none"> <li>152 Acres</li> </ul>	<b>2030 ESTIMATED COMMERCIAL ACREAGE REQUIREMENTS</b> <ul style="list-style-type: none"> <li>54.9 Acres</li> </ul>





# NATURAL FEATURES

## What to Take From This Section

In a setting such as Clay Township, the preservation and enhancement of the Township's vast amount of environmental features, such as wetlands, woodlands and other identified natural features, is essential to preserving water quality, aesthetics and wildlife habitat. The preservation of these elements is not only key for the Township but also for the region including Anchor Bay and the St. Clair River. Several key aspects of environmental preservation are as follows:

### ENVIRONMENTAL PRESERVATION - WETLANDS AND WOODLANDS

As shown on the following mapping, the Township has extensive woodland and wetland areas remaining, which, is both publicly and privately owned. The St. Johns Marsh provides an extensive publicly owned environmental preservation area, while large areas of the privately owned interior acreage of the mainland are wooded and often deemed to be potential wetland area.

These features need to be preserved either through the purchase of property, through conservation easements, or through sensitive design which respects the fragility of the natural features. This is of particular importance due to the location of the Township in relation to the Bay and surrounding Great Lakes water system. The Master Plan and Implementation section will outline Best Management Practices to accomplish this.

### WATERSHED EDUCATION & PROTECTION

A watershed is a drainage area that is any area of land that drains to a common point. That common point may be a lake, the outlet of a river, or any point within a river system. Clay Township lies within the Anchor Bay Watershed.

It is important for the Township to recognize that any type of development will impact the overall watershed as well as the overall water quality/quantity. The planning efforts of the Township within this Master Plan should be closely tied with the planning efforts identified in the Anchor Bay Watershed Plan and vice versa.



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## SOILS

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Soils play a major role in the long-term development of a community. With Clay Township still in its development phase, the soil patterns have a direct impact on the type and location of development, as well as an impact on watershed issues. Soil types can be a significant help in addressing construction issues relating to infrastructure and the siting of buildings, and in addressing drainage problems in specific areas. A generalized soils map is provided on the following page. Some of the beneficial uses of knowing the general soil characteristics in an area are identified below:

- Siting Houses and Commercial Buildings - Locate soils with the fewest limitations for construction;
- Streets, Driveways and Sidewalks - Identify soils that have a high water table or high clay content, which can cause cracking;
- Underground Utility Lines - Identify soils that have properties that can cause breakage or corrosion of lines buried within them;
- Control of Runoff and Soil Erosion - Construction work compacts the soils and increases the amount of paved surfaces, thus increasing runoff;
- Planting of Gardens and Landscaping - Knowledge of the soils allows a homeowner/business owner to select plantings that have the best chance of survival;
- Providing Suitable Recreation - Identifying soils for the location of trails, play areas and picnic areas require a review of the drainage characteristics of the soil, the slope, the soil texture, the flood hazard and the stoniness.

### SOIL DESCRIPTIONS

#### Well Drained and Somewhat Poorly Drained Soils

- Paulding-Wasepi Association- Ideal for landscaping and is suitable as a foundation material for buildings and streets.




#### Poorly to Somewhat Poorly Drained Soils - Tend to Have a High Water Table or a High Clay Content

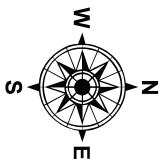
- Latty Association - Because this group of soils is quite sandy, lawns dry out quickly and must be watered frequently. This group is a good foundation material for buildings and streets.
- Wainola-Deford Association - This group is largely found on outwash plains and deltas. Most of these areas are level or gently sloping.
- Boyer-Wasepi-Spinks Association - The major soils have low fertility and low available water capacity. Erosion is a moderate hazard on the sloping soils.
- Bach Association - Large areas of this soil association are still wooded. The major soils in this association have a very high seasonal water table and are subject to periodic flooding.

# CLAY TOWNSHIP

ST. CLAIR COUNTY

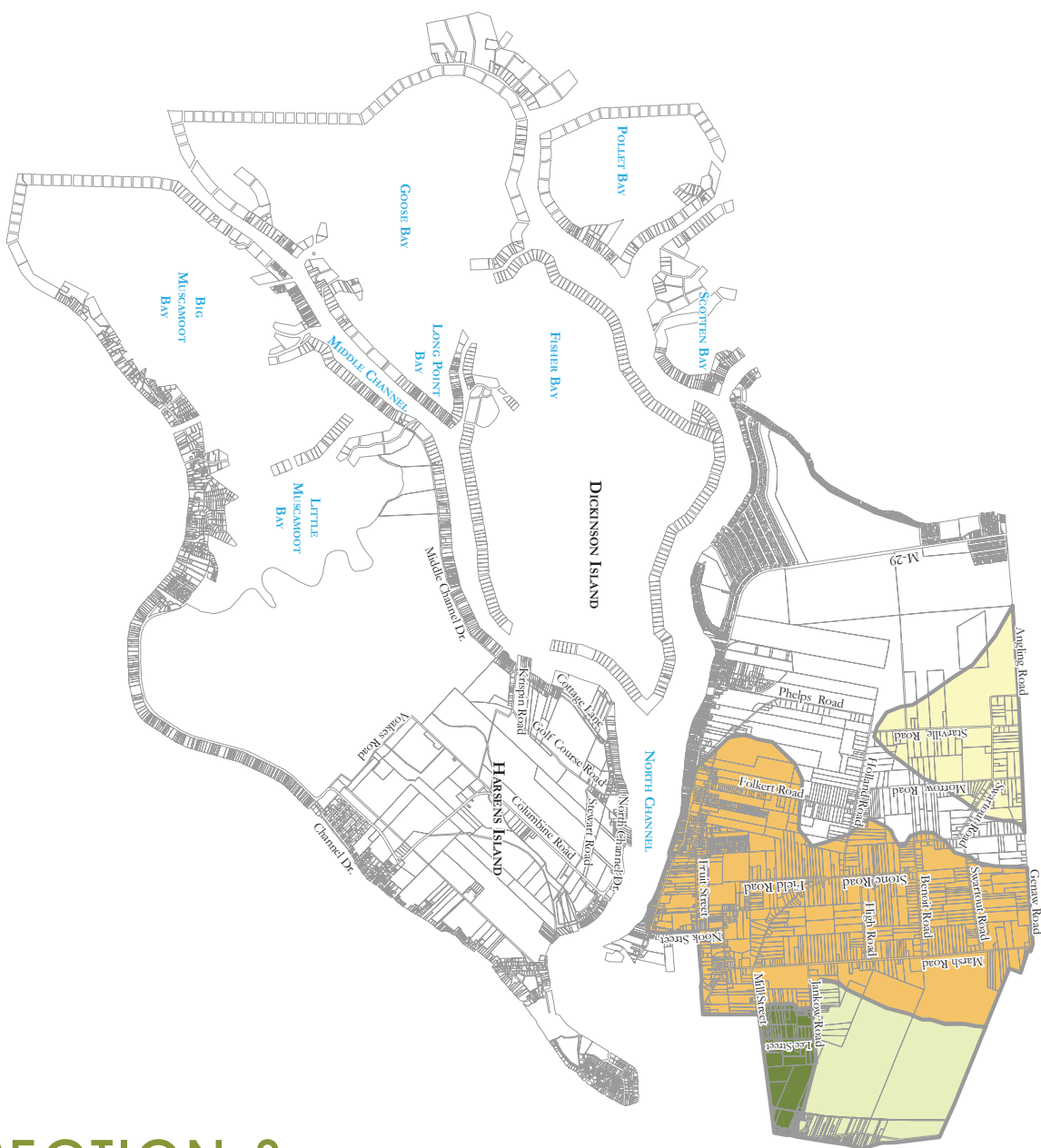
## SOIL ASSOCIATIONS

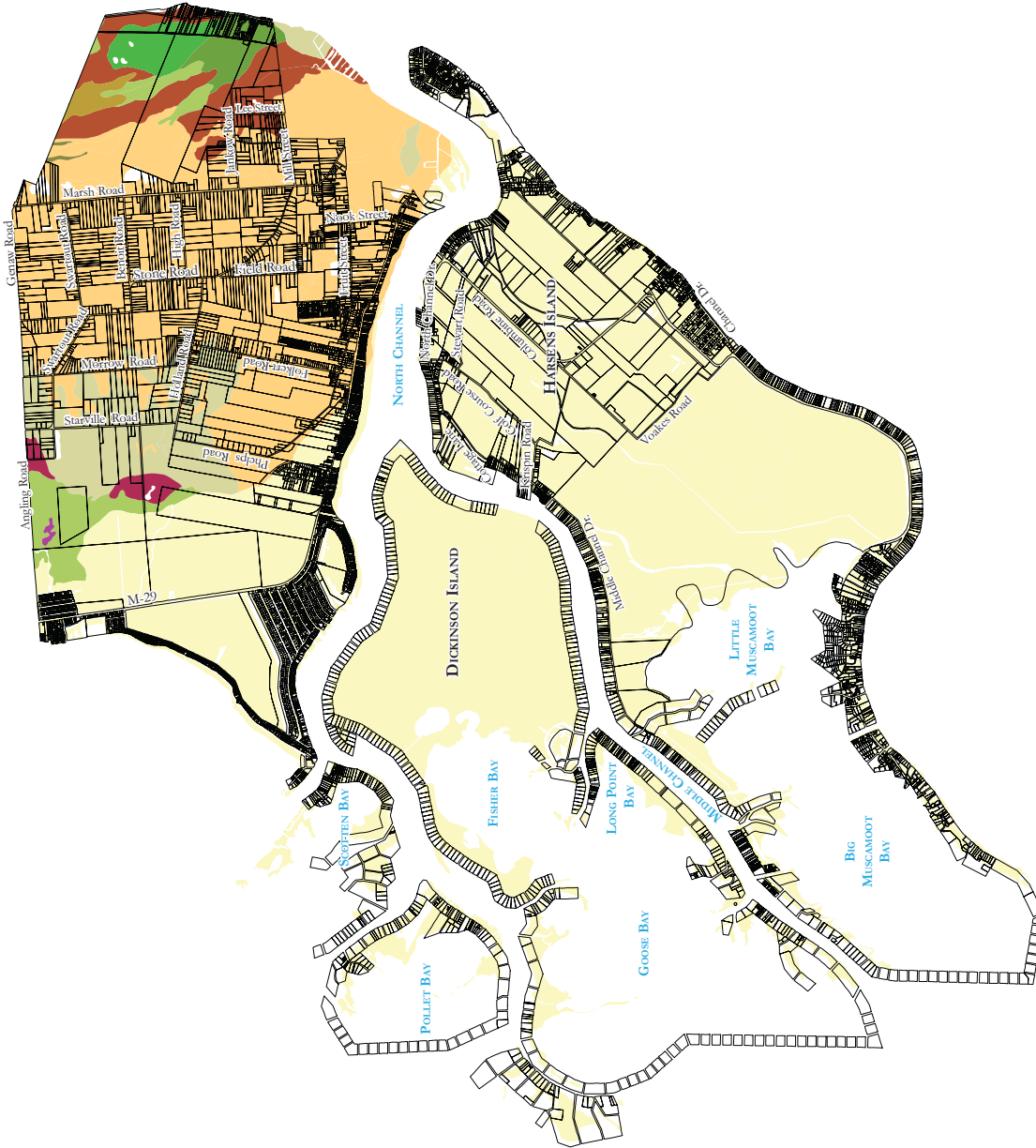
-  Bach Association
-  Paulding Waepi Association
-  Lally Association
-  Vainola - Deford Association
-  Boyer - Wasepi- Sparks Association



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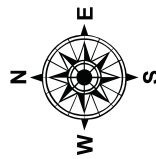
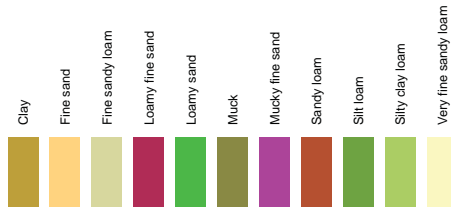
**CPM**  
Community Planning & Management, P.C.  
Professional Planning Consultants





**CLAY TOWNSHIP**  
ST. CLAIR COUNTY

**SOIL TYPES**



**Base Map Information By:**

St. Clair County Metropolitan  
Planning Commission
























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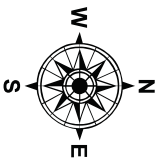


# CLAY TOWNSHIP

## ST. CLAIR COUNTY

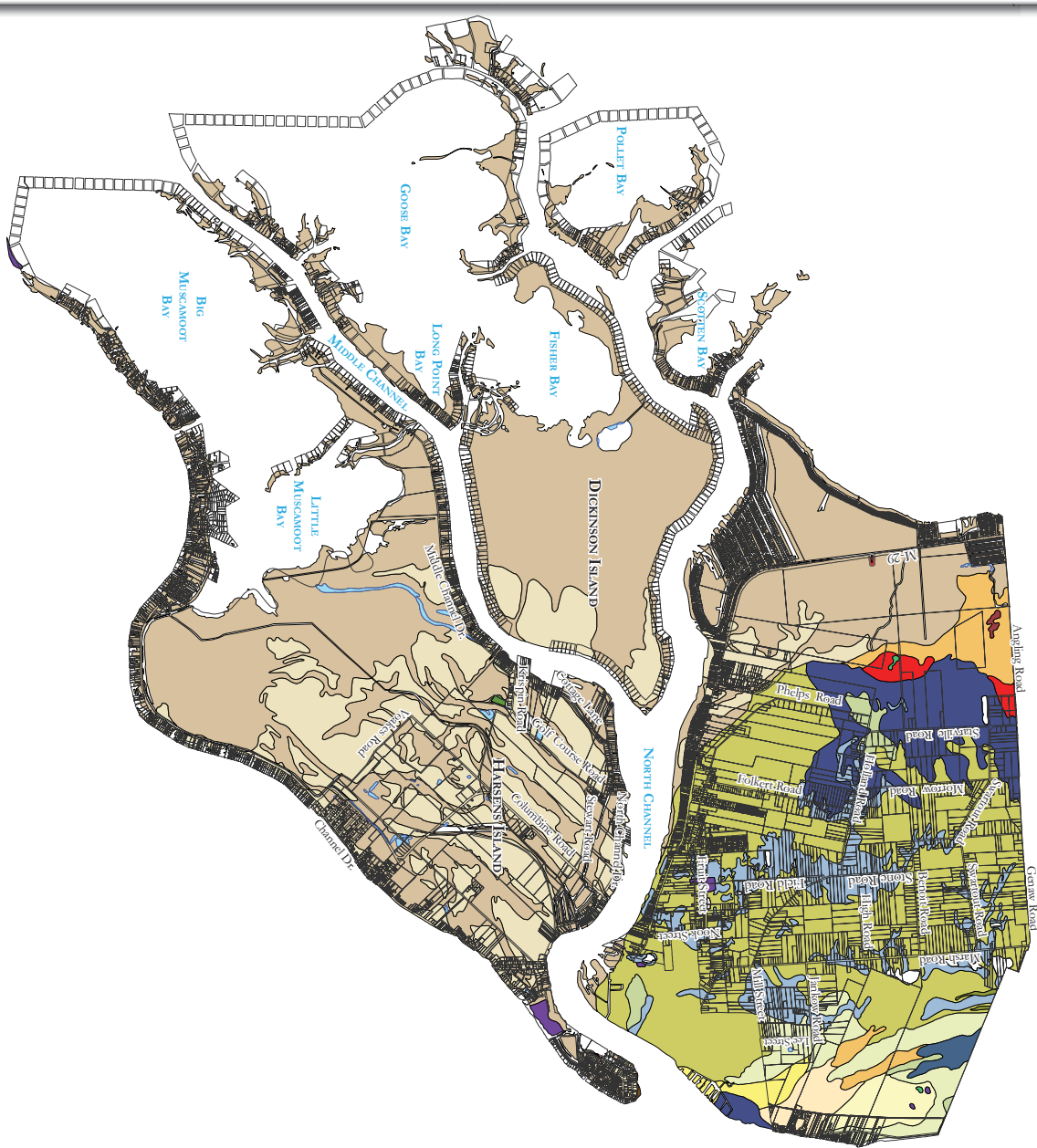
### DETAILED SOIL TYPES

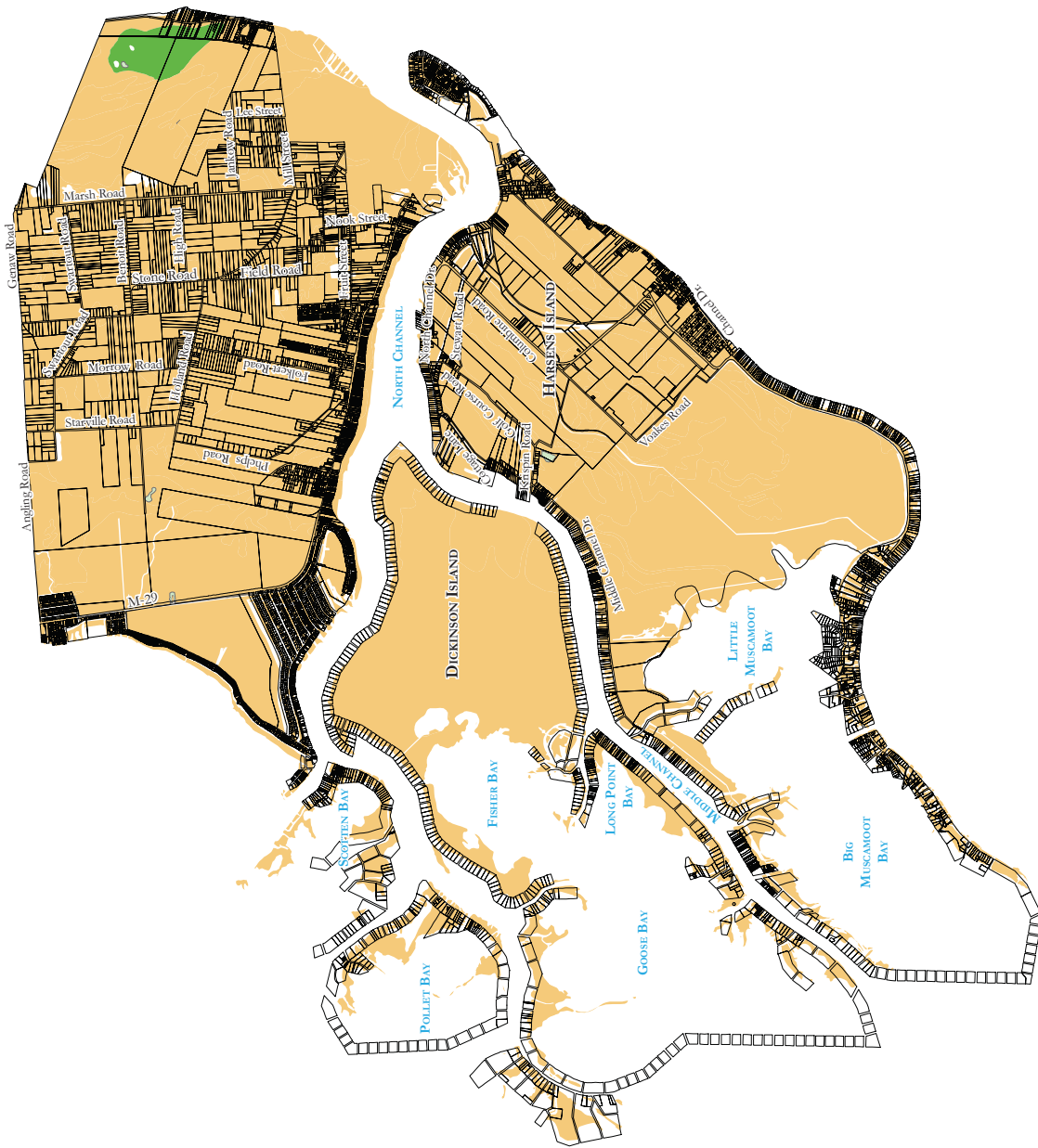
	Atlandale Loamy Fine Sand		Promonting Mucky Fine Sand
	Atlandale Limerock Tokelo Complex		Rousesau Fine Sand
	Bach Very Fine Sandy Loam		Rousesau Fine Sand (Sheep)
	Borrow Pit		Sarillac Very Fine Sand
	Gilford Sandy Loam		Sparks Loamy Sand
	Lake Beaches		Tokelo Silty Clay
	Lamsom Fine Sandy Loam		Wairua Loamy Fine Sand
	Lamy Complex		Wasp Sandy Loam
	Lanawee Silty Loam		Wasp Sandy Loam Clay Subsoil
	Mad Land		Water
	Minco Fine Sandy Loam		
	Pains Muck		
	Pauling Clay		



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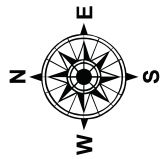




**CLAY TOWNSHIP**  
ST. CLAIR COUNTY

**SEPTIC LIMITATIONS**

- Severe Limitation
- Slight Limitation



**Base Map Information By:**  
St. Clair County Metropolitan  
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## PRIME FARMLAND

Soil data is the principal source of information used by the U.S. Department of Agriculture Soil Conservation Service (ASCS) to determine those areas of the Township and the County that have the greatest potential for long-term agricultural production.

Prime Farmland is typically defined as:

- Soils capable of providing yields of crops common to the area that are equal to or greater than yields from well managed, deep, well drained sandy loams.
- Soils quality, a growing season, and moisture conditions necessary to provide a high yield of crops economically if managed in accordance with modern farming methods.
- Slopes of less than six percent.
- Active rooting depth of at least 20 inches.
- Soils that are not waterlogged. Waterlogged soils are those that have standing water as much as six inches deep several times during the growing season.
- Soils that do not flood more than once every two years.
- Soils that present no particular difficulty in cultivating with large equipment (less than 10 percent is covered with course rock fragments.)
- Soils with the potential of being made private agriculture through economically justifiable investments and practices, including drainage, clearing, irrigation, etc.

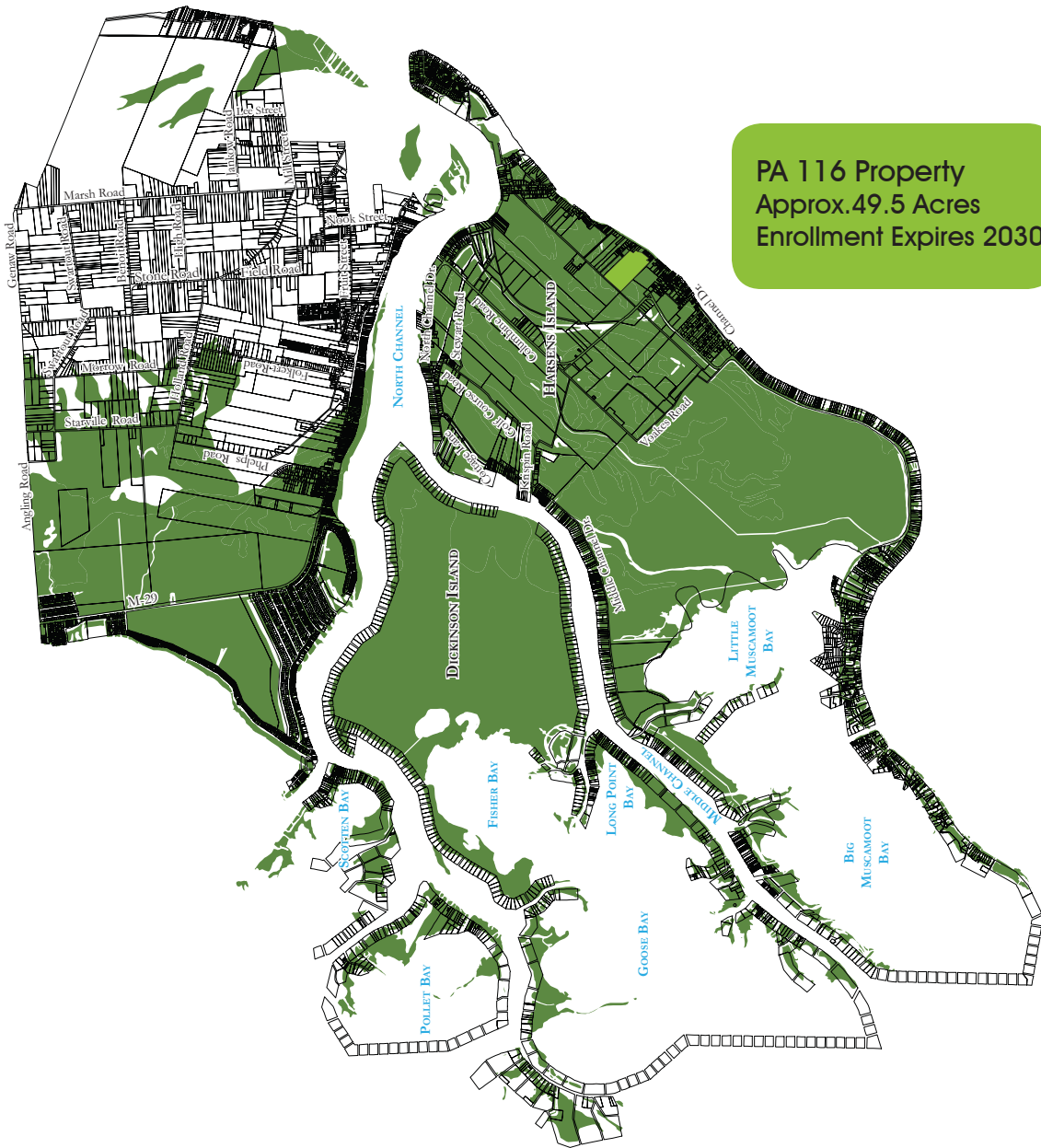
Soil and Conservation Service mapped the locations of important farmlands in St. Clair County in 1974. As a consequence of the County's growth in subsequent years, large amounts of agricultural land have been converted to other uses, mainly large lot single family residential via lot splits. This will likely continue to occur as populations continue to move outward from traditional cores.

### PRIME FARMLAND IN CLAY TOWNSHIP

In Clay Township most the prime farmland is located where potential wetlands also exist. This includes most of the area within St. Johns Marsh as well as both Harsens and Dickenson Islands. A small amount of prime farmland is noted just to the north and west of the City of Algonac. Based on County information there is one property in the Township that is enrolled in the PA 116 Farmland preservation program.



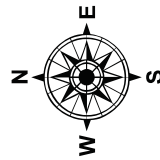
Harsen's Island



**CLAY TOWNSHIP**  
ST. CLAIR COUNTY

**PRIME FARMLAND MAP**

- PRIME FARMLAND
- PA 116 PROPERTY



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St. Clair County Metropolitan  
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## WETLANDS

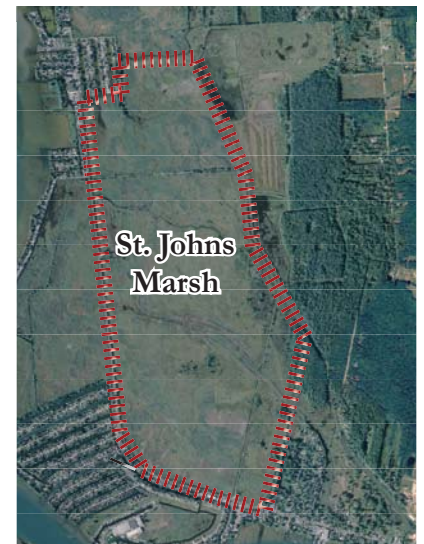
### SIGNIFICANCE OF WETLANDS

- Protect downstream water supplies by providing clean ground water as a result of the nutrient retention and sediment removal. Wetland vegetation traps these sediments and pollutants, thereby preventing them from being deposited in surface water bodies.
- Function as effective natural storage basins for floodwater. Wetlands may be considered large sponges that absorb large quantities of seasonal precipitation, gradually releasing it when the receiving channels are able to accept it.
- Protect the shoreline from erosion caused by wind and wave action and effectively serving as environmental shock absorbers.
- Provide a habitat for many types of plants and animals that thrive in the type of physical environment created by wetlands. These plants and animals provide an economic and recreational benefit as a result of hunting, fishing and other leisure activities.

### WETLANDS IN CLAY TOWNSHIP

The largest contiguous wetland in the Township is located within the St. Johns Marsh area. Large wetland areas are also located along the eastern portion of the Township just to the north of the City of Algonac. Small wetland areas can be found throughout the interior acreage of the Township. The areas along the shoreline of Harsens Island are largely noted a potential wetland areas and most of Dickinson Island is classified as potential wetland.

The size and extent of the contiguous wetlands will likely have a substantial impact on the ability to develop much of the remaining acreage in the Township, especially those areas on the mainland.



### Types of Wetlands

**EMERGENT** - include bogs, meadows, marshes, fens, and potholes. An important marsh type is the 'Great Lakes Marsh' that is hydrologically connected to the Great Lakes and rivals rain-forests in terms of biological productivity.

**SHRUB-SCRUB** - Shrub swamps, are similar to forested swamps, except that shrubby vegetation predominates.

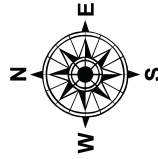
**FORESTED** - Forested swamps occur where trees grow in moist soils. They are often inundated with floodwater from near by rivers and streams.

**OPEN WATER** - Deeper, perennial pools within wetlands and shallow portions of lakes and rivers. The warmth of the water supports numerous aquatic organisms. Typically home to submerged plants (plants that grow underwater) which provide unique habitat resources such as substrates for macroinvertebrates, cover and forage for waterfowl, and spawning and nursing for fish.

**CLAY TOWNSHIP**  
ST. CLAIR COUNTY

**POTENTIAL WETLANDS MAP**

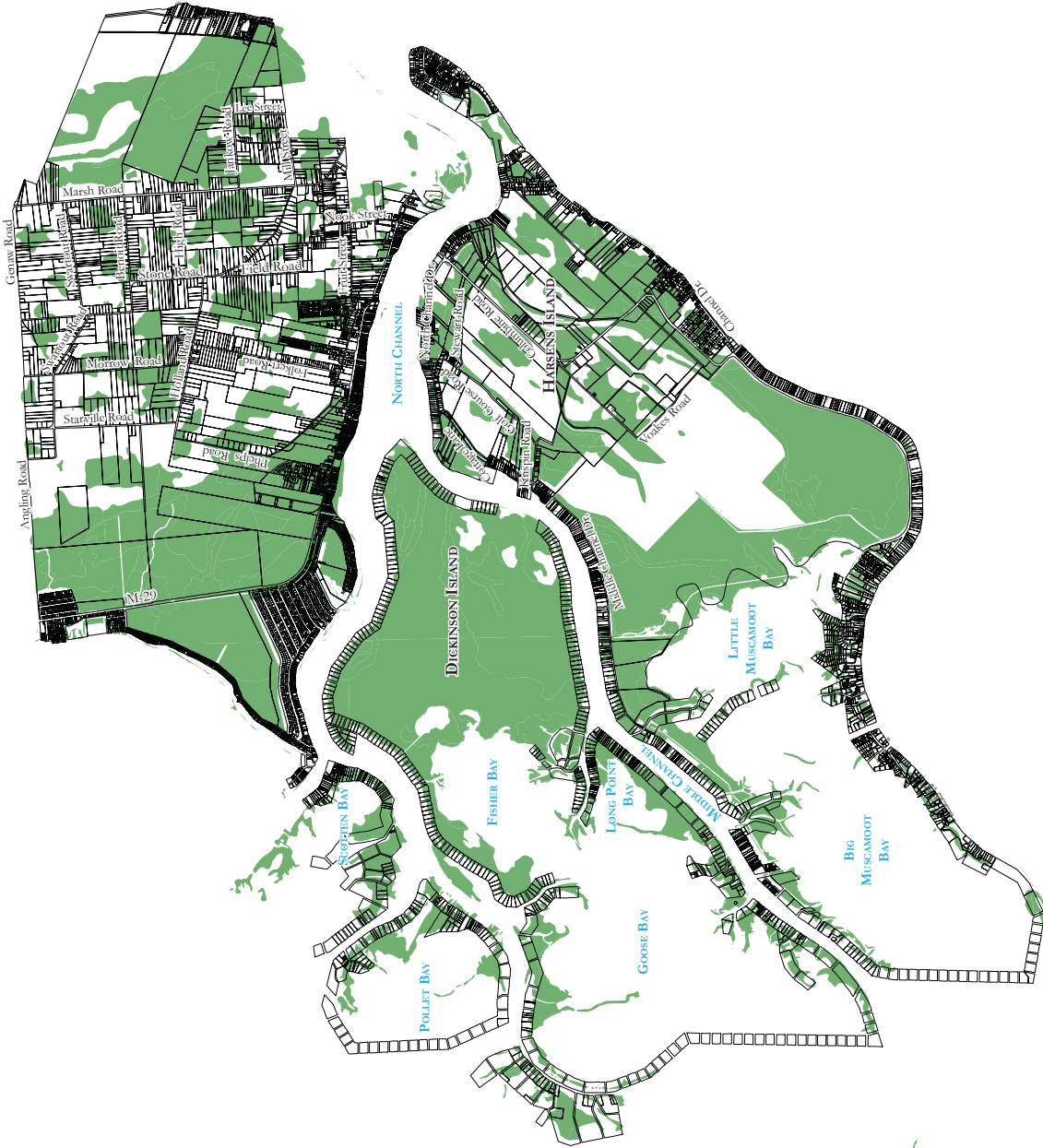
POTENTIAL WETLANDS



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Professional Planning Consultants



## FLOODPLAINS

The FEMA definition for flooding is “a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters or the rapid accumulation of runoff of surface waters from any source.” The definition of floodplain references the definition of flooding.

The FEMA definition of floodplain is “Flood plain or flood-prone area means any land area susceptible to being inundated by water from any source (see definition of “flooding”).”

The floodplain area is an important natural resource for several reasons. Not only is it necessary for the prevention of flood damage to development within the Township, but it also serves as an important wildlife habitat, with its unique types of vegetation providing food and cover to many types of animals. In addition, floodplain areas provide a valuable scenic resource and can be utilized for a wide range of recreational activities.

It should be noted though, that while floodplains do provide a necessary natural service, they also place limitations on development by restricting the type and amount of building which can occur within defined floodplain areas.

### FLOODPLAINS IN CLAY TOWNSHIP

Floodplains in Clay Township outline the perimeter of the Township. This includes the St. John Marsh Area as well as the shoreline north of the City of Algonac. Further, both Harsens and Dickenson Islands are largely designated as floodplain areas as well as shown on the adjacent map.

For development to occur within these areas, map revisions would need to be performed and studies conducted to indicate how the floodplain would either not be impaired or how the floodplain area/function would be mitigated. Further, for individual buildings, additional construction precautions would likely be necessary to ensure building standards are being met.

The official floodplain maps are currently being reviewed and revised. Some additional inland areas are anticipated to be added to the defined floodplain area.



## Floodplain Benefits

### Water Resources

- Natural Flood and Erosion Control
- Preserves Water Quality
- Provides Groundwater Recharge

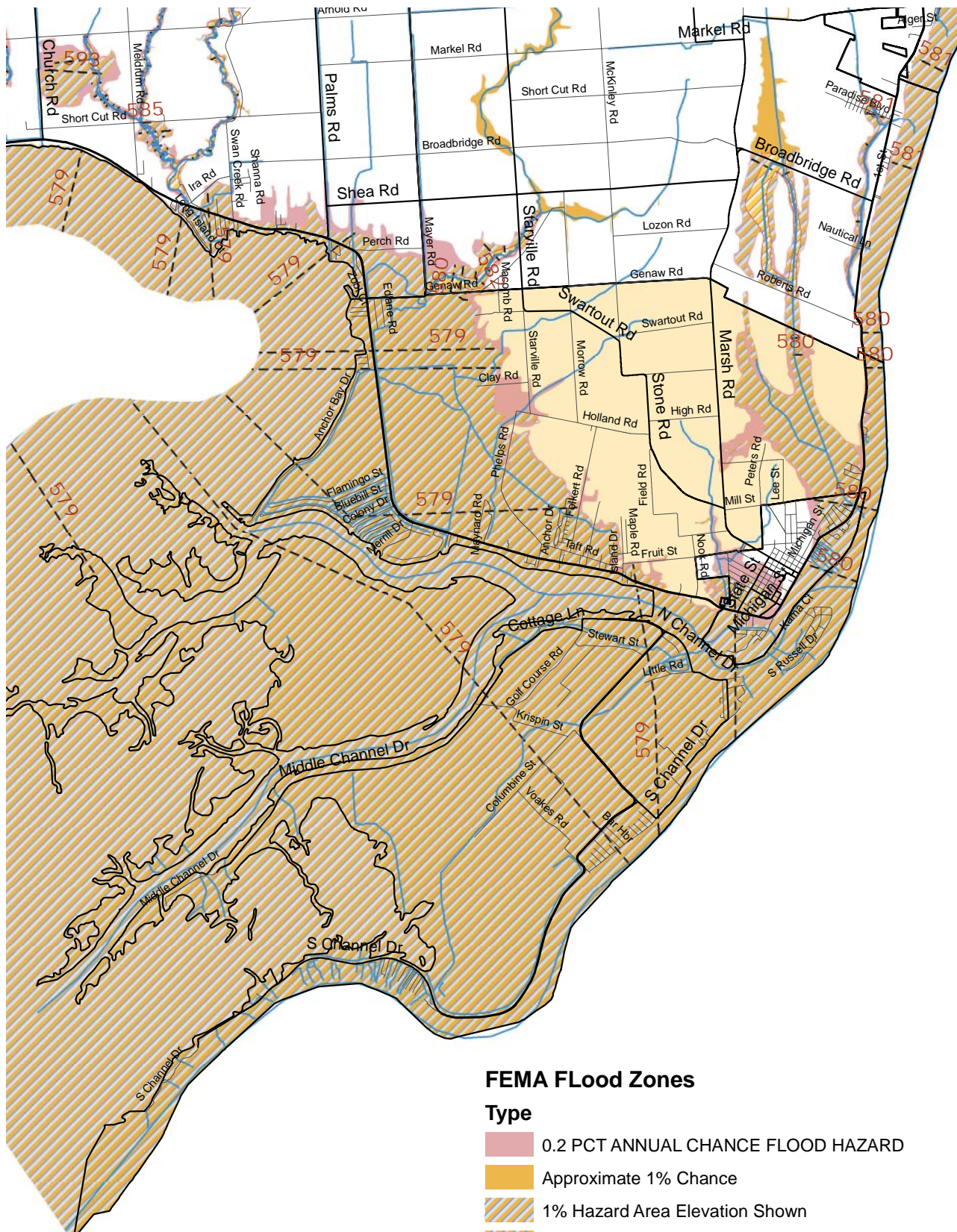
### Societal Resources

- Provides Recreational Opportunities
- Scientific and Outdoor Education

### Biologic Resources

- Biological Productivity
- Fish and Wildlife Habitat





**FEMA Flood Zones**

**Type**

- 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- Approximate 1% Chance
- 1% Hazard Area Elevation Shown
- 1% Hazard Area Elevation Shown (Ponding)
- 1% Hazard Area Elevation Shown (Sheet Flow)

## WOODLANDS

### SIGNIFICANCE OF WOODLANDS

In an environment such as Clay Township, the importance of woodlands, and trees in general, should not be underestimated. Woodlands serve many useful environmental purposes that should be recognized for planning. These include the following:

- Slope stabilization and erosion control
- Conserving water quality
- Maintaining a micro-climate
- Filtering pollution from the atmosphere
- Decreasing noise
- Providing a habitat for wildlife

Finally, woodlands also typically provide an economic benefit as well. Most residential areas which contain wooded lots have a higher value than those which do not.

### WOODLANDS IN CLAY TOWNSHIP

Significant woodland areas in Clay Township are identified on the following page. Most of these areas are on internal acreage away from the shorelines and are very dense. Areas which may also be considered potential wetlands are the most prominent remaining woodland areas in the Township. The potential that these woodland areas are also wetland areas makes their preservation all the more important.

Woodland areas are more limited on the two islands. Harsens Island does have some major woodland areas but most areas are smaller in nature.



### Types of Woodlands (commonly found in Michigan)

**White Red Jack Pine** - This grouping includes Jack Pine, and is found primarily on sandy soils of the eastern upper peninsula and north central lower peninsula.

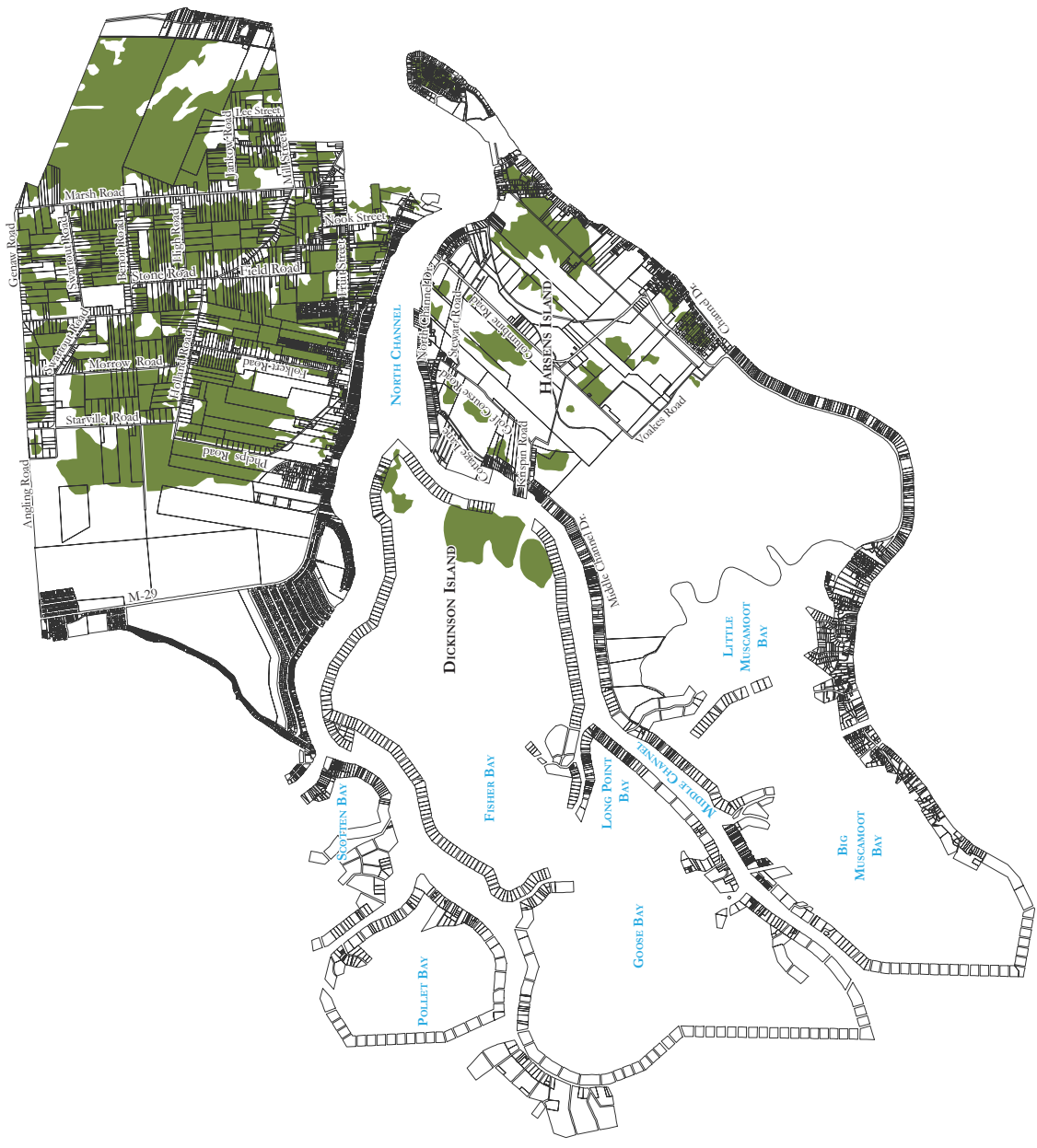
**Spruce Fir** - This grouping consists of White Cedar, Balsam Fir, White Spruce, and Black Spruce and exists primarily in the upper peninsula.

**Oak Hickory** - This group is mainly found in the sandy soils of southern Lower Michigan.

**Elm Ash Cottonwood** - This group is commonly referred to as lowland hardwoods. It is common in fertile soils and along streams.

**Maple Beech Birch** - This group is typically found in northern Michigan and include Maples, Beeches and Yellow Birches.

**Aspen Birch** - This group includes Aspens and Paper Birches and is found primarily in the northern Lower and south Upper Peninsula as well as scattered throughout the State.

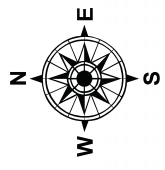


CLAY TOWNSHIP  
ST. CLAIR COUNTY

GENERALIZED WOODLANDS



Woodlands



Base Map Information By:

St. Clair County Metropolitan  
Planning Commission

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Professional Planning Consultants



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## WATERSHEDS

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Communities across the nation are finding that their water resources are degrading in response to growth and development. Activity within a watershed will likely impact the quality of that watershed. For instance, if a new shopping center is built, rain water which was once absorbed into that vacant property will now runoff into the nearest drain, collecting dirt, oils and other chemicals and carrying them into that drain and eventually into the rivers and lakes of the State.

Watershed management is one way to ensure that the water resources of an area are protected. As defined, a watershed is an area of land that catches rain or snow, eventually draining into a body of water (such as a marsh, stream, river, lake or groundwater).

There are several reasons to protect local watersheds, including economic benefits, recreation, flood prevention, scenery and the overall quality of life. Some of the primary benefits that can be realized from watershed protection are:

- The restoration and enhancement of recreational areas/uses;
- The protection of aquatic life, wildlife and habitat, including native landscapes and vegetation;
- The protection of public health through improved water quality;
- The reduction of impacts from peak water flows due to proper flood management.

These statements are also noted as being the four (4) main long term goals of the Anchor Bay Watershed Plan.

### WATERSHEDS IN CLAY TOWNSHIP

Clay Township lies solely within the Anchor Bay Watershed. The Anchor Bay watershed is then made up of several sub-watersheds based on information available from the States data files. These include the Lake St. Clair direct drainage, the Swarthout Drain, the Island subwatersheds as well as the Marine City Drain. The vast majority of the lies within the Direct Drainage Sub-watershed.

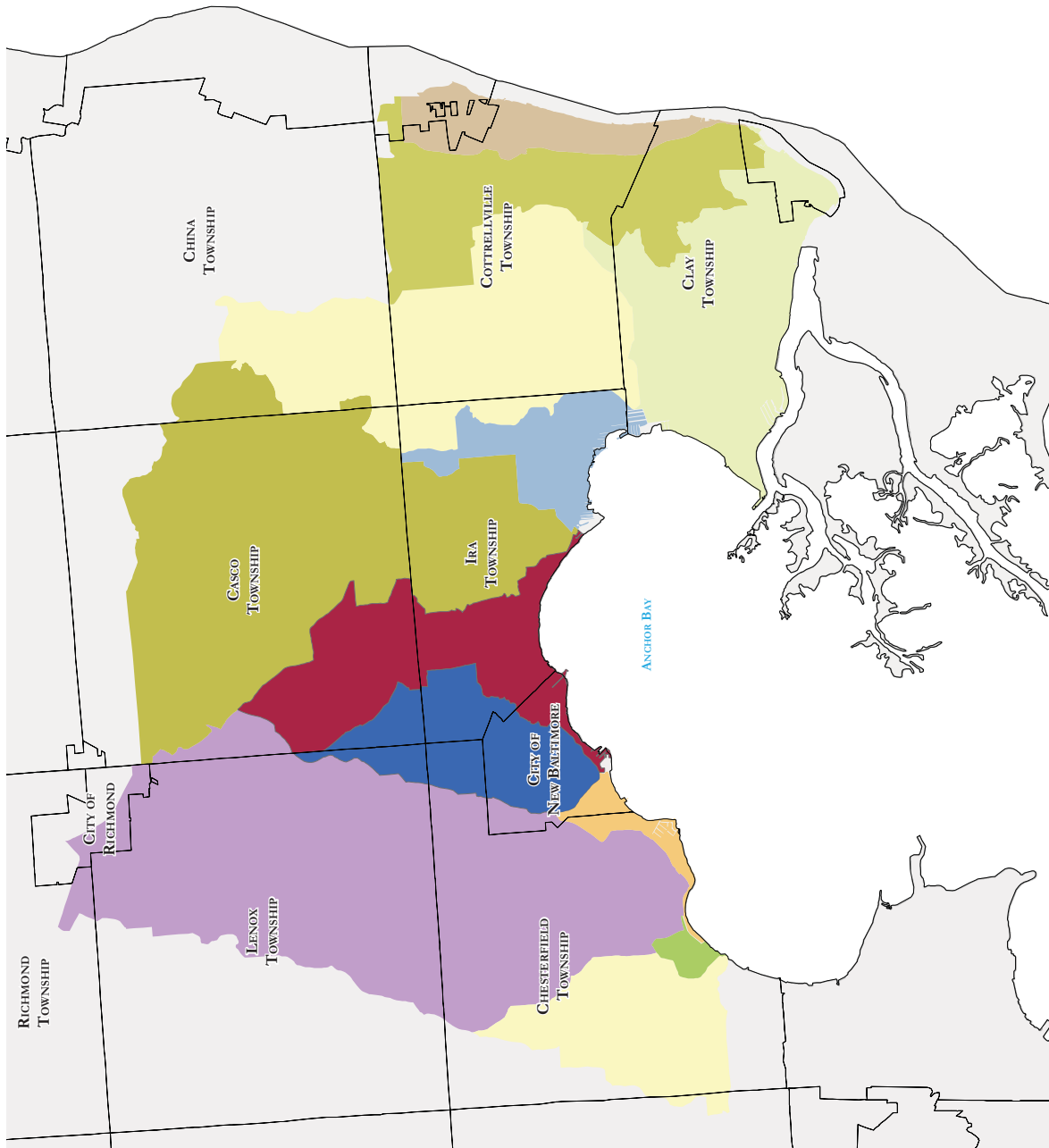
A portion of the eastern part of the Township lies within the Marine City Drain sub-watershed.

\*The map on the opposing page shows the entire Anchor Bay Watershed (colored area), as well as the defined subwatersheds within the overall Anchor Bay Watershed.



Anchor Bay Watershed  
Homepage

[http://www.cis.stclaircounty.org/  
abaywatershed\\_2.asp](http://www.cis.stclaircounty.org/abaywatershed_2.asp)



**CLAY TOWNSHIP**  
ST. CLAIR COUNTY

**GENERALIZED WATERSHEDS  
& SUBWATERSHEDS**

**Base Map Information By:**  
St. Clair County Metropolitan  
Planning Commission

Community Planning & Management, P.C.  
Professional Planning Consultants

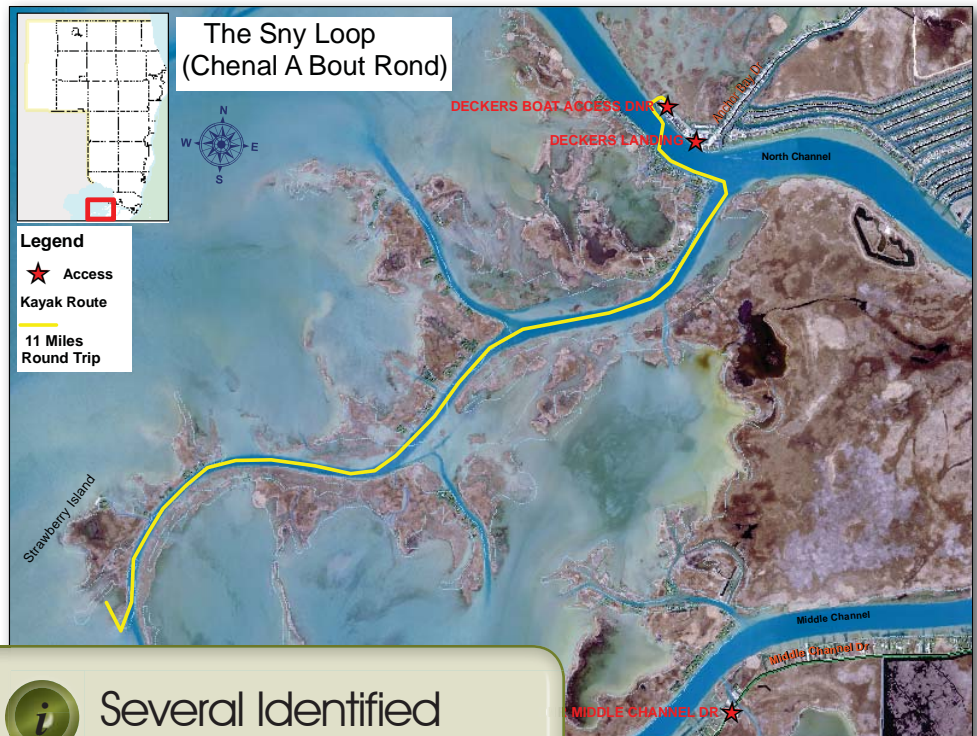
**CLAY TOWNSHIP**  
Master Land Use Plan

## COUNTY BLUEWAYS

<http://www.bluewaysofstclair.org/>

The St. Clair County Metropolitan Planning Commission (MPC) and the St. Clair County Parks and Recreation Commission (PARC) have developed a series of Blueways and Greenways around and throughout the County for environmental, recreational, and economic benefit. These Blueways and Greenways include the land and water trails along the St. Clair River corridor, from Anchor Bay to the northern border of the county along Lake Huron.

Blueways and greenways are terms used to describe corridors of land and water and the natural, cultural, and recreational resources they link together. The benefits to a community are numerous - preserving environmentally sensitive areas, protecting wildlife and their habitat, enjoying recreational opportunities close to home, and connecting to other people and places.



**i** Several Identified Blueway Corridors of Clay Township

Greenways are linear open spaces, including habitats and trails that link parks, nature reserves, cultural features, or historic sites for recreation and conservation purposes.

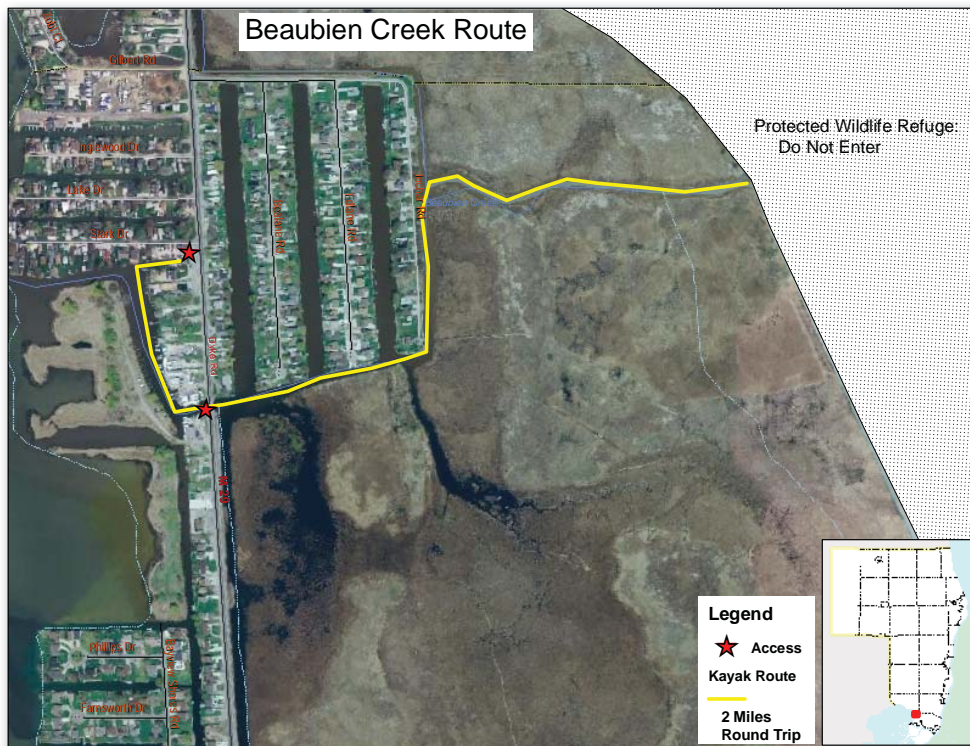
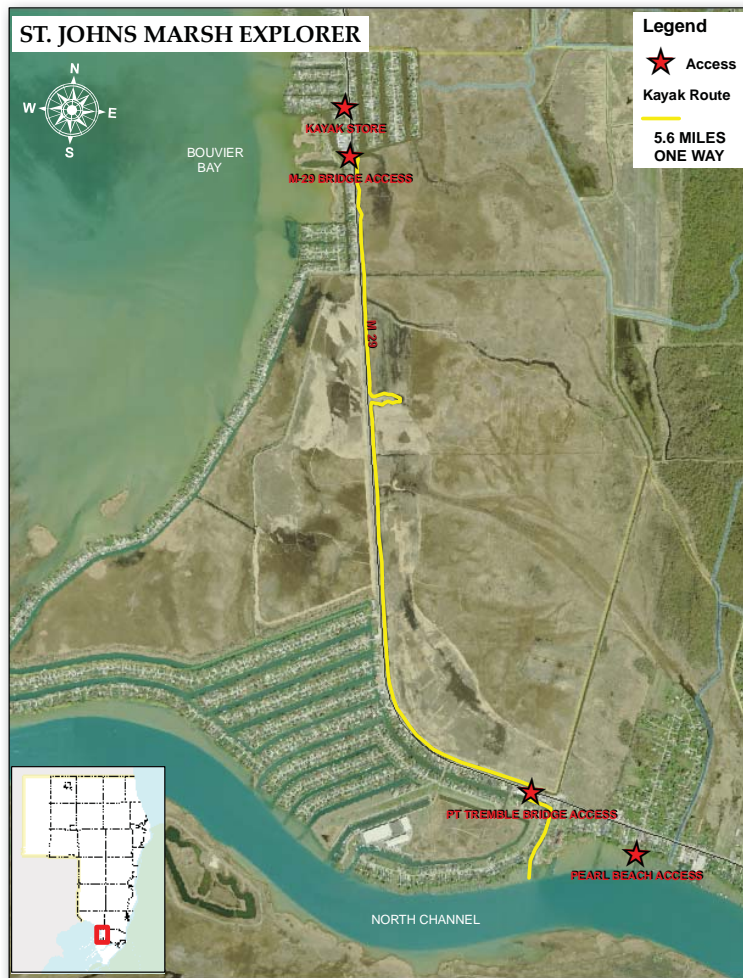
A Greenway is an undeveloped land usually in cities, set aside or used for recreation or conservation.

A Blueway is a body of water that features public access, recreational opportunities, and promotes interaction with the water.

Greenways are rapidly becoming an important urban revitalization program throughout the region. Increasingly, communities are coming together and developing greenways that link communities together through a common green thread.

Currently, the County has developed a total of 16 different paddling routes in 8 different water bodies. The routes are designed to provide a full range of activities for all types of users including places to camp, shop, eat or learn about our maritime history.

The blueways and greenways developed by the County are conceptual in nature and as each plan is implemented specific issues such as parking and specific access points, will need to be addressed by the County Planning and Parks and Recreation Departments as well as the Road Commission and Clay Township.



## NATURAL FEATURES / AMENITIES: A REGIONAL PERSPECTIVE

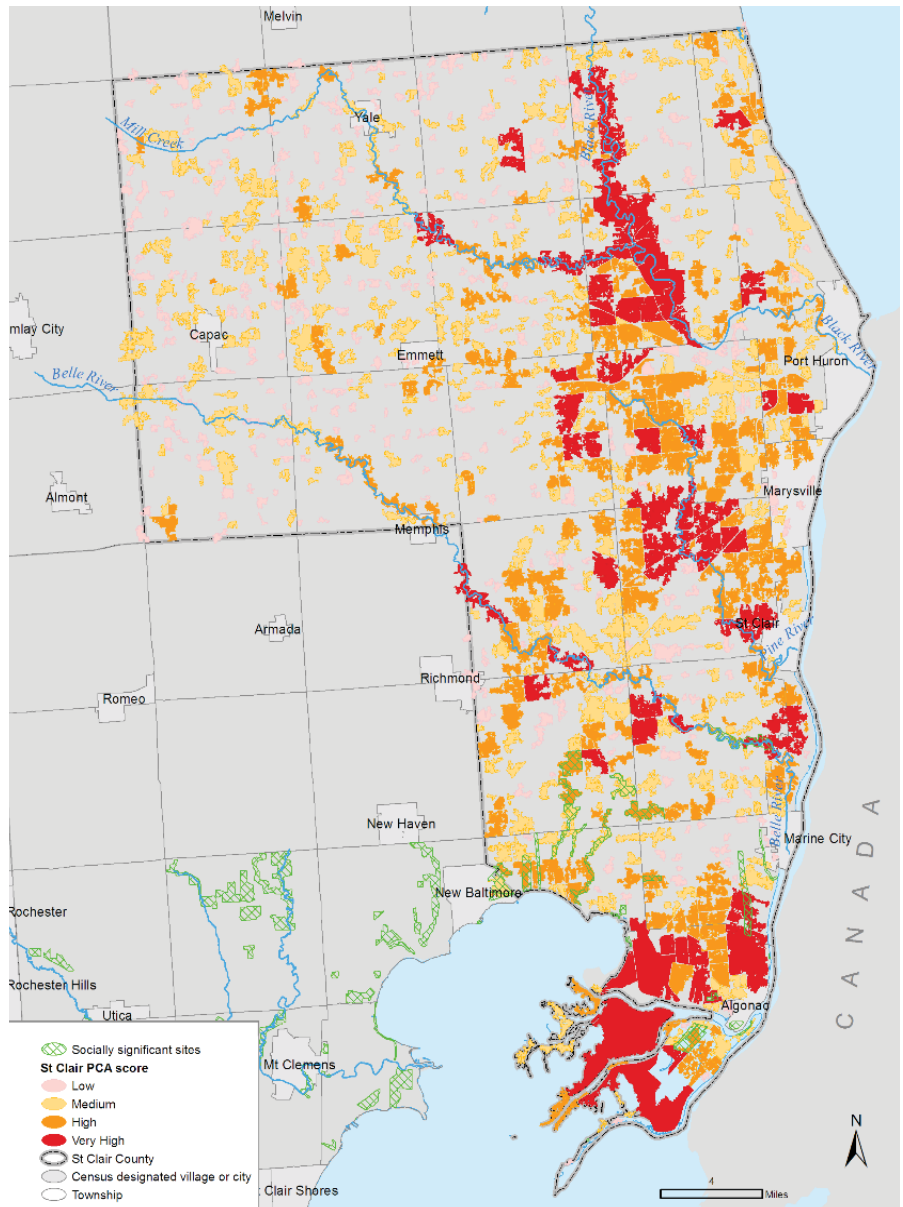
SEMCOG (Southeast Michigan Council of Governments) has produced the following Natural Feature Maps. The maps in general indicate the abundance of highly significant and ecologically sensitive natural features in Clay Township. The magnitude and types of amenities indicated in the maps show the consolidation of specific natural features and the high ratings for significance of such features that one can argue cannot be matched on a regional, State or Federal level.

The protection of these potential conservation areas identified in the SEMCOG maps must be specifically identified and addressed within any development proposal. The densities, development locations and impact on the natural features may have to be altered from the plan designations as actual boundaries of the amenities are scientifically delineated.

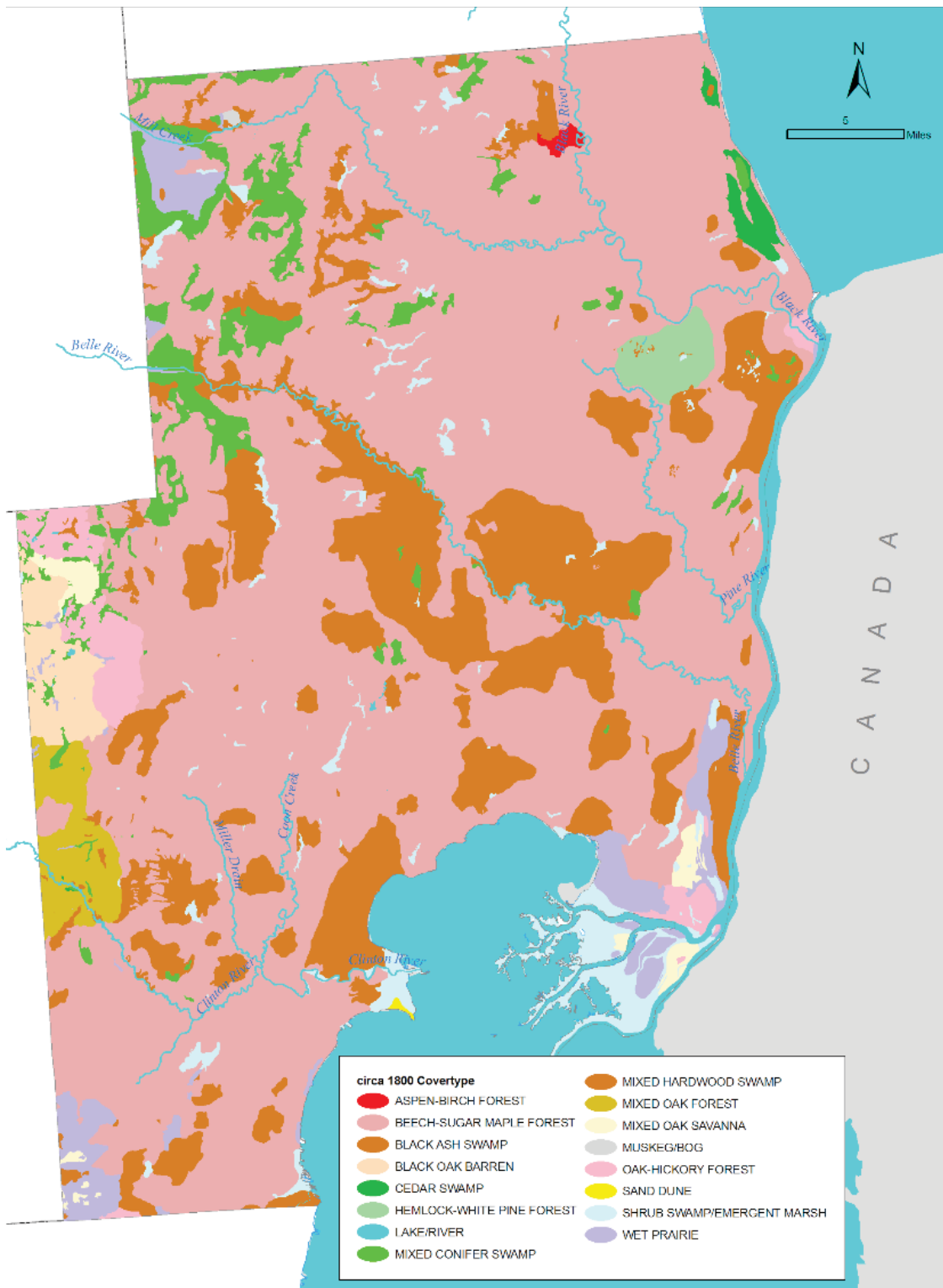
### Land Cover

The Covertype maps prepared by SEMCOG show the land cover circa 1800. According to the SEMCOG data, Clay Township consisted of a mixture of Beech Sugar Maple Forest, Wet Prairie, Mixed Savanna and Shrub Swamp and Emergent Marsh.

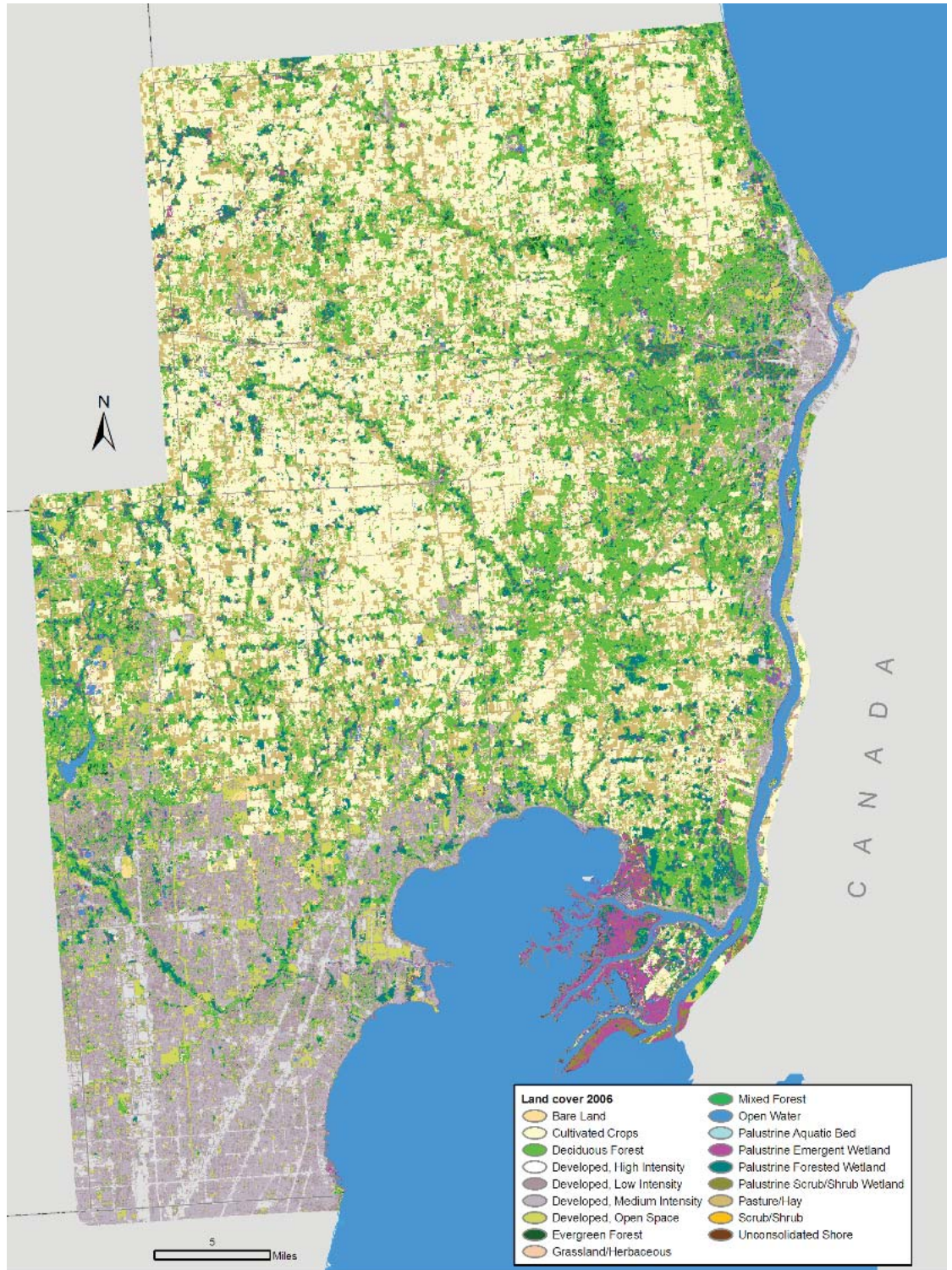
The Land Cover Map of 2006, also prepared by SEMCOG shows a mixture of Palustrine Emergent Wetland along the western third of the Township while the predominant land cover on the mainland is deciduous and mixed forest. The land cover shown on Harsens Island consists of cultivated crop along with some forest area. Finally, the shorelines of the mainland are shown as being developed.



LAND COVER CIRCA 1800 (Map provided by SEMCOG)



LAND COVER CIRCA 2006 (Map provided by SEMCOG)



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## STRATEGY AND PROGRAMS

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STRATEGY: Accommodate new and re-development opportunities given the appropriateness of soil types.

PROGRAMS:

1. Adopt stormwater management provisions that consider soil suitability when determining which best management practices should be used for a given site.
2. Allow hard surface, pervious materials for surfaces like parking lots and sidewalks when soils drain well and when proper engineering is provided to protect against soil, ground water, and other contamination.
3. Encourage deep-rooted plant materials and grasses to assist in drainage, drought resistance, and stormwater filtration. (Bio-swales, rain gardens, etc.)
4. Required landscaping should incorporate a variety of species including native plant and trees.

STRATEGY: Utilize Clay Township's natural environment to stimulate economic activity.

PROGRAMS:

1. Promote community events in public open spaces that engage outdoors activities or highlight local products, i.e. a farmers' market.
2. Encourage local businesses to participate in MDNRE programs like Clean Corporate Citizens and Neighborhood Environmental Partners.
3. Actively market the Township as a recreation and outdoors destination for the region.
4. Promote the commercial cultivation of native species, including plant materials found in swampy conditions.

STRATEGY: Preserve, enhance, and mitigate wetlands.

PROGRAMS:

1. Follow all State and Federal Wetland Regulations.

STRATEGY: Preserve woodlands and champion tree specimens.

PROGRAMS:

1. Develop zoning, or other regulatory provisions that establish reasonable standards for preserving woodlands.
2. Periodically monitor established woodland stands through digital mapping.

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## STRATEGY AND PROGRAMS

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STRATEGY: Eliminate or substantially reduce discharge of pollutants and sediment into Lake St. Clair and other bodies of water.

### PROGRAMS:

1. Ensure that Zoning and Engineering practices require appropriate naturalized and mechanical separation structures.
2. Maintain or install vegetated buffers or filter strips adjacent to bodies of water.
3. Install check dams and other grade control structures to stabilize grades in ditches and swales, decrease stormwater velocity, and prevent channel scour.
4. Reduce stormwater outlets to non-erosive velocities.
5. Use rip-rap or gabions to stabilize streambanks.
6. Use restored wetlands and naturalized sediment forebays that allow suspended solids to settle out.
7. Allow the storage of stormwater on parking lots.
8. Promote "Landscaping for Water Quality" techniques such as rain gardens.
9. Use infiltration trenches and French drains to help remove fine particulate matter.
10. In instances where sediment forebays are infeasible, require hydrodynamic separator units.
11. Promote composting, fertilizer and pesticide management, and organic lawn maintenance.
12. Ensure proper storage and placement of snow removal salts.
13. Require and monitor maintenance of stormwater systems.
14. Incorporate other LID and LEED techniques into Township development requirements.

STRATEGY: Create opportunities for access to sensitive environments and natural areas.

### PROGRAMS:

1. Develop Zoning Ordinance and engineering standards for unobtrusive and low-impact access to naturally sensitive areas, i.e. raised boardwalks with railings.
2. Offer interpretive exhibits and experiences that provide cultural opportunities to those of all ages and physical abilities.
3. Encourage residential open space developments so that natural preservation areas and pocket parks are preserved and accessible to homeowners.

STRATEGY: Promote and maintain a series of Blueways and Greenways throughout the Township which preserve natural amenities and link environmental corridors throughout the County.

### PROGRAMS:

1. Develop a program of removing and monitoring invasive species throughout the Township.
2. Seek out grant monies and other environmental funding sources for the removal of invasive species and other environmental impediments such as fallen trees, garbage, etc.
3. Work with the St. Clair County Metropolitan Planning Commission and St. Clair County Parks and Recreation Commission to further the implementation of the Blueways and Greenways programs.

A photograph of a dirt road winding through a forest in autumn. The trees on the left have vibrant yellow and orange leaves, while the trees on the right are mostly bare. The road is light brown and shows tire tracks. The sky is bright and hazy. The word 'TRANSPORTATION' is written in a black, serif font in the lower right quadrant of the image.

TRANSPORTATION

4

# What to Take From This Section



## Coordinate Growth With Transportation Infrastructure

As Clay Township and the surrounding communities continue to develop over time, growth should be coordinated with roadway expansion to ensure an adequate level of service on every road in the Township. The Township should carefully review the traffic impacts of any rezoning/site plan proposals that could produce a burdensome traffic load on the roads within the Township.

## Improve Safety on High Volume Roads Through Access Management

There are several dangerous intersections and road segments in the community, especially along M-29 that could be improved utilizing access management techniques such as curb-cut reduction and cross access requirements, driveway alignment and bypass/deceleration lanes. Careful consideration will also need to be given to the designated bike path along M-29 as well.

## Accommodate Long-Term Roadway Expansion By Respecting Planned Right-of-Ways

The Township should continue to respect planned right-of-way widths established by both the Township and the St. Clair County Road Commission to ensure that buildings are setback an adequate distance from the road right-of-way. This may likely be difficult in some areas where existing older structures are within the rights of way. Attempts should be made to preserve such right of way for future improvements while making attempts to allow existing structures to be maintained (as appropriate).

## INTRODUCTION

A transportation system provides a means to move people and goods among various geographical areas. Because transportation has a significant impact on economic conditions, environmental quality, energy consumption, land development, and the overall quality of life in a community, it is critical that future transportation needs and problems be anticipated and reflected in the Master Plan process.

The Transportation Plan provides the community with an opportunity to coordinate local transportation planning activities with those occurring on a regional or State-wide basis. Roads are the physical improvements that link communities together. Coordinating the planning associated with the regional transportation system offers some opportunities to consider mutually compatible land use policies relating to these needs. Finally, roads make a significant contribution to the community's image and identity. Streets offer an opportunity for urban design improvements in the way of landscaping and monuments. Too often, this opportunity is neglected with streets becoming cluttered with excessive signage and overhead utilities.

Preparation of a Transportation Plan has several practical applications that have important consequences for the community's ultimate development pattern. Through the identification of future right-of-way locations and standards, a community establishes the system of streets and roads that will provide access for future development. Designating right-of-way widths also helps a community establish consistent setback requirements, which are accomplished through the administration of a Zoning Ordinance. This minimizes the potential of having to acquire homes or businesses when road widening becomes necessary.

The Transportation section is divided into three (3) primary topics. Each topic is identified below:

- The first topic is an identification of transportation planning concepts. Broadly accepted concepts are offered as a way of providing a common basis of understanding or vocabulary.
- The second topic describes the characteristics of Clay Township's road system. This includes lane configurations, traffic volumes along major roads and high accident intersections.
- The section concludes with a description of the Transportation Plan. Major proposals and recommendations for the future are offered.



Aerial View of M-29, the Dike Road, looking north.

Photo taken from  
[www.claytownship.org](http://www.claytownship.org)

Credit: Ted Whittlesey

## PLANNING CONCEPTS

### Roadway Classification

Roadways are grouped into different classifications for administrative, design and planning purposes. Most classification systems make a distinction between roads based on the specific purpose of that road and the geographic areas it is intended to serve. For example, roads are generally divided into those that carry local traffic and those intended to carry traffic passing through a municipality often across the county or region. The classifications are based on the number of lanes, traffic counts and intended purpose of the corridor.

Transportation planners use roadway classifications in order to determine funding priorities and improvement plans. Common road classifications include freeways, arterials, collectors and local roads. Each classification carries with it suggested minimum design standards. For the most part the functional classification of a roadway dictates the right-of-way. Clay Township is served by the following classification of roadways:

**Major Thoroughfare** - Also known as arterial roads, this class of streets carries traffic to and from the expressway and serve those major movements of traffic within or through the urban area that are not served by expressways. Arterials interconnect the principal traffic generators within the community, as well as important rural routes. Arterials handle trips between different areas of the community and should form a reasonably integrated system. The length of the typical trip on the system should exceed one mile.

**Collector** - This classification of streets serves internal traffic movements within an area of the community, such as a subdivision, and connects this area with the arterial system. Collectors do not handle long thru trips and are not, out of necessity, continuous for any great length. In grid-iron street patterns, however, a street of several miles in length may serve as a collector, rather than an arterial if the predominant use is to reach the next junction with an arterial.

**Local** - The sole function of local streets is to provide access to adjacent land. These streets collectively make up a large percentage of the total street mileage of the Township, but conversely carry a small proportion of the vehicle miles of travel. Local residential streets, in most cases, carry daily volumes of 1,000 or less.



#### Road Classifications (Planned Right-of-Way Widths)

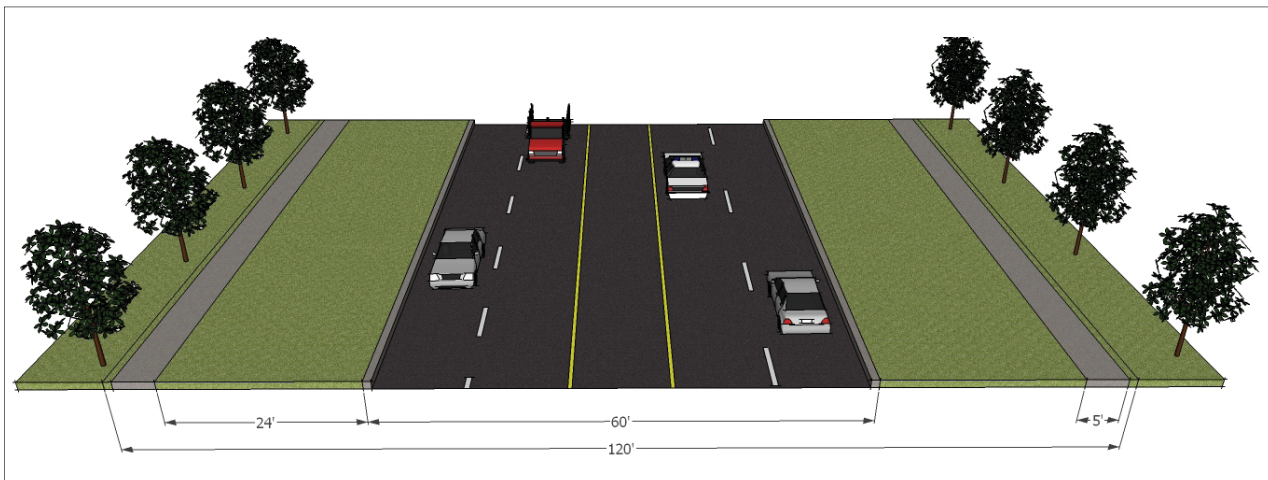
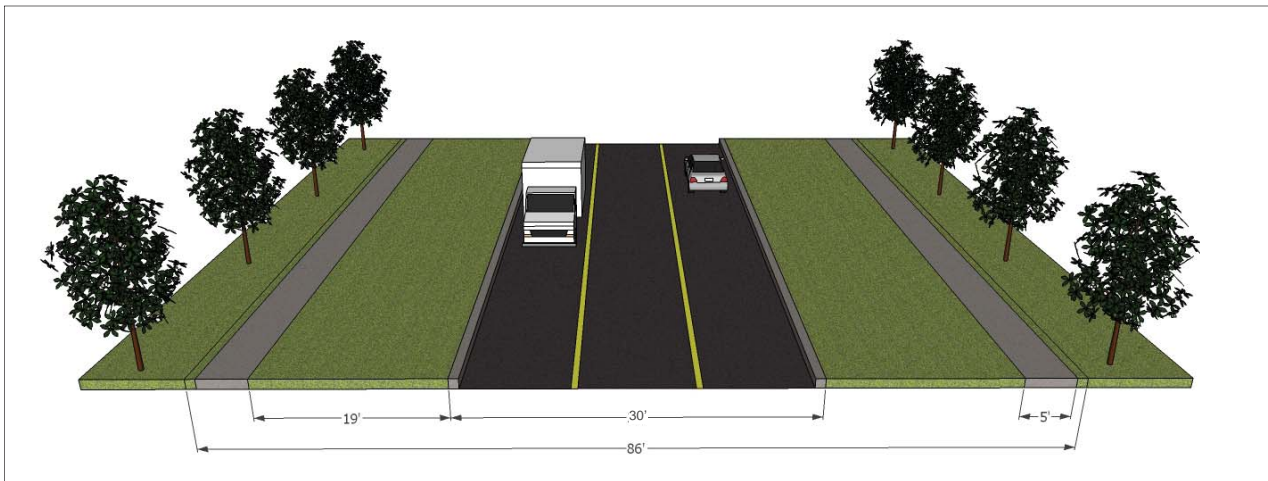
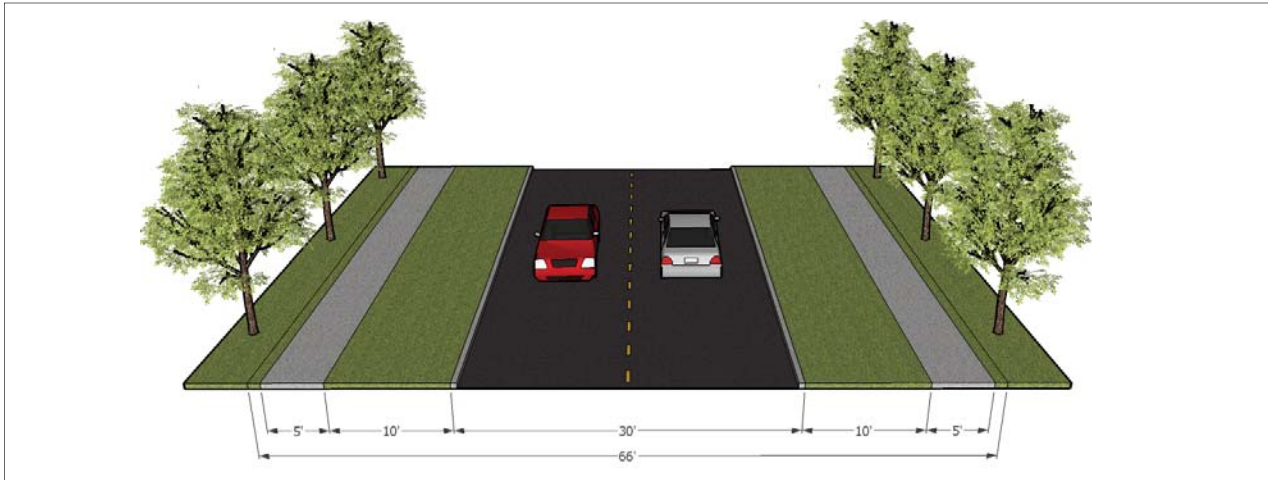
Based on the functional classification of the roadway, the following right-of-way width is recommended:

Road Classification	Right of Way	Pavement Width
• Local Road	66 feet	30 feet
• Collector Road	86 feet	30 feet
• Major Road	120 feet	60 feet
• Major Road	150 feet	60 feet

Local

Collector

Major



## RIGHT OF WAY

### MAINLAND

Major

Marsh Road  
Field Road  
Holland Road  
Starville Road  
Taft Road  
M-29  
Folkert  
Nook  
Island  
Ainsworth  
Phelps  
Morrow

Collector

Mill Road  
Genaw Road  
Jankow  
High  
Benoit  
Swartout  
Macomb  
Clay  
Peters

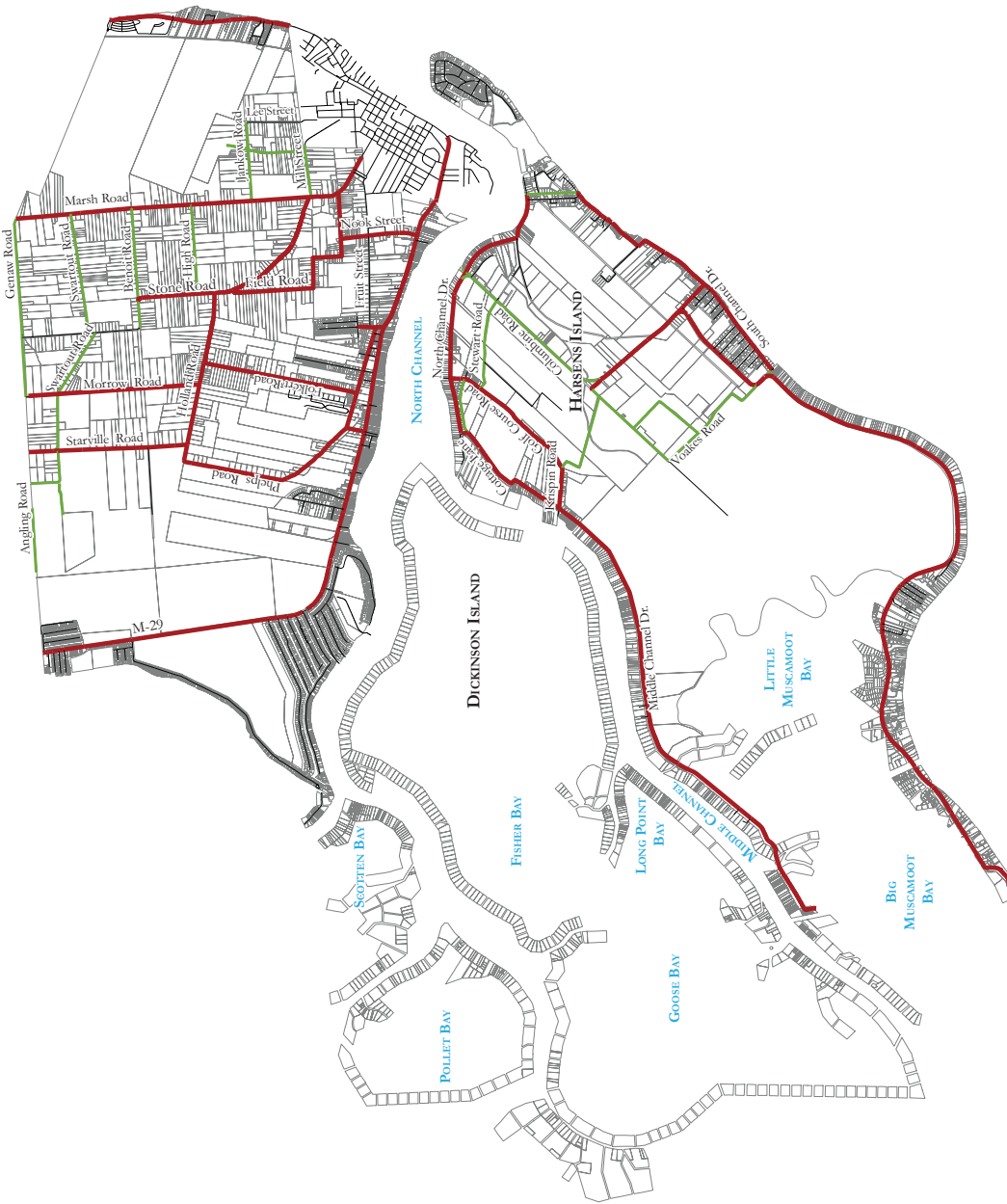
### ISLAND

Major

M-154  
North Channel  
Columbine  
Lacroix  
Green  
Middle Channel Drive  
Golf Course  
North Channel Drive

Collector

Cottage Lane  
Ames  
Columbine  
Krispin  
South Channel Drive  
Stewart  
Orchid  
Little  
Voakes

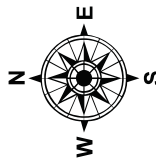


**CLAY TOWNSHIP**  
ST. CLAIR COUNTY

**EXISTING PLANNED  
RIGHT OF WAY**

ST. CLAIR COUNTY ROAD COMMISSION  
LONG RANGE PLAN

- MAJOR THOROUGHFARE
- COLLECTOR



Base Map Information By:

St. Clair County Metropolitan  
Planning Commission



Community Planning & Management, P.C.  
Professional Planning Consultants

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## Major Thoroughfare Descriptions

Marsh Road - Provides the major north/south trip continuity in the eastern portion of the Township.

Field Road - Provides for north/south access to the north end of the Township and beyond, via Stone Road. Also provides access to M-29 to the south via Nook.

Holland Road - Provides east/west access through the central portion of the Township, connecting the north/south arterials.

Starville Road - Provides major north/south access when used in conjunction with Phelps, Folkert or Stone.

Taft Road - Provides a secondary road to M-29 alleviating traffic along M-29 while providing access to other interior roadways.

M-29 - Provides main access in and out of the Township along the coastline.

Folkert - This north/south road carries traffic north to Holland Road which connects to Starville or Stone and allows traffic in and out of the Township.

Nook - Island - Ainsworth Roads - These roads provide short connections to the interior roadways of the Township (Fruit and Taft) from M-29

Phelps Road - Phelps is essentially an extension of Taft and provides north/south access with major intersections at Holland and Starville.

Stone Road - Provides north/south access to the interior portions of the Township as well as access to the City of Algonac.

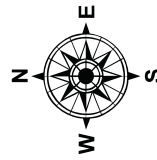
M-154 - This roadway is considered a State Highway as well as a major thoroughfare. M-154 provides access to the St. Clair Flats Wildlife Area as well as to the residents and marinas along the South Channel.

Middle Channel Drive/Golf Course/North Channel Drive - This stretch of road provides access to homes and Sate property on the northern portion of the Island. Along with M-154, this series of roads forms a half circle loop around Harsen's Island.

**CLAY TOWNSHIP**  
St. Clair County

**NATIONAL CLASSIFICATION**

- MINOR ARTERIAL
- COLLECTOR



Base Map Information By:  
St. Clair County Metropolitan  
Planning Commission

Community Planning & Management, P.C.  
Professional Planning Consultants



## TRAFFIC COUNTS

The following traffic counts were provided by the Southeast Michigan Council of Governments (SEMCOG). M-29, or Dyke or Pte Tremble Road, is the most highly traveled roadway within the Township. The highest count recorded for M-29 is 13,476, just south of Anchor Bay.

The majority of the other roadways within the Township are much less traveled with most recording traffic counts of 3,000 vehicles or less.

## TRAFFIC CRASHES

As traffic volumes increase, so do the difficulties of accommodating the traffic. The number of crashes generally rises along with the increase in traffic volume. SEMCOG maintains a database of crashes for the region. The following list of intersections rated the highest in terms of total crashes over the five (5) year period.

Almost all of the intersections noted are along M-29. 26% of the crashes involve drivers under 25 and 15% of the crashes involve drivers over 65. There was one (1) fatal crash and five (5) severe injury crashes, each involving a young or elderly driver.

Road	Location	Traffic Count	Year
Ainsworth	Northeast of M-29	2,306	2000
Anchor Bay	West of M-29	2,055	2004
North Channel	East of Champion Ferry Dock	1,855	2007
North Channel	Ferry Dock on Harsens Island	2,363	2006
North Channel	West of Ferry Dock	1,766	2003
North Channel	West of Green	593	2003
Columbine	South of M-29	1,090	2003
Columbine	North of Lacroix	2,089	2003
Dixie	North of Anchor Bay Drive	13,248	2007
Dixie	South of Anchor Bay Drive	13,476	2004
Field	Nook to Stone Road	1,539	2002
Fruit	Island to Nook	2,489	2001
Holland	Starville to Morrow	861	2001
Island	North of M-29	1,680	2007
Nook	Field to Fruit	2,480	2002
Pointe Tremble	Southeast of Nook	11,002	2007
Pointe Tremble	West of State Street	9,211	1999
Pointe Tremble	Northwest of Ainsworth	11,823	2007
Pointe Tremble	East of Island	11,542	2007
Pointe Tremble	East of M-154	11,445	2007
Pointe Tremble	East of Ainsworth	10,933	2000
Pointe Tremble	East of Nook	12,576	2003
Pointe Tremble	West of Island	11,577	2007
Pointe Tremble	West of Ainsworth	11,700	2003
Pointe Tremble	West of State Street	9,211	1999
St. Clair River	At Algonac	4,174	2007
St. Clair River	North of Algonac	6,165	2003

Community Rank	Intersection	2004-2008 Total
1	Ferry Dock Rd @ Pointe Tremble	25
2	Merrill Dr. @ Pointe Tremble	19
3	Ainsworth St. @ Pointe Tremble	16
4	Fruit St. @ Nook Rd.	13
5	Island Dr. @ Pointe Tremble	12
6	Lakepointe Blvd @ Pointe Tremble	10
6	Anchor Bay Dr. @Dixie Highway	10
8	Dixie Highway @ Flamingo St.	8
8	Pointe Tremble @ Zens Ct.	8
8	Dixie Highway @ Stark Dr.	8

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## ROADWAY CONDITIONS

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The vast majority of roadways within the Township are paved two lane roads. Roads including High, Benoit, Macomb and part of McKinley Roads are gravel within the Township. The roadway conditions map indicates the surface type and condition of the roadway.

## RTP and TIP PROJECTS

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### Long Range Regional Transportation Plan - RTP

The seven-county SEMCOG region maintains a 25-year long-range vision for transportation. It serves as a guide for developing a transportation system that is accessible, safe, and reliable and contributes to a higher quality of life for the region's citizens. The plan's policies, initiatives, and projects are implemented by SEMCOG and its partners. Projects to be implemented in the near term are included in the region's short-range Transportation Improvement Program (TIP).

### Transportation Improvement Program - TIP

The region's short-range transportation program is called the Transportation Improvement Program (TIP). The TIP is a list of priorities chosen by cities and transportation agencies for federal funding. TIP projects must align with the 2035 Regional Transportation Plan for Southeast Michigan.

Project Name:	Marsh Road
Project Limits:	From Benoit to Genaw (~1 mile)
Proposed Work:	Rehabilitate Roadway
Responsible Party:	St Clair County Road Commission
Project Timeframe:	2016-2020

Project Name:	M-154
Project Limits:	at N. Channel on Harsen's Island
Proposed Work:	Resurface and Improve Park and Ride Lot
Responsible Party:	Michigan Department of Transportation
Project Timeframe:	2011

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## ST. CLAIR COUNTY PLANNED PATHWAYS

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### Planned Routes

The major planned route through the Township is the Bridge to Bay Trail. The Bridge to Bay Trail is designed to provide a linkage throughout St. Clair County from the Port Huron Area to the southern portion of the County including Clay Township. This planned route follows M-29 along the coastline. The trail is a shared pathway along M-29.

### Additional Routes

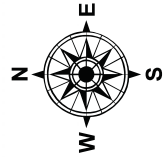
The Plans also call for a pathway along North Channel Drive/South Channel Drive and Green on Harsen's Island. This pathway would provide connections to the St. Clair Flats.



**CLAY TOWNSHIP**  
ST. CLAIR COUNTY

**ACCIDENT SITES**

8 NUMBER OF ACCIDENTS



**Base Map Information By:**  
St. Clair County Metropolitan  
Planning Commission

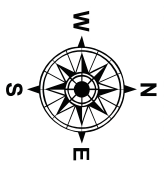


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Professional Planning Consultants

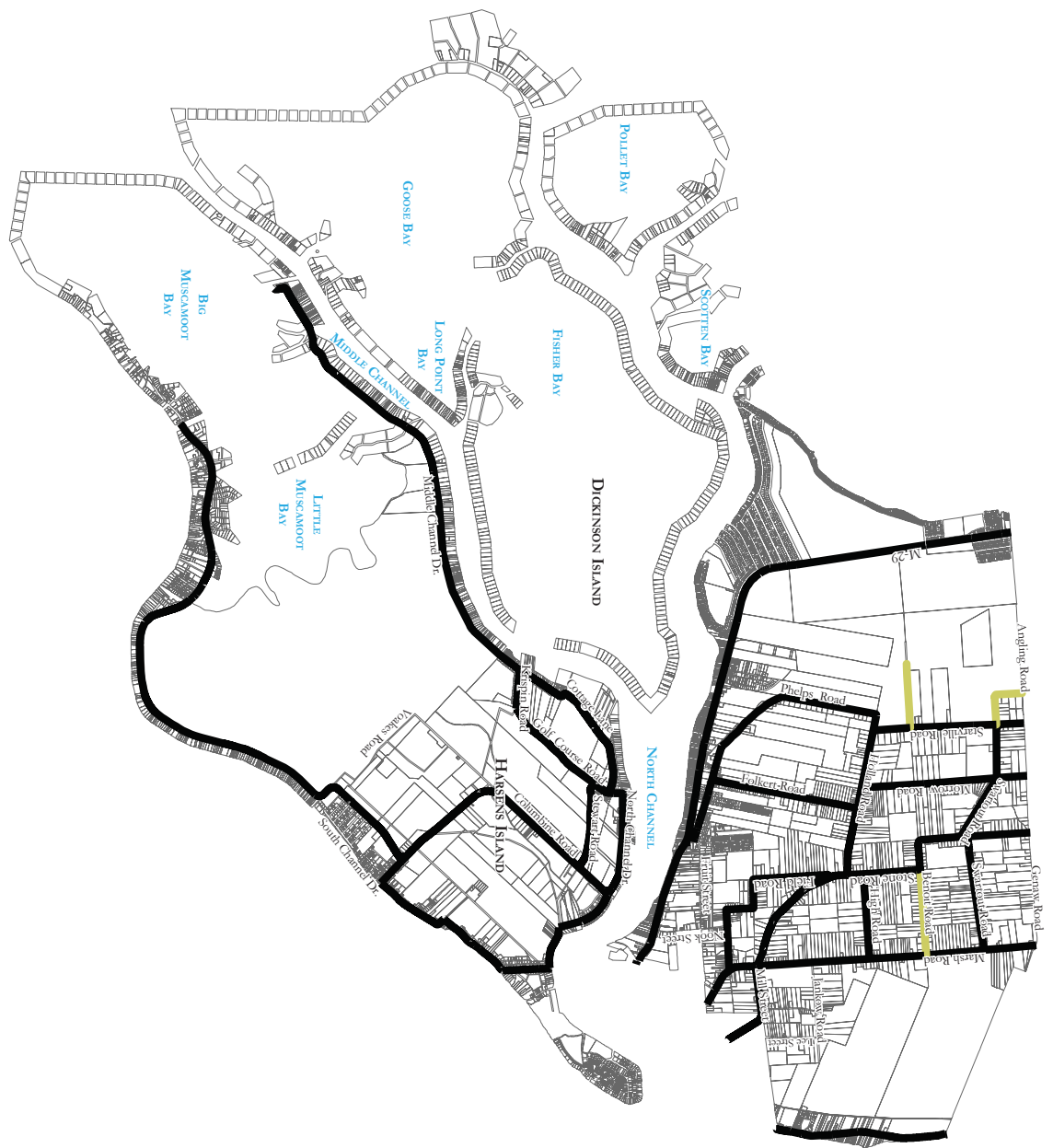


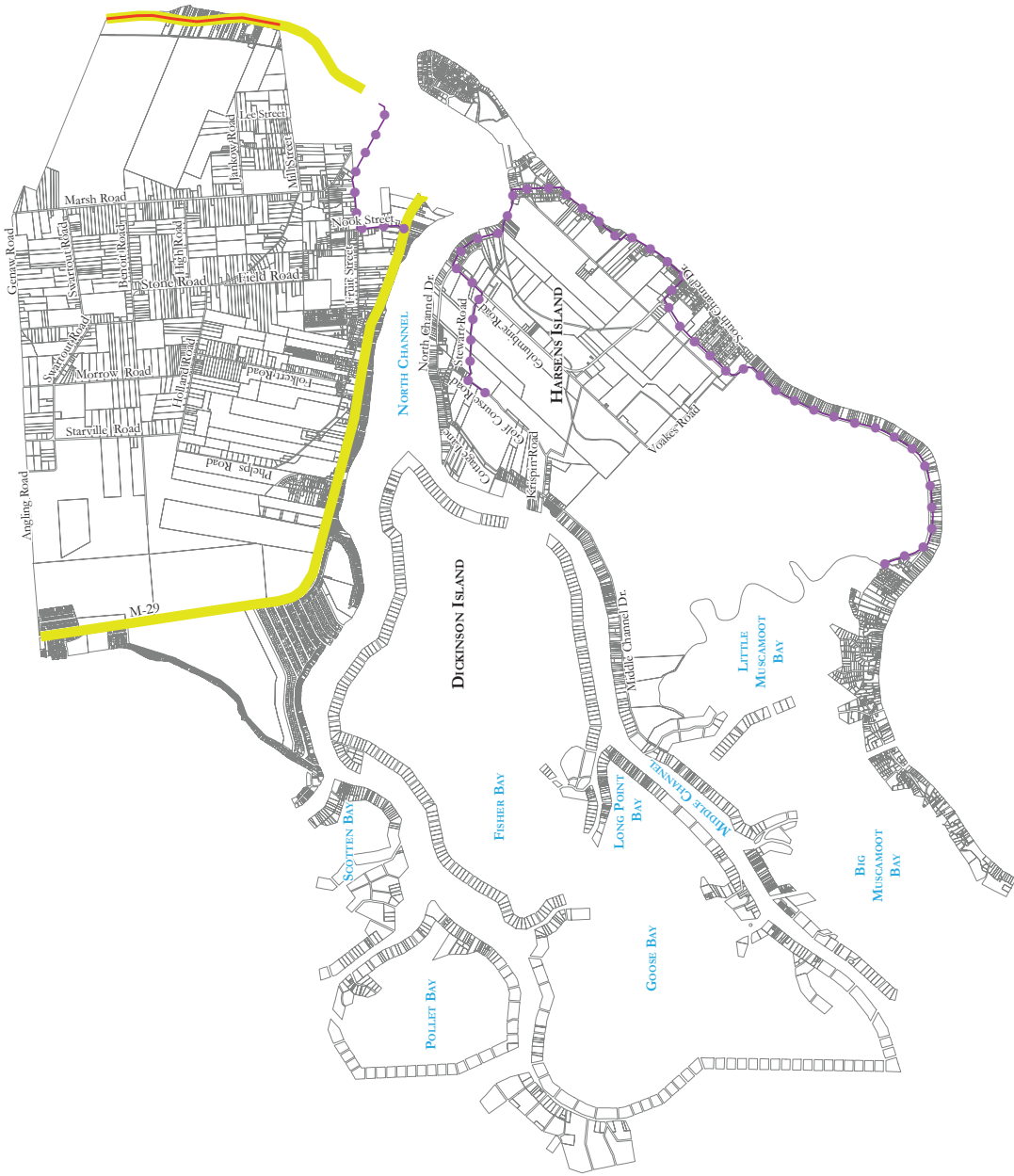
CLAY TOWNSHIP  
 ST. CLAIR COUNTY  
 ROADWAY CONDITIONS

-  PAVED SURFACE
-  GRAVEL SURFACE



Base Map Information By:  
 St. Clair County Metropolitan  
 Planning Commission





**CLAY TOWNSHIP**  
ST. CLAIR COUNTY

**ST. CLAIR COUNTY**  
**TRAILWAY MASTER PLAN**

- SHARED USE PATH 8'-10' WIDE
- RECOMMENDED TEMPORARY CONNECTOR
- BRIDGE TO BAY TRAIL

**Base Map Information By:**  
St. Clair County Metropolitan Planning Commission

Community Planning & Management, P.C.  
Professional Planning Consultants

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## Other Modes of Transportation

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### Transit

Blue Water Area Transit provides linehaul services to Clay Township. The M-29 South route travels to the 23 Mile Road and Gratiot Avenue intersection in Chesterfield Township with stops including Anchorville and Pearl Beach. The M-29 North route travels to the City of Port Huron with stops in Algonac, Marine City, St. Clair, and Marysville. Both routes have morning and evening departures from the Kroger Plaza in Clay Township, twice a day.

The St. Clair County Council on Aging provides dial-a-ride service through Blue Water Area Transit to seniors and the disabled within Clay Township. Priority is given to medical appointments and individuals are limited to two trips per week. Twenty four (24) hour notice is required.

### Airports

Clay Township is approximately sixty (60) miles from Detroit Metropolitan Wayne County International Airport. There are two (2) general aviation airports in St Clair County, Marine City Airport and St. Clair County International Airport. Marine City Airport bases approximately thirty (30) aircraft and averages twenty five (25) aircraft operations per day. St. Clair County International Airport bases approximately ninety three (93) aircraft and averages one hundred (100) aircraft operations per day.

An airport currently exists on Harsen's Island. There is one turf runway; Runway 4/22. According to airnav.com, runway 4 has a displaced threshold of 371 feet and runway 22 has a displaced threshold of 230 feet. Actual length is approximately 2,200 feet.

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## STRATEGY AND PROGRAMS

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STRATEGY: Coordinate development with the Michigan Department of Transportation and the St. Clair County Road Commission.

PROGRAMS:

1. Require pre-approval of driveway locations and stormwater outlets prior to entitlement approval.
2. Incorporate review comments into motions regarding entitlement.

STRATEGY: Coordinate growth with transportation infrastructure.

PROGRAMS:

1. Enact traffic impact analysis standards that adequately explore parking, access, and internal circulation.
2. Annually evaluate roadways bridges and culverts, including surface conditions, safety, and traffic volumes, in order to maximize collaboration with MDOT and the County's local road match program.
3. Provide pedestrian connections from new or redevelopments to the existing non-motorized network.
4. Focus industrial development along existing all-season truck routes or improve roads in existing industrial zoning districts.
5. Require reasonable setbacks from existing road centerlines or edges that respect future expansions.

STRATEGY: Improve safety along heavily traveled corridors and where pedestrian and vehicular traffic conflict.

PROGRAMS:

1. Provide appropriate corner clearances at driveways.
2. Incorporate pedestrian refuge areas at crossings and transit stops.
3. Encourage MDOT to routinely check the signal phases for the traffic lights it controls on M-29.
4. Control and eliminate weeds around existing pedestrian crossings and routes.
5. Consolidate driveways, require access agreements, and implement traffic-calming, where appropriate.

STRATEGY: Improve marine commercial aesthetics while maintaining a pro-business atmosphere to promote economic viability.

PROGRAMS:

1. Work with business owners and boating/yacht clubs to establish ordinance requirements that allow flexibility for outdoor storage while encouraging landscaping and screening.
2. Promote the entranceway signage and encourage a uniform theme of design along the Township's commercial corridor that accentuates its boating and outdoors activities.
3. Install dynamic messaging boards along M-29 to relay the operation status of the Harsen's Island Ferry during peak travel periods and inclement weather.

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STRATEGY: Improve access to the a multi-modal transportation network for persons of all levels of mobility.

PROGRAMS:

1. Enhance the community's Council on Aging dial-a-ride service to extend hours and service to all residents that face mobility challenges.
2. Inventory and improve compliance with the Americans with Disabilities Act provisions for public and transportation facilities.
3. Exceed Michigan Barrier Free Codes for non-single family developments.
4. Conduct a Gap analysis study.
5. Continue to pursue financing opportunities like the DDA and grants to implement non-motorized connections.
6. Develop ordinances that require pedestrian and bicycle amenities.
7. Promote the use of the Blue Water Area Transit line along M-29 as a way to reach government services and connect to jobs centers.



The  
Colony

EXISTING LAND USE

5

## What to Take From This Section

Many factors influence the character of our physical environment. The use of land is the principal effect; the distribution of land uses within the community and the relationship of those uses to one another. These components strongly influence the overall character and appearance of the Township, not to mention individual quality of life and the relative degree of satisfaction with our surroundings.

Land use characteristics and relevant physical features are among the most perceivable aspects of the land use planning process. These features establish the tactile basis for the future of the community. They also influence the community's development potential.

This chapter examines the land use characteristics by classification. The amount of land devoted to each category and the spatial distribution of uses provides hints to the Township's capacity in the future, particularly when compared to historic trends. There are many opportunities for meeting the social and economic demands of the Township's residents and businesses, in spite of the current stagnated climate in Michigan.

## METHODOLOGY

Existing land use data was compiled over the summer of 2009. Zoning, past land use classification, property tax/ownership information, and aerial photography were primarily used for analysis, as well as field survey and verification. Land use categories were assigned on a parcel-by-parcel basis on the Township's base map. Information from all sources was subsequently transferred to an updated base map according to the individual categories identified. Each category was measured to determine the amount of land area occupied by each individual land use class.

The geographical separation between the Mainland and Harsen's Island require an independent and summative analysis. Russell Island, Dickinson Island, and the other smaller isolated islands contain seasonal cottages and many structures that can be classified as homes, however, the lack of access to them greatly reduces the likelihood of more intense development or a demand for services from the Township's developed areas.

Water-locked or waterfront sites with an assessed taxable value of less than twelve thousand (\$12,000) dollars are not likely to have significant or modern structures on them. These parcels are coded vacant/open space, unless they are a homestead according to St. Clair County records.

Also, in past land use and land cover analyses, Dickinson Island was a large area of land that dramatically skewed the amount of state managed lands and open spaces that were undevelopable. The total acreage for this analysis does not include the interior of Dickinson Island, reducing the sum by 4,347 acres.

Land Use Category	Total Acres	Percent Total
Vacant/Open Space	2,864	15.5%
Low Density Residential	4,151	21.5%
Single-Family	3,230	16.7%
Multiple-Family	24	0.1%
Manufactured Housing Community	104	0.6%
Commercial/Office	152	0.8%
Marina Commercial	181	1.0%
Industrial	141	0.8%
Semi-Public	308	1.0%
Public	197	1.0%
State Managed Lands	7,956	41.2%
Right-of-Way	668	3.4%
<b>Total Area</b>	<b>19,307</b>	<b>100.0</b>

**5-1 EXISTING LAND USE SUMMARY - 2009**  
Source: CP&M, P.C.

## RESIDENTIAL LAND USES

Clay Township residents have many housing options and sizes. Large Lot Single Family Residential is less likely to remain single family residential for the planning horizon this study examines. Development pressures, or lack thereof, cause the land to develop or to remain in a primarily undeveloped state.

### SINGLE FAMILY RESIDENTIAL

Single-family home sites occupy 3,231 acres of land in Clay Township. This represents nearly 16.7% of the Township's total land area and 39% of all developed land in the community. Most existing single family development is concentrated in platted subdivisions. According to SEMCOG, there are a total of 5,092 single family homes in the community.

Several subdivisions are adjacent to Lake St. Clair. Nearly every buildable lot along the St. Clair River and its channels is single-family residential.

### MULTIPLE FAMILY RESIDENTIAL

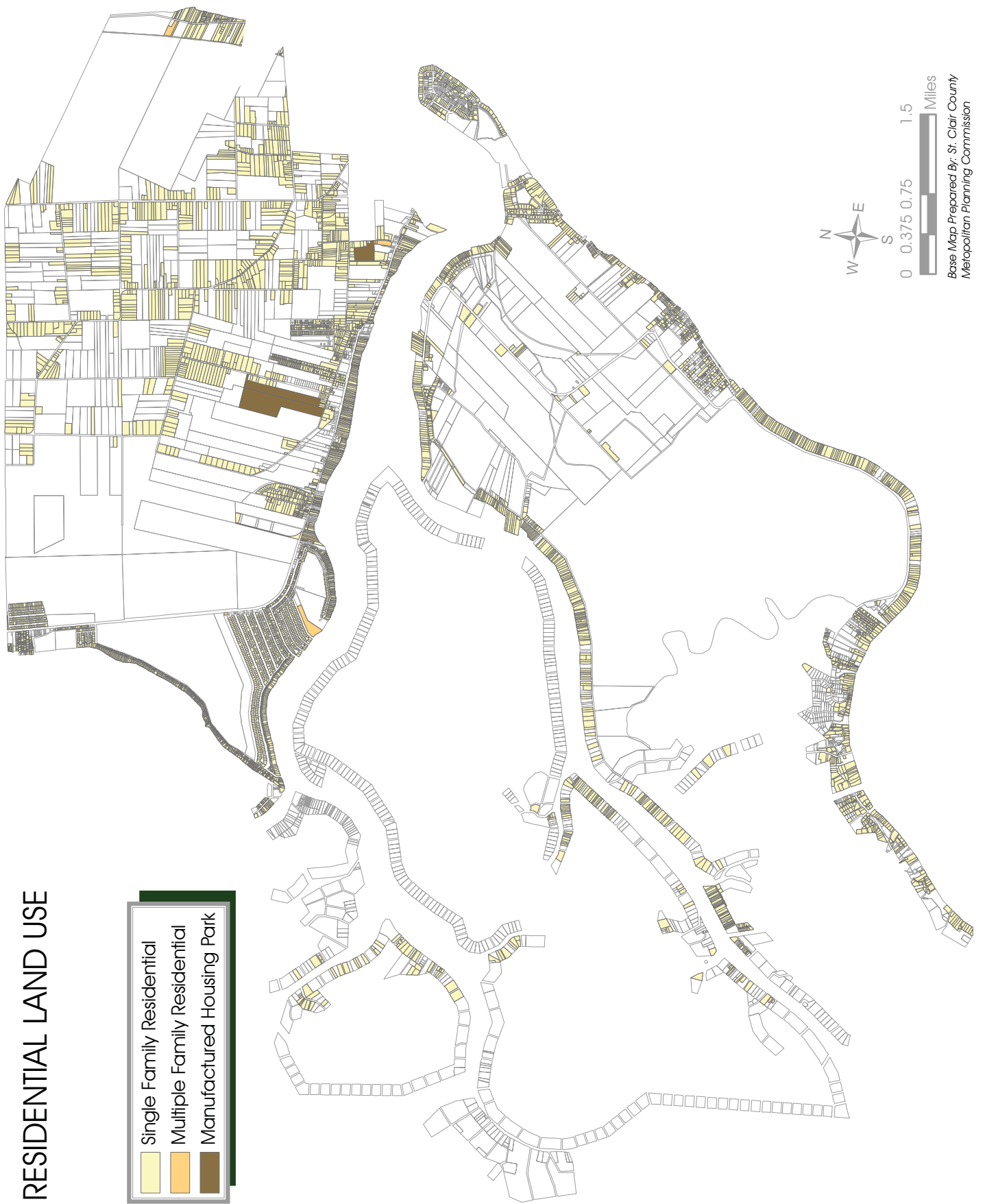
Multiple-family units occupy 100.3 acres of land, or 0.9% of the Township's total developed land area. A total of five (5) separate multiple family housing sites were identified during the field survey. There are a total of 60 condominium units in the Township and 40 boat-well condominiums. Multiple family units comprise 1.8% of the Township's total housing supply.

### MANUFACTURED HOUSING COMMUNITIES

Four manufactured housing communities are located in Clay Township. They consume approximately 104 acres of land. The largest manufactured housing community contains approximately 291 home sites. There are 661 total units within the Township.



# RESIDENTIAL LAND USE



Base Map Prepared By: St. Clair County  
Metropolitan Planning Commission



## VACANT AND OPEN SPACE LAND USES

The land uses in these classifications occupy the most significant portions of the Township. The classifications vary somewhat when considering their long term use and capacity within the context of a master land use plan.

### STATE MANAGED LANDS

There are significant state managed properties in Clay Township. The St. Clair Flats State Wildlife Area, St. John's Marsh State Wildlife Area, and the Algonac State Park preserve huge tracts of land and wildlife refuges, contain research areas for micro-habitat restoration, offer a campground complete with amenities, and have designated areas for hunting waterfowl. There are also boating access sites on the North Channel, Decker's Landing, Snooks, and Ames. These uses including active recreation, hunting grounds, passive recreation with interpretive opportunities, preserved open space, and parcels of land previously platted but inundated by water. St. John's Wet Prairie Natural Area (86 acres) and the adjacent St. John's Marsh (3,000 acres) are managed by the Michigan Department of Natural Resources.



Controlled burning of these sensitive areas is an example of how nature preserves can impact adjacent land uses. State Managed Lands account for almost eight thousand (8000) acres of land, approximately forty one (41)% percent of the Township's area.



State Managed Lands are unlikely to change their use, are owned by the state of Michigan, and do require some public services without paying local property taxes. It is unlikely the State will participate financially to deliver basic local services in the short term, given its precarious fiscal condition. State Managed Lands do provide broad public benefits such as active and passive recreation, preservation of natural habitat and features, and a stimulus to the local economy that attracts out-of-town dollars.

### LARGE LOT SINGLE FAMILY RESIDENTIAL

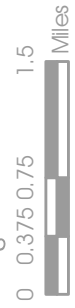
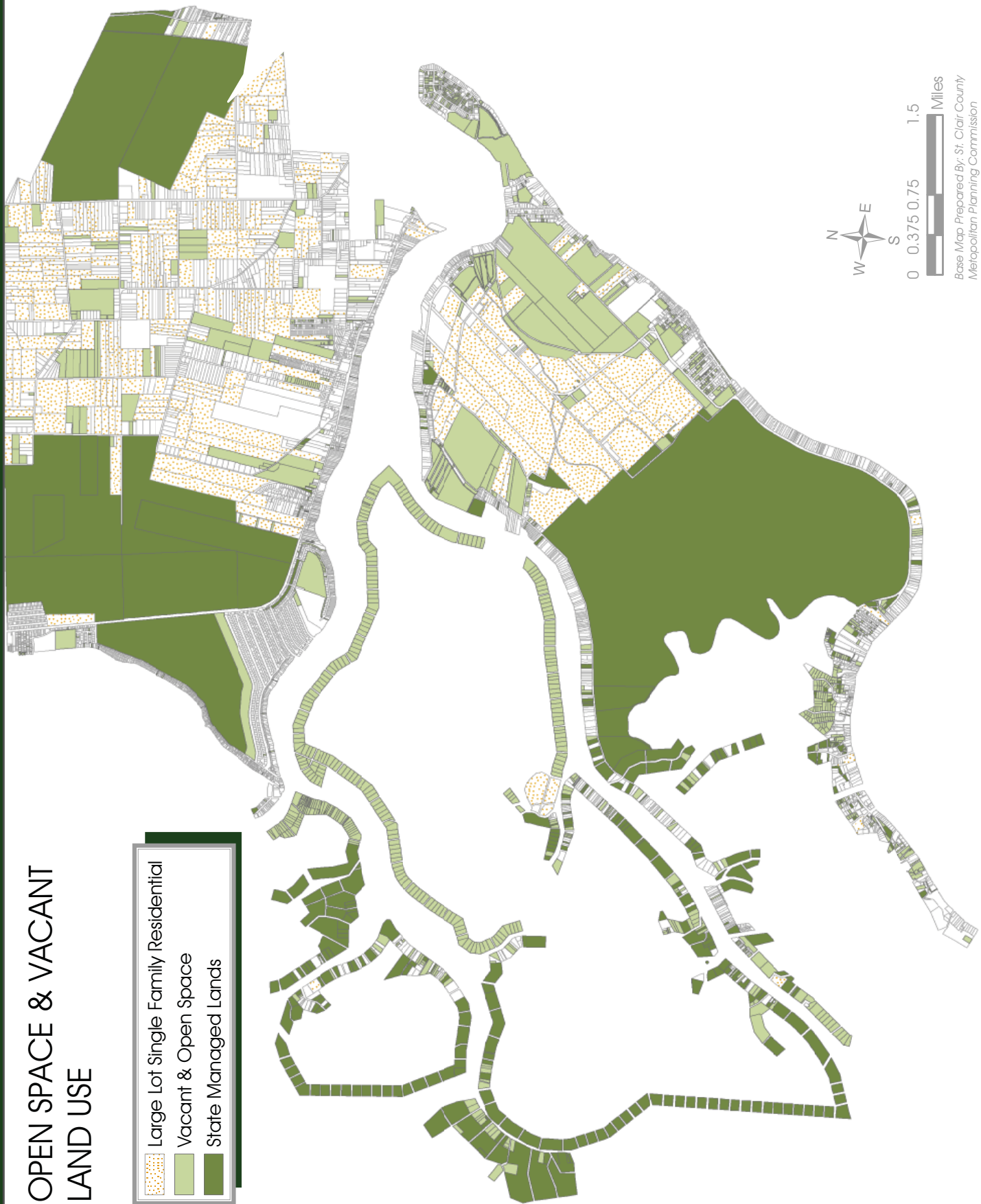
Large lot single family residential consists of any properties over ten (10) acres that have a single family home on the lot. It is important to categorize the properties separately because they are likely to change their development status if infrastructure access (water, sewer, roads, etc) is improved during the planning cycle. Functionally, property in this category holds development capacity much the same way vacant property does, however, it is more flexible than permanently preserved open space or state managed lands.



### VACANT/OPEN SPACE

There are 3,009 acres of land remain vacant, un-buildable, open space, or are currently under development in the Township. This vacant areas included in this category are more likely to be developed as their access to public infrastructure capacity improves.

# OPEN SPACE & VACANT LAND USE



Base Map Prepared By: St. Clair County  
Metropolitan Planning Commission

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## COMMERCIAL & INDUSTRIAL LAND USES

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There are three categories of land uses evident in the community that are providers of goods and services to the public and other business entities.

### INDUSTRIAL

Industrial uses occupy 141 acres of land in Clay Township. There are five nodes of industrial uses:

- o There is a machining/light manufacturing development at the southwest corner of Marsh and Stone Roads.
- o There is a series of machining/light manufacturing uses on the northwest corner of Fruit and Cemetery Roads.
- o There are light manufacturing uses at the intersection of Kretz Street and M-29.
- o There are bulk and outdoor storage uses on the north side of Fruit Road in between Island Drive and Nook Road.
- o The mining operation off the corner of Benoit and McKinley Roads.

Industrial uses can be regulated based on type. In Clay Township there are two basic types, bulk and outdoor storage and machining/light manufacturing.

### COMMERCIAL

The Township's commercial properties, those that offer goods and services to the general public and include office-type uses, service primarily local needs as opposed to catering to a regional market that attracts consumers outside the local retail trade area.

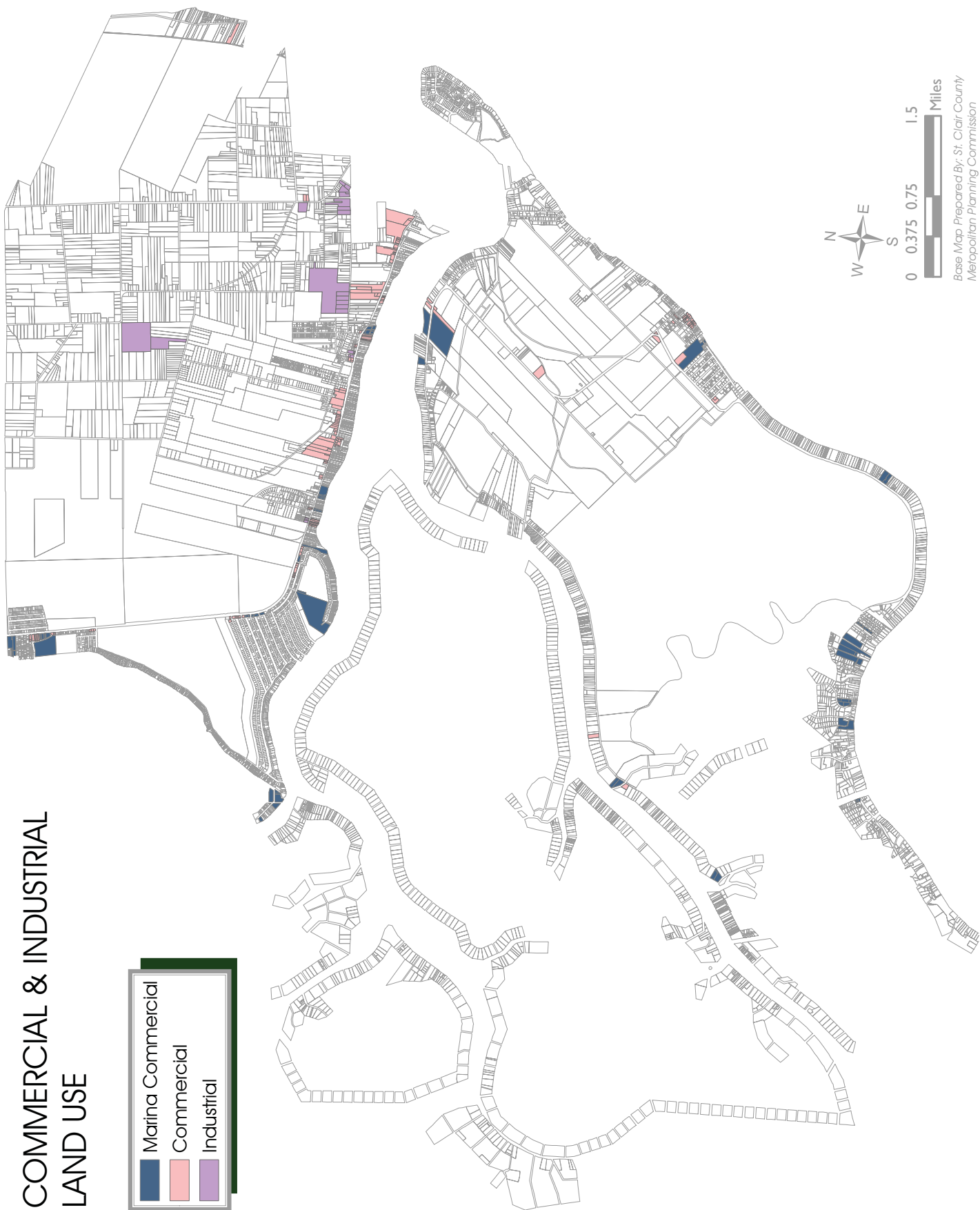
These land uses occupy approximately 152 acres of land within Clay Township. The core shopping center is at the corner of Nook Road and M-29. The center features an anchor grocery store, a dollar store, and several other local businesses as supporting tenants. Almost all of the mainland businesses that local consumers support are along M-29. These commercial uses require freestanding locations major thoroughfares and rely heavily on visibility and convenient access. There are locally serving businesses in San Souci, a hamlet on Harsen's Island.

### MARINA COMMERCIAL

There are a number of marinas and other businesses that service marine traffic from Lake St. Clair and the St. Clair River. These marine business orient towards the water and are generally accessible by surface streets. These businesses are unique within the Township because they are more likely to attract consumers from beyond the local retail trade area. Overall, they occupy 181 acres of land in Clay Township.



# COMMERCIAL & INDUSTRIAL LAND USE



Base Map Prepared By: St. Clair County  
Metropolitan Planning Commission

## PUBLIC, SEMI-PUBLIC, & RIGHT OF WAY LAND USES

### PUBLIC

Public lands occupy a significant portion of Clay Township's landscape. Land occupied by a range of public uses totals 197 acres, 1.0% of the Township's area. The Township's public uses include several school and park sites, boat launches, the Marine Division of the St. Clair County Sheriff's department, and the Township's facilities.

### SEMI PUBLIC

Semi-public uses include several churches, social, and service organizations. Typically not-for-profit, these agencies provide valuable amenities and outreach services within the community. Semi-Public uses comprise 184 acres in Clay Township, also approximately 1.0% of the total land area.

### RIGHT-OF-WAY

One indicator of a community's degree of development is the quantity of land used for right of way purposes. More land is required for roadway and utility needs when more land is utilized for residences, businesses, and industry.

The right-of-way includes the physical roadway as well as adjacent land. The St. Clair County Road Commission is responsible for maintenance of the public's right to traverse the right-of-ways within the Township, with the exception of Michigan Trunklines. Right-of-way needs vary in width based on the type of road function and adjacent land uses.

Land reserved for public right of way occupies 668 acres of land. This represents approximately 3.41% percent of the Township's total acreage.

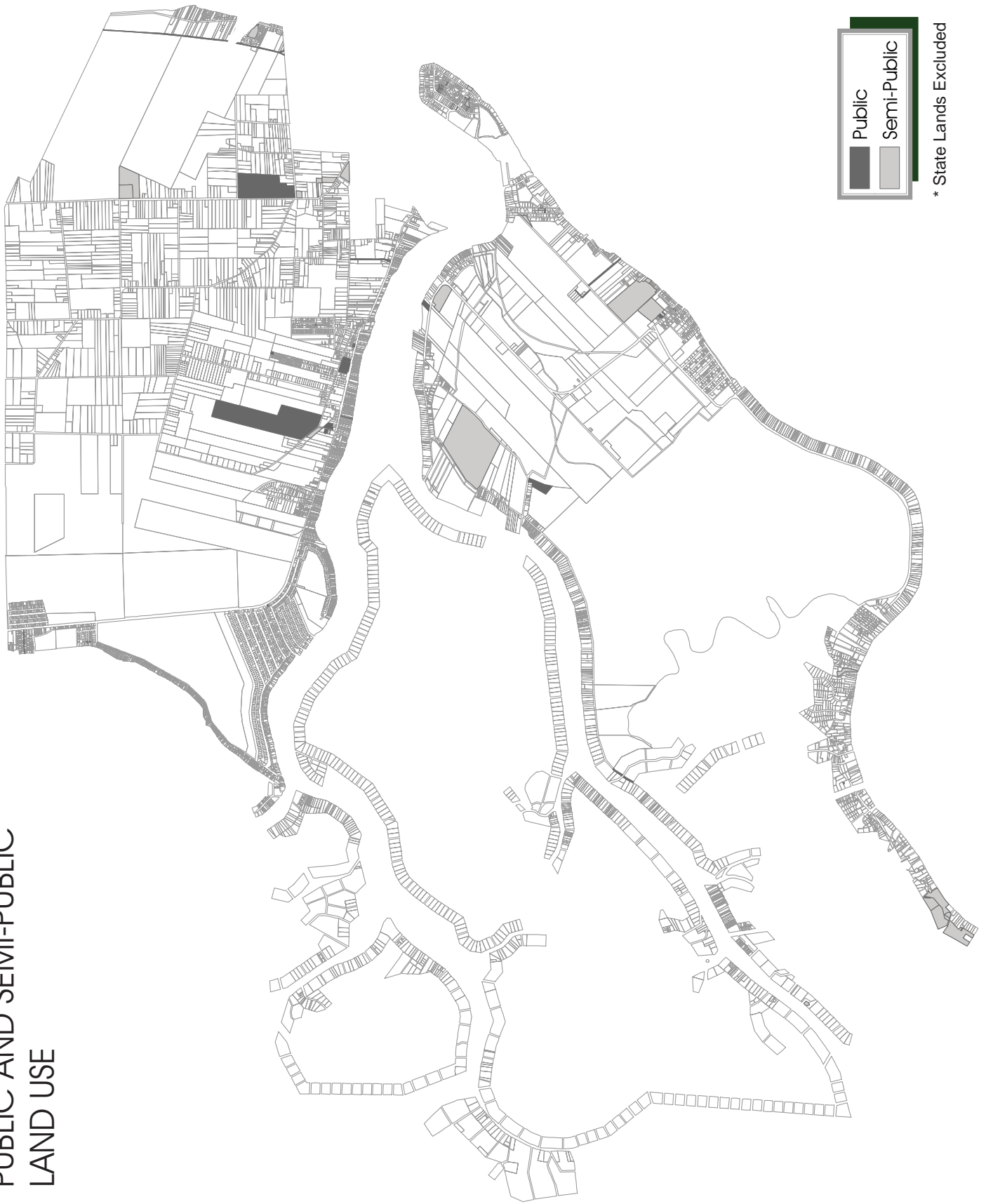
Functional Classification	Planned Right-of-Way Width
Arterial	120'-150'
Collector	80'-90'
Local	50' - 66'

There are no railroads within the Township.

Water's presence has had an important influence on the Township's land use features and overall development pattern. Open water occupies a significant area within the Township's boundaries. The channels of the St. Clair River divide the mainland and the islands from each other. There are few canals, but some of the waterfront subdivisions have them, most notably, the Colony.



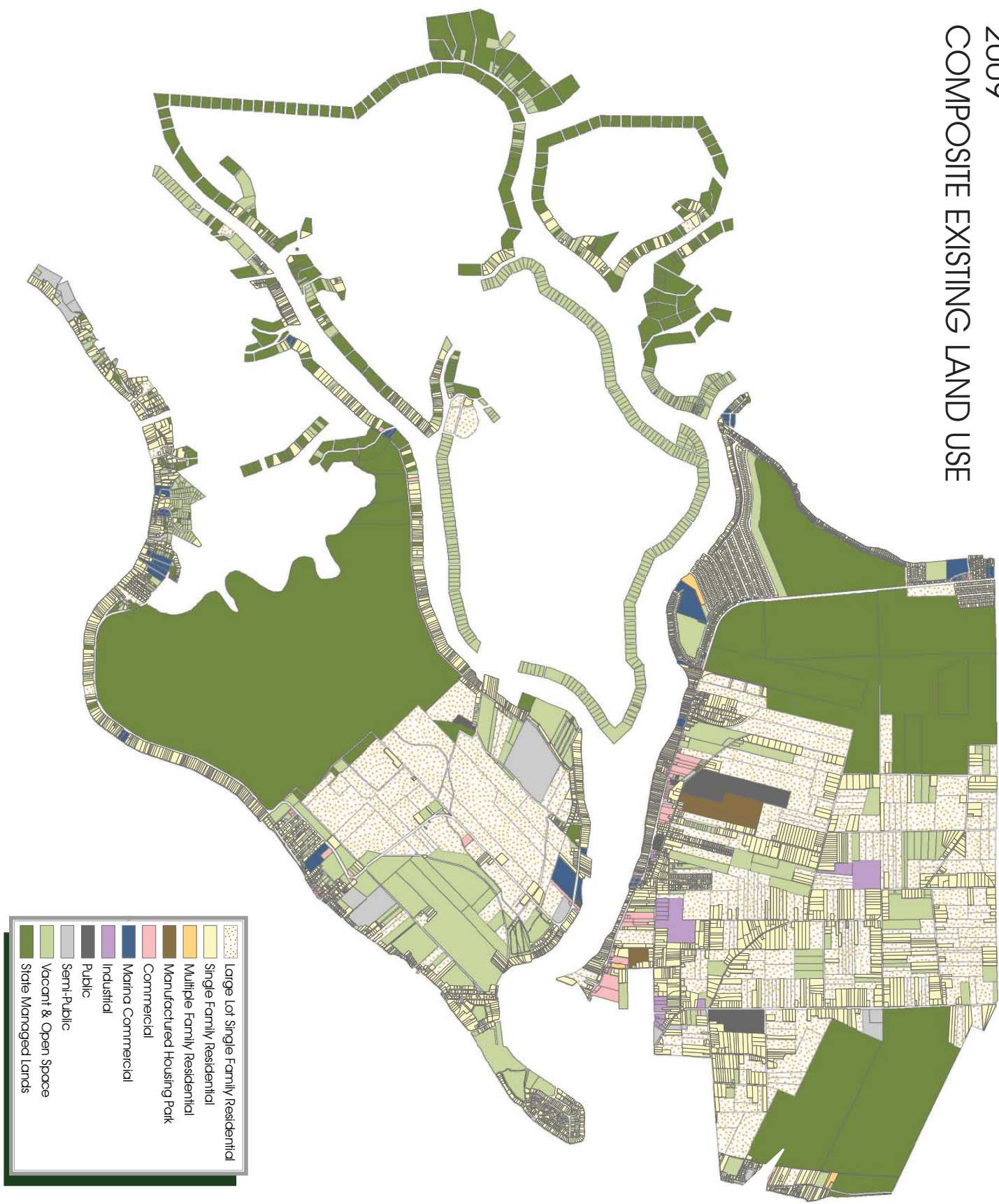
PUBLIC AND SEMI-PUBLIC  
LAND USE



Public
Semi-Public

\* State Lands Excluded

2009  
COMPOSITE EXISTING LAND USE





SUSTAINABILITY &  
ECONOMIC DEVELOPMENT

6

## What to Take From This Section



The concepts of economy and sustainability have never been more intertwined than in today's landscape. Economic development was once the firebrand of politicians and businessmen, intent on attracting the next great manufacturer or technological advancement. Emphasis was placed on land consolidation and creating spaces large enough to house three thousand employees assembling aircraft, vehicles, and appliances. Generations of Michigan workers trained for the opportunities manufacturing presented. Many of those workers, their children and grandchildren have made Clay Township their place of recreation and escape.

However, just as quickly as the two-income family became the paradigm of the 1950's post-war economy, technological advances of the past two decades transformed manufacturing from blue-collar to green collar. Highly skilled, educated, and flexible employees along with dynamic production replaced career laborers and static assembly.

Economic development now requires a community to be right-sized, well balanced, and nimble. Clay Township will experience minimal population growth, infrastructure development and change to its land use patterns over the horizon of this master plan.

The "greenest" uses and buildings are ones that embody a longevity and can adapt to different uses. Economic development in 2010 means local job creation and community support. It understands that enabling, and financing, local businesses is the cornerstone. It means that there is an accent on what business is already there in addition to attracting what isn't. The tax incentive field is, for the most part, level. Companies make their location decisions on the quality of life that their employees can attain in that community.

This section provides tried and true methodologies, as well as some redevelopment concepts, that offer all age and wage ranges of employees opportunities to make Clay Township their place for commerce as well as recreation and domicile.

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## ECONOMIC DEVELOPMENT

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The Master Plan identifies several unique characteristics in the Township that can both promote and further develop the economic identity of the community. Chief amongst those unique characteristics is the abundance of natural features; a prominent part of the landscape. The environmentally significant areas of the Township include the St. Clair Flats, Anchor Bay, and a plethora of wetlands and woodlands. These features offset the lack of access that the Township is encumbered with at the end of the peninsula and at an international border.

The Township aims to focus on utilizing these significant features to attract recreational uses. It is also a desire to maintain the bedroom community character that existing Clay Township residents are accustomed to. To achieve these two ends, the Township must focus commercial activity into distinct concentrated areas of development. These areas can act as the primary activity centers from which to build a tourist industry. The Township also recognizes that large-scale recreation uses will require supporting commercial users in these areas, such as hotels and restaurants. As part of this strategy, the Township will focus on the following:

- *Large-Scale Recreational Development* - The Township recognizes the needs for a large-scale commercial tourism use that will help attract tourists to the area and compliment the existing waterfront amenities of the community;
- *Focus of Recreation Based Tourism/Events* - When promoting the community, the Township should promote events and recreation opportunities in the area, such as:
  - Ferry Rides
  - Fishing/Ice Fishing
  - Snowmobiling
  - ORV - Four wheeling and off-road motorcycling
  - Hunting
  - Kayaking
  - Birding and other wildlife observation
- *Support and Encourage the Film Industry to utilize Clay Township when seeking waterfront locations or other natural landscapes;*
- *Provide Enhanced Access to Natural Features;*
- *Mixed-Use in Key Tourism Areas* - In areas where the Township is focusing on building a concentration of commercial activity around a large-scale user or a village node, mixed-use development should be encouraged and/or required. To achieve this, along with the desired character of development, the Township should consider utilizing Form Based Codes, rather than conventional zoning.

The Illustration on the following pages depict a concept of how this strategy could be implemented in two (2) different areas of the Township.

# EAST END CONCEPT



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## EAST END CONCEPT

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Clay Township's downtown offers an unique opportunity. It supports a variety of shops, services, and local offices that provide clientele in the immediate area alternatives to travelling farther for daily items and needs.

- The site immediately east of the existing Kroger site provides excellent access to the surrounding area is another larger scale retail or service use were to locate in the Township.
- The existing Kroger site offers tenant space as it becomes available for smaller shops and local merchants in an attractive design.
- The boat launch facilities, along with the marina, contribute traffic to the existing, and not unsubstantial, boating economy of the Township.
- M-29 enhancements, some already underway through the Township's DDA, continue to make the community more attractive, pleasing, and safe to both existing residents and the visiting public.
- Adjacent properties along the west entry to the main commercial corridor provide key expansion areas for future commercial redevelopment from existing marginal commercial and office uses as well as waterfront redevelopment.
- On the south side of M-29, between the boat launch and the marina, there is a sizeable area that is ideally situated for a larger water-based tourism and recreation based use, such as an indoor waterpark or wellness lodge.

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## SANS SOUCI CONCEPT

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Harsen's Island presents a unique opportunity for both redevelopment, and for the potential visitor. Harsen's is an area completely isolated from the mainland and accessible only on ferries that operate continuously. The state of Michigan, and potentially the Township, own vast amounts of open space that are meticulously managed for sportsmen and wildlife enthusiasts.

The special place that Harsen's is should not be interrupted by development, but rather center around the opportunity to recreate in harmony with pristine surroundings. Sans Souci village currently consists of services for the island residents and seasonal guests. If greater amenities were offered within convenient surroundings, the likelihood would increase of visitors with disposable income spending dollars in the community, benefitting local businesses and employing residents.

- Sans Souci is a particular village that could thrive under flexible, form based codes that considers the appearance of development as opposed to the uses that are contained within structures. The benefits to this approach expedites development mandates a cohesive visual fabric.
- Allowing non-traditional uses such as kayak liveries and boat rentals.
- Harsen's contains several larger parcels with potential to house a large scale recreation user. The most severe deficiency in southeastern St. Clair County is the lack of overnight lodging and facilities for extended stays, even for relatives and friends of residents.
- A "rustic & nautical" theme will provide the village with a novel and quaint atmosphere, not like anything else in the surrounding areas. Although there are historic waterfront downtowns-Lexington, Caseville, Cheboygan, etc, -they are eclectic. Other waterfront communities in St. Clair County installed public uses in their core areas through Urban Renewal, eliminating cultural resources and handcuffing the development of opportunities oriented towards the water.

# SANS SOUCI CONCEPT



# PEARL BEACH CONCEPT



## PEARL BEACH CONCEPT

The Pearl Beach Pier is public pier located on the south side of M-29, on the west side of the Township. The pier offers Township residents an opportunity to gain access to Anchor Bay for recreational and leisure purposes, such as fishing and picnicking. Adjacent to the site is a vacated marina which, if purchased by the Township, could expand the Township's presence in the area by creating a primary activity node to benefit residents and tourists. The Pearl Beach concept includes the following:

- Activity Center along potential future M-29 multi-use/snow mobile trail;
- Fishing Pier owned by Township;
- If purchased by the Township, the vacated marina provides an opportunity for the following:
  - Use as a winter warming station for snow mobile trail users and ice fishers;
  - A port-of-call for boaters in the summer;
  - Restroom availability to recreational tourists;
  - Picnic location for residents.

## PEARL BEACH CONCEPT



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## STRATEGIES AND ELEMENTS

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The Township's economic development goal is to provide opportunities for existing and future residents. In order to accomplish this goal, the Township must attract commerce and expand existing business opportunities in its boundaries. These competing interests each have their own effects on local services and the longevity of the community.

**STRATEGY: Provide opportunities for existing commercial activity to expand, attracting new residents and visitors to the Township.**

### ELEMENTS:

1. Organize events and large-scale festivals to attract residents and non-residents to Clay Township for extended tourism based visits.
2. Work with existing developments to install cost effective utility solutions that reduce energy consumption and greenhouse gas emissions, thereby making operations cost-competitive and less impacting of the Township's most precious feature- nature.
3. Streamline re-occupation of existing buildings that are safe and up-to-code so that prospective tenants/owners can focus on their operations instead of perceived bureaucracy.
4. Examine the special land use provisions in the Zoning Ordinance and confirm that they are reasonable and effective in controlling uses that have a disproportionate impact on their surroundings and the community as a whole.
5. Use revolving loan funds and connect with venture capitalists to provide gap-financing for local businesses. Businesses with fewer than 25 workers employ a greater portion of the community than large operations.
6. Create unified marketing and branding strategies to effectively communicate the recreation opportunities in Clay through traditional and non-traditional (i.e. social networking) media.
7. Explore shuttle service to connect lodging with attractions and reducing vehicular traffic along roads and keeping disruption of natural areas to a minimum.

**STRATEGY: Attract new development that compliments existing commerce or creates long-standing, sustainable investments in the Township.**

### ELEMENTS:

1. Continue the Downtown Development Authority as a dynamic resource that can adapt to the different demands of today's shifting business climate.
2. Work with other waterfront communities in the area to create a regional boating tourism destination.
3. Prepare materials discussing the Township specifically and its regional context to market the community directly to large scale recreation uses, notable lodging and water-parks.
4. Focus large scale development towards existing infrastructure with the capacity to handle traffic and with adjacent development/redevelopment opportunities.
5. Assemble local residents and business owners to periodically discuss needs as well as celebrate successes in business development and retention.
6. Explore the State's advertising campaigns and attempt to integrate the Township's efforts into broader marketing for Lake St. Clair and Pure Michigan.
7. Utilize mechanisms, including the existing DDA, to fashion business oriented programs and foster civic pride.
8. Assemble and manage property for future redevelopment and large scale uses.
9. Coordinate future development on Harsen's Island between conservation interests, existing residents, and future residential and commercial opportunities.

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STRATEGY: Promote and maintain a series of Blueways and Greenways throughout the Township which preserve natural amenities and links environmental corridors throughout the County while providing potential economic opportunities for those businesses along the designated corridors as well as the Township as a whole.

PROGRAMS:

1. Work with the St. Clair County Metropolitan Planning Commission and St. Clair County Parks and Recreation Commission to further the implementation of the Blueways and Greenways programs.
2. Help maintain and promote a list of businesses and activities, available on the dedicated Blueways homepage, along the identified blueways or greenways.





FUTURE LAND USE

## What to Take From This Section

Clay Township has a unique dual role as a community serving the needs and interests of those that live and work within the community full-time and as an outdoor destination that hosts both short and long-term visitors.

The juxtaposition between these two functions often makes planning and decision-making for the Township and its leaders challenging. During this planning process it became apparent, however, that much of what the community expressed in terms of values, beliefs, and desires for Clay Township's future could in fact provide a synchronized direction for many of the unique issues and concerns associated with each of the two temporal identities. Additionally, Clay Township faces unique geographic challenges because a substantial portion of its citizens reside on islands that are accessible only via ferry or private boat.

The future land use map designation is a visual test for the appropriateness of a proposed use of change in zoning designation. The written policies used to create the future land use map should be applied during decision-making, regardless of whether a change in use designation appears concurrent (or not) with the future land use map designation.

Keep in mind, the Master Plan is a long term policy and vision. It is a foundation for decision making and a guide for legislative creation that enacts a community's vision of character and development. "Build out" of future land uses as indicated on the map are not intended immediately after the publication of the Master Plan. Consistency must correlate with timeliness or land uses will not compliment each other properly and public services cannot be provided efficiently and effectively.

Finally, Michigan law requires the Township to review the Master Plan every five years. This requirement ensures a relevant and dynamic document. In practice, the Township should review the Master Plan's future land use designations as needed, whether that is the minimum time or frequently during the planning cycle.



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## STUDY PROCESS

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The study process for developing the future land use designation map involves:

- o Data Collection, Base Map Development, and Existing Land Use Determination
- o Suitability Analysis
- o Optimal Land Uses Prioritization
- o Composite Land Use Map Development
- o Land Use Map Refinement

## DATA COLLECTION, BASE MAP DEVELOPMENT AND EXISTING LAND USE DESIGNATION

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The initial activities of the study accomplished two objectives: gathering pertinent information to help analyze appropriate land uses, and clarifying the anticipated results of the study with the Master Plan Steering Committee.

Primary sources of digital information are ArcGIS shapefiles from the State of Michigan, St. Clair County and Southeast Michigan Council of Governments. Previous study recommendations that had been mapped, property ownership from St. Clair County cadastral data, and specific development plans from local development interests were also considered. Wherever possible this information is incorporated into a project database which put the data in a consistent coordinate system. The consistent spatial projection provides a geographic model of the study area and the attributes identified in the previous sections.



## SUITABILITY ANALYSIS THROUGH FACTORS OF INFLUENCE

Specific categories for each set of data that influence the suitability of various land uses are established once the data is organized into various geodatabases. The measures of each data type are a level of influence. These measures split each type of data into discrete elements of selected dimensions because there are thresholds of appropriateness for the different future land uses. Also combinations of the different influences affect land differently. Some examples:

- o Properties will not likely be preserved as open space if they are low-density residential or vacant now, contain suitable soils for construction, avoid sensitive environmental features, have access to the transportation network, and are serviced by existing or planned water and wastewater service.
- o Floodplain status is an important factor in determining appropriate land uses. Land which is located in the floodplain cannot be developed in a manner that affects the land's capacity to carry or store water. Development in a floodplain is difficult, but not insurmountable.

Some factors that influence suitability and develop the land use pattern include:

- o Existing Land Use Patterns
- o Zoning Patterns
- o Sensitive Environmental Features
  - Floodways and floodplains
  - Wetlands
  - Woodlands
  - Soils Suitability
- o Extent of current and planned water and sewer infrastructure
- o Existing or planned arterial or collector roadways
- o Intersections of planned or existing arterial or collector roadways
- o Government owned land or land in a public use



The factors of influence were first used to identify where each of five general land use categories were considered feasible. The five land use categories envisioned for suitability are industrial, commercial & office, recreation & conservation, rural residential and high density residential land uses. There are transition/buffer areas in between some adjacent general land use categories where capacity for future development or redevelopment exists. We are able to illustrate the impacts of various factors on the suitability of these five general land use categories with the composite map of factors of influence.

## OPTIMAL LAND USES PRIORITIZATION AND COMPOSITE LAND USE MAP DEVELOPMENT

After the factors had been modeled to identify suitability of specific locations for each of the five general land uses, additional factors were included to help identify optimum locations for the same general land use categories. The Steering Committee evaluated optimal land use locations. These optimum locations were combined into a single map that shows the relationships between optimal locations of the generalized land uses. In some cases, more than one land use is optimal for a single location.

In order to choose the appropriate land use when more than one land use was optimal, types of land uses that should be selected first are prioritized:

- o Industrial land use locations should be established first because they have the most severe impacts on surrounding uses/land, and thus the most stringent requirements for appropriate site development.
- o Commercial land was considered the next land use to prioritize because the limited amount of land needed for commercial development has high degree of locational needs.
- o Parks, Open Space, & Greenways land use locations can be especially difficult to designate because in addition to being suitable where there is rough terrain, large tracts of relatively flat ground were also important for such uses as playing fields. While it is important to map recommended networks for open space and greenways it was not feasible to designate specific programs for future neighborhood or regional parks.

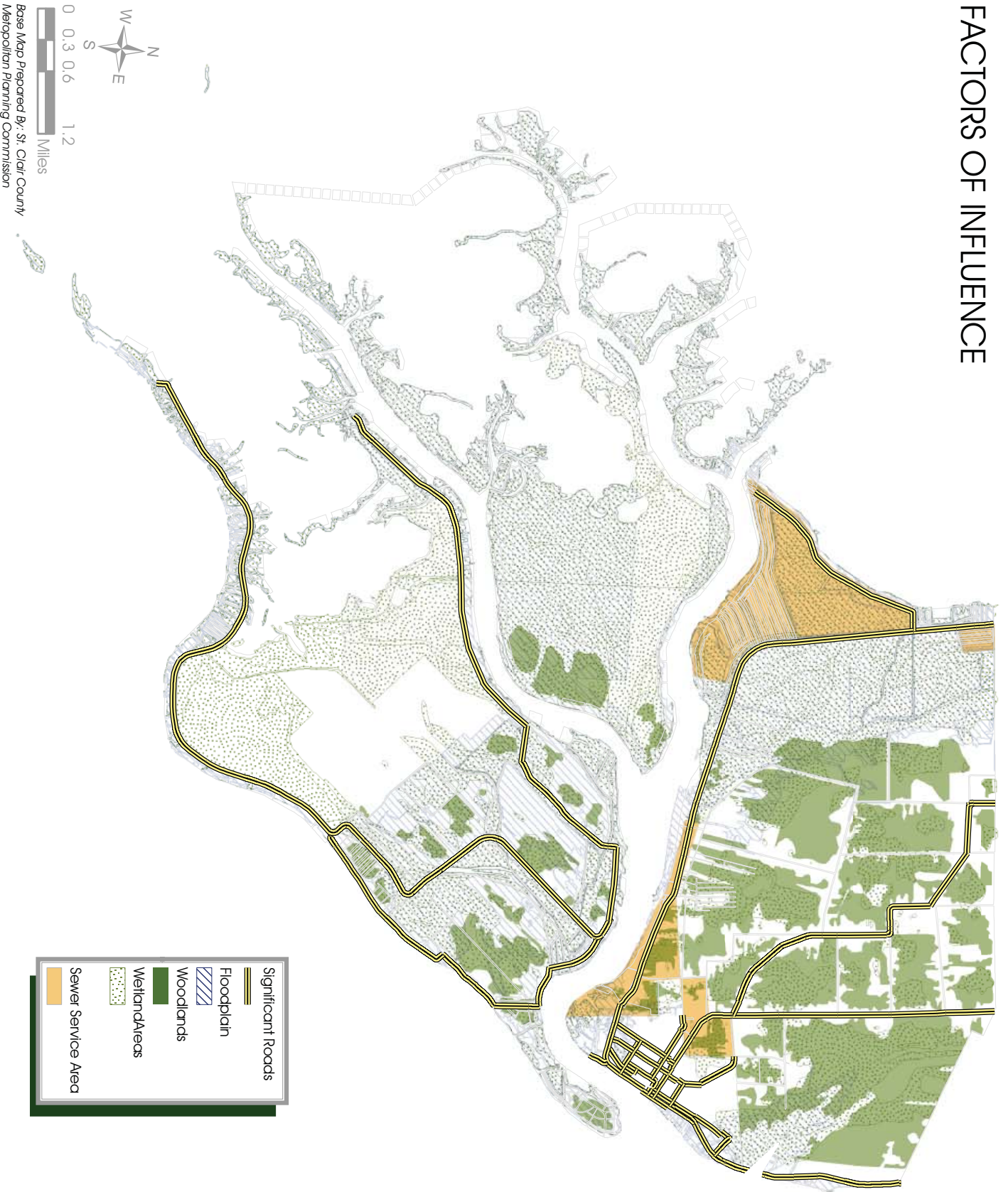
Acquisition of perpetual preservation or use rights for public purpose is ultimately a question of property transfer through a mechanism like gifting or purchase, not through Township regulation restricting future uses.

Following the designation of future industrial, commercial & office, and recreation & conservation, residential intensity is divided between rural and single family based on sensitive environmental features, proximity and access to infrastructure, and existing parcel configurations.

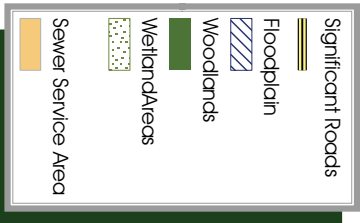
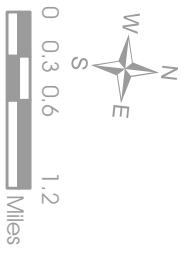


# St. Clair Flats GREAT LAKES MARSH

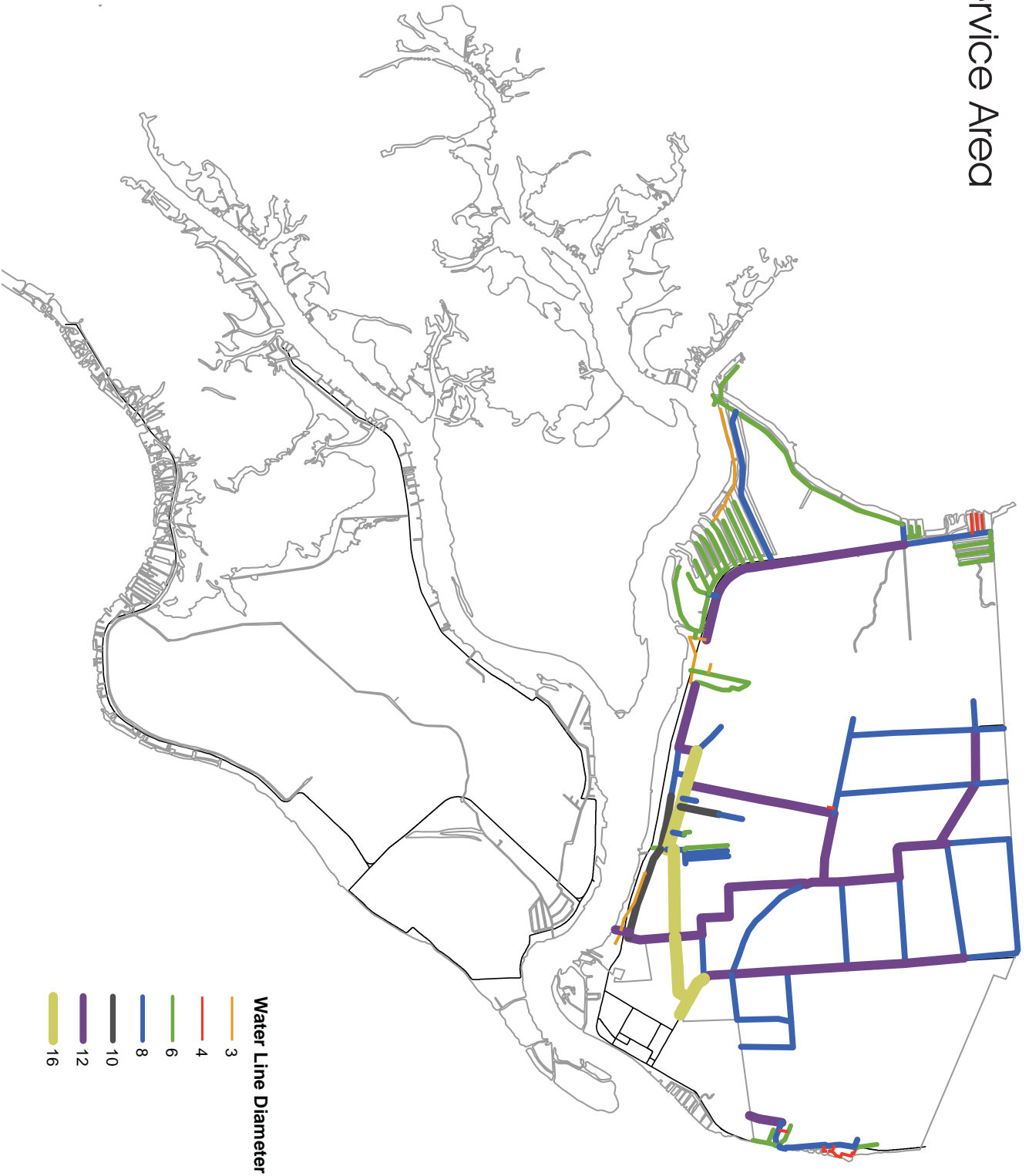
# FACTORS OF INFLUENCE



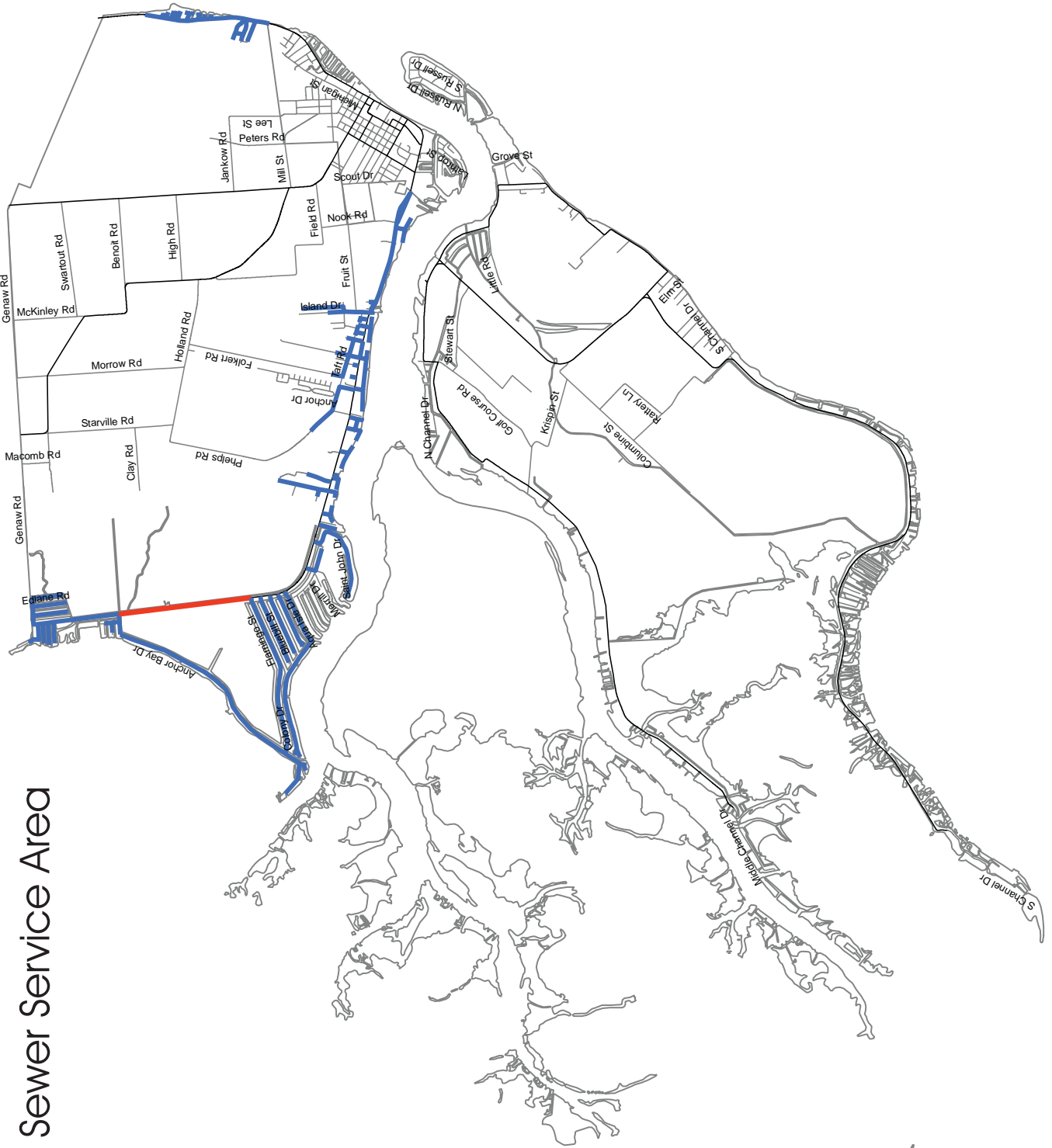
Base Map Prepared By: St. Clair County  
Metropolitan Planning Commission



Water Service Area



# Sewer Service Area





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## LAND USE MAP REFINEMENT

The final step in developing the future land use map designations refines the future land use map to show locations of the remaining land use categories, and refine the details for specific areas based on professional judgment and factors which had not been or could not be mapped. This involved:

- o Providing suitable buffers for potentially conflicting land uses
- o Adjusting the location and size of various land use categories based on more detailed information about existing land use patterns
- o Working to provide greater levels of consistency in boundaries between land use categories on the map
- o Responding to specific known development plans adjoining the study area
- o Responding to specific comments from community stakeholders

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## FUTURE LAND USE DESIGNATIONS

### RURAL RESIDENTIAL

Rural Residential uses provide a transition between traditionally developed single family uses and Recreation & Conservation uses. Rural Residential uses do not contain a substantial amount of environmental features. These areas are not expected to receive access to new public infrastructure within this planning horizon. The zoning plan indicates the combination of the rural suburban zoning districts into a Rural Residential (RR) zoning district with a maximum density of one (1.0) dwelling unit per acre.

### SINGLE FAMILY RESIDENTIAL

Single Family Residential (SFR) uses (as identified by the future land use map) are primarily found within the public water and sewer area and do not contain extensive natural features. Areas planned for SFR should maintain a density range of between 2.2 and 3.0 dwelling units per acre when sanitary sewer is available. Higher residential densities should occur close to the City of Algonac and in areas transitioning away from commercial or industrial uses. The SFR pattern should be preserved unless there is a logical and orderly pattern of development supporting a decision to change this future land use designation and/or zoning designation. Home occupations and reasonable institutional or semi-public uses may be appropriate for special use permitting within the SFR zoning districts.

### WATERFRONT RESIDENTIAL

The Waterfront Residential designation takes into account the unique issues associated with the residential properties in close proximity to Anchor Bay. These areas will most likely maintain densities consistent with the R-1L zoning designation (approximately 2.2 dwelling units per acre). The zoning plan calls for the creation of a zoning district that addresses the unique needs of waterfront residential (WFR) properties, such as setbacks, accessory buildings, viewsheds, and fences. Depending on public water and/or sewer availability and established density patterns in the area, two (2) distinct residential zoning districts may be necessary to protect the character and development rights associated with various lot sizes. These two (2) districts may have differing lot size requirements, frontage requirements or other design requirements that are characteristic of a particular area of homes located near the waterfront.

## MULTIPLE FAMILY HOUSING

The Multiple-Family designation is expected to produce densities in the range of 3.5 to 7.0 units per acre. Typical developments in this category will include attached condominiums, townhouses and apartments. In determining the appropriate multiple-family zoning district for an area, consideration must be given to existing land uses surrounding the property and the impact such development will have on those uses. In addition, consideration must be given to the existing infrastructure and its ability to accommodate multiple-family development at the density requested. Areas within close proximity to industrial or commercial uses would be more likely to accommodate a higher density multiple-family zoning district, while areas with a predominant character of single-family residential would be more appropriate for a lower density multiple-family zoning district.

## MANUFACTURED HOUSING COMMUNITY

This plan does not anticipate the expansion of the Manufactured Housing Communities designation because the Township's population is expected to change little during the planning cycle considered within this master plan.

## WATERFRONT COMMERCIAL

This use is appropriate for waterfront properties where an established pattern of existing waterfront commercial development is evident. Waterfront commercial uses attract both local and regional consumers. They require design standards that are different from traditional commercial development because of the unique features associated with the land and watercraft. The zoning plan calls for the creation of a zoning district that addresses the unique needs of waterfront commercial (WFC) properties, such as setbacks, accessory buildings, viewsheds, and fences.

## COMMERCIAL AND OFFICE

Existing commercial and office uses serve a trade area that includes Cottrellville, Ira, Clay Township and the City of Algonac because the peninsular location of the Township does not stimulate regional traffic into the community. Commercial and office uses exist primarily along the M-29 corridor and within the Sans Souci hamlet on Harsen's Island. There are other instances of locally serving commercial and office uses, however, they are independent of logical patterns and should not be expanded beyond their existing extent. The zoning plan implements "Rustic & Nautical" themed design standards in a form-focused zoning district specifically for Sans Souci.

## INDUSTRIAL

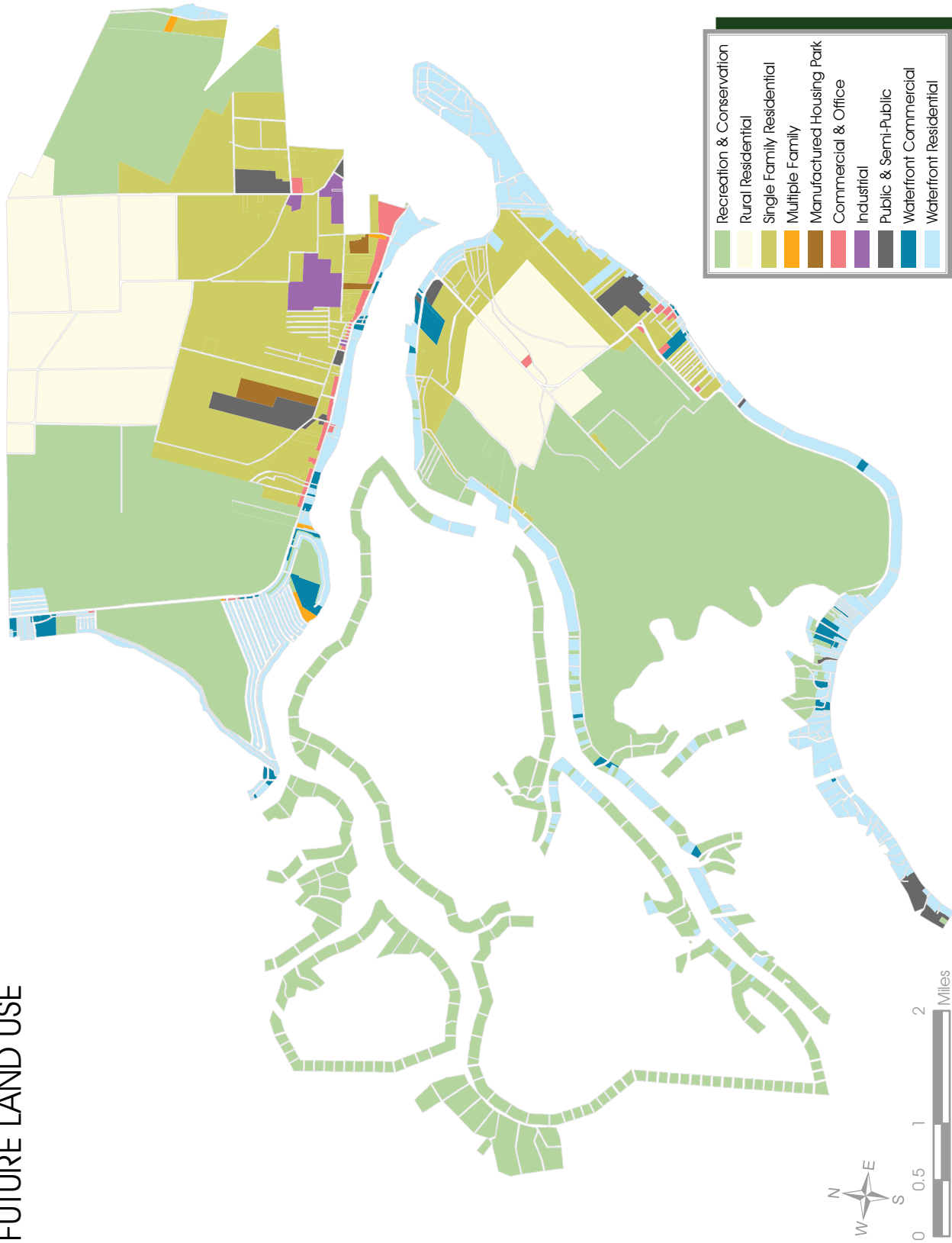
Industrial uses within the Township are primarily categorized two ways, outdoor storage and light industrial shops. The zoning plan recommends the reformulation of a light industrial district that considers primarily the light machining and manufacturing uses traditionally associated with industry, principally along the M-29 corridor and the eastern end of Fruit Road, adjacent to the boundary with Algonac. The zoning plan also recommends the creation of an outdoor storage industrial district. This district focuses on uses that occupy larger parcels, use landscaped berms as screening, lies on the north side of Fruit Road towards its western end, and the primary use is outdoor or self storage. These outdoor storage uses will typically locate in areas that are isolated from less intense uses, such as residential.

FUTURE LAND USE

7-12

# SECTION 7

Future Land Use



0 0.5 1 2 Miles

Base Map Prepared By: St. Clair County  
Metropolitan Planning Commission

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## RECREATION & CONSERVATION

Recreation and conservation uses are appropriate for properties that are contiguous to existing recreation and open space uses. Land for these uses should not lie within planned service areas for public water and sewer. Land for these uses should also contain significant natural features such as regulated wetlands or stands of woodlands. The zoning plan indicates the creation of a zoning district that addresses the unique needs of Recreation/Conservation (RC) properties, such as setbacks, accessory buildings, viewsheds, and fences. Appropriate uses in the RC district include active and passive recreation, managed conservation areas, seasonal structures & cottages, and agriculture. In some instances, commercial/tourism uses may be allowable within the Recreation & Conservation designation. Allowing these additional uses would naturally require additional review authority and control to ensure that proper land use and intensity relationships are maintained. If land that is publicly owned and/or managed changes ownership to a private entity, then future use should be consistent with immediately adjacent land uses and the overall character of the area.

The one unique property listed under this designation is the Middle Channel Golf and Country Club. While recreation in nature, Master Land Use Plan does envision the potential for some commercial land use on this property to allow for additional recreation and tourism opportunities. These uses may include lodging facilities, restaurants, entertainment uses, etc. With the potential of additional development on this property, the property may be serviced by public water and sewer infrastructure. As noted above, the Master Plan suggests the development of a new zoning district, these tourism related commercial uses could be drafted in the District specifically for the golf course property due to its size and unique attributes.

## PUBLIC & SEMI PUBLIC

Public and semi-public uses are typically institutional in nature. They should be located in proximity to the population they service. This plan does not anticipate the expansion of public and semi-public uses because the population is expected to change little during this planning cycle. Public or semi-public uses that cease functioning should reclassify or rezone to a use that is a logical extension of contiguous uses.

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## STRATEGIES AND ELEMENTS

The Township's Zoning Map, Zoning Ordinances, and other land use ordinances are the direct implementation tools the local community that the Master Plan envisions. The Township can indirectly influence development and redevelopment through public and private partnerships that utilize other tools.

The current Zoning Ordinance provides a framework of use-based rules that do not adequately reflect the diversity of Clay Township's built and natural environment. The Zoning Ordinance should not attempt to fit Clay Township into generic classifications that could be used in any community – it should be tailored to the Township's specific vision of its future.

**STRATEGY:** Review the existing Zoning Ordinance so that it aligns properly with existing and future development patterns as prescribed by the Zoning Plan contained within the Implementation chapter of this Master Plan.

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ELEMENTS:

1. Establish a commercial district that reflects the water-front nature of the many businesses within the community that are oriented towards water and outdoors recreation.
2. Industrial zoning districts should promote less-intense traditional industrial uses and operations that require outdoor bulk and equipment storage. Re-assess setbacks, storage areas, and lot use limitations with regard to the small lot and awkward configurations faced by industrial users.
3. Create a zoning district that encompasses the range of uses that exist on State Managed Lands as indicated in the Master Plan's existing land use inventory. These uses include, and are not limited to, active and passive recreation, preservation and restoration of environmental features, and the harvesting of game.
4. Review single and multiple-family residential zoning district designations, particularly for properties that have access to collector roads, municipal water and wastewater service, and minimal sensitive environmental features, as demand for additional living units and housing types increases because of changing demographics.
5. Consider utilizing form-based code provisions and/or adopting overlay zoning districts that establish design criteria for development.

**STRATEGY: Promote civic pride within existing and future development.**

ELEMENTS:

1. Encourage neighborhoods to enhance entryway features.
2. Establish awards that advance aesthetic enhancement such as a "garden of the year" or community beautification award for local businesses.
3. Leverage the Township's Downtown Development Authority to make improvements to the Township's core commercial corridor. Examples of improvements include establishing unified lighting and creating a façade renovation program.
4. Make public art permissible within the zoning ordinance and suggest the reuse nautical memorabilia for decorative purposes throughout the community.

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STRATEGIES AND ELEMENTS

**STRATEGY: Focus Zoning Ordinance district amendments on design standards.**

ELEMENTS:

1. Single family districts should provide equal physical and visual access to the unique natural features that create emotional and financial value for homes in Clay Township. Focus particular attention to preserving access to waterfront properties in order to efficiently and fairly utilize access. Protect residential areas from the intrusion of incompatible uses with buffers and transitions.
2. Promote unified themes within the non-residential district that create uniqueness to the Township's opportunities for commerce and recreation.
3. Carefully consider the scope, intensity, and nature of home occupations as they occur in different residential districts.
4. Reassess setback requirements and other dimensional and design standards that severely curtail the ability of property owners to improve and maintain their properties.
5. Enact building materials requirements within the zoning ordinance that are flexible in order to promote creative and unique design. However, building materials should be selected for long term maintenance.

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6. Acknowledge that there are local and incidental commercial uses that do and will occur outside of the high traffic corridor along M-29, however, it is not the Township's intent to promote the development of additional commercial congregations or to allow intensities of these incidences to significantly expand.
  7. Develop increased landscaping and screening requirements in return for decreased setbacks and increased lot coverage, buildings, and storage areas in order to improve community aesthetics.

**STRATEGY: Minimize the impact of noxious and adult oriented uses.**

**ELEMENTS:**

1. Review the zoning ordinance and the Township's general ordinances to ensure that adequate design standards, operational regulations, and acceptable separation is established for uses such as pawnbrokers, "buy gold" establishments, and other adult uses. This preserves the integrity of the community and prevents objectionable uses from congregating in a "skid row".
2. Prevent glare through adequate site lighting standards.
3. Provide options for screening that allow the Planning Commission and Township Board to determine the appropriate context for buffer solutions given the makeup of adjacent uses and the existing and proposed condition of the land.



PLAN  
IMPLEMENTATION

8

## What to Take From This Section

Each of the previous sections of this plan offer contain suggestions for how to implement new policies and laws in the Township. Some of the recommendations focus on the regulatory process for development within the Township. Other suggestions impact the zoning ordinance in one of two ways; amending the use and dimensional standards for different zoning districts or changing the zoning map designation for properties within the Township.

This section proposes short and long term changes that are intended to gradually alter the natural and built environments of the mainland and islands. Each ordinance amendment outlined in the plan is implemented only after opportunities for public comment, intense examination of consequences, and adoption by the Township Board. Other administrative actions may require precursory events prior to implementation.

When interpreting this Master Plan, Board Members, Planning Commissioners, residents and land developers must always refer back to the overlying vision of this Plan. Not all programs and strategies can be represented in this document, but Township policy should encourage any programs that further the following vision:

### ***THE VISION***

**“Create a local vacation destination full of recreational opportunities, while protecting the environmental, historical, cultural and residential character of the community.”**

## METHODOLOGY

The implementation practices discussed in the sections of this Master Plan can be divided into two systematic programs- Zoning and Implementation.

### ZONING PLAN

The zoning plan includes components that alter the ordinances which control use districts and the dimensional standards that zoning applies to physical development. The zoning plan also includes a map showing future zoning designations for properties within the Township. The zoning plan is a guide that suggests how the Township's vision for future development could occur; it is not a rigid document prescribing absolute changes or a specific time frame for making those changes. There may be other effects that the incremental changes proposed by this plan do not anticipate that require additional analysis and action.

Future zoning designations indicated on the zoning plan map are general in nature. Each map change should be evaluated independently and in the context of both the impact to the parcel itself and the community's vision as a whole. The more detailed analysis contained in specific sections of this Plan provides additional guidance for zoning changes. The Township should use the context of this plan as well as other available data in order to make the most informed decisions possible.

Generally, the Planning Commission initiates zoning changes or responds to petitions filed by property owners. Final actions on zoning ordinance and map changes are ratified by the Township Board. The zoning plan makes suggestions for whether ordinance changes are short or long-term. Applying a timeline is intended to assist the Township in working towards the long-term vision, not accelerate changes that are not immediately appropriate.

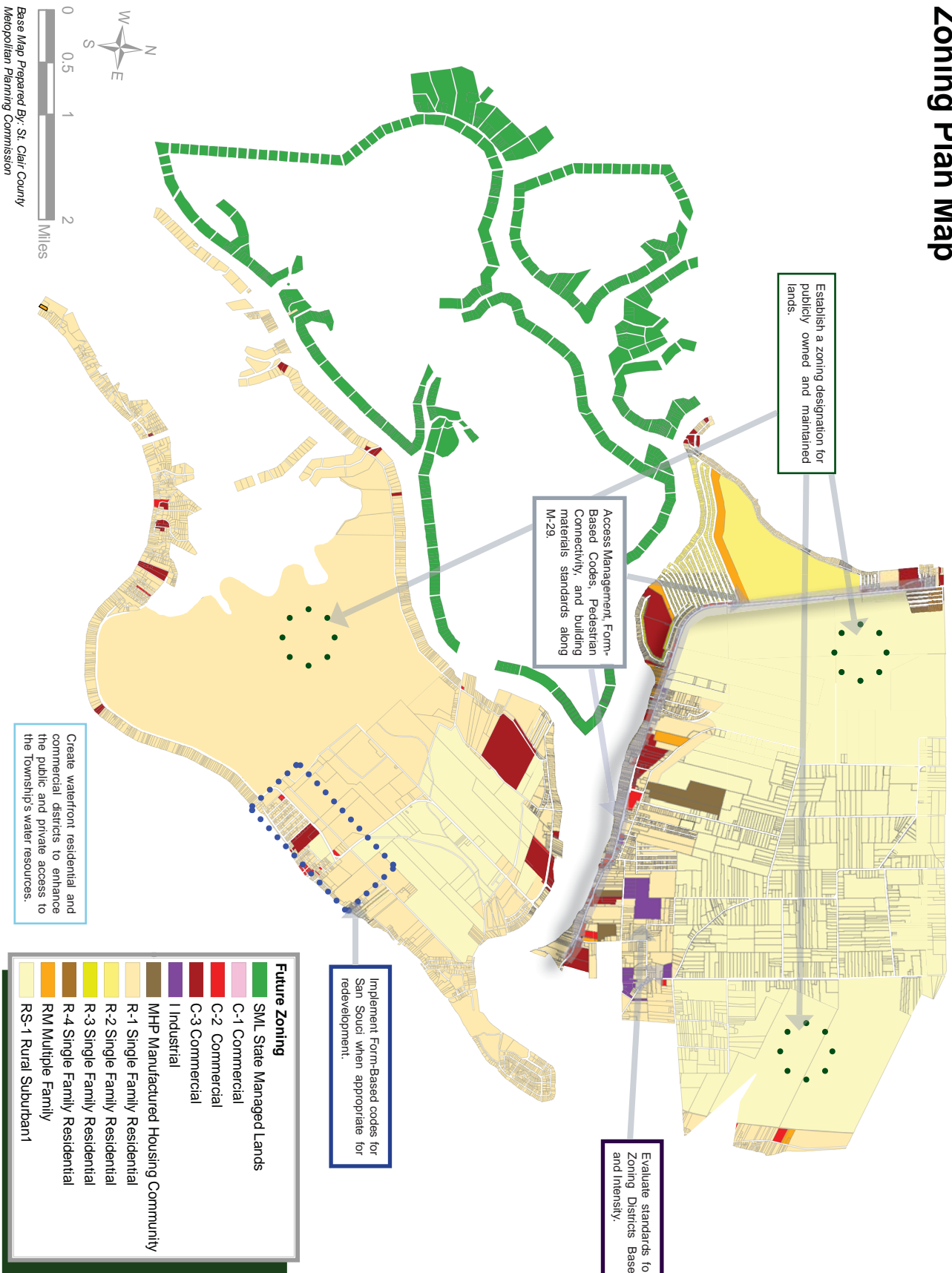
Short Term Zoning Changes	
Zoning Ordinance Amendments	Responsibility
Consider developing an Ordinance that allows hard surface pervious materials for surfaces like parking lots and sidewalks where soils drain well. Allow the Planning Commission to consider alternatives to impervious surfaces for the construction of drives and parking fields.	Planning Commission/Township Planner, Engineer
Allow for temporary and seasonal uses such as farmers' markets in appropriate zoning districts.	Planning Commission/Township Planner
Review the zoning ordinance and the Township's general ordinances to ensure that adequate design standards, operational regulations, and acceptable separation is established for uses such as pawnbrokers, "buy gold" establishments, and other adult uses. This preserves the integrity of the community and prevents objectionable uses from congregating in a "skid row".	Planning Commission/Township Planner
Enact traffic impact analysis standards that adequately explore parking, access, and internal circulation.	Planning Commission/Township Planner, Engineer

## Short Term Zoning Changes

Zoning Ordinance Amendments	Responsibility
Require pedestrian connections from new or redevelopments to the existing non-motorized network.	Planning Commission/ Township Planner
Evaluate Zoning Ordinance to make sure setbacks from existing road centerlines or edges respect future expansions. Develop increased landscaping and screening requirements in return for decreased setbacks and increased lot coverage, buildings, and storage areas in order to improve community aesthetics.	Township Planner/ Planning Commission
Promote the equal treatment of pedestrians, bicyclists, and public transportation by requiring and maintaining refuge areas, transit stops, visibility, and connections.	Planning Commission, Township Planner, BWATC
Establish a commercial district that reflects the waterfront nature of the many businesses within the community that are oriented towards water and outdoors recreation. Work with business owners and boating/yacht clubs to establish ordinance requirements that allow flexibility for outdoor storage while encouraging landscaping and screening.	Planning Commission / Township Planner
Examine the special land use provisions in the Zoning Ordinance and confirm that they are reasonable and effective in controlling uses that have a disproportionate impact on their surroundings and the community as a whole.	Township Planner, Planning Commission
Create a zoning district that encompasses the range of uses that exist on State Managed Lands as indicated in the Master Plan's existing land use inventory. These uses include, and are not limited to, active and passive recreation, preservation and restoration of environmental features, and the harvesting of game.	Planning Commission, Township Planner, MDNR, MDEQ
Make public art permissible within the zoning ordinance and suggest the reuse of nautical memorabilia for decorative purposes throughout the community.	Planning Commission, Township Planner
Rewrite the home occupations components of the Zoning Ordinance, carefully considering the scope, intensity, and nature of home occupations as they occur in different residential districts.	Township Planner, Planning Commission
Enact building materials requirements within the zoning ordinance that are flexible in order to promote creative and unique design. However, building materials should be selected for long term durability.	Township Planner, Building Department, Planning Commission
Revise site lighting standards to prevent glare and improve aesthetics	Township Planner, Building Department, Planning Commission

Long Term Zoning Changes	
Zoning Ordinance Amendments	Responsibility
Promote the commercial cultivation of native species, including plant materials found in swampy conditions.	Planning Commission/Township Planner, Engineer
Develop zoning, or other regulatory provisions that establishes reasonable standards for preserving woodlands.	Planning Commission/Township Planner
Amend landscaping requirements to include vegetated buffers or filter strips adjacent to bodies of water. Also use of rip-rap or gabions to stabilize banks. Provide options for screening that allow the Planning Commission to determine the appropriate context for buffer solutions given the makeup of adjacent uses and the existing and proposed condition of the land.	Planning Commission/Township Planner
Create landscaping requirements for retention/detention ponds	Planning Commission/Township Planner, Engineer
Implement access management through zoning controls along M-29.	Township Planner / Planning Commission, MDOT
Install entrance way signage and encourage a uniform theme of design along the Township's commercial corridor that emphasizes its boating and outdoors activities. Require attractive and context appropriate entryway features to neighborhoods.	Planning Commission, DDA / Township Planner, MDOT
Coordinate future development on Harsen's Island between conservation interests, existing residents, and future residential and commercial opportunities.	Planning Commission, Township Planner
Industrial zoning districts should promote less-intense traditional industrial uses and operations that require outdoor bulk and equipment storage. Re-assess setbacks, storage areas, and lot use limitations with regard to the small lot and awkward configurations faced by industrial users.	Planning Commission, Township Planner
Review single and multiple-family residential zoning district designations, particularly for properties that have access to collector roads, municipal water and wastewater service, and minimal sensitive environmental features, as demand for additional living units and housing types increases because of changing demographics.	Planning Commission, Township Planner
Single family districts should provide equal physical and visual access to the unique natural features that create emotional and financial value for homes in Clay Township. Focus particular attention to preserving access to waterfront properties in order to efficiently and fairly utilize access. Protect residential areas from the intrusion of incompatible uses with buffers and transitions.	Planning Commission, Township Planner
Consider rezoning large lot residential property to holding zones and open space preservation while focusing moderate and high density residential in areas with proper drainage, public utilities, and high accessibility.	Planning Commission, Township Planner

# Zoning Plan Map



Establish a zoning designation for publicly owned and maintained lands.

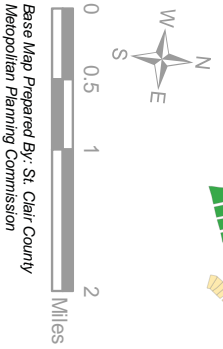
Access Management, Form-Based Codes, Pedestrian Connectivity, and building materials standards along M-29.

Create waterfront residential and commercial districts to enhance the public and private access to the Township's water resources.

Implement Form-Based codes for San Souci when appropriate for redevelopment.

Evaluate standards for Industrial Zoning Districts Based on Use and Intensity.

- Future Zoning**
- SML State Managed Lands
  - C-1 Commercial
  - C-2 Commercial
  - C-3 Commercial
  - I Industrial
  - MHP Manufactured Housing Community
  - R-1 Single Family Residential
  - R-2 Single Family Residential
  - R-3 Single Family Residential
  - R-4 Single Family Residential
  - RM Multiple Family
  - RS-1 Rural Suburban1



Base Map Prepared By: St. Clair County Metropolitan Planning Commission

## IMPLEMENTATION PROGRAM

The implementation program includes components that affect both the non-zoning ordinances and policies of other entities inside and outside the Township. The implementation program also includes a map showing areas that may be appropriate candidates for actions towards implementation within the Township. The program is a guide that suggests how the Township's vision for future development could occur; it is not a rigid document prescribing absolute changes or a specific time frame for making those changes. There may be other effects that the incremental changes proposed by the implementation program do not anticipate and that require additional analysis and action.

Improvements indicated on the implementation map are general in nature. Each change should be evaluated independently and in the context of both the impact to the specific area and to the community's vision as a whole.

Several of these implementation steps require dialogue and collaboration with other internal components of the Township and/or other Agencies. The responsibilities indicate some necessary participants, but are not intended to be an exhaustive representation of important stakeholders.

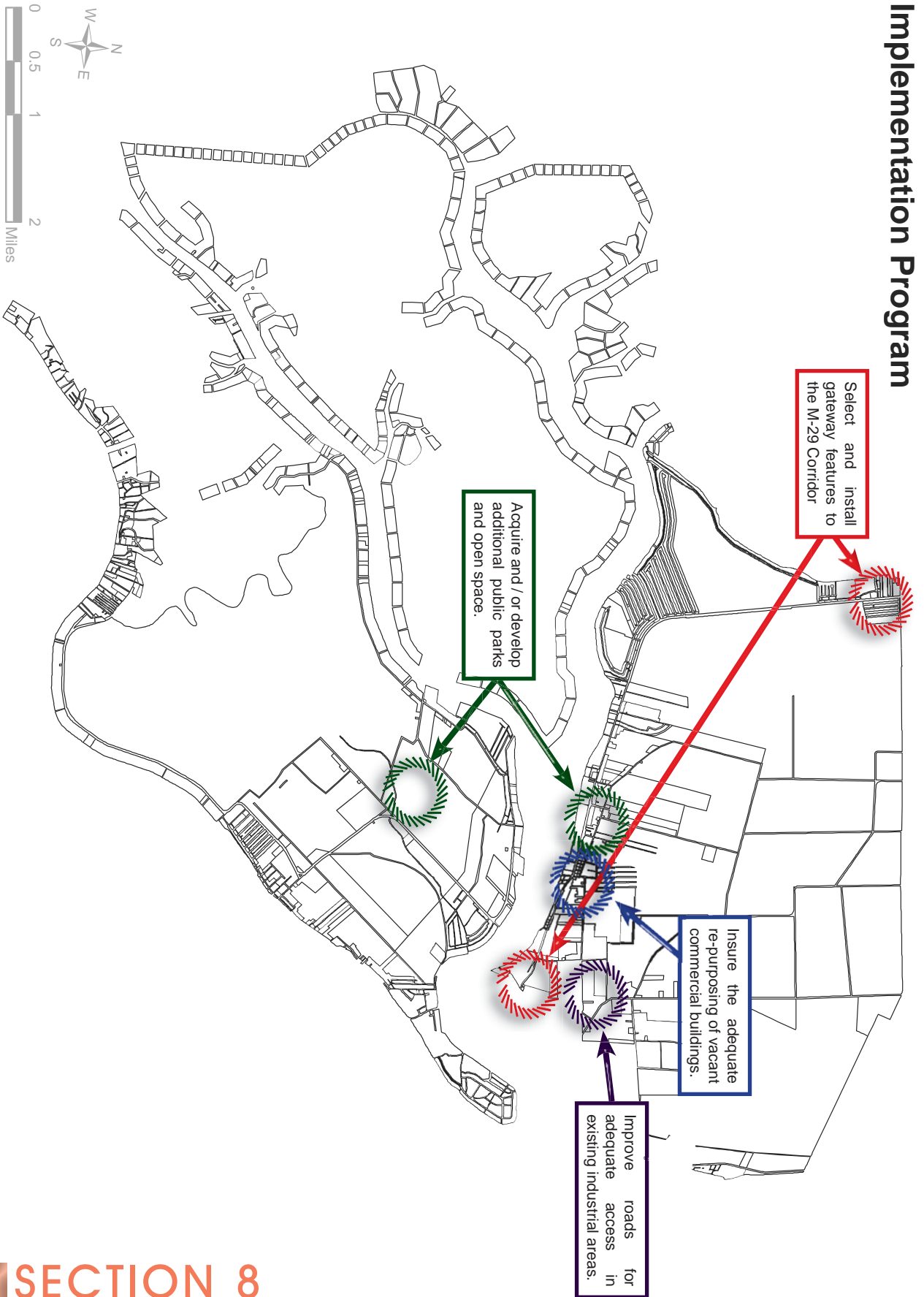
Short Term Implementation Program	
Policy and Ordinance Changes	Responsibility
Create a low-impact development handbook that describe preferred methods of handling stormwater and using native plants to reduce landscape maintenance and increase water infiltration	Township Planner/ Planning Commission, Engineer
Require pre-approval of driveway locations and stormwater outlets prior to entitlement approval.	Township Planner/ Planning Commission, Engineer, MDOT, SCCRC
Annually evaluate roadways bridges and culverts, including surface conditions, safety, and traffic volumes, in order to maximize collaboration with MDOT and the County's local road match program.	Township Engineer/ Planning Commission, MDOT, SCCRC
Continue to pursue financing opportunities like the DDA and grants to implement non-motorized connections.	Township Board, DDA, Township Planner, MDOT
Streamline re-occupation of existing buildings that are safe and up-to-code so that prospective tenants/owners can focus on their operations instead of perceived bureaucracy.	Building Department, Planning Commission, Township Planner
Utilize the Downtown Development Authority as a dynamic resource that can adapt to the different demands of today's shifting business climate. Require coordination of DDA Plan and improvements with Master Plan and developments. Examples of improvements include establishing unified lighting standards and creating a façade renovation program.	Township Board, DDA, Planning Commission, Township Planner

Short Term Implementation Program	
Policy and Ordinance Changes	Responsibility
Prepare materials discussing the Township specifically and its regional context to market the community directly to large scale recreation uses, notable lodging and water-parks. Focus large scale development towards existing infrastructure with the capacity to handle traffic and with adjacent development/redevelopment opportunities.	Township Board, Township Planner, DDA, Planning Commission
Utilize mechanisms, including the existing DDA, to fashion business oriented programs and foster civic pride. Assemble local residents and business owners to periodically discuss needs as well as celebrate successes in business development and retention. Establish awards that advance aesthetic enhancement such as a "garden of the year" or community beautification award for local businesses.	DDA Township, Planning Commission, Township Planner
Assemble and manage property for future redevelopment and large scale uses.	Township Board, DDA, Township Planner

Long Term Implementation Program	
Policy and Ordinance Changes	Responsibility
Allow hard surface pervious materials for surfaces like parking lots and sidewalks when soils drain well.	Planning Commission/Township Planner, Engineer
Encourage local businesses to participate in MDNRE programs like Clean Corporate Citizens and Neighborhood Environmental Partners.	Township / Township Planner
Establish standards for stormwater management that decrease runoff velocity and increase storage capacity	Township Engineer/ Planning Commission, Township Planner
Focus industrial development along existing all-season truck routes and improve roads in existing industrial zoning districts.	SCCRC, MDOT/ Planning Commission, Township Planner
Install dynamic messaging boards along M-29 to relay the operation status of the Harsen's Island Ferry during peak travel periods and inclement weather.	MDOT/ Planning Commission, DDA
Enhance the community's Council on Aging dial-a-ride service to extend hours and service to all residents that face mobility challenges. Also, promote the use of the Blue Water Area Transit line along M-29 as a way to reach government services and connect to jobs centers.	BWATC, Township, COA

Long Term Implementation Program	
Policy and Ordinance Changes	Responsibility
Inventory and improve compliance with the Americans with Disabilities Act provisions for public and transportation facilities.	Township Planner, Building Department
Work with existing developments to install cost effective utility solutions that reduce energy consumption and greenhouse gas emissions, thereby making operations cost-competitive and less impacting of the Township's most precious feature- nature.	Building Department / Planning Commission
Use revolving loan funds and connect with venture capitalists to provide gap-financing for local businesses. Businesses with fewer than 25 workers employ a greater portion of the community than large operations.	Township, DDA, Township Planner
Create unified marketing and branding strategies to effectively communicate the recreation opportunities in Clay through traditional and non-traditional (i.e. social networking) media.	Township, DDA, Township Planner
Explore shuttle service to connect lodging with attractions and reducing vehicular traffic along roads and keeping disruption of natural areas to a minimum.	Township, DDA, Township Planner, BWATC

# Implementation Program

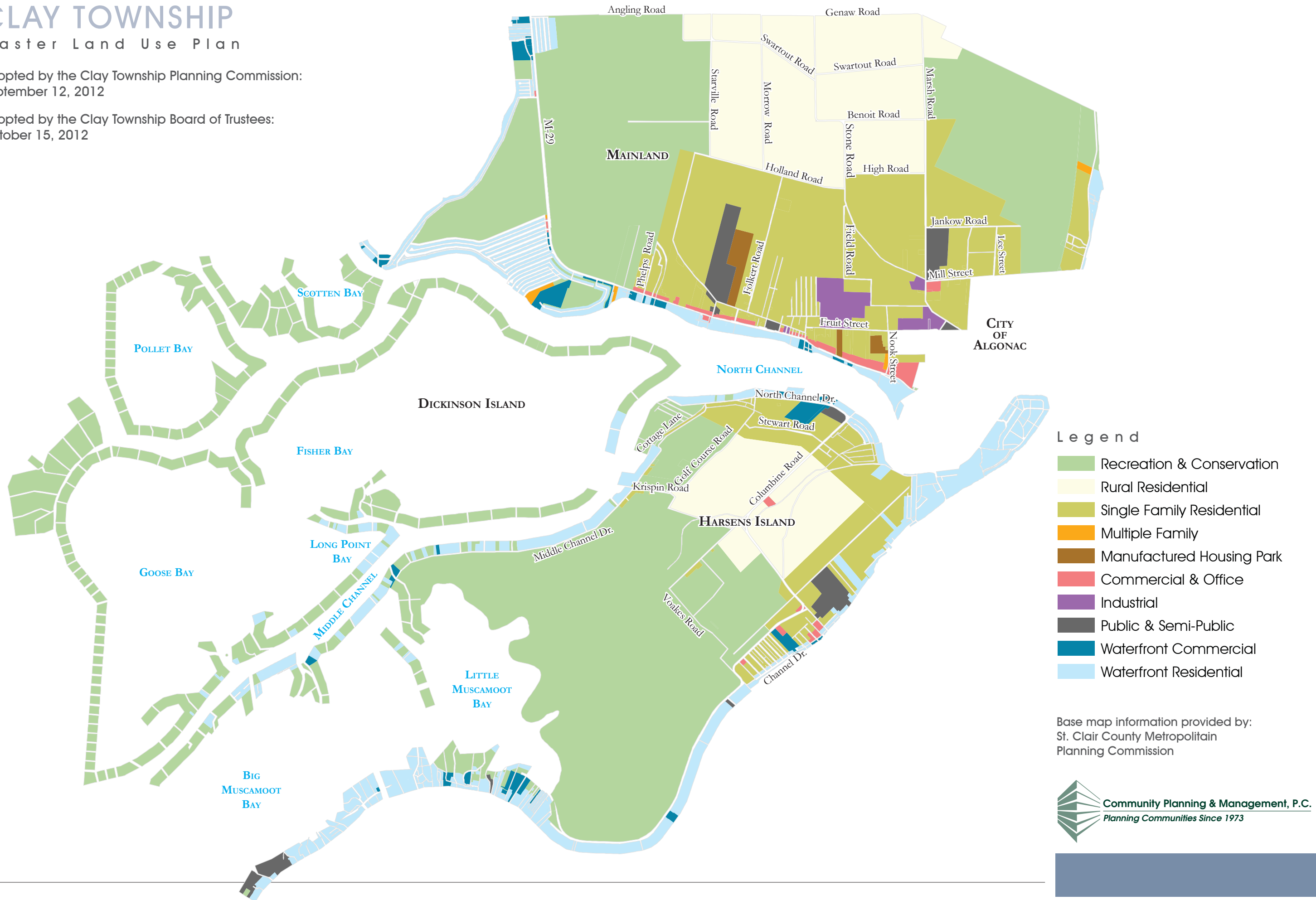


# CLAY TOWNSHIP

## Master Land Use Plan

Adopted by the Clay Township Planning Commission:  
September 12, 2012

Adopted by the Clay Township Board of Trustees:  
October 15, 2012



**Legend**

- Recreation & Conservation
- Rural Residential
- Single Family Residential
- Multiple Family
- Manufactured Housing Park
- Commercial & Office
- Industrial
- Public & Semi-Public
- Waterfront Commercial
- Waterfront Residential

Base map information provided by:  
St. Clair County Metropolitan  
Planning Commission

