EAST CHINA TOWNSHIP

ST CLAIR COUNTY, MICHIGAN

St. Clair Riverfront Redevelopment Plan

March 2022

EAST CHINA TOWNSHIP
St. Clair Riverfront Redevelopment Plan

Final Draft - March 23, 2022

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SECTION 1
Introduction and Regional Context

Purpose

The St. Clair Riverfront Redevelopment Plan is a land use planning and redevelopment study of the St. Clair Riverfront. The project study area includes an existing coal power plant operated by DTE Energy that is slated for decommissioning. DTE's planned decommissioning of the power plant is a major driver of this planning effort. Redevelopment within the study area presents numerous opportunities:

- Prime riverfront property along a heavily industrialized segment of the river will likely be an opportunity for redevelopment
- Significant economic development potential to include diverse land uses and job producers
- Opportunity to restore natural environment and improve environmental sustainability
- Opportunity to establish riverfront recreational opportunities

This Plan is a statement of Township policy with regard to the long-range redevelopment of the study area over an extended period of time. The primary purposes of the Plan are to investigate the riverfront for public and private use, improve environmental sustainability, and bring vitality to the natural and built environments. The Plan analyzes existing riverfront conditions, including natural habits, watershed quality, and land use character. The Plan serves as a policy guide, with recommendations for future development over time, to encourage economic vitality, low-impact development, sustainable design, efficient circulation, environmental restoration, and enhanced recreational opportunities.

Long-Term and Flexible Viewpoint

This Plan establishes a long-term vision for the future of the riverfront. The Plan has been developed in a conceptual, flexible way, recognizing that any recommendations must be adaptable to changing market conditions and that implementation will occur over an extended period of time.

Project Partners and Financial Assistance

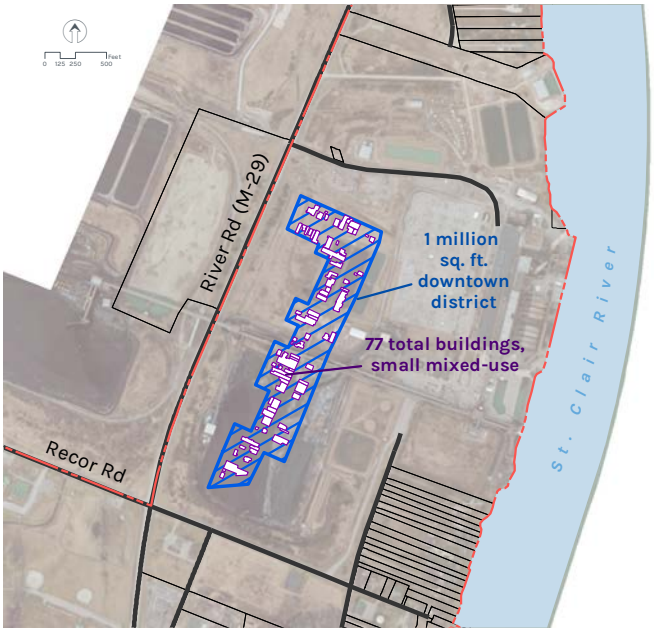
East China Township is undertaking this project in collaboration with DTE Energy and other local and regional stakeholders. The project is being funded, in part, with financial assistance provided by the Michigan Department of Environment, Great Lakes and Energy's Coastal Management Program through funding provided by the National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

Study Area

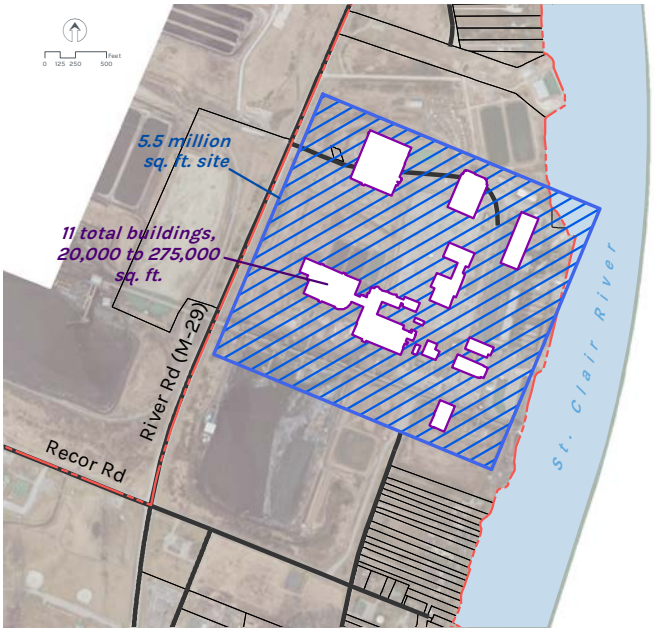
Centrally located within East China Township, the study area includes the DTE Energy St. Clair Power Plant site and additional properties within the Township (see **Map 1**). The study area contains approximately 480 total acres and has approximately 1.5 miles of frontage on the St. Clair River.

To provide perspective on the size of the study area, several maps have been prepared that place the real-world footprint of a small downtown, a suburban business park, and a large fulfillment center within the study area. These graphics showcase how a substantially sized development could easily fit within the study area.

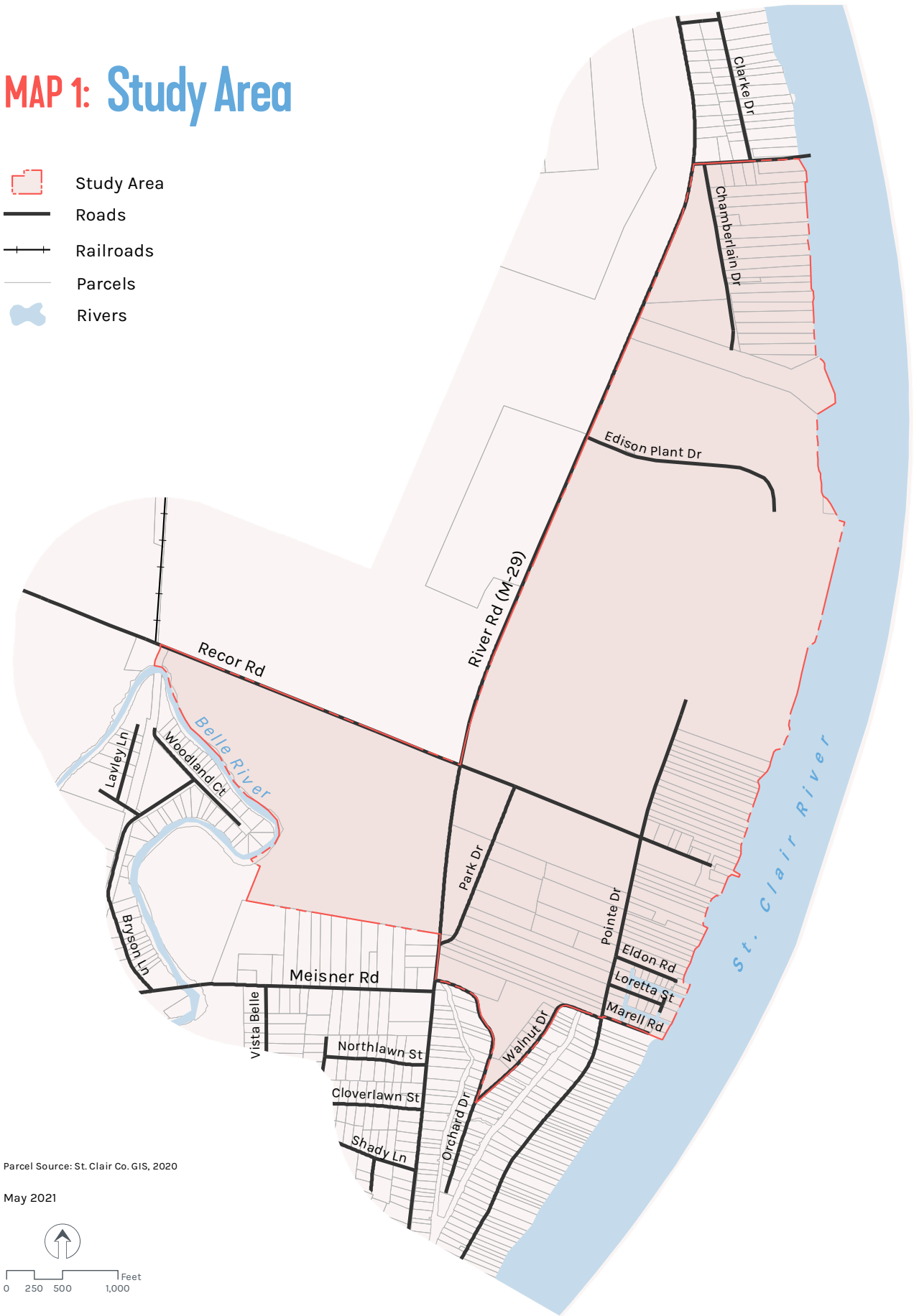
Site Size Comparison: Small Downtown (Marine City, MI)



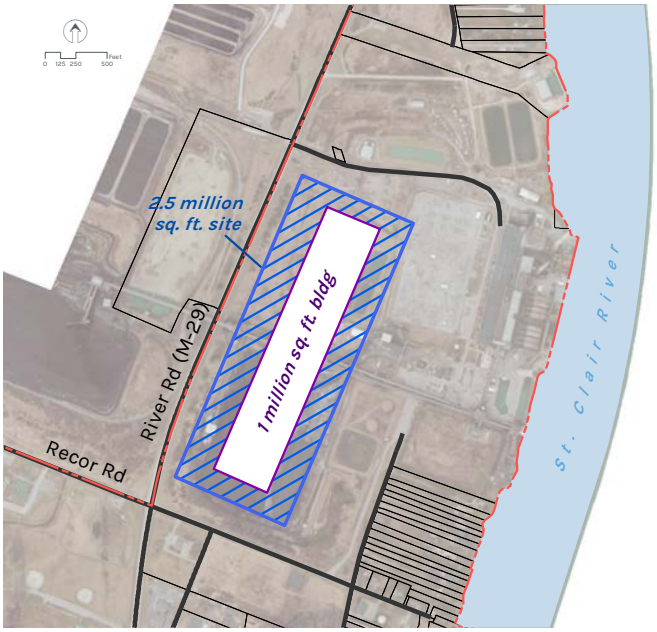
Site Size Comparison: Business Park (Sterling Heights, MI)



MAP 1: Study Area



Site Size Comparison: Large Distribution Center (Amazon)



Regional Context

East China Township is located in the southeastern portion of St. Clair County in Southeastern Michigan. The Township is situated along the St. Clair River, a critical Great Lakes waterway that connects Lake Huron and Lake St. Clair (see **Map 2**).

Pertinent Studies

This project has been prepared in recognition of several pertinent local and regional plans and initiatives, including the East China Township Master Plan, the Parks and Recreation Plan of East China Township, the St. Clair County Parks and Recreation Plan, and the St. Clair County Economic Development Strategy. Brief descriptions of these studies are provided below.

East China Township Master Plan

This St. Clair Riverfront Redevelopment Plan is a sub-area study and addendum to the East China Township Master Plan, which was last updated in October 2015. The Township Master Plan serves as a road map for the ultimate development of the Township and a guide for land use decisions.

The Township Master Plan supports the preparation of a Riverfront Redevelopment Plan in numerous ways. First, the Master Plan mentions the need for improvements and restorations of the East China Township Park, which is located within the study area. This Redevelopment Plan will aid in creating a guide for future improvements and use of the park. Additionally, the Master Plan outlines proposed efforts to update the character of the scenic drive and bike path which both run through the study area. The Master Plan provides strong evidence that the Township seeks to improve the vitality and use of this space.

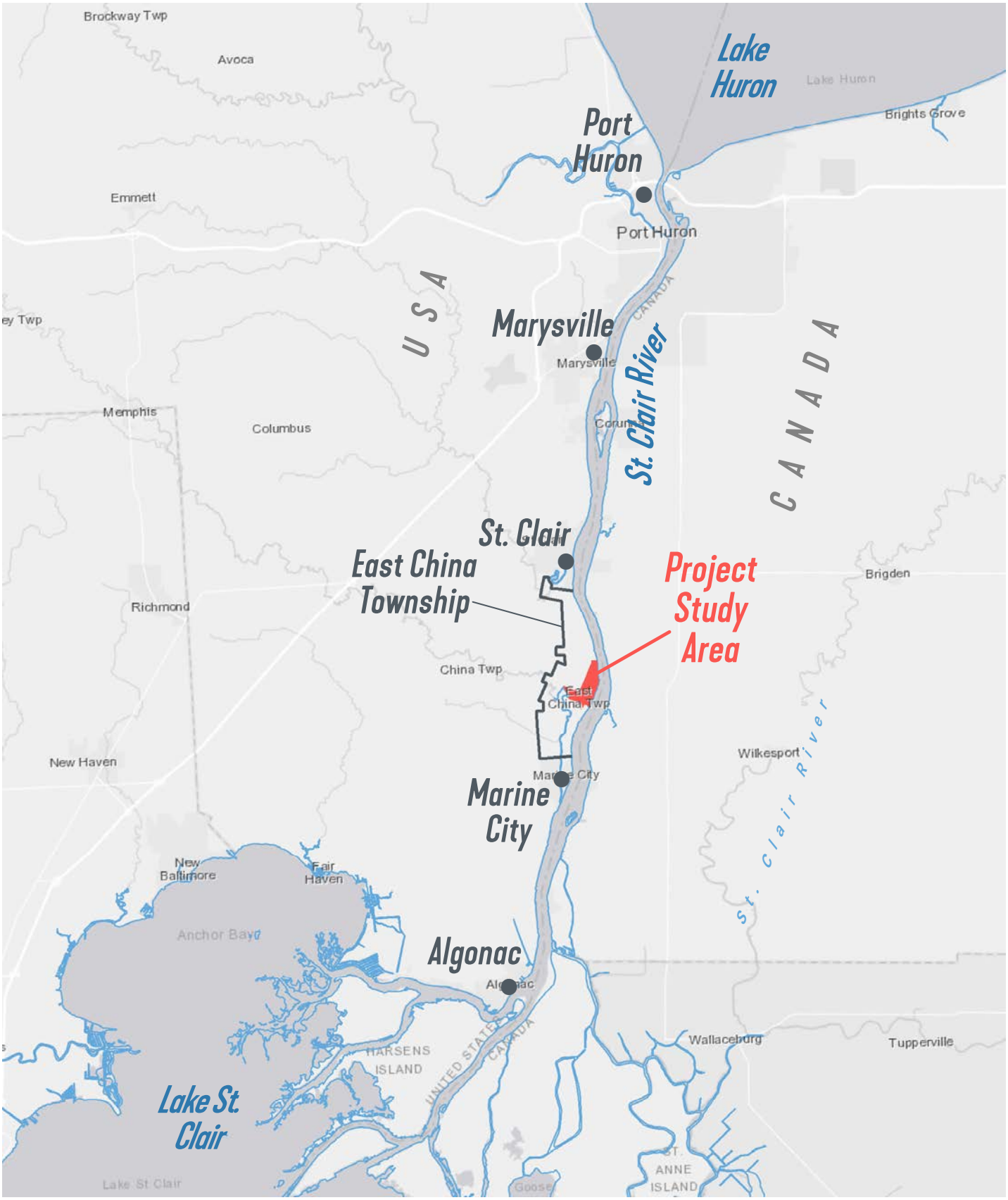
East China Township Parks and Recreation Plan

The Parks and Recreation Plan of East China Township defines the goal to plan for opportunities that increase accessibility, promote diverse recreation, healthy lifestyles, improve water access, and protect natural resources or habitats. This Riverfront Redevelopment Plan complements the existing Parks and Recreation Plan and encourages development that promotes its defined goals.

St. Clair County Master Recreation Plan

The St. Clair County Master Recreation Plan outlines the importance of economic development and placemaking through parks and recreation planning. This Riverfront Redevelopment Plan substantiates these notions and supports several of the primary planning goals listed in the document. The County Master Recreation Plan also lists the following goals as priorities for county-wide recreation planning:

- Strong collaboration among entities
- Preservation of resources
- Connected greenways/blueways
- Multi-modal transportation



MAP 2: Regional Context

- Livable communities that provide residents with a high quality of life and economic prosperity

Blue Meets Green / St. Clair County Economic Development Strategic Plan

The Blue Meets Green initiative began in 2009 as part of a county-wide Economic Development Strategic Plan. Since its inception, the public, private, and non-profit sectors have collaborated to stimulate economic growth, and prosperity. More than 100 volunteers, who live and work in the Blue Water Region, have invested many hours working diligently to develop the Where Blue Meets Green road map defining specific actions to enable the Blue Water Region to compete and prosper in the future. To implement this plan, people, businesses, and organizations across St. Clair County are working together for the economic success of this entire region.

The initiative resulted in the development of a vision statement: Develop the Blue Water Region into a prosperous, sustainable economic environment through the united effort and commitment of the private, public, and non-profit sectors. The strategic plan outlined seven key areas of focus, as follows:

- Career & College Readiness
- Small Business & Entrepreneurs
- Downtowns & Neighborhoods
- Tourism
- Waterfront Development
- Workforce Development
- Healthy Communities

This Plan directly aligns with the vision of the Blue Meets Green strategy by engaging public and private sectors (the Township, DTE, citizens, stakeholders) to establish a prosperous, sustainable economic environment for the riverfront.

DTE St. Clair Power Plant

SECTION 2

Existing Conditions

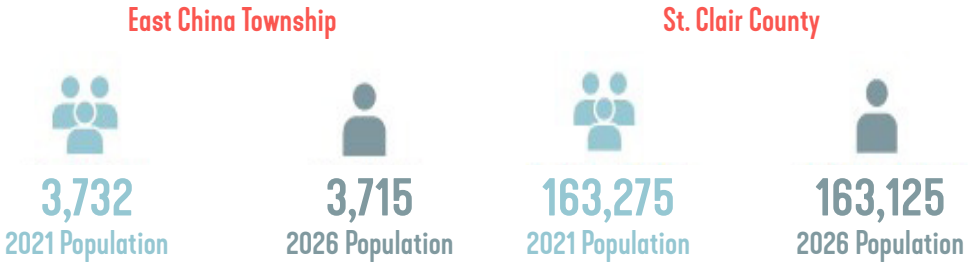
Socio-economic Characteristics

A socio-economic analysis of East China Township resident characteristics and the target users of the study area is important to understand the community and how the study area may accommodate the community's needs, desires, and services

This analysis is extracted from 2021 Esri data profiles for East China Township, St. Clair County, and the population that resides within a 30-minute radial drive from the East China Township Hall (a centrally-located property within the study area).

Population

The population size of a community is a strong indicator of the amount and diversity of services that are needed. A growing population may signify an increased need for services and amenities, while a shrinking population may signify an opportunity to improve upon existing amenities to attract additional residents or visitors.



Since 2010, the population in East China Township has declined from 3,788 to 3,732 in 2021. The population is projected to continue to decline, slightly, over the next five years.

The population in St. Clair County has grown since 2010, but is projected to decline in the next five years. The projected population for the county in 2026 is 163,125, which is lower than the current 2021 population, but is higher than the 2010 population.

The population within a 30-minute radius of the site has had the most significant change since 2010, when the population was 197,538. Today, the population is estimated at 202,822 and is projected to grow to 205,048 over the next five years. This population growth within the region indicates the need for new housing, services, and amenities, some of which could be captured within the study area.

Housing

The table below displays the percentage of housing units that are occupied by owners, renters, and those units that are vacant for 2021 and the predicted change five years later in 2026.

When compared to St. Clair County and the 30-minute drive time geography, East China Township has the largest percentage of owner-occupied units and the smallest percentage of renter-occupied units. As the jurisdictions increase in size, so does the percentage of renter-occupied units. The 30-minute drive time geography has the highest percentage of renter-occupied units at 18.5%.

For each of the jurisdictions, the percentage of owner-occupied units, renter-occupied units, and vacant units are projected to increase slightly over the next five years. As of 2021, St. Clair County has the greatest percentage of vacant units at 11.2%.

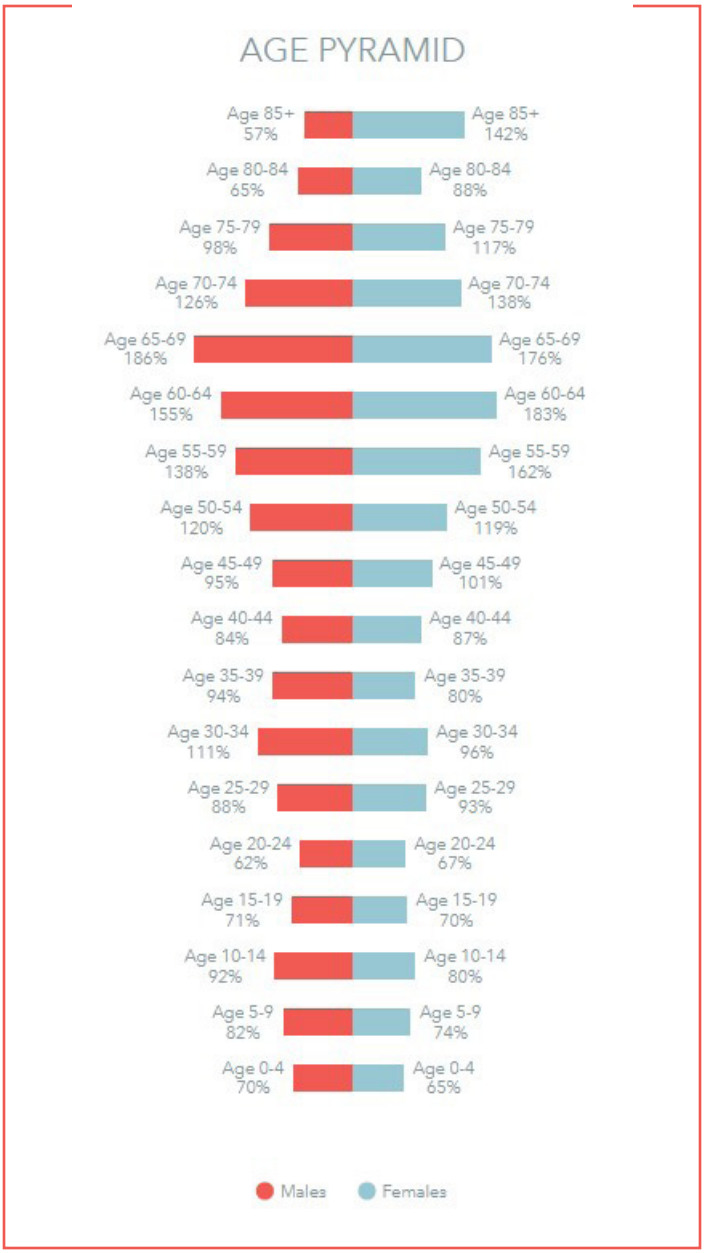
Age Groups

The breakdown of a community's population by age offers deeper insight into the demographic characteristics of a community. Understanding the age groups in a population allows government officials, developers, and residents alike to provide and advocate for services that meet their particular needs.

The age pyramid on the following page shows a breakdown of the percentage of the population by age range and community. For each of the three geographic areas analyzed, the most populous age ranges are from age 35 to age 64, accounting for 42.5% of the population in East China Township to 43.6% in St. Clair County, and 43.7% of the population of the 30-minute drive time geography.

When compared to one another, East China Township displays a larger percent of the population that is aged 55 or older than the other two jurisdictions. Similarly, both St. Clair County and the 30-minute drive time geography have higher percentages of people aged 20 to 34 than does East China Township. This data suggests that East China Township is a retirement community, while the county and the region may be growing amongst younger demographics.

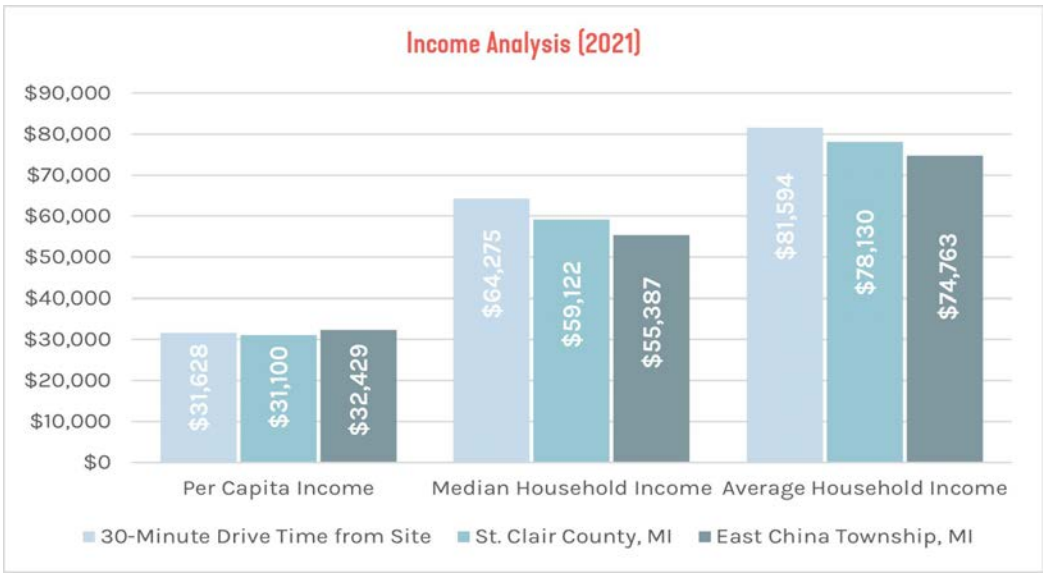
	Housing					
	Owner-Occupied		Renter-Occupied		Vacant	
	2021	2026 (projected)	2021	2026 (projected)	2021	2026 (projected)
East China Township	74.3%	74.4%	16.1%	15.3%	9.6%	10.3%
St. Clair County	71.6%	71.7%	17.2%	16.3%	11.2%	12.0%
30-Minute Radius from site	71.6%	72.1%	18.5%	17.6%	9.8%	10.3%



Income

The income analysis chart shows median household income, average household income, and per capita income for the identified jurisdictions.

Income is a good indicator of economic progress and development. In general, the three jurisdictions analyzed in this report have similar income data. East China Township and St. Clair County have nearly equal median household incomes, both of which are nearly $10,000 lower than the median household income of residents within a 30-minute radius from the site. The average household income is, on average, about $20,000 greater than each jurisdictions' median household incomes. East China Township has the lowest average household income at $74,763, which is about $4,000 lower than the average household income in St. Clair County, and nearly $7,000 lower than the average household income of residents within a 30-minute radius from the site.

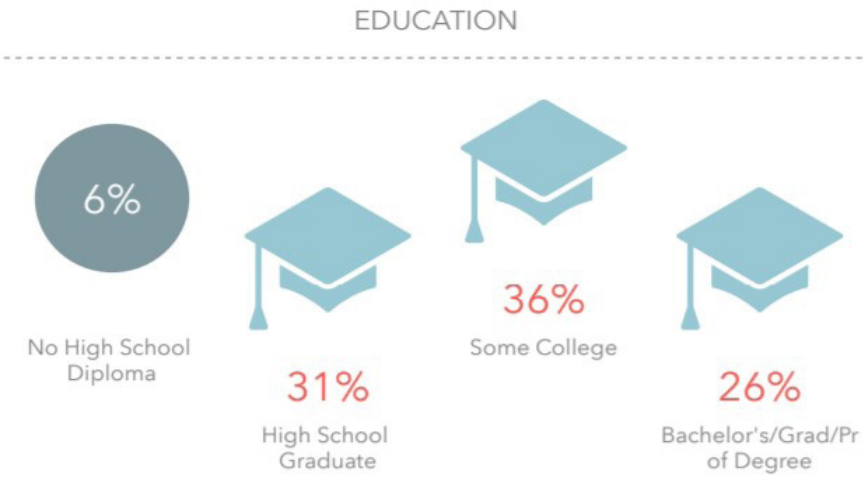


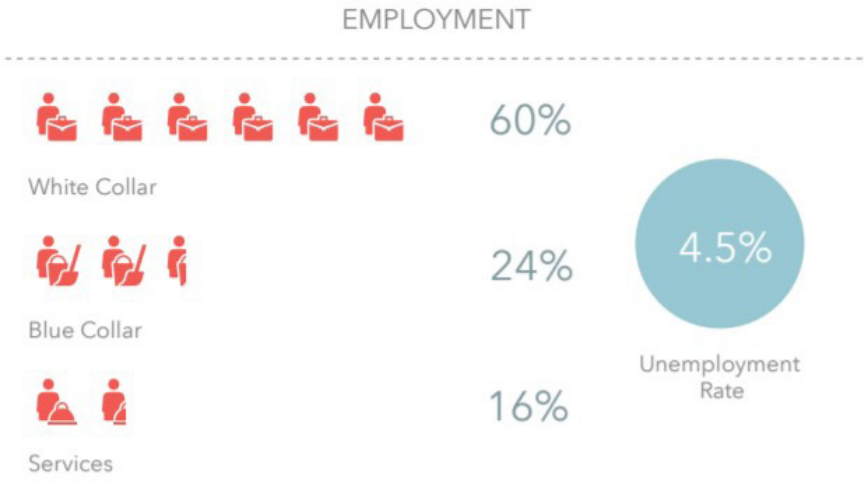
Education

Educational attainment is one factor that defines a population of people and a community. It contributes directly to the skill set of the workforce and the employment opportunities available.

The figure below showcases the percentage of the population that attained a high school degree (or equivalent), a bachelor's degree, and a graduate degree.

In all three jurisdictions reviewed, over 90% of the population has completed at least a high school education or a GED equivalency program. Of the three jurisdictions, East China Township has the highest percentage of people who have completed a bachelor's degree and a graduate degree at 26.4% and 12.0%, respectively.





Occupations

Esri categorizes occupational data by white collar, blue collar, and service employment. In each of the jurisdictions, the majority of jobs are white collar, with blue collar work and service work employing about 15% - 30% of workers each (see figure below).

In each of the geographic areas, the largest share of white collar workers are in Management and Office/Administration Support. Amongst the blue collar occupations, work in the Production sector has the highest percentage of employees. The employment rates are more similarly split amongst the occupations.

Among the white collar employment sectors that do not employ large amounts of people are the Life/Physical/Social Sciences, Community/Social Services, Legal fields, and the Arts/Design/Entertainment sectors.

In the blue collar and service industries, the Farming/Fishing/Forestry sector and the Personal care/Service sectors do not employ many people, especially when compared to other sectors within these industries. These patterns are similar across East China Township, St. Clair County, and the 30-minute drive time geography.

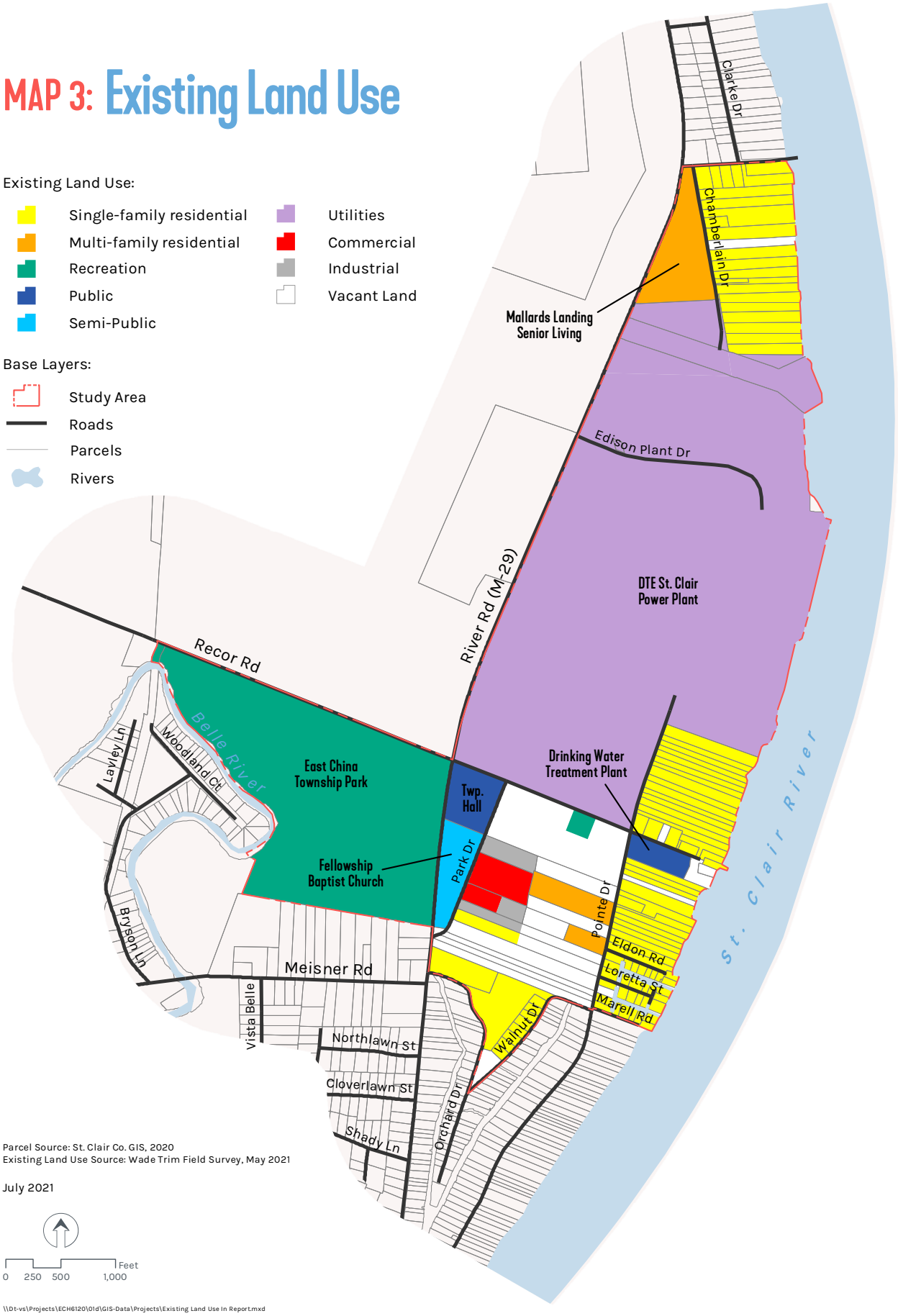
Land Development Patterns

In order to plan for the future redevelopment of the study area, it is important to first understand its existing land use character and development patterns, including the existing purposes, uses, and potential constraints.

Existing Land Use

Map 3, Existing Land Use, depicts the current type of land use of each

MAP 3: Existing Land Use



parcel within the study area. The map includes nine different land use types: single-family residential, multi-family residential, recreation, public, semi-public, utilities, commercial, industrial, and vacant land.

In total, the study area comprises approximately 480 acres. Of that space, 48% of the land is used for utilities - DTE's St. Clair Power Plant. About 17% of the study area is occupied for single-family residential use, consisting of between 75 and 100 single-family homes. These single-family residential areas are located primarily along Marell Street, Loretta Street, and Eldon Road, as well as riverfront homes along Pointe Drive and along Chamberlain Drive.

About 17% of the study area is used for recreational purposes, consisting primarily of the East China Township Park.

Additional land uses within the study area include multiple-family residential (3.5% of the study area), consisting of two apartment complexes and one senior living facility, public use (1.8%), consisting of Township-owned facilities, and semi-public use (1.3%), consisting of a church. Several adjacent properties on the east side of Park Street are occupied for a combination of commercial (1.1%) and industrial use (0.9%). These establishments include mini-storage facilities, a trucking business, and landscape contractor businesses.

There are several vacant or undeveloped properties within the study area, particularly along Park Road and Pointe Drive. These vacant lands total approximately 8.5% of the study area.

Property Ownership

Map 4, Property Ownership, highlights the property ownership characteristics of the study area. The map identifies four different ownership categories: private, DTE, semi-public, and public. In total DTE owns approximately 232 acres within the study area. East China Township owns nearly 110 acres within the study area. Only 132 acres, approximately 28% of the study area, is under private ownership.

Land Use Character

With a few exceptions, the study area is primarily characterized by a low-density pattern of development. The current residential pattern of development of the site is characterized by relatively low-density housing, made up predominantly of single-family, detached homes. While most properties are single-family residential uses, the study area is also home to Mallards Landing, an assisted living center with a building footprint of approximately 50,000 square feet.

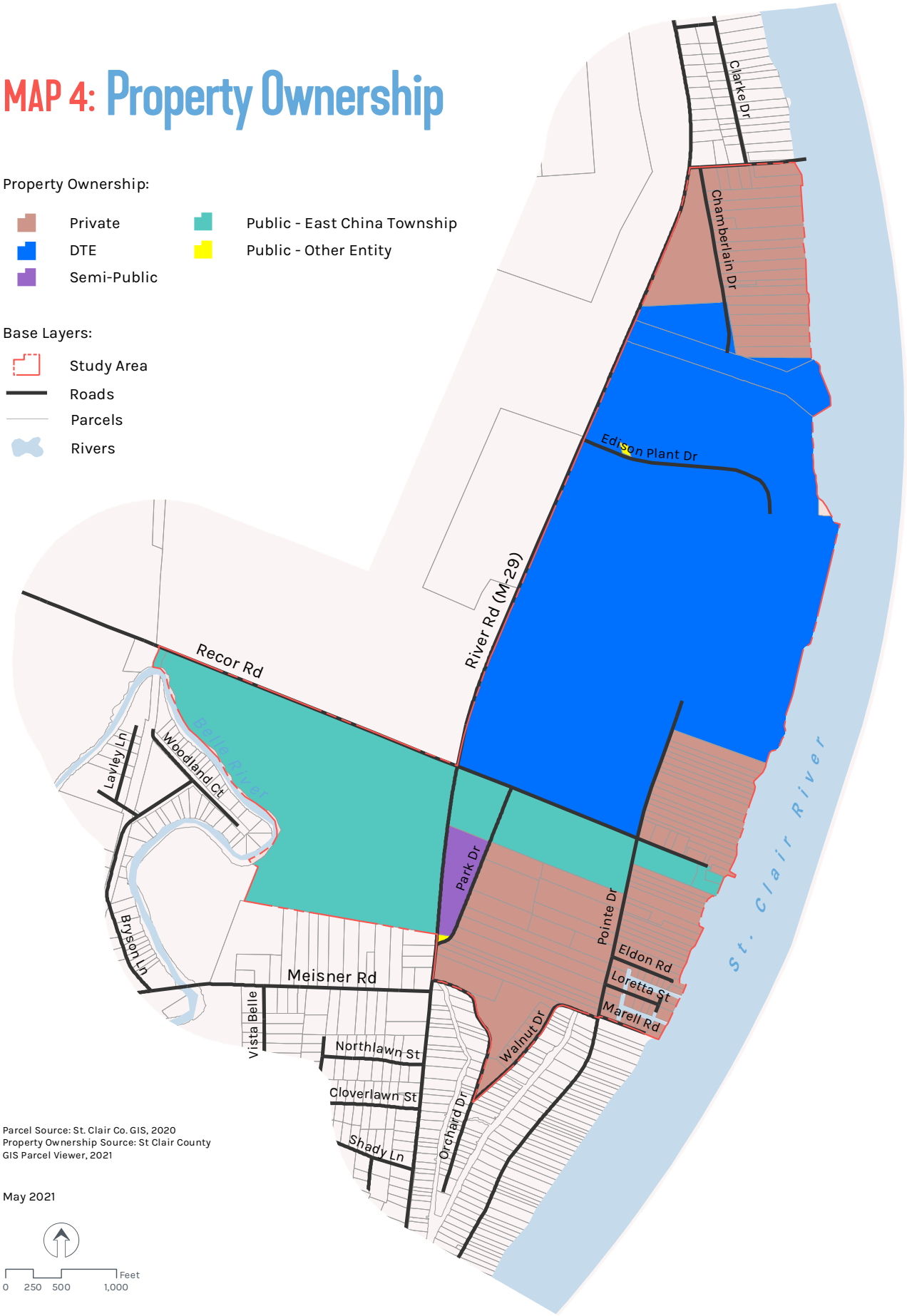
The DTE St. Clair Power Plant building occupies an approximately 370,000 square foot footprint and is accompanied by numerous smaller buildings and facilities.

Due to the attraction of the river, there is a much greater development concentration along the bank of the river than further inland, particularly in the southern portion of the site. This pattern, which can be seen in **Map 5**, supports the desirability of development along the riverfront.

Recreational Facilities

As shown on the **Recreational Inventory Map (Map 6)**, there are several recreational facilities located within the study area. The largest facility is the East China Township Park, which is the focal point for outdoor recreation within the entire Township. The East China Township tennis courts are also located within the study area; however, this facility is in general disrepair. The regional trail route, Bridge-to-Bay Trail, extends into the study area through the Township Park and along M-29.

MAP 4: Property Ownership



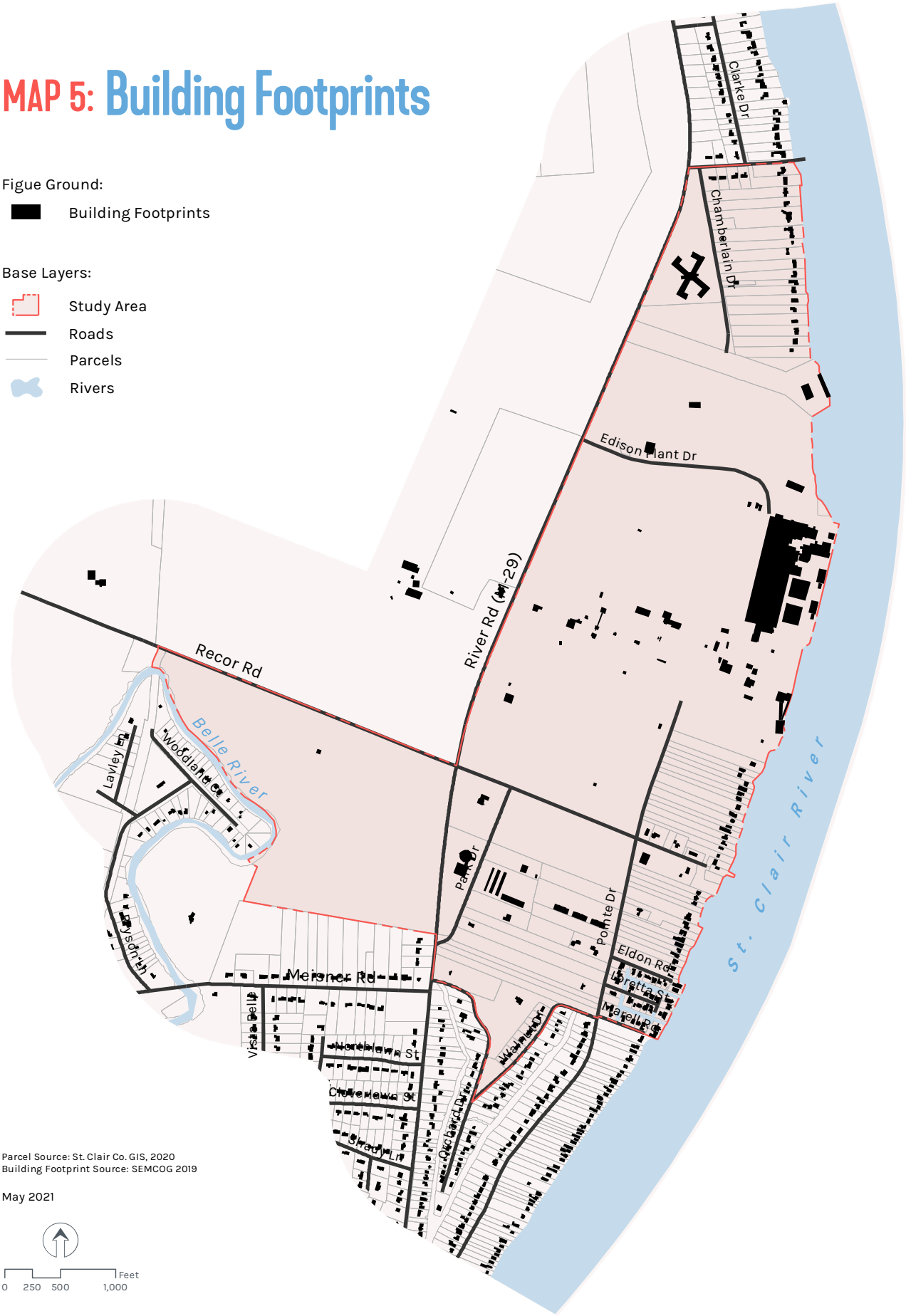
MAP 5: Building Footprints

Figue Ground:

- Building Footprints

Base Layers:

- Study Area
- Roads
- Parcels
- Rivers



Parcel Source: St. Clair Co. GIS, 2020
Building Footprint Source: SEMCOG 2019

May 2021

0 250 500 1,000 Feet

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MAP 6: Recreational Inventory

Recreation Facilities:

- Bridge to Bay Trail
- Township Parks
- Public Views to St. Clair River

Base Layers:

- Study Area
- Roads
- Parcels
- Rivers

Parcel Source: St. Clair Co. GIS, 2020
Bridge to Bay Trail Source: SEMCOG 2020

May 2021

0 250 500 1,000 Feet

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Currently Adopted Master Plan

The current East China Township Master Plan was adopted in 2015, and has recommendations for this study area. Within the narrative, the adopted Master Plan identifies two different industrial uses: light industrial and heavy industrial. Per the Master Plan narrative, the light industrial category is intended to provide space for industrial uses whether in or outside of an industrial park environment whose external physical impacts are restricted to the district. Contrastingly, the heavy industrial district is meant to accommodate industrial uses of a high intensity that typically will exhibit external characteristics that may have an impact on surrounding areas.

Although the Master Plan identifies these two industrial distinctions, the currently adopted future land use map does not define a distinction between industrial uses. The **Currently Adopted Future Land Use Map (Map 7)** shows six different future land use classifications within the study area: single-family residential, multiple-family residential, commercial, public/semi-public, public parks, and industrial. The currently adopted future land use classifications do not differ much from the current conditions of the site (as shown in **Map 3**).

Currently Adopted Zoning Codes

The currently adopted **Zoning Districts Map (Map 8)** identifies four different zoning districts within the study area: R-2, One-Family Residential; RM-1 Multiple-Family Residential (low rise); GB, General Business; and I-2, Industrial Two. The majority of the land in the site is zoned as R-2 and I-2, which could severely limit redevelopment opportunities without updating the zoning ordinance and district map.

The I-2 Industrial Two District provides for manufacturing, assembling, and fabrication activities, including large-scale or specialized industrial operations, whose external physical effects will be felt to some degree by surrounding districts. The I-2 District allows the following uses:

- Manufacturing and production
- Electric/gas service buildings and yards
- Public utility buildings
- Water supply and sewage disposal plants
- Railroad transfer and storage tracks
- Warehouses
- Freight terminals
- Stamping plants
- Junkyards
- Storage facilities for building materials and contractor's equipment
- Power generating plants

Transportation

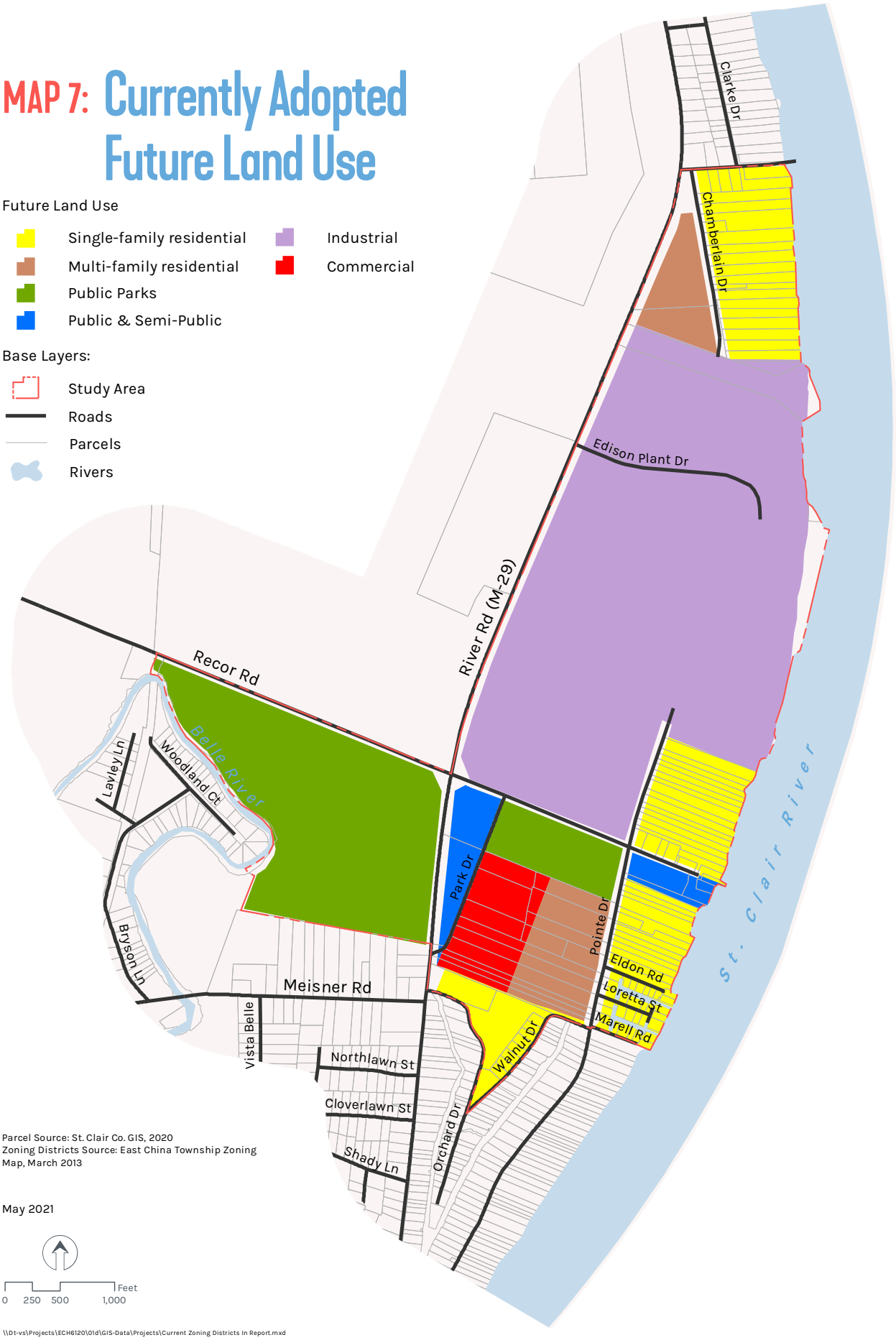
Understanding the existing transportation network within the redevelopment site is necessary to identify gaps in connectivity and opportunities for development of non-motorized and multi-modal circulation. As development plans for the site progress, the nature of the existing transportation facilities may need to change, expand, or be updated to reflect the changing environment and increased needs of the study area.

Road Network and Conditions

The existing transportation network within the redevelopment site is primarily local roads (see **Map 9**). There is one uncertified private road that leads onto the DTE industrial property. River Road (M-29) on the western-most side of the redevelopment site is considered a major collector road. This road sees an average of 7,028 vehicle trips daily. River Road is in poor condition and is also considered a truck route that is open to legal axle loads.

While there is not a significant number of vehicle crashes, there have been a number of crashes along River Road (see **Map 10**). None of

MAP 7: Currently Adopted Future Land Use



Parcel Source: St. Clair Co. GIS, 2020
Zoning Districts Source: East China Township Zoning Map, March 2013

May 2021

0 250 500 1,000 Feet

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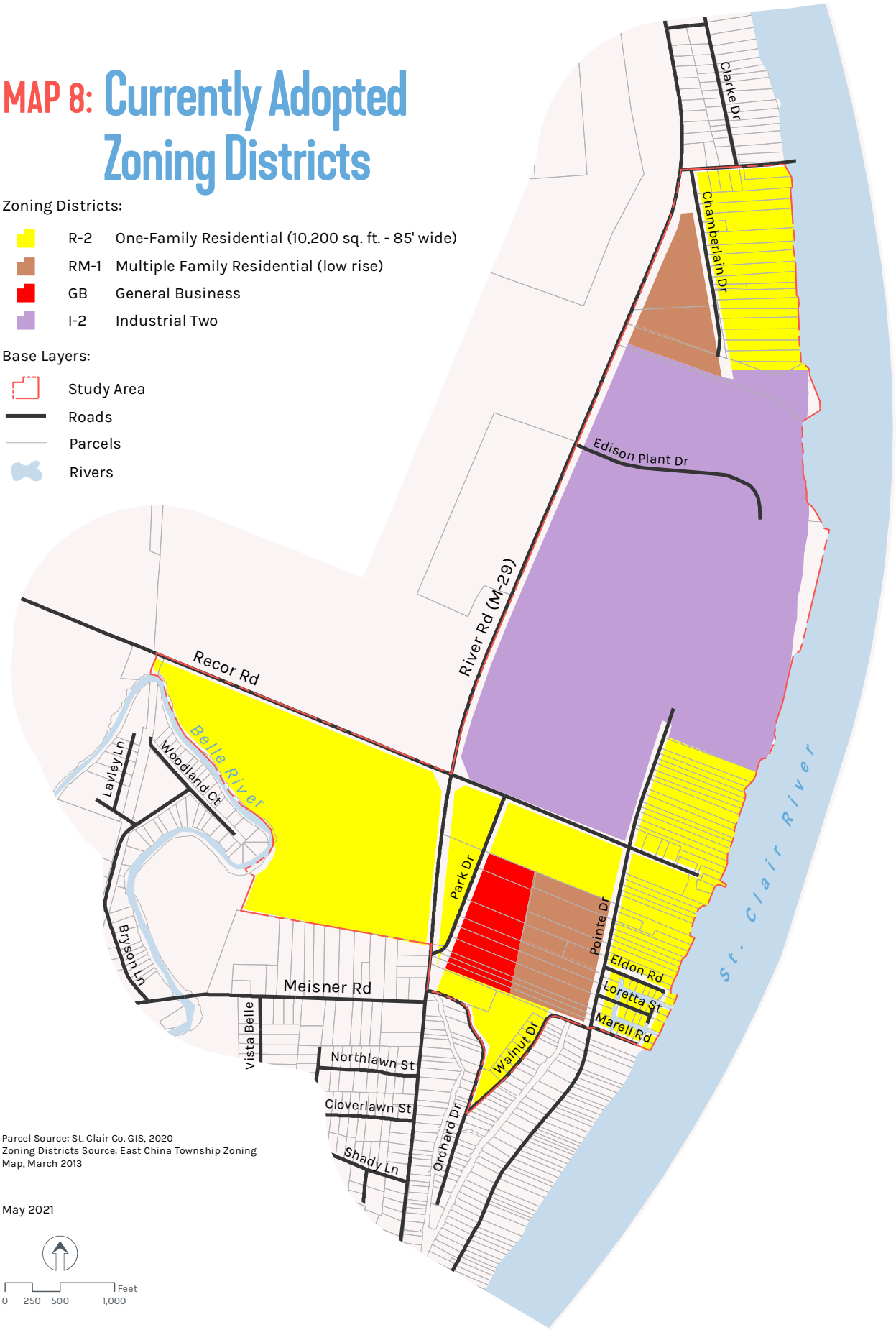
MAP 8: Currently Adopted Zoning Districts

Zoning Districts:

- R-2 One-Family Residential (10,200 sq. ft. - 85' wide)
- RM-1 Multiple Family Residential (low rise)
- GB General Business
- I-2 Industrial Two

Base Layers:

- Study Area
- Roads
- Parcels
- Rivers



Parcel Source: St. Clair Co. GIS, 2020
Zoning Districts Source: East China Township Zoning Map, March 2013

May 2021

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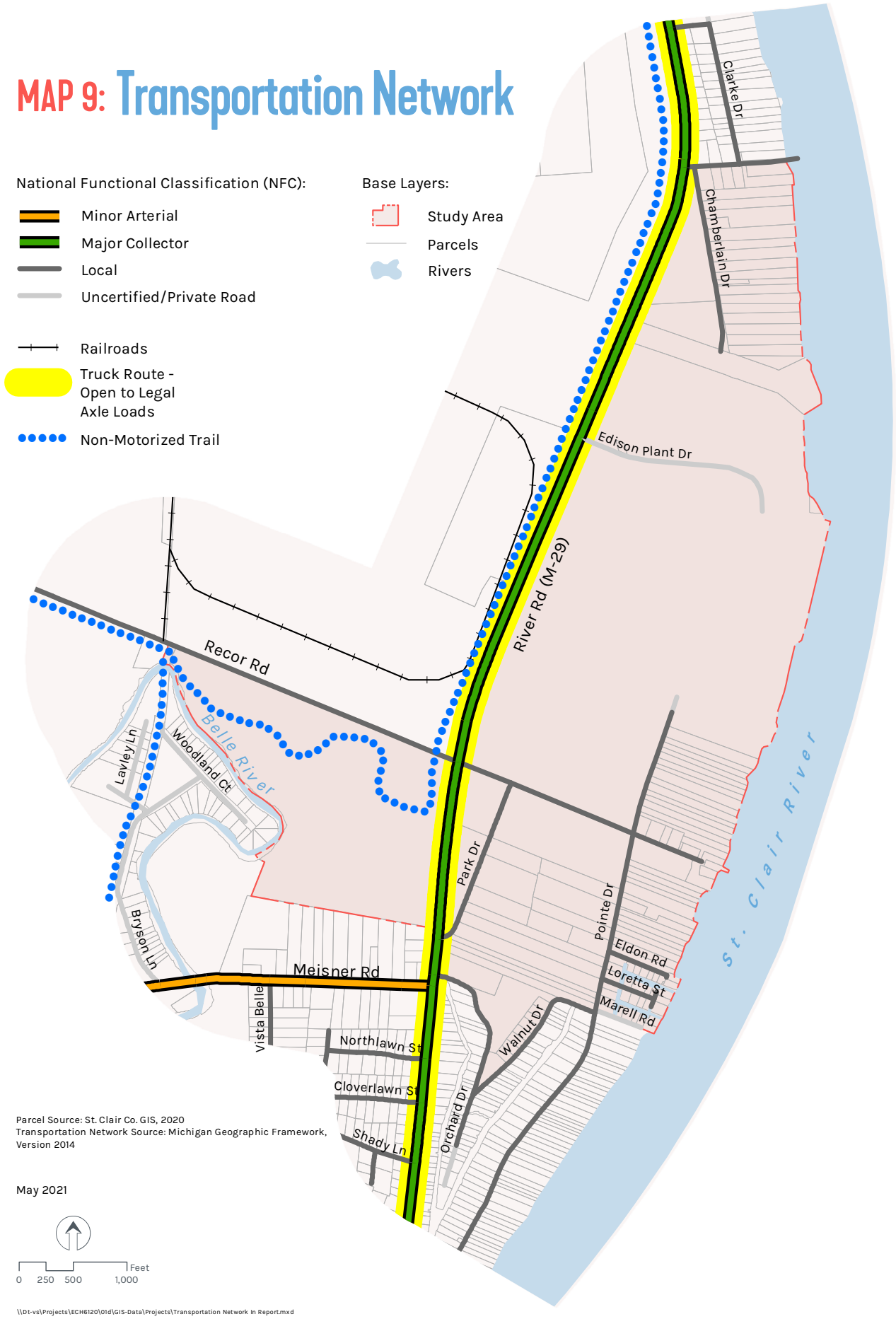
MAP 9: Transportation Network



Parcel Source: St. Clair Co. GIS, 2020
Transportation Network Source: Michigan Geographic Framework, Version 2014

May 2021

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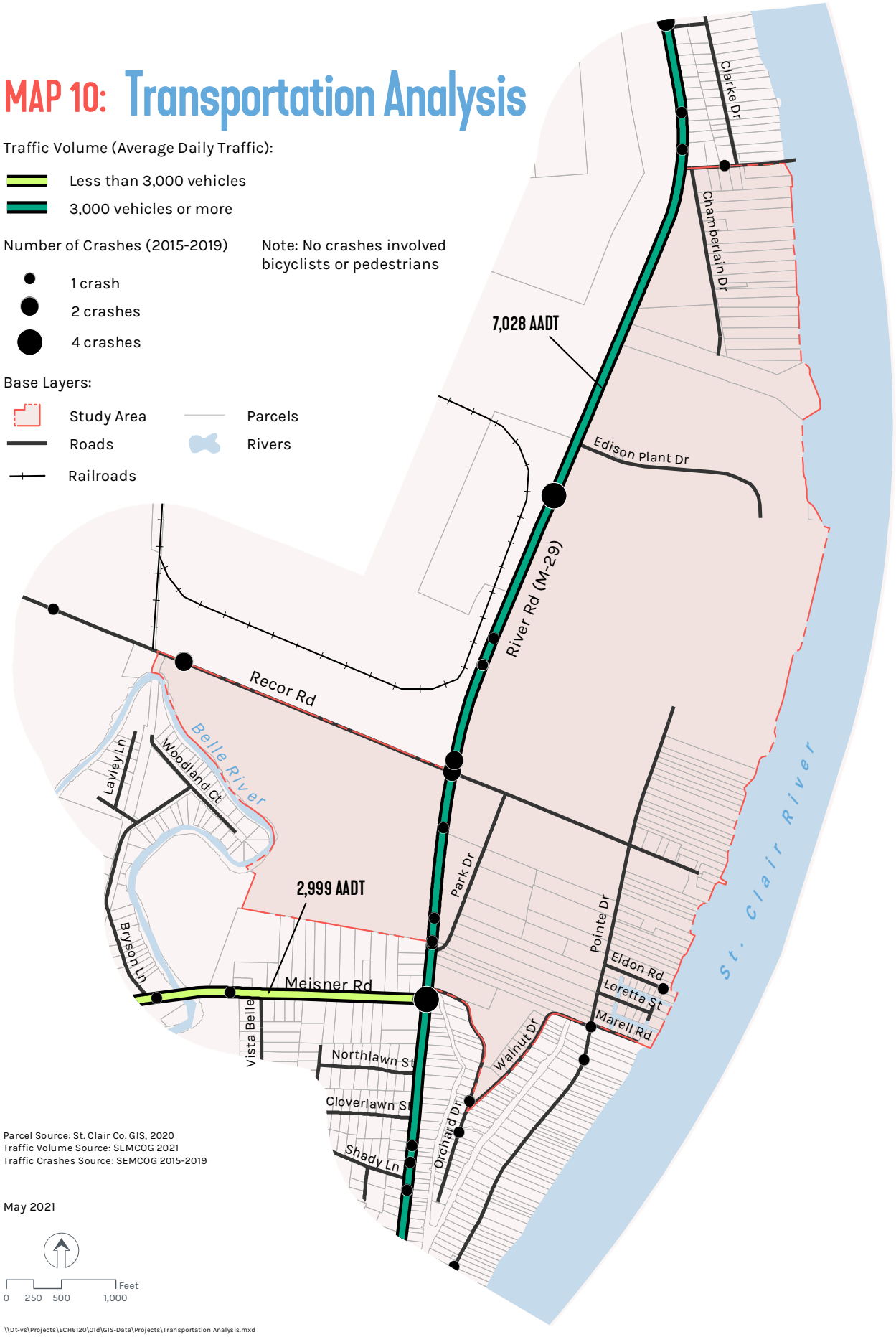
MAP 10: Transportation Analysis



Parcel Source: St. Clair Co. GIS, 2020
Traffic Volume Source: SEMCOG 2021
Traffic Crashes Source: SEMCOG 2015-2019

May 2021

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the crashes involved bicyclists or pedestrians; however, this data should be considered in the redevelopment process to evaluate if additional safety precautions should be implemented to accommodate the increase in traffic as the site evolves.

There is one minor arterial (Meisner Road) that connects to River Road just south of Orchard Drive and of the study area. This road is in poor condition and supports approximately 2,999 annual average daily traffic vehicles.

Non-Motorized Facilities

Map 11, Non-Motorized Facilities, identifies the existing non-motorized facilities within the study area.

The U.S. Bike Route 20 runs along River Road. River Road forms the western border for the majority of the redevelopment site, and cuts through the bottom portion of the site after Recor Road. The bike route follows this same path.

The Bridge to Bay Trail is a 54-mile trail that extends throughout St. Clair County in cooperation with local government units. According to the St. Clair County Department of Parks and Recreation, East China Township was the pioneer of the first three parts of the path. Within the site, the trail runs along River Road (M-29) and through the East China Township Park. The trail splits at the western edge of the park along Recor Road, continuing west or continuing south toward Meisner Road for a 2.5 mile stretch south to Marine City.

Presently, no public sidewalks are located within the Study Area.

Water-Based Transportation

Water-based Transportation in the Great Lakes and its accompanying waterways supports hundreds of millions of metric tons of cargo representing billions of dollars in economic activity. This commerce also supports hundreds of thousands of jobs throughout the cities along the coasts of the great lakes.

This type of industry has several positive impacts for the local community, including increased economic activity. This activity stimulates direct employment opportunities, as well as induced employment and indirect employment opportunities, effects that occur as a result of the increased personal income and employment opportunities of the industry. Water-based industry also increases local business revenue, increases the amount of local purchases, and increases the local tax base.

The redevelopment site is home to the St. Clair port and is flanked by the Marysville port to the north and the Marine City port to the south. Due to the number of ports along the St. Clair River and Lake St. Clair, the redevelopment site may be a prime location to continue to support economic activity in the water-based transportation realm. In addition to their industry-based uses, these ports may also create an opportunity for recreation, dining, and other entertainment amenities.

The Belle River Water Trail is a blueway that runs through East China Township and along the edge of the study area along East China Township Park. This water trail is designated as one of the seventeen blueways in St. Clair County; these water trails serve as a recreational opportunity as well as a point of access to the many water towns in the county.

Other Transportation Modes

Blue Water Area Transit is a public bus transportation system that operates primarily in fixed routes within the City of Port Huron, Ft. Gratiot, Burtchville, Port Huron Township and the City of Marysville. This transit system has one fixed route that runs through East China Township, stopping only at the front entrance of the St. John Hospital.

In addition to this fixed route along M-29, the Blue Water Area Transit also permits the sched-

MAP 11: Non-Motorized Facilities

uling of Dial-A-Ride services throughout the county.

Other than these minimal public transit services, the only other minimally available vehicle transportation modes are private ride-sharing organizations such as Uber or Lyft. Even these systems are not very popular in the area and are likely to be very expensive options.

Public Services and Facilities

The study area is well served by public facilities and services that are managed by the Township Administration. The site is serviced by township water mains, sanitary sewer mains, and overhead electric transmission lines. In addition to these public water and sewer infrastructures, there are also public parks and recreation facilities that are managed by the Township (see **Map 12**).

The DTE property is home to the St. Clair Power Plant and the Belle River Power Plant, which are powered by ITC electric transmission infrastructure (power lines and switchyard) in addition to the township water and sewer facilities. While the Belle River Power Plant is operational, the St. Clair Power Plant coal supply from barge unloading must be maintained until the Belle River Power Plant is retired.

Market Trends and Opportunities

National and regional trends in the housing market, retail markets, office markets, and industrial markets indicate a number of economic opportunities for the study area.

Communities who want to succeed in the new economy should look to provide the fundamental conditions necessary to attract the key drivers of the economy, based on these new trends.

Any future development on the site should employ a balanced economic development strategy. This strategy should celebrate the high quality of life already present in the Township while making investments and implementing policies that enhance that same quality of life.

Housing

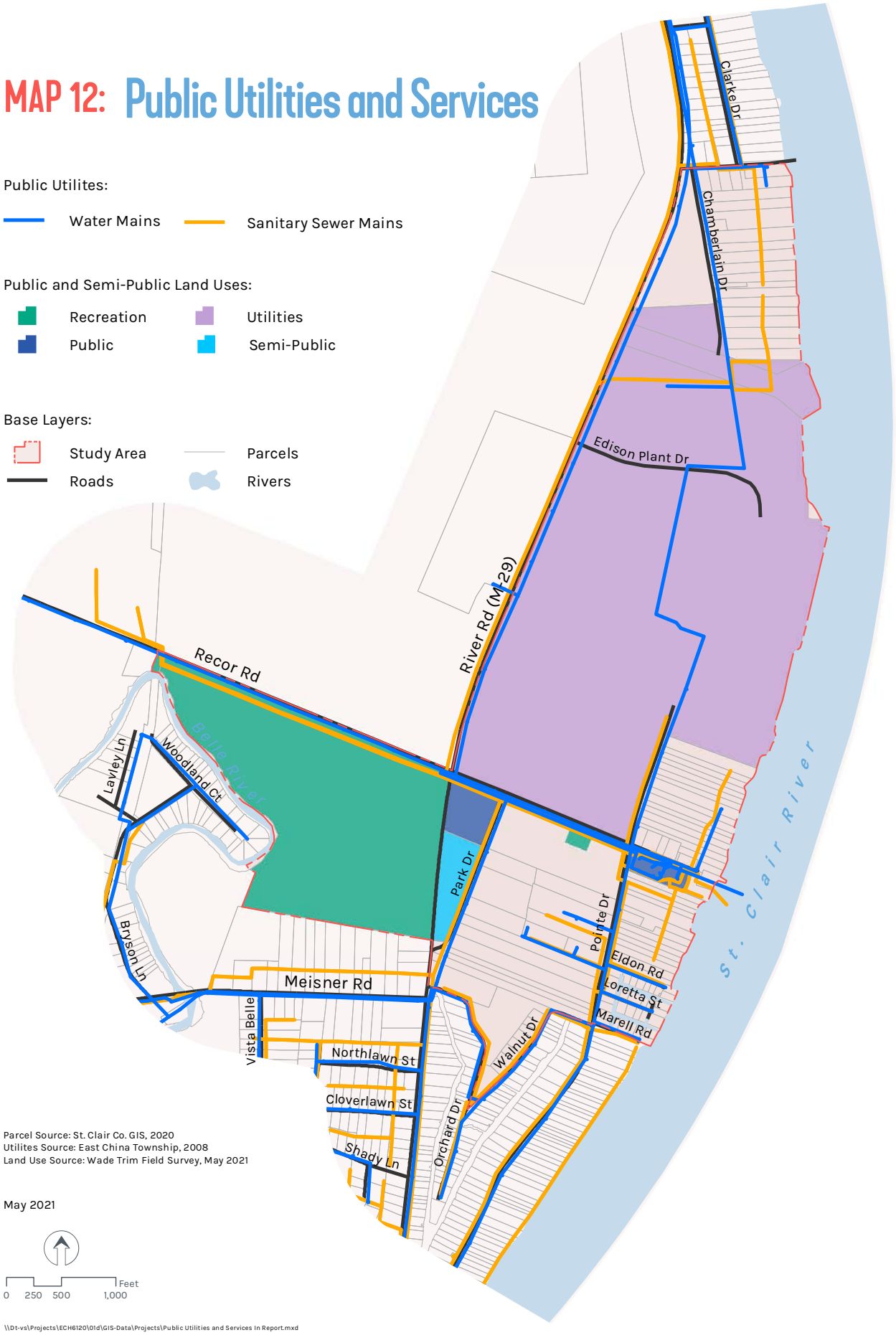
Since the middle of the twentieth century, the single-family detached home has played a dominant role in the housing market. Owning such a home was widely considered the primary element of the American Dream. A strong economy, the development of the interstate highway system, favorable tax laws, and easy financing led to rapid development of the suburbs with predominantly low-density housing.

The homeownership rate soared, reaching nearly 70% by the mid-2000s. However, the Great Recession that hit in late 2007 brought a housing market crash whose impacts are still felt today. Recovery from the recession has occurred, but the characteristics of the housing market appear to have moved in a different direction, steered by various demographic changes occurring within the United States.

These changes include racial and ethnic diversification, a growing immigrant population, and an increasing percentage of non-traditional households. However, the growth and evolving preferences of the Baby Boomer and Millennial generations has also had a major impact on housing supply and demand.

Baby Boomers
Once preferring large-lot detached homes, the aging Baby Boomer Generation (born 1946 to 1964) is expanding the nation's senior population and increasing demand for downsized units and housing that caters to the needs of seniors. Despite a preference for many to age in place, a large number of Baby Boomers will be in search of new housing. According to housing market researcher Arthur C. Nelson, when those age 65 and older move, 80% will vacate single-family houses, but only 41% will move back into single-family units; the other 59% will located in multiple-family units.

MAP 12: Public Utilities and Services



Demand for alternative housing types, often called "missing middle housing" - which includes duplexes, triplexes, fourplexes, townhouses, rowhouses, and bungalow courts - is being driven by demographic change within the U.S.

Millennials

Now entering the housing market, the Millennial Generation (those born between the early 1980s and the early 2000s) will account for 75% to 80% of the owner-occupied housing absorbed by people under 65 before 2020 (Source: Demographic Challenges and Opportunities for U.S. Housing Markets, Bipartisan Policy Center, March 2012) Different from their parents' living preferences, this generation prefers housing in mixed-use urban environments and increasingly views renting as an advantageous option.

Opportunities

Redevelopment of the study area should seek to address the changing needs of the Baby Boomer and Millennial generations, while continuing to attract new residents. One strategy is to develop a faction of housing that is currently missing from the township, called "missing middle" housing. Missing middle housing offers the provision of housing types other than single-family homes that are increasingly desired by Americans, such as duplexes, triplexes, fourplexes, townhouses, rowhouses, bungalow courts, and live/work units. This is a strategy that is supported by the I-69 Thumb Region Housing Strategy, which states that "adding new housing, especially for middle-income buyers will attract new residents and workers to the region which in turn, benefits the economy."

The Township should also diversify its housing stock by encouraging and allowing housing types which enable citizens to age-in-place, such as accessory dwelling units, active senior living developments, and elderly care facilities.

The missing middle housing types noted above typically offer a mixture of both owner units and rental units. Additionally, because many missing middle housing developments are comprised of smaller sized housing units, they are often a more affordable housing choice.

Retail

In 2021, no other real estate sector is facing the challenges of the retail sector. While other sectors are changing the way they do business, the internet is making brick and mortar retails fight for their very existence. Many retailers have already succumbed to online competition, like Sears, Borders, and nearly every video chain. An increasing number of malls and clothing stores are beginning to shutter their doors, as online shopping opportunities surpass those in-person opportunities.

Retailers now face stronger competition with each other and with their online counterparts. In an effort to compete, in-person retailers have shifted away from having a large invento-

ry and massive footprint to offer the best experience possible. The goal of these retailers is to offer something in the store that makes people choose to shop there instead of shopping through online sources. In this environment, the Apple Store is the gold standard; customers come in for the experience as much as the product.

The following are key national trends within the retail sector:

☑ **Smaller Stores**
Retailers are looking for a smaller, more specialized location that focuses on experience and customer service. This means better materials inside, and a highly-trained, customer oriented staff. The goal is not to have as many products as possible, but to provide an experience that gets people to fore-go online shopping.

☑ **Less Inventory**
The rise of online shopping has created a disincentive to keep large amounts of inventory in the store. Retailers find it more efficient to use their store as a showroom, and ship directly to a consumer from a central warehouse.

☑ **Fast Casual Restaurants**
With a price that falls between a fast food restaurant and a sit-down restaurant, the fast-casual dining experience has come to dominate the food service industry. According to data from market research firm Euromonitor, the category have grown by over 550 percent since 1999, which is more than ten times the growth seen in the fast food industry over the same period. Hallmarks include good quality food, simple menus, and quick service that does not require paying the server a tip. Chipotle and Panera Bread are the industry standard, but there are countless other restaurants trying to break into this category.

☑ **Dead Malls**
All over the county, older shopping malls are closing. For many malls, they have the dual challenge of changing, negative demographics, combined with increased competition from online retailers and other malls. The death of a mall is often slow and painful due to the investment structure, and sometimes leaves behind an expansive structure that the community must address.

☑ **Premium Grocers**
With Whole Foods leading the way, many grocers have decided to stop competing with Kroger and Walmart on price, and have elected to offer higher quality food instead. A focus on smaller stores, higher quality foods, and prepared foods sets these grocers apart from their mass market brethren. These higher-end chains, and their unique, local counterparts, are expected to cut into the market share of mid-level, full-service chains like Kroger.

Placemaking is the idea of using a sense of place as an economic development tool. Simplified, placemaking celebrates elements that define a community, thereby attracting new business, new retail, and new visitors.

☑ **Integrated Strategy: Online and Brick and Mortar**
While some experts predicted the demise of brick and mortar retail altogether due to online competition, this is not the case. Many companies are using the brick and mortar store and the online retailers as an integrated retail strategy. As of August 2021, the U.S. Census Bureau reports that only 13.3% of all sales occur online. Many companies that began as online-only retailers are expanding into retail stores as a way to grow their brand.

☑ **Conclusions and Opportunities for the Riverfront Study Area**
Those retail opportunities that offer a unique experience and attract a wide range of consumers, such as microbreweries and specialty shops, are more likely to be successful in the long-term. To succeed in the new retail economy, development should provide the conditions that support this type of economic activity. One way to do this is through placemaking, which is the idea of using a sense of place as an economic development tool. Simplified, the idea of placemaking is to celebrate those elements that define a community, thereby attracting new business, new retail, and new visitors.

Office

There are a number of national trends with great influence in the office real estate sector. CBRE Group, Inc. a commercial real estate services and investment firm, has identified national trends for the office real estate sector:

☑ **Office Downturn and Vacancy**
As a result of the pandemic and the global financial crisis, office real estate saw a downtown in development and use; however, this decline is predicted to stabilize as the pandemic and global economy re-stabilize. Office vacancy rates are still predicted to remain high, as renters continue to dominate the market. In the Detroit Metro Area, vacancy rates were declining prior to the pandemic; however, the impact of remote work has likely halted or reversed this trend.

☑ **Urban vs. Suburban**
Suburban office markets are predicted to recover from the pandemic and previous economic downtowns more quickly than urban environments due to their dependence on mass transit and smaller spaces. The ability to expand over larger areas allowed offices to adapt in the pandemic, while also allowing their businesses to remain responsive and productive.

☑ **Remote Working**
The shift to remote working, that already began prior to the global pandemic but was accelerated due to health and safety concerns, is beginning to dominate the office market sectors. Companies are beginning to favor hybrid solutions for their employees, allowing them to work from home on a part time basis. This trend is likely to have lasting impacts on the amount of space needed at offices, shifting towards, smaller more niche operating spaces that cater to clientele and showmanship over utility and a full workforce.

☑ **Conclusions and Opportunities for the Riverfront Study Area**
The shift to remote work and the stagnancy of vacant office spaces provides an opportunity to redevelop spaces for shared offices amongst companies, reduced rents to fill vacancies and attract new business, and increased affordability in desirable areas. The suburban and rural nature of the study area could support a variety of office types and sizes, seeking to build upon the local workforce and shape the character of the future waterfront.

Industrial

Given the strong shift away from brick and mortar retailers, the national economy is likely to shift from a strong retail focus to an industrial conversion. Adaptive reuse of retail space and infill warehouses are going to continue to increase in popularity as the cost of development rises, according to CBRE Group, Inc.

Although there is a positive future expected outlook for manufacturing and other heavy

industry, consultants at Deloitte have stipulated that the toll of the pandemic on heavy industry has impacted supply chains, production agility, and overall performance. Over time, this total industrial production is expected to increase once again, if these industries are able to adapt through digital investments and digital technologies to ensure that the workplace and production capabilities are resilient.

Additionally, a number of regional opportunities have been established. The St. Clair County Economic Development Alliance has identified four target industries for future expansion and development within St. Clair County. These industries were identified through the existing strengths and opportunities within the region. These target industries are:

☑ **Mobility and Automotive**
Southeast Michigan has long been a leader in the automotive industry and has remained a hub for automotive engineering development, production, and manufacturing. Today, Michigan is home to 61 of the top 100 automotive suppliers. As an international gateway connecting the U.S. and Canada, St. Clair County is an ideal location for automotive suppliers. The Blue Water Bridge, the CN rail tunnel, and I-69 provide ample opportunity for international access, trade, and business through Canada and Mexico.

☑ **Advanced Manufacturing**
This sector is considered the top of the manufacturing industry, and St. Clair County already supports two national defense installations. In addition to the automotive industry, Michigan has long-supported manufacturing in nearly every sector of the industry, including robotics and automation, advanced plastics and compounding, aerospace components, heat treating and advanced coatings, metal stamping, prototype manufacturing, medical devices, and paper manufacturing and packaging.

☑ **Energy Generation & Distribution**
Due to the presence of the Belle River Power Plant, the St. Clair Power Plant and the Blue Water Energy Center, the St. Clair EDA has identified energy generation as an important industry for the region. While the SCPP and the BRPP are slated to be decommissioned over the next 10 years, the Blue Water Energy Center will continue to provide energy throughout the region. In addition, the region is ideal for power generation through wind turbines, and is a prime location for solar power.

☑ **Warehouse, Logistics, and Distribution**
Economic mobility is one of the most important characteristics of economic activity within the St. Clair Region. Due to the county's extensive rail, water, highway, and air networks, and its central location, St. Clair County offers prime access for domestic and international shipping throughout a variety of markets.

☑ **Conclusions and Opportunities for the Riverfront Study Area**
The target industries identified above represent a viable opportunity in the study area and cater to the local workforce and skill set. Accommodation of these industries within the study area would generate employment opportunities, grow the tax base, and contribute greatly to the economic welfare of the region.

SECTION 3

Environmental Assessment

Natural Features

Before redevelopment can occur on the site, it is important to evaluate the existing riverfront conditions and natural habitats to understand how to protect and preserve existing natural features in the area. An analysis of the topographic and hydrologic features provides an initial understanding of the condition of the land and its natural character.

Topography

Map 13 shows the topography of the study area using 10-foot and 5-foot contours. The contours indicate a change in elevation by either 5-feet or 10-feet, depending on the contour line. In general, the study area is relatively flat, with minimal elevation changes.

Hydrologic Resources

Wetlands are an extremely important, though commonly overlooked, natural resource that provide both aesthetic and functional benefits. Through the years, over 50% of Michigan's wetlands have been destroyed by development and agricultural activities. Therefore, Michigan enacted Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994 to protect the remaining wetlands.

The wetland act authorizes the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to preserve certain wetland areas. EGLE may require permits before altering regulated wetlands and may prohibit development in some locations.

MAP 13: Topography

Topgraphy Contours:

- 10-foot Contours
- 5-foot Contours

Base Layers:

- Study Area
- Roads
- Rivers

Parcel Source: St. Clair Co. GIS, 2020
Topography Source: SEMCOG LiDAR Data, 2010

May 2021

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There are two wetlands within the redevelopment study area, as seen on **Map 14**. Although these areas are not large in size, they have ample significance for natural habitats and biodiversity and should be protected during redevelopment efforts.

In addition to the existing wetlands, the study area also sits within both a 500-year flood zone and a 100-year flood zone. These two flood zones overlap one another in many places across the site.

Map 14 also shows that nearly the entire East China Township Park property resides within the 100-year and 500-year flood zones. These zones are also found in the southern portion of the site on single-family home properties, and running north along the river's edge.

These zones should be considered in the production of redevelopment plans to ensure that all new development is prepared for potential flooding events, damage, or other impacts that may occur as a result of storm events and surges. These zones may also be indicators of areas in need of remediation prior to redevelopment.

Watershed Analysis

According to the Friends of the St. Clair River Strategic Plan, the St. Clair River is a 40 mile long river that is connected to six sub-watersheds: the Black River, Mill Creek, Pine River, Belle River, Lake Huron, and Anchor Bay (see **Map 15**). It provides drinking water to nearly two-thirds of St. Clair County residents and supports a variety of plant and animal species, including several listed by federal agencies as endangered or threatened.

The St. Clair River forms the eastern-most boundary of St. Clair County and is the water body that divides the United States and Canada. It is considered a prominent natural feature that supports protected wildlife, people, industry, and recreation. Despite its importance, the river is threatened by rapid urbanization, agricultural runoff, stormwater runoff, toxic pollutants from heavy industry, invasive species, soil erosion, loss of wetland habitats, and more.

Since 1985, the St. Clair River has been designated as an Area of Concern, suggesting that the river experiences significant pollution problems and severe environmental degradation from development practices and poor management. Over time, the Friends of the St. Clair River have worked to improve the river's conditions and health.

Redevelopment efforts must take the river's history into account when considering its future uses. In order to protect the river itself and its accompanying watersheds, all demolition, remediation efforts, and new developments should have neutral or beneficial impacts on the water source and the life it supports.

Power Plant Retirement Process Overview

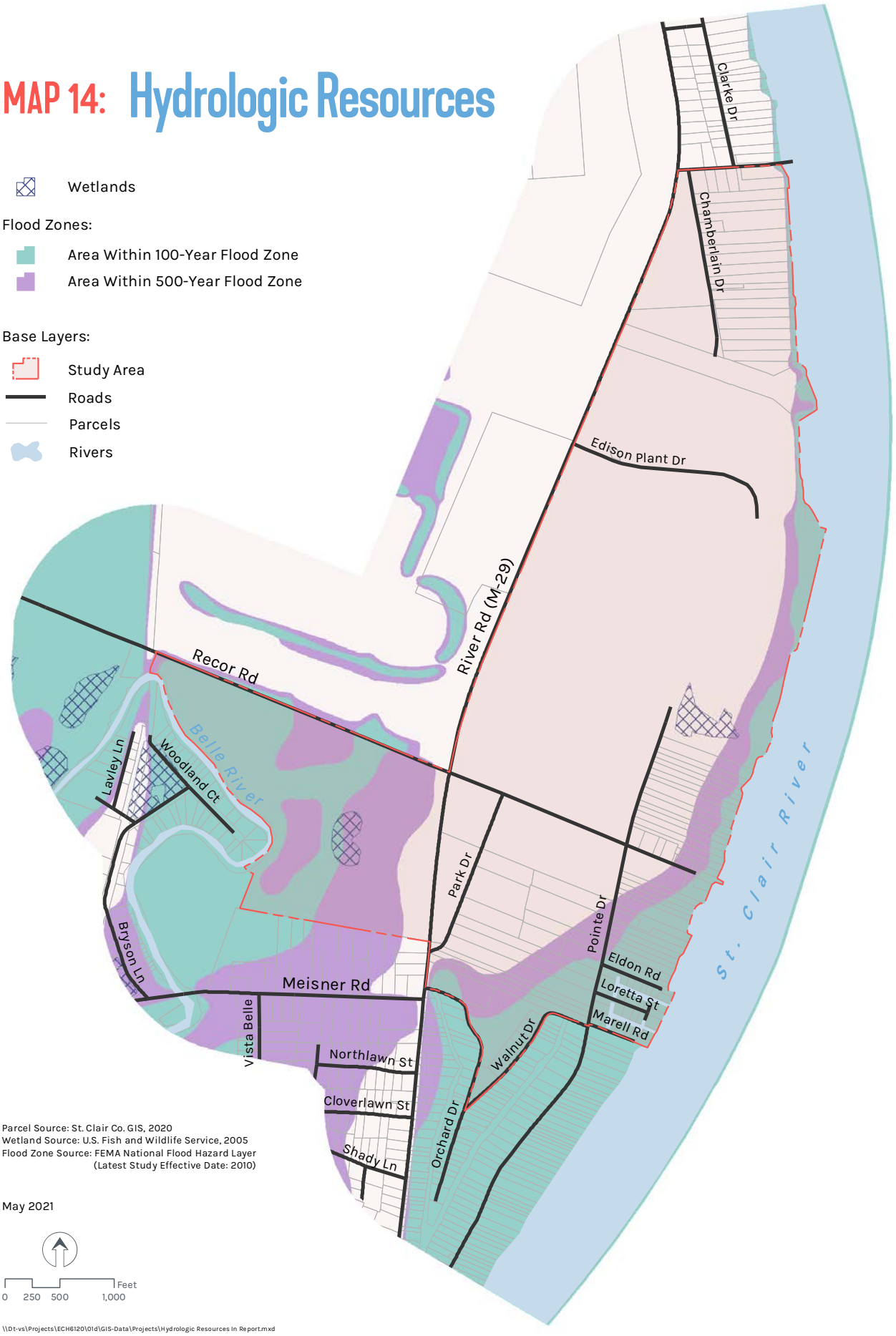
The U.S. Environmental Protection Agency (EPA) recommends a multi-step process for the decommissioning of a coal plant. These steps should occur over an extended, multi-year period and include stakeholder engagement throughout the shutdown/decommissioning process, the remediation process, and the redevelopment process.

This study is a key component in the stakeholder engagement process as part of the greater decommissioning effort. The St. Clair River Redevelopment Planning Study allows for up-front planning to consider site reuse options early on in the decommissioning process. Understanding the range of reuse options will help in the development of realistic schedules and cost estimates.

The EPA recommends the decommissioning process occurs over three primary phases that are supported by additional, complex steps:

1. Shutdown and Decommissioning Phase
2. Remediation Phase
3. Redevelopment Phase

MAP 14: Hydrologic Resources



Parcel Source: St. Clair Co. GIS, 2020
Wetland Source: U.S. Fish and Wildlife Service, 2005
Flood Zone Source: FEMA National Flood Hazard Layer
(Latest Study Effective Date: 2010)

May 2021

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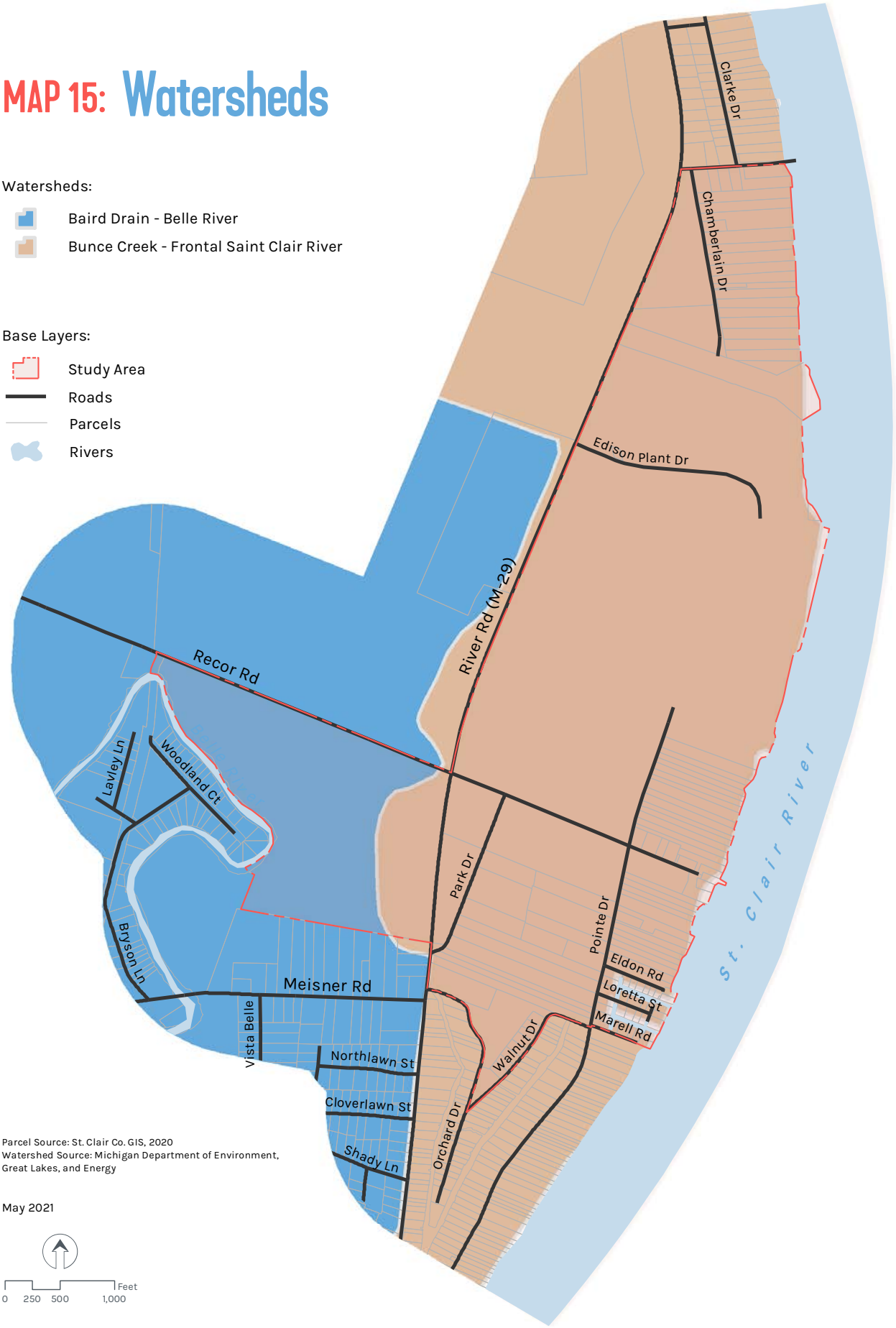
MAP 15: Watersheds

Watersheds:

- Baird Drain - Belle River
- Bunce Creek - Frontal Saint Clair River

Base Layers:

- Study Area
- Roads
- Parcels
- Rivers



Parcel Source: St. Clair Co. GIS, 2020
Watershed Source: Michigan Department of Environment, Great Lakes, and Energy

May 2021

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Shutdown & Decommissioning Phase

This phase covers the period beginning with the initial announcement of the closure to the stopping of the power production and the removal of the equipment and materials.

Typically, after the announcement of closing, the current coal plant owner must consider their strategy for managing the decommissioning process, which may include changing ownership. The current owner may consider the following options:

- Owner maintains full control
- Selection of a third party to oversee the process
- Owner sells the property to a developer or municipality

Once the management of the decommissioning is decided, there are a number of possible shutdown and decommissioning phase tasks. Among the possibilities are:

- Closure planning, including safety engineering survey and asset inventory; legal notices
- Equipment shutdown, cleaning and removal or sale
- Electrical switchyard and plant power reconfiguration
- Security enhancements (fences, gates, lighting)
- Removal of surplus coal, oil and process chemicals

Upon completion of these, the equipment and materials removal process can begin. This will lead to building demolition and assurance of compliance with federal and state permitting requirements.

Remediation Phase

The remediation phase covers the clean up of the site and any contamination to support new use. It typically involves the following steps:

- Investigation and cleanup of hazardous materials to meet federal or state requirements
- Defining site-specific needs for redevelopment
- Collecting solid and ground water samples to document contamination
- Cleanup plan is prepared for approval by state and federal regulators
- Cleanup plan is implemented

The remediation phase may also include the following tasks:

- Environmental assessment
- Removal of hazardous chemicals and wastes
- Permit applications and closures, remedial plan development and regulatory review
- Public outreach and public involvement
- Closure and cleanup of waste management units, such as ash pits or ponds

Redevelopment Phase

After the plant is shut down and decommissioned, and after the remediation/clean-up phase is complete, the redevelopment phase can begin.

The EPA encourages that, although the redevelopment phase is the final phase, the planning for redevelopment should start early, which is an impetus for this St Clair Riverfront Redevelopment Plan. Having a shared vision in place is a benefit for both the owner and the community, and helps avoid major changes to the plan later on, which could cause delays and waste valuable resources.

This phase includes the development of a detailed site design and engineering plans, which should be reviewed through the local government review process.

Upon approval, the construction of the new site can occur and so can the maintenance of environmental controls. Additionally, there are a number of other possible redevelopment phase tasks, including:

- Demolition or renovation of existing structures
- Infrastructure improvements or alterations
- Architectural planning
- Construction of new buildings and spaces

Costs and Financing

Understanding the anticipated costs for all phases of redevelopment is an important aspect of a community revitalization plan. Several financial mechanisms may be available to support different phases of the assessment, cleanup, and redevelopment process.

Cleanup costs will depend on the anticipated reuse of the site and the type and location of hazardous materials stored or disposed. For example, if industrial use is planned, the cleanup requirements may be less stringent than what is required for residential use, because the likelihood of direct or prolonged human exposure to contaminants will be lower. Many power plants are adjacent to bodies of water that may contain contaminants due to power plant operations, which must also be addressed as part of the cleanup. The cost of remediation can vary greatly, ranging from hundreds of thousands of dollars to several million dollars or more.

For some redevelopment activities, financial support may be available as grants, loans, and tax incentives. Support also may be available through other innovative funding mechanisms. Site owners should determine what incentives and options are available. Under limited circumstances, EPA brownfields assessment grants may be available for state, municipal, and tribal organizations if these organizations have access to abandoned power plants. EPA brownfields cleanup grants are not available to owners of closed power plants if the owner is a private party or if the owner is determined to be the party responsible for any contamination at the property. In most cases, and particularly in cases where decommissioned power plants (or waste management units located at these plants) are permitted under the Resource Conservation and Recovery Act, the private party owner is responsible for implementing and paying for corrective actions to address environmental contamination and taking actions to close or decommission all operating units at the plant.

DTE Plant Retirement Process Overview

Some of the facilities at the St. Clair Power Plant (SCPP) site will be decommissioned in 2022 as the SCPP is decommissioned. Other facilities must stay in place for a time to serve the Belle River Power Plant (BRPP) nearby, until that facility is decommissioned (scheduled for 2028). Finally, some facilities must remain into the foreseeable future.

The SCPP supplies electric power for the BRPP, by way of the switchgear and overhead electric lines. The supply of coal to the BRPP is enabled by the dock and fuel supply system at the SCPP. The coal heads to the BRPP by way of an overhead conveyor. These facilities must be maintained until the BRPP retires.

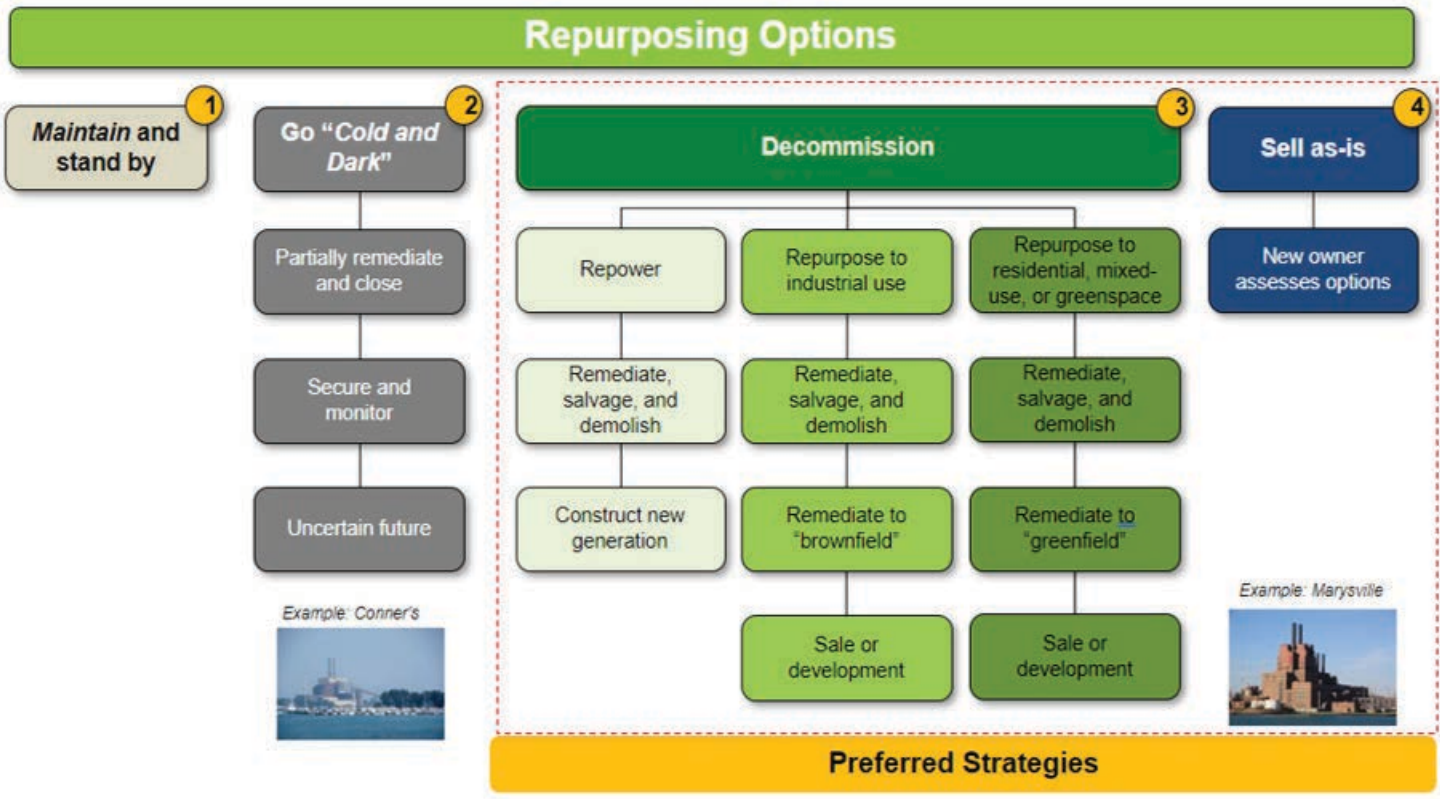
The cooling water intake at the SCPP is utilized by the BRPP as well as the Blue Water Energy Center (BWEC). As the BWEC is a new facility and will be in place for many years, this cooling water intake must be maintained into the foreseeable future. The ITC Mat (switchyard) at the SCPP and overhead electric lines that extend out from the switchyard must also be maintained into the foreseeable future.

DTE has established a project goal to identify a post-retirement plan for the SCPP site that is desirable to both DTE and the community.

DTE is evaluating numerous repurposing options for the St. Clair Power Plant (see the graphic below), including:

1. Maintain and stand by - in this option, the St. Clair Power Plant would not be decommissioned; additionally, no remediation would occur and its structures would be maintained as they stand today.
2. Go "Cold and Dark" - this option allows for the partial remediation and closure of the SCPP. This option would require secure monitoring of the site and would leave an uncertain future for development opportunities.
3. Decommission - this option has the greatest range of options for DTE, including repowering the plan to construct new energy generation, repurpose to a variety of use types, and remediation.
4. Sell as is - this option would allow DTE to sell the plant as it stands today and a municipality or developer would take over the decommissioning and redevelopment process.

DTE has identified options 3 and 4 as the preferred paths forward.



Source: DTE

SECTION 4
Public Engagement

Project Steering Committee

A project Steering Committee was appointed to lead the planning process, along with a planning consultant. The Committee consisted of seven persons, representing varied entities, including:

- East China Township Board
- East China Township Planning Commission
- East China Township Administration
- DTE
- St. Clair County Environmental Health Department
- Friends of the St. Clair River
- St. Clair County Board of Commissioners
- St. Clair County EDA

Public Informational Meeting

East China Township, in collaboration with DTE Energy, held a public project kick-off and informational meeting at 6:30 pm on August 3, 2021. The meeting took place at the DTE Belle River Club House, located at 4505 King Road. There were approximately 30 people in attendance.

The meeting included a presentation that covered a project introduction and over-

view, a business update from DTE, and a discussion of the St. Clair Power Plant decommissioning process.

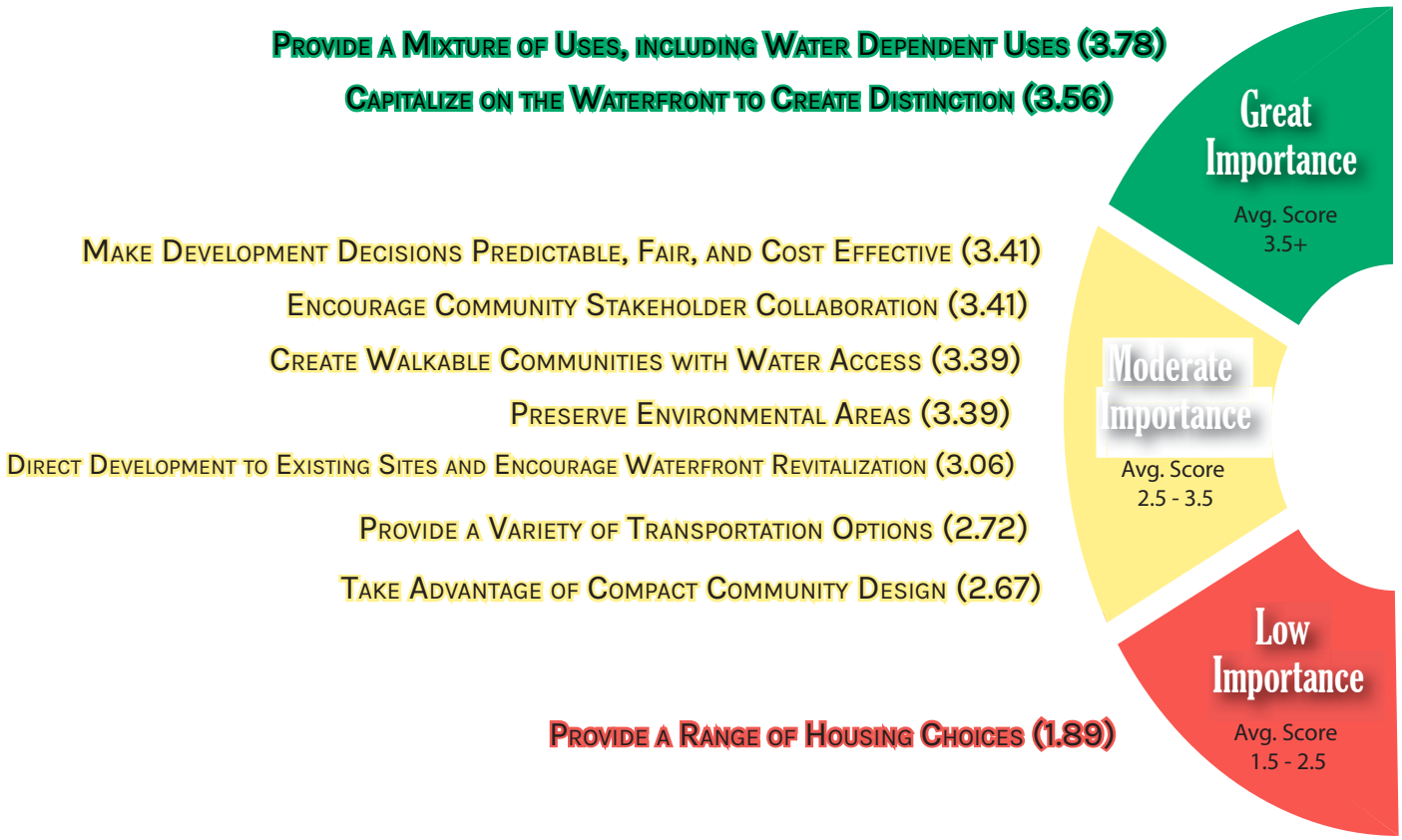
Attendees were also briefed on the existing conditions of the study area and best practices for waterfront planning. Finally, attendees were given the opportunity to ask questions and provide feedback about their core values for the redevelopment of the site, based on the waterfront planning best practices.

Core Values Exercise

After they were given a presentation on the details of each waterfront planning best practice, attendees completed a handout that gave them the opportunity to rank each of the best practices on a scale of 1 to 4, as follows:

1. Not important
2. Low importance
3. Moderate Importance
4. Great importance

To evaluate the results of the exercise, the rankings of each of the respondents were aggregated and averaged to identify a single ranking score for each of the best practices. The graphic below shows how each of the 10 best practices fell within the scale of relative importance. No best practice was considered not important (average score of less than 1.5).



Public Work Session

A public work session was held on January 25, 2022, at the East China Township Hall. The purpose of the work session was to allow interested citizens and stakeholders to review and discuss preliminary recommendations for the study area, with particular emphasis on the redevelopment of the DTE St. Clair Power Plant site.

Three land use strategy options were presented to generate discussion and feedback, explore options and ideas for redevelopment that could occur, and help establish a framework for development. It was noted that the purpose of the discussion was not to rank the strategies, but rather to identify elements of each which may be feasible and appropriate. The necessity to ensure flexibility for future development was reiterated, in recognition that market demand will be a key driver of the type and character of development over time.

The three land use strategy options for the redevelopment of the DTE ST. Clair Power Plant site included:

- Strategy A: Unique Industrial
- Strategy B: Business & Technology Campus
- Strategy C: Mixed-Use Community Mosaic

Concept plans and precedent imagery was used to illustrate the overall character of each land use strategy option. The precedent imagery boards for each strategy are included in this section.

None of the three land use strategy options were deemed inappropriate for the DTE St. Clair Power Plant site. However, after considerable discussion, general consensus on several points was gained:

- Light-industrial uses situated within a planned campus environment are ideally suited for the site. These uses could take advantage of the access to the river, deep water port, potential use of raw water, proximity to existing electric/gas infrastructure, and access to rail.
- Additional prospective uses may include professional and medical offices, business and technology uses
- A mixed-use commercial, office, lodging and entertainment district could be accommodated, particularly along the riverfront, provided favorable market conditions exist
- Although various residential use types could be integrated within the site, it is likely to be cost prohibitive due to higher environmental remediation standards
- Any redevelopment should capitalize on the riverfront location to strengthen its sense of place. Development should embrace the riverfront setting.
- Providing public green space and access to the river is a critical element of any successful redevelopment
- Future redevelopment should include multi-use trails connecting to the Bridge-to-Bay Trail along M-29
- Although a State Trunkline, M-29 does not have sufficient capacity to support significant increases in truck traffic

Public Work Session Participants

- The existing deep water port is a significant amenity that contributes to the economic development potential of the site and region; it should remain
- A combination of generous setbacks, berms, green spaces and land use transition schemes must be employed to buffer higher intensity uses from existing adjacent single-family residential areas

SECTION 5
Planning & Design Recommendations

This section provides a road-map for land use, development and future improvements within the riverfront study area. The recommendations and proposals included herein are based on a review of existing conditions, regional context, market opportunities and feedback received by community leaders and citizens through public engagement events.

Guiding Principles

The following principles, derived from the U.S. EPA's Smart Growth Principles for Coastal and Waterfront Communities, outline best practices for planning and development within waterfront communities and districts. These best practices were presented to residents during the August 2021 public informational meeting to evaluate their relevance to this study. Based on the average rankings of meeting participants, every best practice was deemed important. Therefore, the U.S. EPA's Smart Growth Principles for Coastal and Waterfront Communities are accepted as guiding principles for this Riverfront Redevelopment Plan. Listed by order of importance (based on the August 2021 ranking), each of these guiding principles is described below.

Provide a Mixture of Uses, including Water Dependent Uses

In coastal and waterfront communities, thoughtfully integrating a mix of land uses with the waterfront can deliver many benefits including generating vibrancy from active, pedestrian-friendly streets, sidewalks, and public spaces.

Working waterfronts have historically been places of work, production and industry. A best practice is to embrace and preserve the working waterfronts whether we are talking about recreational, commercial or industrial use. These help waterfront districts to remain stable and viable. Tenants include:

- Provide a thoughtful mix of uses to create vibrant, sustainable communities

- Preserve working waterfronts
- Facilitate public access and connections to the water

Capitalize on the Waterfront to Create Distinction

Coastal and waterfront communities can capitalize on their location and strengthen their sense of place. Waterfront and coastal communities are defined by the sights, sounds, and smells of the water; the activity on the docks or wharves; and the opportunity to boat, swim, and fish nearby. Tenants include:

- Waterfront features as a focal point for redevelopment
- Support a working waterfront as part of revitalization efforts
- Connect streets, buildings, sites, and public spaces to the water

Make Development Decisions Predictable, Fair, and Cost Effective

By creating an easily understood, predictable development process, waterfront and coastal communities can create a climate that is more likely to produce projects that meet multiple community goals. This can be achieved by effectively coordinating across regulatory agencies, providing non-regulatory incentives, and allowing flexibility in local development policies.

In any community, a first step toward greater fairness and predictability is to establish a vision for growth. For development projects to succeed, they must be buildable within a reasonable timeframe, with a likely profit commensurate with their risk. Tenants include:

- Support the private sector and entice private investments through an efficient development review process
- Reduce barriers to sustainable development to encourage the public sector to support environmentally responsible development

Encourage Community Stakeholder Collaboration

An inclusive planning process is critical for waterfront and coastal communities because of the complex regulatory environment, the diversity of stakeholders, the demand for public access to the water, and the competing interests for use of waterfront resources. Tenants include:

- Facilitate meaningful public involvement
- Ensure that public interests in, and rights of access to, the waterfront are upheld

Create Walkable Communities with Water Access

A walkable community requires more than just a sidewalk, path, or boardwalk. In coastal and waterfront communities, it calls for a comprehensive approach to building and street design, parking, zoning, and water access that ensures that pedestrians are safe, welcome, and have a range of destinations—water- and land-based— to which they can walk. Key strategies to consider:

- Ensure that multiple modes of transportation are available

> **“It is essential that the community regain full access to the waterfront after 75 years as a power plant.”**
>
> - East China Township Resident

- Provide physical connections to the water
- Provide visual connections to the water

Preserve Environmental Areas

By preserving open space, natural beauty, and critical environmental areas, communities can maintain essential environmental services and improve community resilience. Natural lands play an essential role in the economic, environmental, and social well-being of communities, offering many benefits, including an increase in neighboring property values, attracting businesses and residents, supporting tourism, offering opportunities for recreation, and providing scenic value.

Through green infrastructure planning, a community or region can identify and prioritize natural areas that should be preserved or restored to protect long-term ecological health and build community resilience. Central to any planning process along the shore must be the recognition that shorelines are constantly changing systems Erosion, flooding, storm surges, and sea-level change in response to tides, waves, and storms are all natural and familiar processes, as are Great Lake water level fluctuations. When they clash with the built environment, they can be hazardous. Furthermore, these processes are likely to intensify under some climate change scenarios. Smart shoreline development can mitigate the damaging effects on the built environment caused by these changes by incorporating land use approaches that reduce the risks from coastal and waterfront hazards. Tenants of environmental preservation in development include;

- Balance the needs of the built environment with those of the natural environment
- Protect environmental areas to characterize and support waterfront communities and districts

Direct Development to Existing Sites and Encourage Waterfront Revitalization

Infill development in existing communities, where roads, utilities, and transportation connections are already in place, is a preferred growth strategy because of the many environmental and economic benefits it provides. In many coastal and waterfront areas, properties at the water's edge are prime redevelopment targets, since they are in or near the historic center of the community, are well connected to land- and water-based modes of transportation, and are close to jobs, services, and tourist sites. Tenants include:

- Promote infill development on existing/ underutilized sites where roads, utilities, and transportation connections are already in place
- Redevelop brownfield sites

The redevelopment of brownfield sites is considered a key strategy within this best practice. The many benefits include a strengthened tax base, enhanced historic, cultural, and scenic resources, building a strong sense of place, and the protection of water and other natural resources. Redeveloping brownfield sites allows

for concentrated growth that reduces pressure to convert undeveloped land elsewhere.

Provide a Variety of Transportation Options

Giving people more options for getting around meets many community goals. When people find it easy and safe to walk, bike, or take transit, they no longer have to rely exclusively on cars to get to shops, work, and school, reducing air pollution and traffic congestion. Walking and biking also help people include physical activity in their daily routines, give more freedom to those unable or unwilling to drive, and can reduce household transportation costs.

Water-based transportation options should also be considered, and, when connected to land-based public transportation, can be a very efficient and cost-effective form of transportation of people and goods. Strategies to consider include:

- Construct docks, launches, and marinas for private watercraft
- Locate vehicular parking facilities away from the water's edge
- Facilitate pedestrian/cyclist connections
- Consider the movement of goods as well as people

Take Advantage of Compact Community Design

Waterfront developments should take advantage of compact community design that enhances, preserves, and provides access to waterfront resources. If you accommodate more use on less land, then you are using the land more efficiently. In any case, more density means more activity, which can facilitate more vibrant communities and districts. The benefits of compact design include:

- Better use of limited waterfront space
- Preservation of more land for natural areas and civic space
- Reduced costs for building and infrastructure
- Reduction of runoff, flooding, and stormwater drainage needs
- Facilitation of civic identity, vibrancy, and activity

Provide a Range of Housing Choices

A comprehensive approach to housing that offers options for seasonal and permanent residents, visitors, and workers provides a strong basis for a vibrant economy. As individuals pass through various stages of their lives, their housing needs, as well as what they can afford, varies. Strategies include:

- Allow increased density near waterfront amenities
- Provide seasonal rentals and timeshares
- Provide workforce housing
- Allow accessory dwellings
- Encourage affordable housing options

Study Area Recommendations

The following recommendations are relevant to the study area as a whole.

Future Land Use Plan

The Future Land Use Plan for the St. Clair Riverfront Study Area equips Township officials and community members with a literal depiction of the desired land uses throughout the district. Derived from relevant planning studies (in particular, the currently adopted East China Township Master Plan), the guiding principles, existing conditions assessment, market opportunities, and public input received during the planning process, the Plan represents the long-term land use vision that the Township has established for the waterfront district over the next 10 to 15 years. The Future Land Use Plan will be a useful tool on which to base zoning and other development decisions, and will

allow for consistent and sound planning within the district.

A total of six future land use categories have been established for the study area. The distribution of these categories within the study area is shown in the Future Land Use Map (**Map 16**). Provided below is a description of each category.

Waterfront Residential

This category supports the existing single-family residential land uses that are located along the riverfront. These include properties along Chamberlain Drive, Pointe Drive, Eldon Road, Loretta Street and Marell Road. The intent of this category is to support and protect these existing waterfront residential uses and encourage the construction of new, predominantly single family detached homes consistent with the existing waterfront character.

Single family residential lot sizes on the waterfront vary significantly. Most lots along Chamberlain Drive and Pointe Drive are narrow but deep, with large homes near the water that are set back as much as 500 feet from the street. The homes along Eldon, Loretta and Marell Streets are on small lots backing on canals that connect to the river. These residential areas have a unique character that is to be protected. Some currently undeveloped land along Orchard, Walnut, and Pointe Drives has the potential for new single family residential growth consistent with the existing waterfront residential areas.

Mixed Residential

This future land use category is designed to provide sites for a mixture of single family, two family and multiple family dwelling structures, and related uses, which would generally serve as zones of transition between the waterfront residential areas and non-residential areas. Examples of appropriate residential development types may include single and two family attached condominiums, townhouses and moderate density garden apartments. Senior housing, both independent and dependent, nursing homes and other care facilities would also be appropriate within this category.

Recreation & Green Space

This future land use classification accommodates existing parks and open space areas including the East China Township Park and existing Township-owned green space at Record Road and Park Drive. Both sides should be preserved for recreational use and expanded to serve residents of the study area and beyond.

Civic

This classification is designed to support the existing public and semi-public uses within the study area that include the Township Hall, Township Drinking Water Treatment Plant and Fellowship Baptist Church. No new lands are identified for this classification, but future public and semi-public uses could be accommodated within the study area to support the residents of the community, provided they are appropriately sited and buffered from adjacent residential properties.

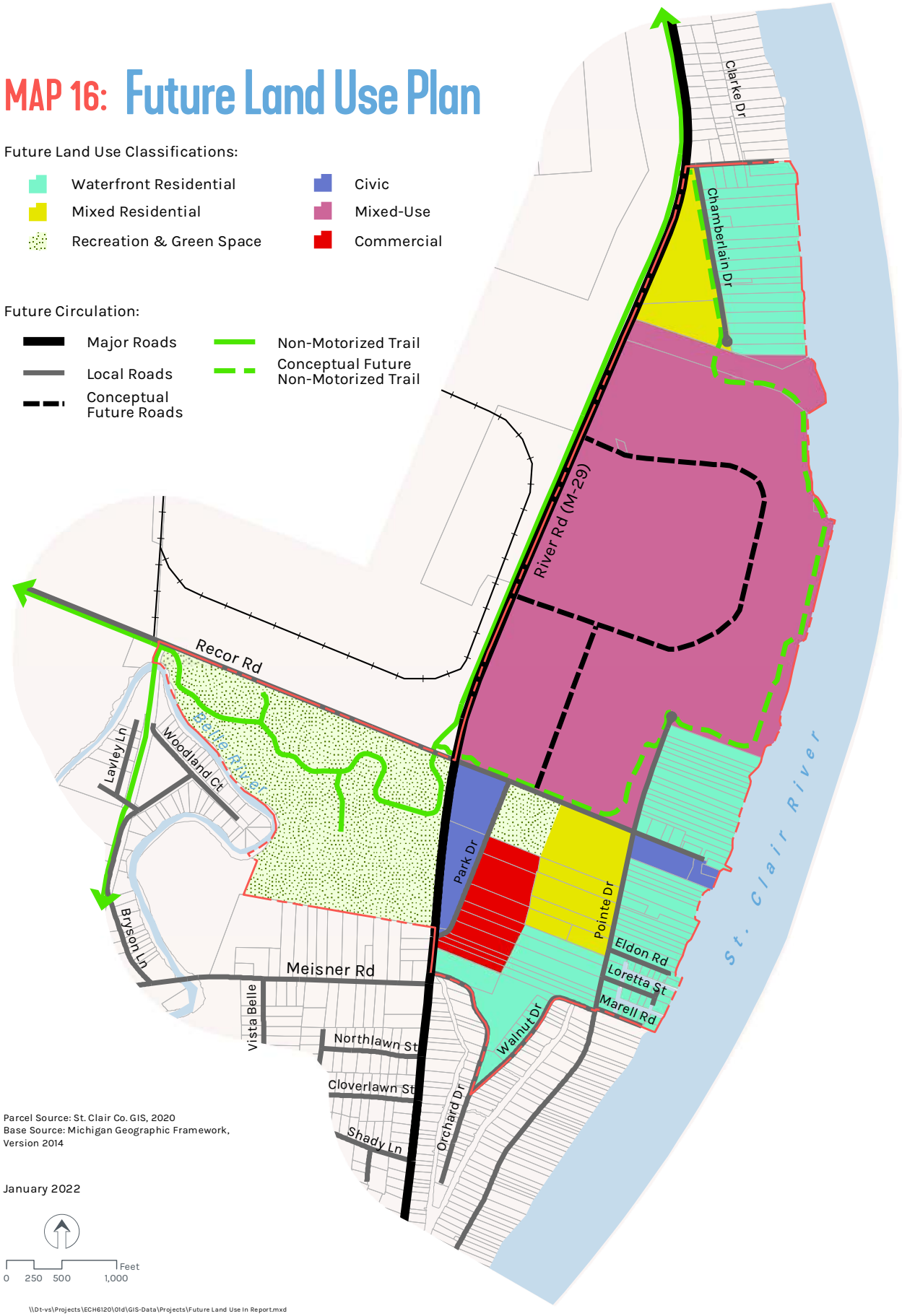
Mixed Use

The Mixed Use future land use classification is designed to allow for redevelopment of the DTE St. Clair Power Plan site. To enable redevelopment of this site, which will be a long-term endeavor, a flexible planning and zoning scheme must be established that would allow for a variety of compatible uses to develop over time in line with market demand. Specific details are outlined in the DTE Site Redevelopment Recommendations subsection.

Commercial

The Commercial future land use classification encompasses an existing commercial area located along Park Drive between Recor Road and M-29. Existing commercial uses are found here, and include a Dollar General, self-storage

MAP 16: Future Land Use Plan



Parcel Source: St. Clair Co. GIS, 2020
Base Source: Michigan Geographic Framework, Version 2014

January 2022

0 250 500 1,000 Feet

\\Dt-vs\Projects\ECH6120\01d\GIS-Data\Projects\Future Land Use In Report.mxd

facilities, and contractor's businesses. A few properties are currently undeveloped and could be developed for new commercial enterprises that may include retail, personal service and business service uses.

Circulation

This Plan recommends the establishment of an appropriate vehicular and pedestrian circulation system to support existing and new land use patterns within the study area. The circulation system is currently anchored by one primary vehicular route, River Road (M-29), and one primary pedestrian route, the Bridge-to-Bay Trail. An opportunity to establish new vehicular and pedestrian routes exists as part of the long-term redevelopment of the St. Clair Power Plant (SCPP) site.

The following circulation objectives and strategies are established by this Plan:

☑ **Improve riverfront access and visibility**

☑ **Improve the function and appearance of River Road (M-29)**

- Balance vehicular (potentially to include transit) and pedestrian needs
- Facilitate high quality landscaping, uniform signage, and design treatments consistent with the character of this riverfront area

☑ **Ensure safe and efficient traffic and pedestrian circulation within the River Road (M-29) corridor**

- Implement vehicular and pedestrian safety improvements at the River Road and Recor Road intersection, as well as future intersections established as part of the St. Clair Power Plant site. Pedestrian improvements may include crosswalks and pedestrian signals, particularly to accommodate users of the Bridge-to-Bay Trail and future connections to and from the trail.

☑ **Create a connected network of streets that serve various modes of travel**

- Design new streets to safely accommodate vehicles, transit and bicyclists
- Provide sidewalks along all future streets
- Appropriately accommodate service needs, including deliveries, trash pick-up, etc.
- Provide a convenient combination of on-street and off-street parking to accommodate the needs of employees, customers, and visitors as part of new mixed use redevelopment

☑ **Develop new multi-use trails, linking the Bridge-to-Bay Trail with the riverfront**

Power Plant Site Redevelopment Recommendations

The opportunity for redevelopment of the SCPP site is significant. The key "advantages" making this site ripe for redevelopment include:

- Access to the river
- Access to the deep water port
- Access to rail
- Access to M-29
- Access to high capacity electric and gas infrastructure

The following recommendations are specifically relevant to the long-term redevelopment of the St. Clair Power Plant site.

Allowable Uses

Based on key opportunities and themes identified during the course of the planning process, the pool of potential uses was narrowed. The site's key advantages listed above make it an ideal candidate to accommodate industrial use. The following industry types are specific candidates based on the site's advantages:

- Industries that require high industrial water use in their processing, such as textiles and garments, the beverage industry, and the automotive industry
- Industries that require high amounts of electrical power, such as data centers, health care facilities, manufacturing and warehousing and distribution
- Industries that require natural gas fuel in their processing

The appeal of the riverfront setting also creates an opportunity for a mixed use office, commercial, lodging and/or entertainment development, integrated with public spaces and amenities. Although residential use could be easily and appropriately accommodated as part of mixed-use development, such use is less feasible due to higher environmental remediation costs and the higher "value" that the land would yield if developed for non-residential use.

Reflective of the site's history, another potential is for a portion of the site to continue to be utilized for power generation use and activities.

The chart on this page summarizes potential and allowable uses that may be accommodated as part of site redevelopment.

Conceptual Land Use Scenarios

Three conceptual land use scenarios have been prepared to illustrate the potential redevelopment of the SCPP site. Considerable overlap of land uses and design concepts exist across the three scenarios. The primary difference is the extent of the redevelopment (one scenario shows the northern portion of the site remaining in use by DTE) and the character of the riverfront portion of the redevelopment (with an office emphasis in comparison to a mixed use development). All three scenarios are presented as acceptable options, and none are presented as a "prescriptive" plan that must be followed.

DTE Site Redevelopment - Potential Uses

Allowable Use	Market Support	Intended Context
Light Industrial/Manufacturing	Highest feasibility	Planned campus environment, off riverfront
Research & Technology	Highest feasibility	Planned campus environment, off riverfront
Warehousing & Distribution	Highest feasibility	Planned campus environment, off riverfront
Power Generation/Distribution	Proven by historic use	Existing DTE facilities
Office (Professional/Medical)	Potentially feasible	Planned campus environment, off riverfront, or integrated within a mixed-use riverfront development
Retail & Restaurant	Potentially feasible	Integrated within a mixed-use riverfront development
Lodging	Potentially feasible	Integrated within a mixed-use riverfront development
Entertainment	Potentially feasible	Integrated within a mixed-use riverfront development
Recreation & Open Space	n/a	Public access to the riverfront is a critical compent of any redevelopment. Other forms will include greenspace buffers, open spaces, and stormwater designed as public amenity.
Integration of Residential Use	Potentially cost prohibitive	Integrated within a mixed-use riverfront development

This Plan remains flexible and recognizes that future redevelopment of the site may look quite different that what is illustrated in the scenarios.

Building Character and Scale

The following building character objectives should guide new development.

Within a Mixed-Use Riverfront Context

Within any future mixed use commercial and office areas near the riverfront, smaller, human-scaled buildings should be accommodated at or near the sidewalk edge. These buildings should be no taller than 3 stories in height, with an option for a fourth story, provided that it is stepped back from the primary building line so as to not have a dominating presence. Building design must include appropriate massing and scale to prevent large, flat walls, through such techniques as facade setbacks and detailing on wide buildings. Uniformity and consistency in the architectural style is encouraged, but not to the detriment of creativity and uniqueness.

Active uses should be provided at ground level with windows to create a "transparent" space. Building entrances should be oriented to the street. Parking must be located to the side or rear of buildings, screened from streets and pedestrian areas. Buffering and screening of service areas and equipment must be provided.

Within a Planned Campus, Off-Riverfront Context

Buildings located away from the riverfront are anticipated to be much larger. Industrial and warehouse buildings are likely to be 1-story in height; office and R&D buildings, if accommodated, may be 2 to 3 stories in height. All such buildings should be uniformly designed and suited in a planned campus setting. Buildings may be set back further from streets, but clear, save and direct pedestrian connections between primary building entrances and sidewalks, parking lots and sidewalks must be accommodated.

Uniformity and consistency in the architectural style is encouraged, but not to the detriment of creativity and uniqueness. Buffering and screening of parking lots, service areas and equipment must be provided.

Open Space

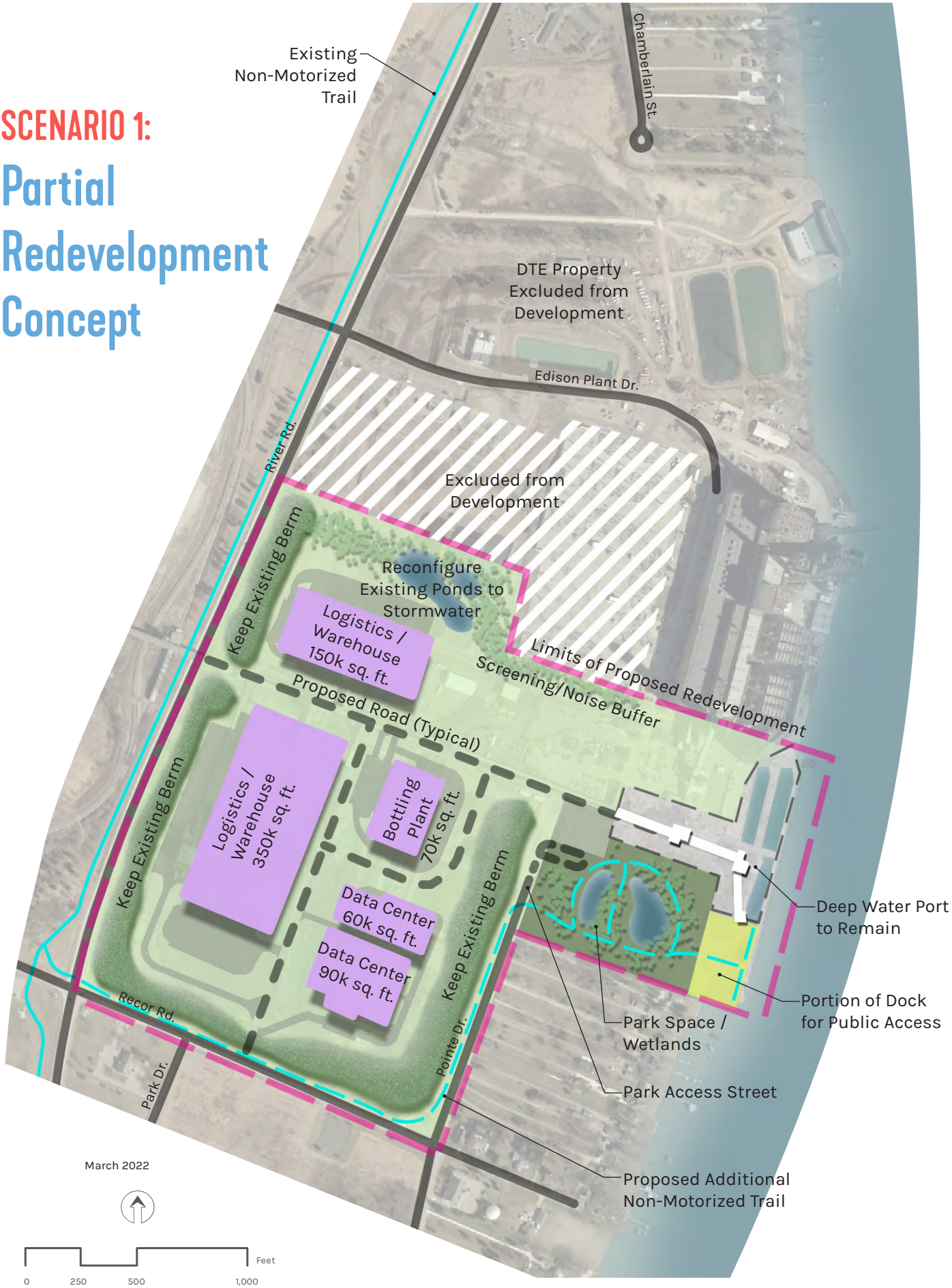
Redevelopment of the SCPP site must include active and passive open space, with a particular focus of providing public access to the riverfront. The conceptual land use scenarios highlight an option to convert a portion of the existing dock facility to public use, which may include features such as fishing piers and viewing platforms. Public spaces should be accessible at street level with public amenities including street furnishings such as lighting, landscaping, seating and public art. Public spaces should also function to provide green infrastructure and enhance stormwater management.

Sustainable Design

Redevelopment of the SCPP site must strive for the protection of critical environmental resources, including the St. Clair River shoreline and adjacent wetlands and habitats, as well as other open spaces, which contribute to the health of natural systems, wildlife habitats, quality of life and district character.

The historical activity at the site has resulted in significant modifications to the naturalized river shoreline environment, including the removal of natural habitat and development of buildings, seawalls and similar facilities. Redevelopment of the site represents an opportunity to restore shoreline environment. Additionally, sustainable and low impact development design techniques must be employed so that new development protects and restores environmental resources and achieves additional benefits such as cost effective infrastructure

SCENARIO 1:
Partial Redevelopment Concept



SCENARIO 2:

Redevelopment Concept with Mixed Use Riverfront

SCENARIO 3:
Redevelopment Concept with Office Riverfront

and improved aesthetics. To this end, the following sustainable design goals and objectives will guide redevelopment of the power plant site:

☑ **Protect, maintain, and where feasible, enhance or restore the riverfront environment**

- Actions to achieve this goal may include removing or managing invasive vegetation and replanting native plants, terracing of stream banks, and providing river edge landscaping buffers

☑ **Promote and enhance habit diversity and connectivity**

- Actions to achieve this goal may include incorporating habitat complexity or reconnecting the river with nearby floodplain and wetland

☑ **Protect and maintain water quality**

- Implementation of this goal would contribute to the recovery of sensitive species, impaired water temperatures, and reduce contaminants from runoff. Actions such as reducing impervious surface area and proper storm water management will further this goal.

☑ **Employ sustainable design and low impact development techniques in redevelopment**

- Redevelopment within the area provides opportunities to integrate sustainable site design and building design components. Inclusion of such sustainable design techniques are highly recommended as part of the redevelopment. Inclusion of such environmentally sustainable site plan and building design methods and techniques will reduce the additional demand on existing infrastructure and resources as well as provide life cycle cost benefits to the developer. Some of the recommended sustainable design methods recommended in the Plan include:
- Maximize the use of open space as an essential component of a comprehensive green infrastructure system
- Employ sustainable building design using standard such as U.S. Green Building Council's LEED
- Inclusion of best management practices and green infrastructure techniques such as rain gardens, bioswales, green roofs etc. to manage storm water
- Use of rainwater and/or greywater capture, retention and reuse system

Infrastructure

Any redevelopment at the SCPP site will connect to the existing utilities infrastructure; including water, sewer, electricity, and natural gas. An analysis of the capacity of existing infrastructure that will be necessary to accommodate the redevelopment will be required at the design phase. Overhead utility systems should be prohibited.

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SECTION 6
Implementation Strategy

The purpose of this section is to provide a path forward for East China Township and its partners to be in position to support the redevelopment of the St. Clair Power Plant site and ensure that growth and development occurs over time in consistency with this Plan. To this end, several recommended actions and resources are outlined.

Support DTE Site Decommissioning and Remediation

Although East China Township may not be directly involved in this process, it must partner with and provide support to DTE and entities who will be involved in the various stages of decommissioning and remediation of the site, which will be a multi-faceted and multi-year effort. The development of this Plan was a key first step in the process by engaging community members and outlining public goals and recommendations for site reuse. Where feasible, the Township may be able to support DTE in identifying and securing outside funding for site clean-up, such as grants, loans, and tax incentives. At the time of redevelopment, the Township must be in position with "redevelopment ready" zoning requirements in place, along with a streamlined development review process.

Master Plan Update

At the next available opportunity (communities in Michigan must review their master plans at least once every five years), East China Township should move forward with a Township-wide Master Plan Update. The findings and recommendations of this St. Clair Riverfront Redevelopment Plan should be incorporated into the Master Plan Update.

Zoning Ordinance Amendments

In order to facilitate the type and character of development conceived by this Riverfront Redevelopment Plan, Township zoning regulations and other land development codes must support and encourage such development. In reviewing the currently adopted East China Township Zoning Ordinance, it is recommended that various amendments be implemented in order to effectuate the changes recommended in this Plan.

One key need is for the creation of a new, flexible, mixed-use zoning district for the St. Clair Power Plant site, which is identified as Mixed-Use on the Future Land Use Plan (**Map 16**). Such a district would ensure that the prospective mixture of land uses are allowed by-right, and would also require compliance with minimum standards for architectural design, building size and placement, landscaping, parking, and other requirements.

Other zoning ordinance amendments should be explored in order to implement this Plan, such as the creation of an expedited review process to stimulate new development and the allowance for performance bonuses (i.e., a density bonus) for new developments as an incentive to provide public benefits such as the dedication of public open space.

Funding Resources

Provided below is a listing of various funding resources that may be available to private entities (such as DTE) or public entities (such as East China Township) to help implement the recommendations outlined in this Plan. Potential funding sources from outside entities for public improvements change and evolve on a regular basis. Understanding available funding programs, their requirements and deadlines requires continuous monitoring.

The funding opportunities are organized under topic categories and simply include links to program information.

Decommissioning and Remediation

☑ **Brownfields Cleanup Grants (USEPA)**

- https://www.epa.gov/brownfields/brownfields-cleanup-grants

☑ **Brownfield Redevelopment Grants (MI-EGLE)**

- https://www.michigan.gov/egle/0,9429,7-135-3311_29262-151085--,00.html

Land Acquisition

☑ **Coastal and Estuarine Land Conservation Program (EGLE/NOAA)**

- https://www.regions.noaa.gov/great-lakes/index.php/great_lakes-restoration-initiative/habitats/coastal-and-estuarine-land-conservation-program/

☑ **Natural Resources Trust Fund (MDNR)**

- https://www.michigan.gov/dnr/0,4570,7-350-79134_81684_79209_81657---,00.html

☑ **Great Lakes Area of Concern Land Acquisition Program (NOAA)**

- https://www.regions.noaa.gov/great-lakes/index.php/great_lakes-restoration-initiative/habitats/coastal-land-conservation-in-the-great-lake/

Habitat/Ecosystem Restoration

☑ **Section 206: Aquatic Ecosystem Restoration (ACOE)**

- https://www.sas.usace.army.mil/Missions/CAP/Section-206-Aquatic-Ecosystem-Restoration/

☑ **North American Wetlands Conservation Act (USFWS)**

- https://www.fws.gov/service/north-american-wetlands-conservation-act-nawca-grants-us-small

☑ **Michigan Coastal Zone Management Grant (MI-EGLE/NOAA)**

- https://www.michigan.gov/egle/0,9429,7-135-3313_3677_3696---,00.html

☑ **Great Lakes Habitat Restoration Program (NOAA)**

- https://www.fisheries.noaa.gov/national/habitat-conservation/great-lakes-habitat-restoration#:~:text=NOAA%20works%20through%20the%20Great,wetlands%2C%20and%20provide%20recreational%20opportunities.

Stormwater Management/Green Infrastructure

☑ **Great Lakes Restoration Initiative (USEPA/USFS/NOAA/USFWS/ACOE)**

- https://www.glri.us/

☑ **Section 319 Nonpoint Source Funding (MDEQ/EPA)**

- https://www.epa.gov/nps/319-grant-program-states-and-territories

Recreation & Non-Motorized Facilities

☑ **Transportation Alternatives Program (MDOT/USDOT)**

- https://www.michigan.gov/mdot/0,4616,7-151-9621_17216_18231---,00.html

☑ **Natural Resources Trust Fund (MDNR)**

- https://www.michigan.gov/dnr/0,4570,7-350-79134_81684_79209_81657---,00.html

☑ **Land and Water Conservation Fund (MDNR/NPS)**

- https://www.michigan.gov/dnr/0,4570,7-350-79134_81684_79209_81655---,00.html

☑ **Michigan Coastal Zone Management Grant (MI-EGLE/NOAA)**

- https://www.michigan.gov/egle/0,9429,7-135-3313_3677_3696---,00.html

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