



Sanilac County

MASTER PLAN

February 2024

SANILAC COUNTY BOARD OF COMMISSIONERS

**SANILAC COUNTY BOARD OF COMMISSIONERS RESOLUTION
TO ADOPT A NEW COUNTY MASTER PLAN**

WHEREAS, the Sanilac County Board of Commissioners recognizes the need for comprehensive development and growth strategies to ensure the well-being and prosperity of the community; and

WHEREAS, after thorough consideration, evaluation, and public input, the Sanilac County Master Plan has been formulated to guide land use, infrastructure development, environmental conservation, and economic growth; and

WHEREAS, the Sanilac County Master Plan aligns with the goals and vision of the community, promoting sustainable practices and enhancing the quality of life for residents; and

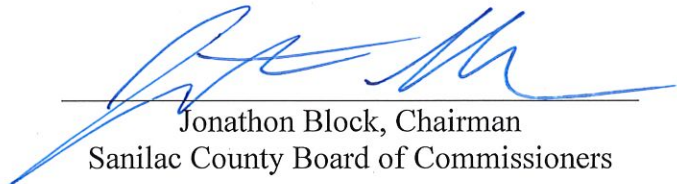
WHEREAS, the adoption of the Sanilac County Master Plan will serve as the blueprint for future decision-making and development initiatives within the county; and

NOW, THEREFORE, BE IT RESOLVED, that the Sanilac County Board of Commissioners hereby adopts the Sanilac County Master Plan as the official guidance for future development and growth within the county; and

BE IT FURTHER RESOLVED, that the Sanilac County Board of Commissioners directs all relevant municipalities, departments and agencies to utilize the Sanilac County Master Plan as the primary framework for their planning, decision-making, and implementation processes;

BE IT FURTHER RESOLVED, that the Sanilac County Board of Commissioners extends its gratitude to all stakeholders, experts, and members of the community who contributed to the formulation of this comprehensive Master Plan;

NOW BE IT, FURTHER, RESOLVED, that this resolution be spread upon the proceedings of the Sanilac County Board of Commissioners this 6th day of February, 2024.



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Sanilac County Board of Commissioners

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Special Thanks

To the people of Sanilac County who came to our visioning sessions and answered surveys.

To the Youth Advisory Council Members who gave valuable input on what young people want and need for the future.

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Introduction



Source: Sanilac County

What is a Master Plan?

A Master Plan is a community-driven policy document used by elected and appointed community leaders to guide decisions about land, people, and structures. When presented with long-term decisions, community leaders should use the Master Plan to ensure that their decisions are consistent with the vision that Sanilac County residents created. To provide a long-term roadmap, the Comprehensive Plan inventories systems, identifies how the systems work together, and examines how the systems have changed over time. Major systems and themes discussed in the Master Plan include the following:

- » Demographics
- » Housing
- » Natural Features
- » Community Facilities
- » Transportation
- » Economic Development
- » Land Use

The Master Plan lays out “where we should go” based on a combination of residents’ priorities and findings drawn from the inventory process. The inventory process is a blend of external data sources (State of Michigan), internal data sources (local government), and community input. These priorities are the basis for the actions that community leaders pursue through policy and actions.

The Michigan Planning Enabling Act (PA 33 of 2008) (MPEA) enables jurisdictions to create master plans to achieve the following:

- » Guide the use of limited resources efficiently;
- » Promote public health, safety, and general welfare;
- » Preserve the quality of the environment within the jurisdiction; and
- » Guide zoning decisions.

The Master Plan is designed to be comprehensive, future-oriented, and accessible to the public; therefore, busy government officials

do not need to get swept up in short-term gains at the expense of long-term progress. In Sanilac County, the county has no authority over local jurisdictions planning or zoning decisions. In the county, local governments (cities, townships, and villages) are responsible for directing land use within their jurisdictions.

Why Does Our County Need a Plan?

One may ask, “If our county has no land use authority over local municipalities why does it even need a plan?” The plan can be seen as a resource for the municipalities as well as an opportunity to learn how other municipalities in Sanilac County prioritize and plan for their land uses. The plan may also identify opportunities for coordination on issues that cross municipal boundaries such as transportation or shoreline preservation. Reviewing all available local planning documents for each municipality in Sanilac County offers a broad overview of countywide priorities and trends from which larger gaps can be identified. The large scale of a county plan can facilitate broader understanding of regional trends and issues.

Defining the Role of County Planning

In Michigan land use planning is predominantly the responsibility of local municipalities (cities, townships, and villages). The State has also expressed their authority over some elements of land use planning, but the majority of the responsibility is at the local level. Counties are in a unique position of having little to no land use planning authority but are responsible for regional planning and coordination. For example, in many rural areas counties are responsible for maintaining and constructing roads. Lacking the authority to direct local land use planning, Sanilac County can instead serve as a supporter to local communities and facilitate regional discussions.

Educator

Sanilac County is better positioned than any other body in the region to gather and disseminate information throughout the entire county. In this role, Sanilac County can collect information on important topics and present that information in a coordinated and consistent way.

Resource Provider

Sanilac County can also play the role of a resource provider. Providing model ordinances, best practices, case studies, and identifying partners can help the county move in a coordinated, efficient, and consistent manner.

Facilitator

With a comprehensive understanding of important issues in each local community, Sanilac County can facilitate discussions by bringing groups together. Many of the communities' goals overlap and can be achieved by working together. As a facilitator, the county can encourage these communities to plan together, either by coordinating the development or by meeting to exchange ideas about financing, design, and citizen outreach.

Connecting with Local Master Plans

The primary goal of a county master plan is to develop a profile of significant issues and trends across the county based on the individual goals and objectives identified in the master plans of the individual municipalities within Sanilac County. To accomplish this all-available master plans for the municipalities were collected and their goals and objectives were aggregated. In review of all available master plans, several key themes emerged: housing and neighborhoods, agriculture and rural land, economic development, management and leadership, natural features, and transportation and infrastructure. The table titled "Sanilac County's Master Plan Matrix" outlines which communities provided master plans and what key themes and actions were mentioned as goals in each master plan. The following communities either did not have or did not provide a master plan to review:

- » Argyle Township
- » Austin Township
- » Custer Township
- » Elk Township
- » Elmer Township
- » Flynn Township

- » Fremont Township
- » Lexington Township
- » Maple Valley Township
- » Marion Township
- » Marlette Township
- » Minden Township
- » Village of Applegate
- » Village of Carsonville
- » Village of Deckerville
- » Village of Forestville
- » Village of Melvin
- » Village of Minden City
- » Wheatland Township

Master Planning Process

Developing a master plan is a lengthy and iterative process. Sanilac County established a steering committee to guide the drafting and development of the plan, and the plan meets all of the requirements set forth in the Michigan Planning Enabling Act, Act 33 of 2008. Furthermore, a key element of the master planning process is gathering input from the community. There was a community survey open to the public for this master plan, which included a youth survey and a general public survey. There were 429 responses for the general public survey and 149 responses for the youth survey of high school students.

How to Use this Master Plan

Sanilac County is a large county and not all communities in Sanilac County face the same challenges, have the same opportunities, or approach land use planning in the same way. Therefore, this Master Plan is a transect based Master Plan. Transects allow for the Master Plan to elaborate on the unique land uses/communities within Sanilac County and provide the most relevant information to the reader. A description of the Sanilac County transects can be found in Chapter 4.

Table 1: Sanilac County’s Master Plan Matrix

	Bridge-Hampton Township	Buel Township	City of Croswell	City of Brown City	City of Marlette	City of Sandusky	Delaware Township	Evergreen Township	Flynn Township	Forester Township	Greenleaf Township	Lamotte Township	Moore Township	Sanilac Township	Speaker Township	Village of Lexington	Village of Peck	Village of Port Sanilac	Washington Township	Watertown Township	Worth Township	Sanilac County	Total
Housing & Neighborhoods																							
Diversity		✓	✓	✓	✓	✓	✓	✓			✓			✓	✓	✓		✓	✓	✓	✓		15
Concurrency		✓	✓	✓			✓	✓	✓		✓			✓	✓		✓		✓	✓	✓		12
Character/Condition			✓	✓	✓		✓	✓			✓				✓	✓	✓	✓			✓		11
Senior Living				✓		✓									✓		✓	✓			✓	✓	7
Growth	✓		✓		✓	✓								✓						✓			6
Agriculture & Rural Land																							
Preservation	✓	✓					✓	✓	✓		✓	✓		✓	✓				✓	✓	✓	✓	12
PDR/TDR	✓													✓	✓							✓	4
Economic Development																							
Industry	✓		✓	✓		✓	✓							✓		✓		✓		✓	✓	✓	11
Downtowns			✓	✓	✓	✓									✓	✓	✓	✓				✓	9
Historic Preservation			✓	✓							✓				✓	✓		✓		✓	✓	✓	9
Tourism			✓	✓	✓		✓		✓					✓	✓	✓		✓				✓	9
Placemaking			✓		✓	✓					✓				✓	✓		✓				✓	8
Redevelopment, Rehabilitation, & Infill			✓		✓	✓					✓					✓	✓	✓					7
Job Growth		✓		✓	✓	✓						✓										✓	6
Diverse Economic Base			✓	✓	✓									✓						✓		✓	6
Management & Leadership																							
Regional Coordination			✓				✓	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	14
Citizen Involvement				✓		✓	✓					✓	✓	✓	✓	✓		✓		✓		✓	11
Providing Public Services				✓			✓	✓			✓			✓		✓	✓	✓			✓	✓	10
Transparency						✓		✓			✓	✓	✓			✓	✓		✓			✓	9
Code Enforcement							✓	✓			✓				✓	✓				✓	✓	✓	8
Administrative Staff		✓				✓																✓	3
Responsible Governance																✓	✓					✓	3
Natural Features																							
Environmentally Sensitive Design		✓	✓		✓		✓							✓	✓	✓				✓	✓	✓	10
Water Quality					✓		✓	✓						✓	✓	✓				✓	✓	✓	9
Preservation/Conservation							✓	✓	✓		✓	✓		✓	✓					✓	✓		8
Shoreline Health														✓		✓		✓			✓		4
Transportation & Infrastructure																							
Road Maintenance		✓	✓		✓		✓	✓	✓		✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	15
Non-Motorized Enhancements			✓		✓	✓	✓					✓		✓	✓	✓	✓	✓		✓	✓		12
Traffic Control			✓	✓	✓	✓	✓					✓			✓	✓		✓		✓		✓	11
Telecommunications				✓	✓							✓		✓						✓		✓	6
Streetscaping			✓	✓	✓	✓	✓									✓							6
Regional Transit				✓																		✓	2

Demographics



Source: Sanilac County

An essential step to planning responsibly is understanding the demographic makeup of the community. In order to know what to develop, for whom, and how it should be designed, careful consideration of the current and projected population is key.

Data Sources

1. 2020 US Census
2. American Community Survey, ACS
3. Gale Demographics Now
4. Experian USA Mosaic

Introduction

Sanilac County is home to 40,611 people living in 962 square miles, with just 42.2 people per square mile. While geographically isolated from large metropolitan areas, the residents prefer it that way, with lots of wide-open spaces and a simple, old fashioned, country lifestyle. People here tend to live in the

same house for most of their adult lives, and generational friendships are the norm. Home ownership is higher than the national average, and while household incomes are also lower, the low cost of living is very appealing to residents.

According to Experian's Mosaic Psychographics descriptions, three quarters of the households in the county fall into psychographic groups that value simple country living; enjoy outdoor activities like hunting, fishing, gardening, camping and boating; live unassuming lifestyles, prefer cash over credit, and are modest spenders; own their homes for decades and enjoy seasonal decorating, gardening and entertaining friends and family; have made good lives for themselves and their families through blue collar manufacturing and agricultural jobs; are family oriented, attend Sunday church services, and are involved in the betterment of their communities. Most households have multiple vehicles with at least one pickup truck and nearly all vehicles are American brands. Both financially and politically conservative, Sanilac County residents enjoy a simple, rural lifestyle.

The county population is aging at a faster rate than the rest of the US. The median age of a Sanilac County resident in 2000 was 37.7, is now 45.3, and is projected to be 45.7 by 2026. This means we need to plan for more senior citizen housing options and work hard to attract young families to the area. Since 2000, Sanilac County's population has declined by 5.7%, and this has affected everything from school enrollment to the lack of new middle-class housing being built.

The aging population has also led to a lower rate of workforce participation, referring to adults ages 16 and over. Nationally, 62.9% of adults are in the workforce. In Michigan, it's 61.5%, and in Sanilac County it is just 57%. Some municipalities have rates as low as 49% workforce participation rates, which can put a city at greater risk of being unable to maintain infrastructure and services. This led to both Marlette and Sandusky being chosen to participate in Project Rising Tide, each being chosen over all other communities in our 7-county I-69 Trade Corridor Prosperity Region. Project Rising Tide gave them additional planning assistance to help the community diversify its economy and attract new residents and businesses to raise the standard of living for everyone.

As part of our research into what the young people of Sanilac County want and need in order to return to the area after their schooling, we spoke to the Sanilac County Youth Advisory Committee. YAC is a group of an average of 50-60 high school student leaders representing every school in the county. They work together to uncover issues and needs amongst teens and at-risk populations in the county and find creative ways to address them. Every one of the YAC members attending that day indicated that they have no desire to move to large cities, and the majority would prefer to live in a rural area. Their insights into what is most in need for their futures paralleled the results of the High School Student Surveys and the public surveys.

- » Improved telecommunications infrastructure, especially cellular phone service.
- » Trades education beyond just high school.
- » Access to broadband from every residential and commercial address.
- » Affordable new construction housing. Most YAC members saw themselves living outside the cities and villages with some property by their 30's, but they will need market rate apartments, lofts or rental homes in the meantime.
- » Additional recreational opportunities as well as more restaurants and retail stores.

During the COVID pandemic, Sanilac County saw an increase in population as young families began buying homes along the shoreline and M-53 corridor. While we do not have exact statistics since the 2020 census, realtors and bankers across the county reported more homes being sold to people moving into the area, especially along the lakeshore and up the M-53 corridor.

Housing

Sanilac County has a total of 21,676 housing units including single family homes, condos, mobile homes and apartments, and a total of 17,920 households. About 3,500 are second homes along the lakeshore for in-county residents, hunting camps, snowbird retirees who summer here, and vacation homes for metro Detroit area residents. In the past several years, more homes along the lakeshore area are being

used for short term rentals, with AirBNB having 178 listings, and VRBO having 145 listings.

Total Vacancy Rate

The housing vacancy rate represents all housing structures that were not being occupied at all during the time the census was taken. One misleading factor about this indicator is that a unit can be classified as vacant if the residents have a primary home elsewhere, a common occurrence in areas along the Lake Huron shoreline for seasonal and second homes. For this reason, the total housing vacancy rate counts only homes listed for sale of 1.2% of homes, and rental units unoccupied at 3.7%.

The total housing vacancy indicates the strength of the housing market. However, the housing market depends on supply and demand forces that may have little to do with the physical housing stock. For example, a high vacancy rate could be attributable to seemingly unrelated issues such as population loss, lack of employment opportunities, and low wages, in addition to housing related issues such as low-quality housing, oversupply or undesirable units. Michigan's Thumb and Sanilac County are experiencing the same affordable housing shortage as the rest of the nation.

According to the 2020 ACS, the housing vacancy rate for Sanilac County is 1.2%, slightly lower than the state average of 1.3%. It is highest in rural Evergreen Township at 6.3% and Bridgehampton Township at 4.7%, with most cities are hovering at or near 0%, indicating a need for new homes. Several factors have made it hard to construct new homes in the county, most notably the rising housing costs that make new home ownership difficult for the lowest 2/3 of incomes. For more than a decade after the housing crisis of 2008, the existing home values were too low to give adequate comps for banks to finance the price of a new build; but the COVID-19 pandemic made rural life extremely attractive and home sale prices rebounded to the rate that we can now finance the construction of new homes.

Like the unemployment rate, it is preferable to have a low vacancy rate that is still above zero. This circumstance allows for mobility without a zero-sum game; one person can move without another having to move first. In general, this low

vacancy rate means it is an attractive place to live. There are several municipalities with 0% owner occupied housing vacancy rates, which is concerning for future growth.

Renter-Occupied Housing

This is defined as the homeowner living elsewhere and renting the premises to another person or family. Historically, the rate of renter-occupied housing has served as a proxy for the strength of the housing market because high renter occupancy is correlated with lower median incomes and with specific populations such as students, young professionals, the elderly, and minorities. Sanilac County currently has 3,108 rental units including apartment complexes and single-family homes. 91.8% of these are under \$999 a month for rent. There are 17 apartment complexes across the county providing 617 units of subsidized low-income housing. The lack of market rate affordable rental housing is a problem for employers who need skilled labor and for young people looking for a place to live while starting their careers, especially in Sandusky, Marlette, Croswell and Lexington.

Rental vacancy rates are showing the highest in rural Custer Township at 13.1%, Elk Township at 12.7%, (slightly skewing higher based on low numbers of rentals) and lakeshore adjacent Worth Township at 4.8%. The two cities with the highest numbers of apartment rentals are Sandusky at 4.6% and Croswell at 3.1%. The county has a rental vacancy rate of 3.7, somewhat less than the state average of 5%. This indicates somewhat of a rental shortage, most acutely seen in the market rate apartment rentals.

Educational Attainment

A higher percentage of residents without a high school diploma correlates with lower paying jobs and higher unemployment. By the same token, residents with a bachelor's degree or higher tend to earn higher wages and experience lower unemployment. Understanding these indicators can go a long way toward predicting a community's prosperity and addressing them can go just as far in influencing it.

In Sanilac County, 89.5% of the population over the age of 25 has at least a high school diploma. Residents without a high school diploma is about

Table 2: Cost of Living Comparison

	Sanilac County, MI	Michigan Average	US Average
Household Income	\$48,852	\$63,829	\$67,521
Median Gross Rent	\$701	\$892	\$2,000
Cost of Living Index	81.2	89.6	100
Median Home Cost	\$121,100	\$207,800	\$291,700

10.5% and those with a bachelor’s degree or higher is 14.8%. Those who have a high school diploma as their highest education are 41.8%, and 32.9% have some college or an associate’s degree.

Income

\$49,852 is the 2020 Median Household Income for Sanilac County, which is considerably lower than the state average of \$63,829, or national average of \$67,521. This is due to several factors, including the high number of retirees compared to workers, lower wage jobs in tourism, agriculture and light manufacturing, high number of residents relying on social services, and fewer jobs requiring degrees or specialized training.

Concurrently, the cost of living is also 81.2 with the average American index of 100; this means it is 18.8% less expensive to live here than average American county. While wages are lower, the cost of housing is much lower.

People in Poverty

The Census Bureau sets an annual income threshold by household size to determine the poverty line for the entire us. For example, a household of 4 earning less than \$27,750 would be considered below the poverty line.

The percent of people living below the poverty line in Sanilac County is 10.3%, which is lower than the national average of 11.4%. More concerning is that 22.2% of the children under the age of 18 are living below the poverty level in Sanilac County, compared to 16.1% nationally. Because of this, 49.08% of students in the county get free breakfast and lunch at school.

Employment

Private Sector Employment

The percent employed in the private sector refers to persons who do not work for the government and are not self-employed. Most workers in the county, 68.2%, fall into this category, mainly with jobs in manufacturing 32.5%, health care and education 11.9%, retail trade 15.3%, construction 6.8% and agriculture 9.1%.

Other employment types

Governmental workers (local, state, federal) carry 11.1% of the jobs, Non-Profit Organizations have 7.4% of the jobs, and 13.3% of the workers are self-employed.

Of particular concern for our county’s future is the potential for loss of agricultural, ag related retail and service business jobs if a large portion of our county’s agricultural land is converted into alternative energy farming, including solar and wind. While just 9.1% of the private sector employment is directly agricultural, most large retail establishment jobs in the county including farm supply stores, implement dealers, and car dealers rely heavily on agriculture for the core of their sales.

To help the townships dealing with alternative energy companies, the county is taking a lead in providing training for township planning officials and officers to provide the required knowledge for sound decision making.

Since nearly all manufacturers are short on workers, some of these job losses could be retrained to take on manufacturing positions, which are higher paying and with better benefits than most entry level and unskilled agricultural jobs.

Transportation



Source: Sanilac County

Introduction

Transportation networks are essential for everyday life. Roads, sidewalks, and non-motorized infrastructure allow residents to travel between work, home, social spaces, and other daily destinations. These networks also make connections to larger transportation systems like highways, rail systems, and air travel allowing for the movement and goods and products. Trail systems offer county residents and visitors recreational opportunities as well as connections to other communities and parts of the state. Transportation systems promote interconnectedness within modern economies while also fostering connection between residents. Sanilac County is the largest county by land area in Michigan's lower peninsula, covering 964 square miles. Given Sanilac's size, varied transportation systems are becoming increasingly important to ensure that the County is accessible and offers both motorized and non-motorized transportation systems.

Transportation Inventory

Roadways


Sanilac County’s transportation network is heavily automobile-centric. Due to the overall size and rurality of Sanilac, traveling by car is almost a necessity. Sanilac has 363 miles of paved county roads, 1,439 miles of unpaved local roads, and 34 miles of paved local roads that serve to transport individuals, goods, and services across the county.¹ The street pattern in the county is very grid like, consistent with an agrarian community, where streets and transportation routes were designed around plots of farmland. However, the reliance on extensive automobile travel is expensive in Sanilac County. The Center for Neighborhood Technology estimates that a typical household in Sanilac County spends 33% of






their household income on transportation related expenses, including car payments, insurance, and fuel. A typical household in Sanilac County spends more on transportation than on housing costs (24% of household income). It is estimated that a household spends \$15,658 annually on transportation-related costs.² While widespread alternatives to automotive use in Sanilac County, like public transportation, are unlikely it is important to provide alternatives to automobile travel, where possible.

Complete Streets

The term “Complete Streets” refers to roadways that are designed for and operated by all users, including pedestrians, bicyclists, motorists, and public transit users. Per the Michigan Public Act 135 of 2010, Complete Streets are “roadways

Table 3: Complete Streets Design Strategies

Design Strategy	Example
Trees / landscaping	
Green infrastructure	
Street furniture	
Bicycle parking	
Parklets	

Design Strategy	Example
Pedestrian-scale lighting	
Wayfinding	
Sidewalk level driveways	
On-street bike lane	
Off-street bike lane	

planned, designed, and constructed to provide appropriate access to all legal users in a manner that promotes safe and efficient movement of people and goods whether by car, truck, transit, assistive device, foot, or bicycle.^{3"}

Currently, Sanilac County has limited complete streets elements. While a total complete streets approach is not applicable to many of the rural roads in Sanilac County the denser cities and villages should adopt a complete streets elements on roads they deem appropriate.

Highways

Sanilac County sits along six highways, M-53, M-46, M-25, M-19, and M-90. Each of these highways serve to connect the county and allow for intercontinental and state transportation. M-53 provides Sanilac with a direct connection to Detroit, allowing for the transportation of goods, services, and connections to and from the major city. Additionally, the M-46 highway runs latitudinally across the lower peninsula of Michigan, beginning in Port Sanilac and reaching Muskegon on the West coast of the state. This freeway allows for transit between Sanilac and Allegan County, specifically Grand Rapids—another major Michigan City. M-25 runs from Port Huron to Bay City and connects Sanilac to communities along the shore of Lake Huron. The M-19 highway is a north-south highway through Michigan’s thumb that begins near New Haven and ends near Bad Axe. Lastly, M-90 is runs laterally across the thumb of Michigan, starting in North Branch and ending in Lexington on the Lake Huron shore. Given its size and rurality, these highways are the backbone to the economic transport of goods and services to and from Sanilac County.

Transit

Public transportation in Sanilac County is primarily offered through the Sanilac Transportation Corporation. The Sanilac Transportation Corporation is an 18-vehicle fleet and six-driver team responsible for transporting individuals around the area and includes both bus and non-emergency transportation services.⁴ The service operates as a para-transit network, commonly referred to as “dial-a-ride” where riders have to schedule pick-up and drop-off services in advance. For rural communities like Sanilac County, there is

limited feasibility on providing public transportation services beyond paratransit. In 2021, the Sanilac Transportation Corporation, transported 40,883 people, 24% of who were elderly, 15% of whom were disabled, and 10% of whom were elderly and disabled. However, the COVID-19 pandemic significantly impacted ridership, in 2019 the Sanilac Transportation Corporation recorded 103,936 total passengers, indicating a 61% decline in total ridership from 2019 to 2021.⁵ Developing a rough transportation schedule between major population centers in the County would help residents better plan for using public transportation system. Additionally, implementing a pilot fixed-route between the major population centers would help gauge the ridership/demand for fixed-route services in the county.

Air and Rail

Sanilac County has nine freight railroad stops on the Huron & Eastern Railway (HESR). This railroad runs from southern Sanilac to Bay City and down the Durand, including stops in Saginaw and Flushing. The Huron & Eastern Railway also connects to three major transcontinental railways: the Canadian National Railway in Durand, and the CSX Railway in Howell,. HESR also connects to several interstate railways such as the Great Lakes Central Railroad in Durand, the Lake State Railway in Saginaw, and the Mid-Michigan Railroad in Saginaw. Furthermore, HESR has indirect connections to many other interstate and transcontinental railways, so the county is accessible for goods to be transported from the North, South, and West.⁶

Railways connect Sanilac County to not only multiple major cities around Michigan, but to major cities around several surrounding states as well. They provide quick, often inexpensive export/import transit as well as serve to transport goods in and out of the area.

There are two publicly owned airports in Sanilac County, the Sandusky Airport and the Marlette Airport. The Sandusky Airport hosts 24 aircraft and the Marlette Airport, 34. MDOT estimates that the entire aviation sector contributes \$22 billion to the statewide economy every year, more than rail, bus, and cycling. In recent years the Sandusky Airport has become a center for manufacturing and aviation related businesses. In 2023, an airplane manufacturer relocated to Sandusky.

Trails

Due to Sanilac County's proximity to the Lake Huron shoreline, the county is home to multiple local motorized, non-motorized, and water trail networks and park systems open for public use. Sanilac's four park systems: Evergreen Park, Forester Park, Lexington Park, and Delaware Park are each home to hiking trails among other recreational opportunities.⁷ Sanilac County is also home to Sanilac Petroglyph Historic State Park in Cass City. The state park is the site of Michigan's largest collection of early Native American teachings carved into stone. Sanilac Petroglyph State Park is 240 acres, with a mile-long interpretive hiking trail loop crossing over the Little Cass River. The park is managed in collaboration with the Saginaw Chippewa Indian Tribe of Michigan.⁸ Non-motorized transportation systems are vital to communities as they provide safe recreation and serve as transit connections

around the county and statewide, but there is no comprehensive county-wide system. A small connection exists between Croswell and Lexington (the Cros-Lex Bike Trail). A lack of connected trail systems means that traveling across the county without a motorized vehicle is challenging, a countywide trail system is explored further in the "Rural Zone" of this master plan.

Aside from the non-motorized trailways, Sanilac County also features DNR snowmobile trail systems that span across the county. The snowmobile trails run north to south and continue east to the Lake Huron shoreline. These trail systems connect recreationalists from Minden City to Sandusky, providing stops in many other cities, villages, and townships in Sanilac. Motorized transportation trails offer motorized recreational vehicle users transportation routes that differ from traditional automobile roadways.⁹



Diamond Trail Park Fun Run

Source: Sanilac County

Many communities in Sanilac County also permit ATVs, ORVs, and golf carts on the roadways, a popular option for short-distance travel within the county. However, these vehicles are not permitted on the state roadways meaning that there are areas of the county inaccessible by ATV/ORV.

Finally, Sanilac County includes access to the Tip of The Thumb Heritage Water Trail . A Water Trail is a designated route through a waterway including lakes, rivers, canals, or bays, that is designed for outdoor recreation.¹⁰ This water trail system is a 103-mile-long trail on Lake Huron. The trail begins at White Rock Park and continues around Michigan's thumb. There are 44 access points along the water trail with several along the shoreline in Sanilac County.¹¹

Recommendations

- » Explore the development of a non-motorized trail system in the Sanilac County
- » Explore the development of a motorized trail system in Sanilac County
- » Work with the Sanilac County Transportation Company to develop a schedule of bus service to the major population centers
- » Work with the Sanilac County Transportation Company to implement a pilot fixed-route service

Sources

- 1 Sanilac County News, Road Commission Ready for Battle, <https://sanilacountynews.mihomepaper.com/articles/road-commission-ready-for-battle/>
- 2 Sanilac County Fact Sheet, Center for Neighborhood Technology, <https://htaindex.cnt.org/fact-sheets/?lat=43.350708&lng=-82.819944&focus=county&gid=286#fs>
- 3 Michigan Complete Streets Advisory Council. <https://michigan.gov/modot/about/commissions-councils-committees>
- 4 Sanilac Transportation Corporation, <https://sanilactransportation.com/>
- 5 Michigan Department of Transportation, Program Data, <https://www.michigan.gov/mdot/travel/mobility/pub-transit/program-data>
- 6 Michigan Railroad System Map, <https://www.michigan.gov/-/media/Project/Websites/MDOT/Travel/Mobility/Rail/Michigan-Railroad-System-Map.pdf?rev=029a2575f2a74ff2bc4f486eff09c795>
- 7 Sanilac County Parks, <https://www.sanilaccountyparks.com/>
- 8 Michigan Department of Natural Resources, Sanilac Petroglyphs Historic State Park, <https://www2.dnr.state.mi.us/parksandtrails/Details.aspx?id=490&type=SPRK>
- 9 Michigan Department of Natural Resources, Sanilac County Snowmobile Trails PDF, https://www2.dnr.state.mi.us/publications/pdfs/forestslandwater/SnowmobileTrailMaps/countymaps/snowmobile_sanilac.pdf
- 10 Michigan Department of Natural Resources, Water Trails, <https://www.michigan.gov/dnr/places/state-trails/water-trails#:~:text=A%20water%20trail%20is%20a,recreation%20experience%20for%20the%20user.>
- 11 Michigan Water Trails, Tip of the Thumb Heritage Water Trail, <https://www.michiganwatertrails.org/trail.asp?ait=cv&cid=130>



Forester Park Campground & Day Use Area

Source: Sanilac County

Land Use Transect



Source: Sanilac County

When planning at a county scale, especially a county the size of Sanilac County, it can be challenging to balance the diversity of land use types and defined community visions with broad countywide discussions. For example, discussions and recommendations for farmland preservation are relevant for the rural areas of the county but for the more developed villages and cities, farmland preservation is not a high priority for land use planning within their jurisdiction. Therefore, the Sanilac County Master Plan approaches land use discussions from a transect framework where common land use typologies (transects) are individually discussed. This method allows jurisdictions within Sanilac County to identify what typologies are most relevant to them rather than having to review large sections of the plan and attempt to identify the relevant information.

Transects

There are five distinct land use transects in Sanilac County: Natural Zone, Rural/Agricultural Zone, Towns and Villages, Small Cities, and the Shoreline.

Natural Zone

The Natural Zone is identified by large contiguous areas of undeveloped land in a natural state including forests, wetlands, and natural open space. Roughly 25% of Sanilac County is within the Natural Zone with the majority in the northwestern quarter of the county and along the shoreline.

Rural/Agricultural Zone

The Rural/Agricultural Zone is defined by working farmland and active open space. Many rural single-family homes also fall into the Rural/Agricultural Zone. The Rural/Agricultural Zone is the largest in the county, accounting for 74% of the total land in the county. Only three jurisdictions in Sanilac County do not have any land within the Rural/Agricultural Zone.

Towns and Villages

Towns and Villages includes smaller more developed communities in Sanilac County that have a couple residential neighborhoods, limited commercial activity, but products and services offered in Towns and Villages cannot meet the entire population. Towns and Villages total less than 1% of the county, the smallest of all the zones.






Small Cities

Small Cities is the most developed zone in Sanilac County and can be defined by larger communities that have several residential neighborhoods, larger employers, and offer more products and services than Towns and Villages. They have a clearly defined commercial center and can meet the basic needs of the entire population. Accounting for just over 1% of the total county land small cities do not have a large footprint in the county but are essential economic and social hubs.

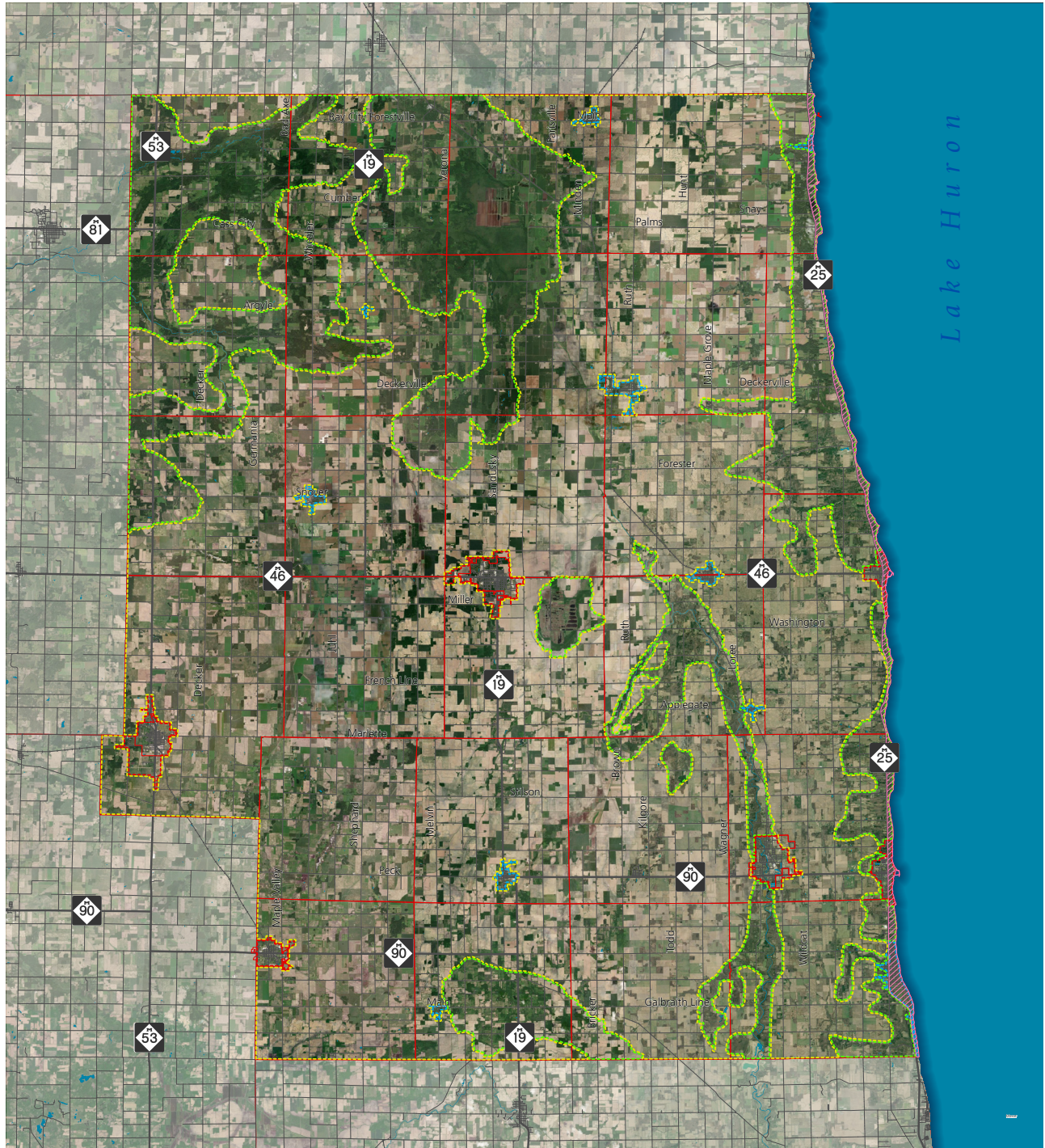
Shoreline

The Shoreline Zone generally encompasses the land between Lake Huron and M-25. Land use planning for a shoreline, especially a Great Lake Shoreline, requires specific planning strategies so the shoreline is given a distinct zone. The Shoreline Zone is the only zone that overlaps with other zones, specifically in the developed communities along the shoreline (Lexington, Port Sanilac, etc.). The Shoreline Zone is less than 1% of the total county but intersects eight jurisdictions, see the table titled Transect Details.

Table 4: Transect Zone Descriptions

Zone	Description	Acres	% of County	Example
Natural	Large contiguous areas of undeveloped land in a natural state	151,672	24.6%	
Rural/Agricultural	Working farmland and active open space	453,903	73.6%	
Towns and Villages	Some residential neighborhoods, limited commercial activity	3,380	0.5%	
Small Cities	Larger communities that have several residential neighborhoods, larger employers, and offer a range of products and services	8,018	1.3%	
Shoreline	Land along Lake Huron and east of M-25	4,369	0.7%	

Map 1: Transects



Transects

Sources: Michigan Open Data Portal, Sanilac County

- Natural Zone
- Rural/Agricultural Zone
- Towns and Villages
- Small Cities
- Shoreline

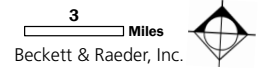


Table 5: Transects by Community in Sanilac County

Community	Natural Zone	Rural / Ag. Zone	Towns and Villages	Small Cities	Shoreline
Argyle Township	44%	56%	0%		
Austin Township	65%	35%			
Bridge-Hampton Township	4%	96%	0%		
Buel Township	6%	94%			
City of Croswell		12%		88%	
City of Brown City				100%	
City of Marlette		3%		97%	
City of Sandusky				100%	
Custer Township	9%	89%		2%	
Delaware Township	13%	87%	0%		2%
Elk Township		100%	0%		
Elmer Township		100%			
Evergreen Township	46%	54%			
Flynn Township		100%			
Forester Township	76%	24%			5%
Fremont Township	14%	86%			
Greenleaf Township	73%	27%			
Lamotte Township	26%	74%			
Lexington Township	13%	27%		60%	3%
Maple Valley Township		100%		0%	
Marion Township	3%	96%	0%		
Marlette Township		97%		3%	
Minden Township	64%	36%			
Moore Township	11%	88%	1%		
Sanilac Township	24%	76%		1%	2%
Speaker Township	64%	36%			
Village of Applegate	22%	59%	19%		
Village of Carsonville	3%	53%	44%		
Village of Deckerville		34%	66%		
Village of Forestville	78%		22%		27%
Village of Lexington	13%	27%		60%	19%
Village of Melvin	16%	63%	21%		
Village of Minden City		66%	34%		
Village of Peck		51%	49%		
Village of Port Sanilac	17%	8%		74%	35%
Washington Township	37%	63%	0%		
Watertown Township	16%	83%		2%	
Wheatland Township	41%	59%	0%		
Worth Township	61%	37%	4%	0%	5%
Sanilac County	25%	74%	1%	1%	1%

Natural Zone



Source: Sanilac County

Over the past two centuries, agricultural development in Sanilac County has led to the systematic fragmentation of the county’s natural areas. The remaining natural spaces are interspersed with farms and segmented by the grided road system. A few large tracts of natural space remain in the county, but the fragmentation of natural space can make preservation a challenge.

Natural areas are a critical component of land use planning because of the ecosystem services they provide. Ecosystem services are the benefits that human society receives from nature, including soil formation, water filtration, pollination, and clean air. Natural feature preservation, especially in areas where natural features have been in conflict with other land uses, is essential to maintaining a habitable environment.

The Natural Zone is intended to encompass large tracts of contiguous natural land including woodlands, wetlands, and undeveloped open space. Sanilac County’s Natural Zone predominantly follows the main waterways in the county, the Cass River, the Black River, the Elk River, and along the Lake Huron shoreline. In total the natural zone accounts for roughly a quarter of the land within Sanilac County. While the natural zone is predominantly natural land, some individual agricultural properties are scattered throughout the natural zone and on the fringes of the zone. Continued pressure from agricultural land clearing is the greatest threat to the preservation of Sanilac County’s natural areas. The intent of the natural zone is to preserve the existing natural features and promote compatible uses like recreation.

Woodlands

Woodlands are the backbone of the natural areas of Sanilac County, they provide habitat for local flora and fauna, promote a natural and rural aesthetic, and support many recreational uses. Historically, before the Europeans arrived in the area, Sanilac County was likely a mix of woodlands and open meadows. Currently, woodlands are fragmented throughout the county and a few large tracts of woodlands remain in the northwest corner of the county.

The United States Geological Survey, in partnership with the United States Department of Agriculture, Bureau of Land Management, and Forest Service, produces a data set of land cover for the contiguous United States every five years. The data set classifies land into one of 34 categories, three of which are forest types. The map titled “Natural Features” shows what areas in Sanilac County are identified as deciduous forest, evergreen forest, and mixed forest. Deciduous forests are generally comprised of trees that lose their leaves in the fall (oaks, maples, beech, etc.). Evergreen forests do not lose their leaves in the fall (pines, conifers, spruce). Mixed forests are a combination of deciduous and evergreen trees.

Woodland preservation, which is aligned with the Master Plan goals in 35% of the reviewed plans, is primarily achieved through zoning. Zoning for woodland preservation can be achieved at a

district level or through landscaping standards that emphasize natural feature preservation. Sample language for zoning districts that emphasize natural feature preservation and sample language for landscaping standards can be found in the appendix. Sanilac County should encourage local jurisdictions to adopt zoning language that preserves woodlands.

Wetlands

Wetlands are one of the most valuable and sensitive natural features in Michigan due to the ecosystem services that they provide. Wetlands have the ability to absorb excess water and act as a filtration device. They capture water flowing over the land and slowly infiltrate it into the groundwater. Wetlands also provide a unique ecosystem habitat for flora and fauna that cannot live in other types of ecosystems making them essential for the healthy biodiversity of a community.¹ Wetlands also provide recreational benefits, especially when incorporated into larger recreational areas.

There are two main types of wetlands, freshwater emergent wetlands and shrub/forested wetlands. The distinction between the two wetlands is made based on the amount/type of vegetation and the water saturation of the soil. Table 7: Wetlands outlines the types and sizes of wetlands in Sanilac County.

Table 6: Forests

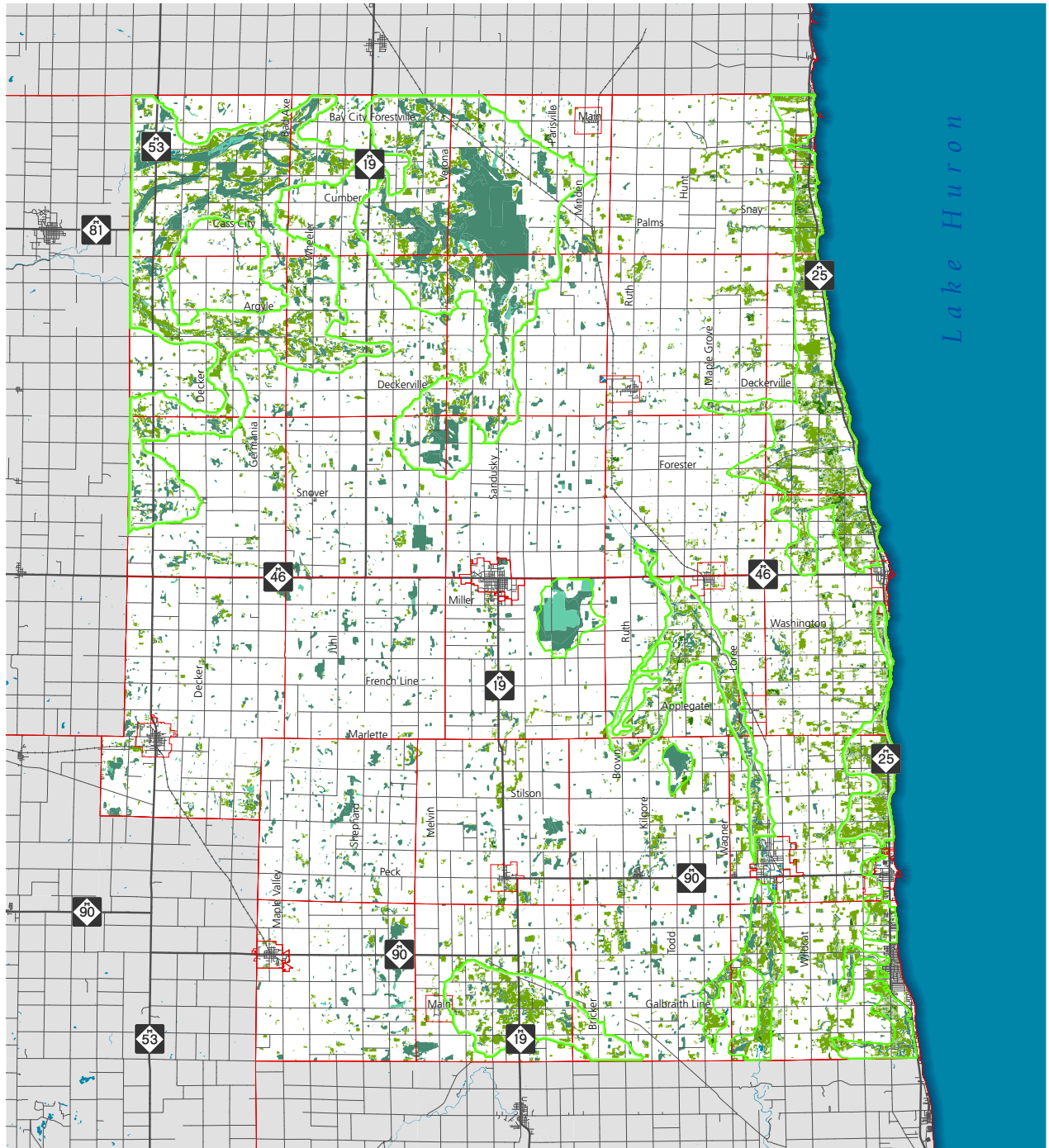
Forest Type	Sanilac County	Natural Zone	
	Acres	Acres	Percent of the County
Deciduous Forest	46,539.4	28,205.8	60.6%
Evergreen Forest	4,148.1	2,858.3	68.9%
Mixed Forest	7,774.4	5,475.4	70.4%

Table 7: Wetlands

Wetland Type	Sanilac County	Natural Zone	
	Acres	Acres	Percent of the County
Emergent	2,894.9	1,821.0	62.9%
Forested	40,805.9	25,932.7	63.6%
Total	43,700.8	27,753.7	63.5%

Source: EGLE

Map 2: Natural Features



Natural Features

Sources: Michigan Open Data Portal, Sanilac County, USDA

- Natural Zone
- Emergent Wetland
- Forested Wetland
- Deciduous Forest
- Evergreen Forest
- Mixed Forest

3 Miles
 Beckett & Raeder, Inc.

The greatest threat to wetlands in Sanilac County is agricultural development. If drained, wetlands can be converted into productive agricultural land. However, wetlands provide numerous benefits to agricultural land including pollinator habitat, managing nutrient runoff, and increasing groundwater recharge. It is mutually beneficial to ensure that wetlands are preserved in Sanilac County.

Wetland preservation, which is aligned with the Master Plan goals in 35% of the reviewed Master Plans, is predominantly the responsibility of the State of Michigan’s Department of Environment, Great Lakes, and Energy (EGLE), formerly known as the Michigan Department of Environmental Quality (DEQ). EGLE regulates wetlands over 5 acres in size, wetlands within 1,000ft of a Great Lake, and within 500ft of an inland lake, river, or stream. Developing in these regulated wetlands required obtaining a permit from EGLE. However, local governments have the ability to regulate wetlands beyond the authority that the State has expressed. There are multiple regulatory avenues to preserve wetlands including blanket wetland preservation ordinances, conservation zoning, and wetland setbacks. Sanilac County should encourage local governments to adopt wetland preservation language in their zoning ordinances. Sample language for wetland preservation ordinances, conservation zoning, and wetland setbacks can be found in the appendix of this master plan.

Water Quality

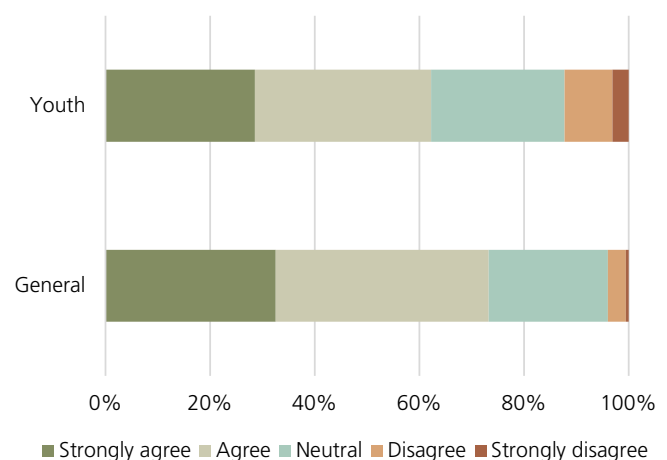
In rural communities, like Sanilac County, water quality is primarily influenced by agricultural runoff and household wastewater systems. While agricultural best management practices can reduce agricultural runoff, addressing household wastewater systems is slightly more complex. Water and wastewater systems that are not connected to a municipal or community system rely on a well, septic tank, and septic field to provide, treat, and discharge water and wastewater. Often these systems are built to a certain standard and subject to regular inspections, but in Michigan, which is the only state in the United States without a statewide septic code, systems can go decades without maintenance and inspection. This means that failing systems can be discharging untreated or

partially treated waste into the local environment unnoticed. Commonly, during the home buying process, prospective buyers will ask to have the system inspected but this is optional and not required. Several counties and communities in Michigan (primarily in Northwest Michigan) have adopted time of sale or transfer ordinances that mandate when a property changes ownership the well and septic system must be inspected by the local health department. This ensures at least inspections are happening.

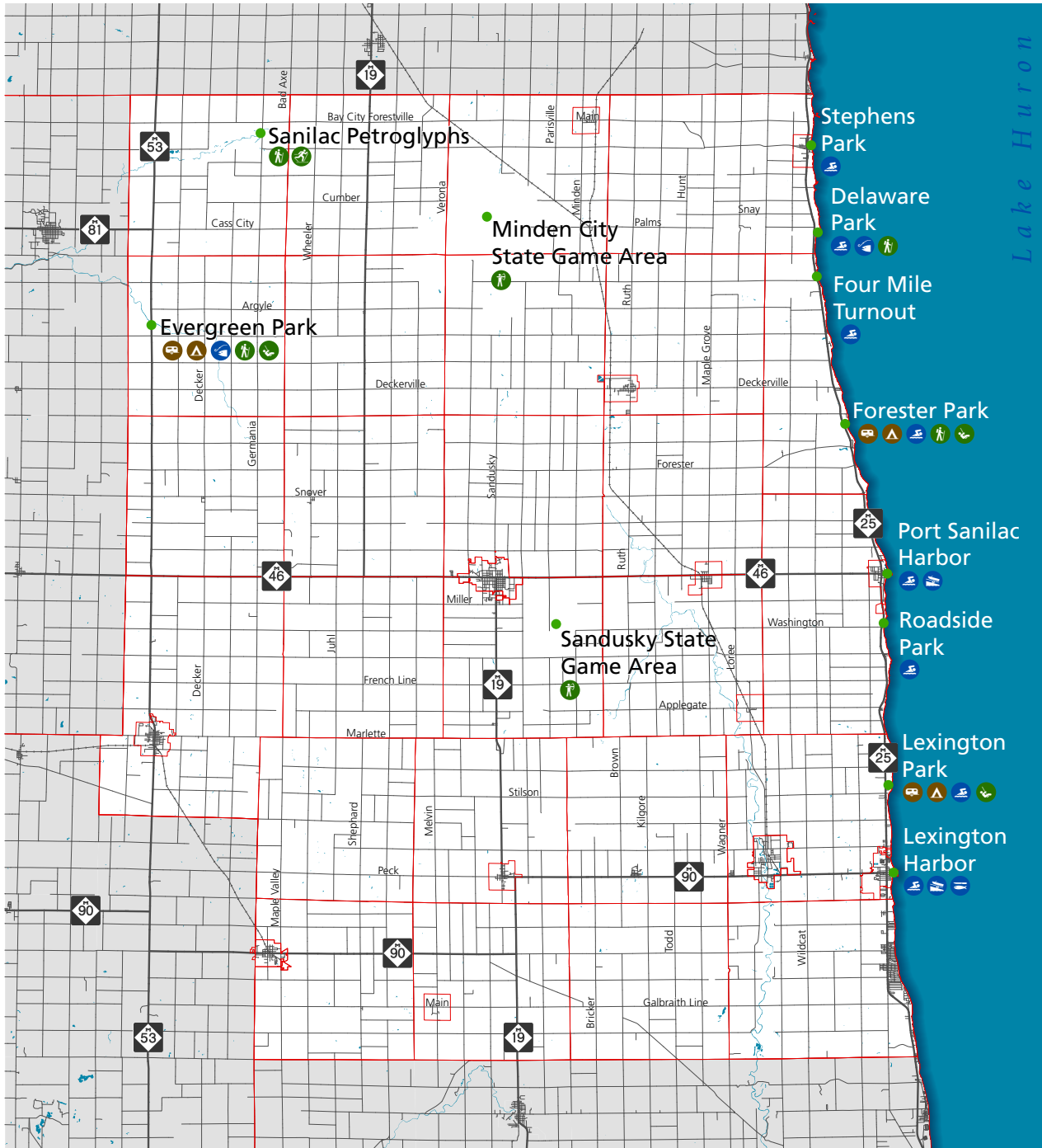
Recreation

In Sanilac County, most recreational opportunities are tied to the natural resources of the county. Evergreen Park, one of four county parks, is located in the forests of northwest Sanilac County and offers fishing, hiking, and many nature trails. Two large State Game Areas (Minden City State Game Area and Sandusky State Game Area) offer opportunities for hunting. For communities with lots of natural areas, developing recreation (hiking trails, camping, and biking) can promote economic development without comprising the natural environment. People who come from outside the county to utilize the recreational assets spend money on food, gas, and lodging within Sanilac County, supporting the local economy. There is support in the community for this approach as a majority of respondents in the general master plan survey and youth survey indicated that the county should promote camping as a way to attract visitors.

Figure 1: Sanilac County should promote camping opportunities in the county to attract visitors

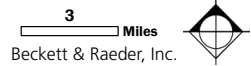


Map 3: Parks



Parks

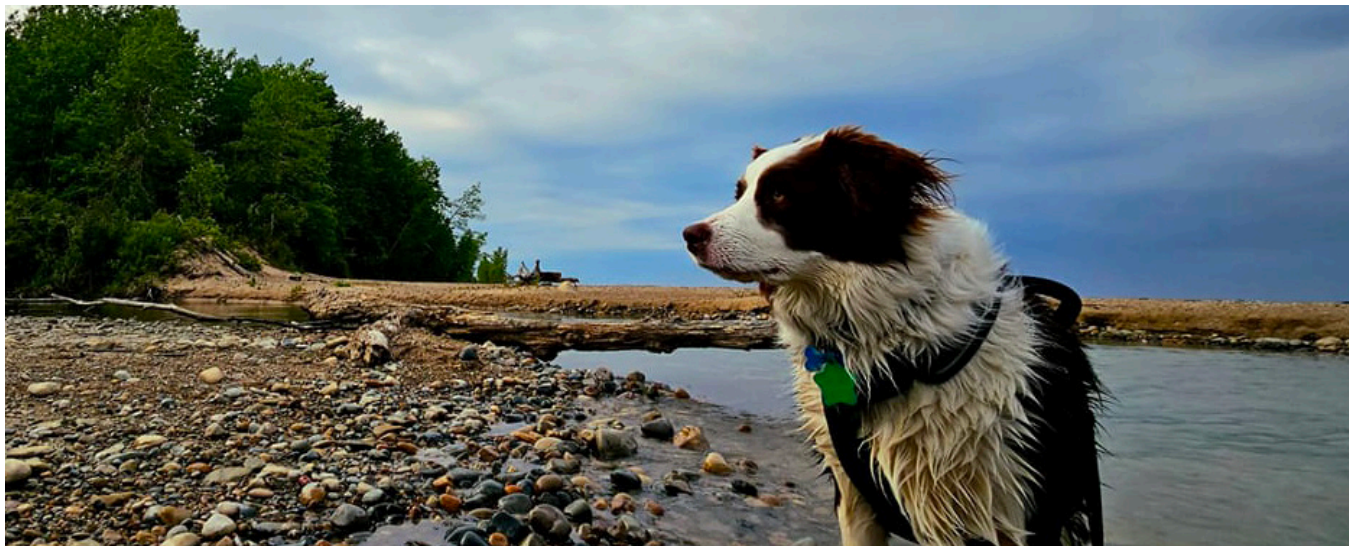
Sources: Michigan Open Data Portal, Sanilac County



- | | | |
|-----------------------|----------------------|----------------|
| Fishing | Hiking | Modern Camping |
| Swimming | Playground | Camping |
| Boat Launch | Hunting | |
| Fish Cleaning Station | Cross Country Skiing | |

Table 8: Recreation Offerings in Sanilac County

Jurisdiction	Recreational Offerings
Argyle Township	Playground, ball fields
Bridge-Hampton Township	Playground
City of Croswell	Playground, trails, splash pad, ball courts, fairgrounds
City of Brown City	Ball fields, ball courts, track
City of Marlette	Track, ball fields, ball courts, pool
City of Sandusky	Splash pad, trails, ball courts, fairgrounds, trails
Delaware Township	Swimming beach, camping
Evergreen Township	Camping, fishing, trails
Flynn Township	Nature center, trails, boating, playground
Forester Township	Camping, hunting, swimming beach
Greenleaf Township	State Park, trails
Lexington Township	Camping, trails, fishing, golfing
Minden Township	State game area
Sanilac Township	Swimming beach, golf
Speaker Township	Hunting, golf
Village of Carsonville	Playground
Village of Deckerville	Track, ball courts, shuffleboard
Village of Forestville	Swimming beach, boat launch, playground, ball court
Village of Lexington	Harbor, ball court, playground, ball fields
Village of Minden City	Ball fields
Village of Peck	Ball fields, track, playground
Village of Port Sanilac	Harbor, swimming beach, ball courts
Worth Township	Hunting, swimming beach, mini-golf



Delaware Park

Source: Sanilac County

Figure 2: Would you support the development of a non-motorized trail system?

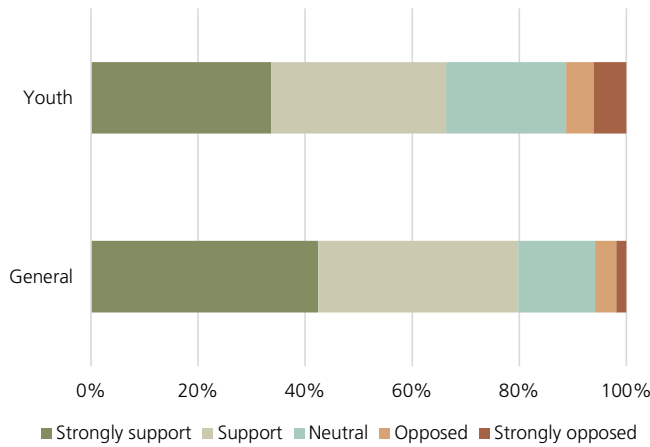
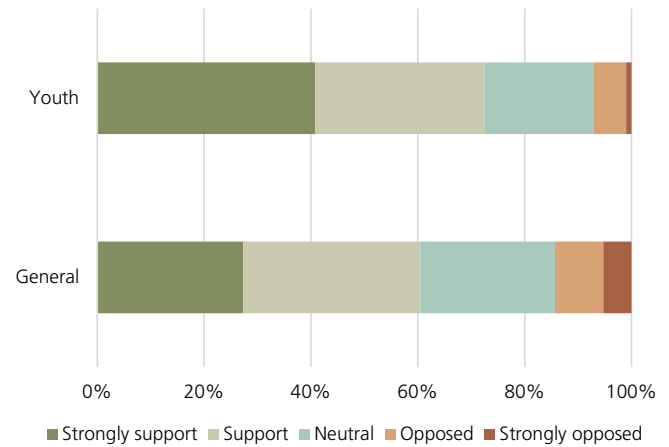


Figure 3: Would you support the development of a motorized trail system?



A tourism economic development strategy was listed as a goal in 40% of the reviewed Master Plans from local municipalities in Sanilac County. To support a recreation-based economic development strategy Sanilac County should develop a coordinated recreation marketing strategy that promotes state, county, local, and private facilities. A coordinated marketing strategy would leverage the assets of multiple governmental bodies and promote a singular message for recreational assets in the county. Additionally, exploring a countywide trail network would expand the recreational offerings in the county and contribute to a recreation-based economic development strategy. Trails have a high level of support in the community, roughly 80% of respondents to the master plan survey indicated that they support or strongly support the development of a non-motorized trail system, support among youth was lower but the majority of youth survey respondents still supported the development of non-motorized trails.

Support was also high for the development of a motorized trail system, as a majority of respondents to both surveys were receptive to this idea. Interestingly, support was higher among youth, indicating that youth recreational trends in Sanilac County lean towards the motorized options compared to the non-motorized ones.

Recommendations

- » Encourage jurisdictions in Sanilac County with zoning authority to adopt zoning language that preserves woodlands.
- » Encourage jurisdictions in Sanilac County with zoning authority to adopt zoning language that preserves wetlands.
- » Adopt a time of sale or transfer well and inspection ordinance at the county level.
- » Develop a coordinated marketing strategy that promotes the recreational facilities in Sanilac County.
- » Explore the development of a non-motorized trail system in the Sanilac County.
- » Explore the development of a motorized trail system in Sanilac County.

Sources

1 Wetland Identification and Delineation. Tip of the Mitt Watershed Council, www.watershedcouncil.org/wetland-identification.html.



Source: Sanilac County

Agricultural Zone



Source: Sanilac County

The Agricultural Zone is the largest land use transect in the county, accounting for almost three-quarters of the entire county. Agriculture and rural land are very much ingrained into the cultural identity of Sanilac County residents and the preservation of agriculture and rural living is a top priority for many local communities and residents.

Overall, the Agricultural Transect Zone encompasses working farmland and rural residential estates (single-family homes on large lots interspersed with agricultural land). Of the 39 local units of government in Sanilac County, 23 of them are over 50% in the Rural/Agricultural Zone. The intent of the Rural/Agricultural Zone is to continue to provide for the operation of Sanilac County's agricultural base.

The Agricultural Industry

Every five years the United States Department of Agriculture conducts an agricultural census, a complete survey of all farms in the United States. This survey gathers information on types/acres of crops grown, the type/number of livestock, and the finances of farms. In 2017, there were 1,315 farms in Sanilac County, a 10% decrease from 2012. Along with a decrease in the number of farms, the total acres operated also dropped by roughly 5%. Cropland also decreased but not to the degree of total agricultural acreage indicating that the loss of cropland is not driving the decline

of farmland. When accounting for inflation income from agricultural activities has increased over the past decade, a positive sign, but there was a stark decline in farm incomes from 2012 to 2017.

The most prevalent crop harvested according to the 2017 agricultural census was soybeans (36.7% of harvested acres), followed by wheat (11.7%) and hay & haylage (11.2%). Cattle are the most common livestock, with roughly 82,000 head of cattle (including calves) in 2017. Cattle sales generated just over \$59M countywide for all farm operators. Milk production generated the most returns countywide at over \$100M.

Table 9: Agricultural Census

	2007	2012		2017	
	Estimate	Estimate	Change	Estimate	Change
Number of Operations	1,535	1,467	-4.4%	1,315	-10.4%
Acres Operated	417,035	456,877	9.6%	436,511	-4.5%
Acres, Cropland	368,243	405,957	10.2%	400,979	-1.2%
Net Income, per Operation (2023 \$)	\$53,579	\$121,554	126.9%	\$84,404	-30.6%

Source: United States Department of Agricultural, 2007, 2012, 2017 AG Census

Table 10: Crops Harvested

Crop	Acres	Percent of Total
Corn, Grain	82,155	21.6%
Corn, Silage	20,220	5.3%
Beans, Dry & Edible	25,246	6.6%
Hay & Haylage	42,451	11.2%
Oats	1,021	0.3%
Soybeans	139,410	36.7%
Sugar Beets	24,907	6.5%
Wheat	44,361	11.7%
Vegetables	423	0.1%
Orchards	123	0.0%

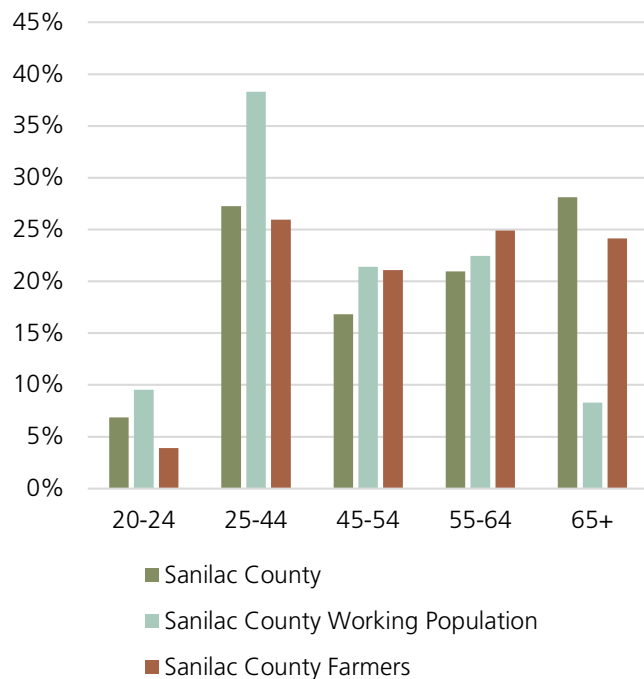
Source: United States Department of Agricultural, 2017 AG Census

Table 11: Livestock & Livestock Products

	Number of Operations	Inventory/Production	Total Sales (2017 \$)
Cattle, Incl. Calves	465	80,873	\$59,063,000
Milk	125	26,557 milk cows	\$100,591,000
Hogs	46	6,229	\$2,545,000
Sheep, Incl. Lambs	53	991	\$112,000
Wool	10	2,131 lbs.	\$5,000
Goats	56	485	\$27,000
Goats, Milk	28	223	\$14,000
Goats, Angora	4	20	n/a
Goats, Meat	30	242	\$13,000
Equine, Horses and Ponies	216	1,373	n/a
Equine, Mules and Burros	21	63	n/a
Chickens, Layers	164	4,753	n/a
Chickens, Broilers	38	3,327	n/a
Turkeys	33	1,012	n/a
Honeybee Colonies	53	3,362	
Honey	28	296,655 lbs.	\$568,000

Source: United States Department of Agricultural, 2017 AG Census

Figure 4: Age of Farmers

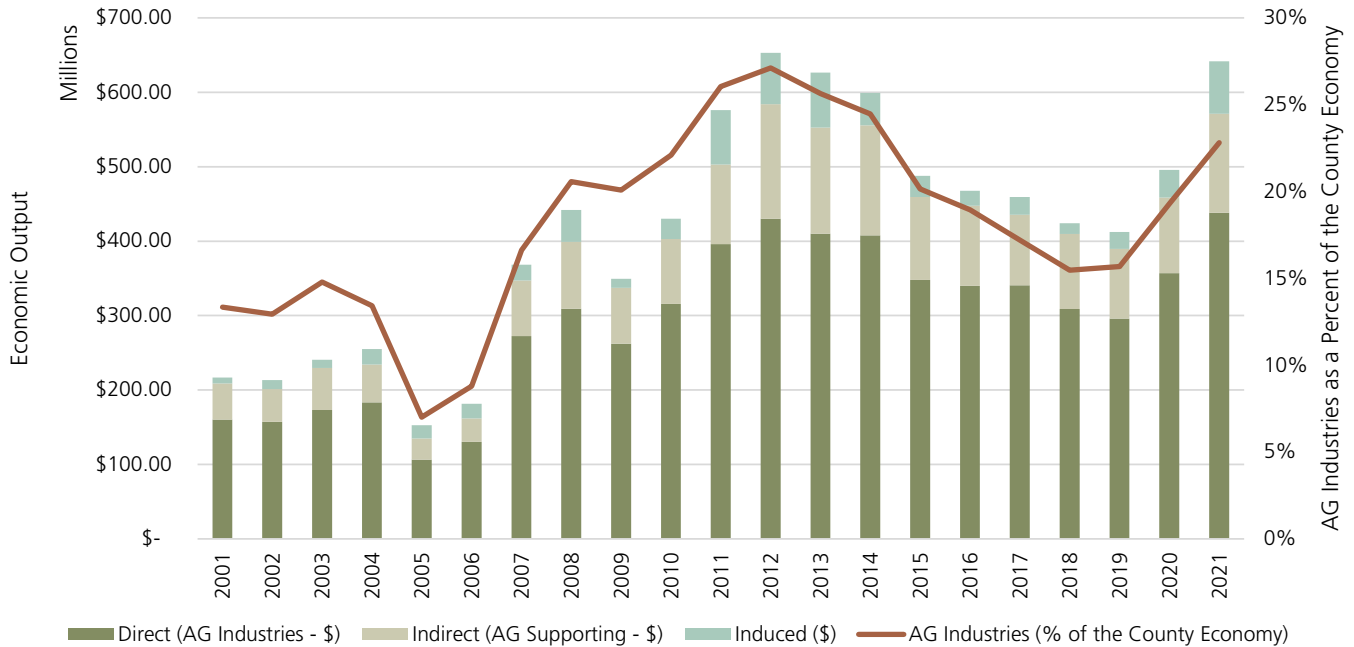


Source: Agricultural Census 2017

Farmers

The agricultural industry wouldn't be what it is today without the farmers of Sanilac County. Like the industry overall, the makeup of who is farming in Sanilac County has changed over the years. Mirroring overall population trends, the farmers are aging. In Sanilac County, the average age of a farmer is 53.3 years, slightly lower than the national average of 57.5 years. As shown in the figure titled "Age of Farmers" the percent of farmers over the age of 65 is significantly higher than the working population over the age of 65, indicating that farmers are continuing to work long after others over the age of 65. Farmers in Sanilac County have been farming for 25.7 years on average.¹

Figure 5: Economic Relationships in Sanilac County



Source: IMPLAN, 2021

The Agricultural Economy

Economies are an intricate network of relationships between various industries. Goods produced in one industry may be sold to another and the materials used to make that good may be sourced from a variety of industries. To aid in the understanding of the agricultural economy of Sanilac County, IMPLAN, an economic modeling tool, was used to provide granular details on the relationship between the agricultural industries and the broader Sanilac County Economy. IMPLAN is the leading provider of economic impact data and analytical software. The company began in 1972 working with the US Forest Service and has grown to a current user base of academics, governments, economic developers, corporations, nonprofits, and consultants. The foundational concept is that all industries, households, and governments in the economy are connected through buy-sell relationships, therefore a given economic activity supports a ripple of additional economic activity throughout the economy. IMPLAN is an Input-Output (I-O) modeling system that uses annual, regional data to map these buy-sell relationships so users can predict how specific economic changes will impact a given regional economy or estimate the effect of past or existing economic activity.² IMPLAN models three types of economic

relationships, direct, indirect, and induced. Direct economic impacts are the changes within one particular industry. For example, the increase of 100,000 more lbs of milk production and the resulting economic gains would be a direct impact from the dairy cattle and milk production industry. The increase of feed needed to support that increase in milk production would be an indirect impact (the cattle feed industry would be a supporting industry to the dairy cattle and milk production industry). Finally, induced impacts are the resulting impact on the changes in how households in the economy spend their money. For example, the increase in the production of milk may increase the profits for the owner of the dairy farm and in turn, their household may spend more money on everyday goods and services.

Direct Agricultural Impact

In 2021, direct agricultural industries (growing and animal production) accounted for 15% of Sanilac County's total economy. Over the past two decades, the direct agricultural industries have bounced between 5% and 17% of the total county economy, peaking in 2011-2012. However, in 2021 the total production of direct agricultural industries reached \$438 million, the highest in two decades. The largest agricultural sector in Sanilac County is grain farming, which accounts

Table 12: Direct Agricultural Industries

	Agricultural Economic Output	Agricultural Workers
Oilseed farming	20.5%	6.1%
Grain farming	31.1%	26.9%
Vegetable and melon farming	0.4%	0.8%
Fruit farming	0.1%	0.2%
Tree nut farming	0.0%	0.0%
Greenhouse, nursery, and floriculture production	1.2%	3.1%
Sugar beet farming	6.3%	12.9%
All other crop farming	3.4%	22.0%
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	9.0%	13.8%
Dairy cattle and milk production	27.0%	12.1%
Poultry and egg production	0.1%	0.0%
Animal production, except cattle and poultry and eggs	0.9%	2.1%

Source: IMPLAN, 2021

for 31% of total agricultural economic output and 27% of all agricultural workers.

Over the past 20 years, the direct economic production from direct agricultural industries has increased at an average annual rate of 8.3%. However, not all growth has been constant, the agricultural industries experienced downturns in 2005-2006 and in 2009 and an extended decline from 2012 – 2019. Recently, the agricultural industries have been rapidly accelerating in Sanilac County, increasing at an average annual rate of 44% over the past three years.

Indirect Agricultural Impact

In addition, to the direct agricultural industries other industries are reliant on agricultural production, such as food processing and manufacturing industries. This relationship is called an indirect economic relationship. An additional 172 industries in Sanilac County are indirectly reliant on agricultural production from within the county. There are industries that either purchase products from the agricultural industries (such as produce or animal products) or support the agricultural industries by providing goods and services (such as machinery or crop insurance) and therefore would see a decline in production due to a loss of customers.

The table titled “Indirect Agricultural Industries” shows the industries that are most reliant on the agricultural industries within Sanilac County, by total dollar and by percentage. In total, \$132,752,336 (4.4%) of Sanilac County’s economy is completely reliant on agricultural production from within the County. While this number may seem low, given the agricultural nature of the county, it is important to consider that many agricultural supporting operations buy goods and services from companies and areas outside the county, therefore 4.4% is likely an underrepresentation of the true agricultural nature of the county economy, as it only reflects the relationships within the county and not external ones. The largest industry reliant on the agricultural industries, by total dollar, is “other real estate”, which includes the leasing or renting of agricultural land, warehousing, and property management. Given that many farmers lease the land they grow crops on, unsurprisingly this industry is heavily reliant on the agricultural sector. The largest industry reliant on the agricultural sector, by percentage, is the “support activities for agricultural and forestry” which includes plowing, crop dusting, crop spreading, etc., this industry is completely reliant on the agricultural industry and accounts for over \$6 million of the Sanilac County economy.

Because many of these industries source their business from other industries besides the agricultural sector, changes in the indirect economic impact of agriculture are more insulated from rapid changes in the agricultural sector. Meaning, that indirect impacts from agriculture

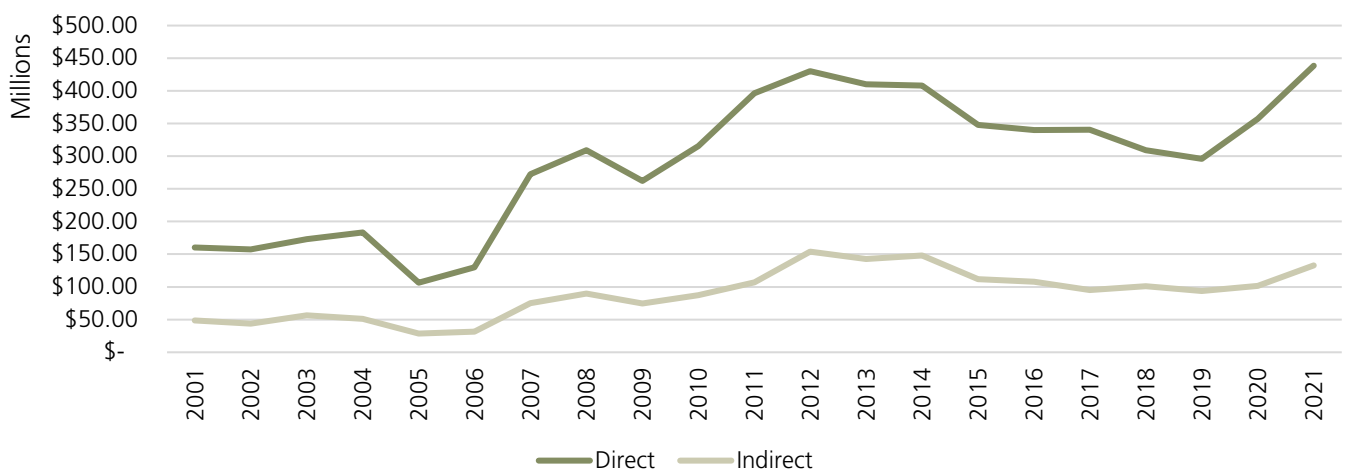
are slower to decline in periods of recession in agriculture and slower to increase in periods of growth in the agricultural sector. However, if current trends continue it is expected that the indirect impacts resulting from the agricultural sector will likely trend upwards.

Table 13: Indirect Agricultural Industries

By Total Dollar		By Percentage	
Industry	Reliant on Ag Industries	Industry	Reliant on Ag Industries
Other real estate	\$30,312,363 (34%)	Support activities for agricultural and forestry	100% (\$6,227,115)
Wholesale – nondurable good merchant wholesales	\$15,422,439 (49%)	Wholesale – nondurable good merchant wholesales	49% (\$15,422,439)
Truck transportation	\$7,894,717 (14%)	Racing and Track Operation	46% (\$4,059)
Support activities for agricultural and forestry	\$6,227,115 (100%)	Other real estate	34% (\$30,312,363)
Maintenance and repair construction of non-residential structures	\$3,929,179 (26%)	Wholesale - Wholesale electronic markets and agents and brokers	33% (\$100,823)
Wholesale – machinery, equipment, and supplies	\$1,913,981 (5%)	Commercial and industrial machinery and equipment rental and leasing	27% (\$1,548,472)
Water, sewage, and other systems	\$1,565,568 (20%)	Other animal food manufacturing	27% (276,109)
Commercial and industrial machinery and equipment rental and leasing	\$1,548,472 (27%)	Maintenance and repair construction of non-residential structures	26% (\$3,929,179)
Insurance agencies, brokerages, and related activities	\$1,327,586 (27%)	Water, sewage, and other systems	20% (\$1,565,568)

Source: IMPLAN, 2021

Figure 6: Economic Production from Indirect Agricultural Industries



Source: IMPLAN, 2021

Table 14: Indirect Agricultural Industries

By Total Dollar		By Percentage	
Industry	Reliant on Ag Industries	Industry	Reliant on Ag Industries
Hospitals	\$9,700,689 (8%)	Child day care services	9% (\$53,733)
Retail – Nonstore retailers	\$3,447,731 (6%)	Labor and civic organizations	8% (\$119,509)
Limited-Service restaurants	\$2,654,848 (7%)	Community food, housing, and other relief services, including rehabilitation services	8% (\$188,083)
Monetary authorities and credit intermediation	\$2423,752 (5%)	Offices of other health practitioners	8% (444,018)
Religious organizations	\$2,284,165 (8%)	Individual and family services	8% (\$83,200)
Other real estate	\$2,170,859 (2%)	Religious organizations	8% (\$5,436)
Retail – General merchandise stores	\$1,752,115 (7%)	Home health care services	8% (\$26,716)
Retail – Food and beverage stores	\$1,717,792 (7%)	Offices of physicians	8% (\$227,617)
Insurance agencies, brokerages, and related activities	\$1,293,415 (5%)	Outpatient care services	8% (\$136,200)

Source: IMPLAN, 2021

Induced Agricultural Impact

The last economic relationship modeled through IMPLAN was the induced relationship, the economic impact of household spending influenced by the agricultural industries. In 2021, 2.5% (~\$70M) of the Sanilac County economy was an induced relationship with the agricultural industry. As shown in the table titled “Induced Agricultural Industries” many of the industries reliant on the household spending resulting from the agricultural industries are health care and retail services. Unlike many of the indirectly related industries, no industry with an induced relationship has a high reliance on the agricultural industry. However, in a community like Sanilac County, where there are limited retail services, any change however small is noticeable.

Impact of Farmland Loss

The highly agricultural nature of Sanilac County and Sanilac County’s economy means that the loss of farmland has significant economic and cultural implications. Using IMPLAN, the loss of farmland (only direct agricultural industries

were modeled) was calculated over the past two decades, as shown in the figure titled “Economic Impact of Farmland Loss.” As shown in the figure, a 1% loss of farmland in 2021, would remove roughly \$6.5 million of economic production from the Sanilac County economy. While this only represents 0.21% of the total county economy, even small reductions in the county economy have a substantial impact at the household level, especially for those who are struggling to make ends meet. As the agricultural economy in Sanilac County continues to grow, the greater the economic impact of farmland loss will be.

Importantly, a 1% reduction in farmland is not a loss of one acre. Because Sanilac County is predominantly agricultural land, a 1% reduction in farmland is a substantial amount of land. When calculating the economic impact per acre, the economic impact becomes much less. The acreage of farmland in Sanilac County varies depending on how one categorizes “farmland.” Using the National Land Cover Database, an aerial survey of land cover for the continental United States, it was determined that there are 457,541 acres of farmland in Sanilac County.

Figure 7: Economic Impact of 1% Reduction in Farmland Loss

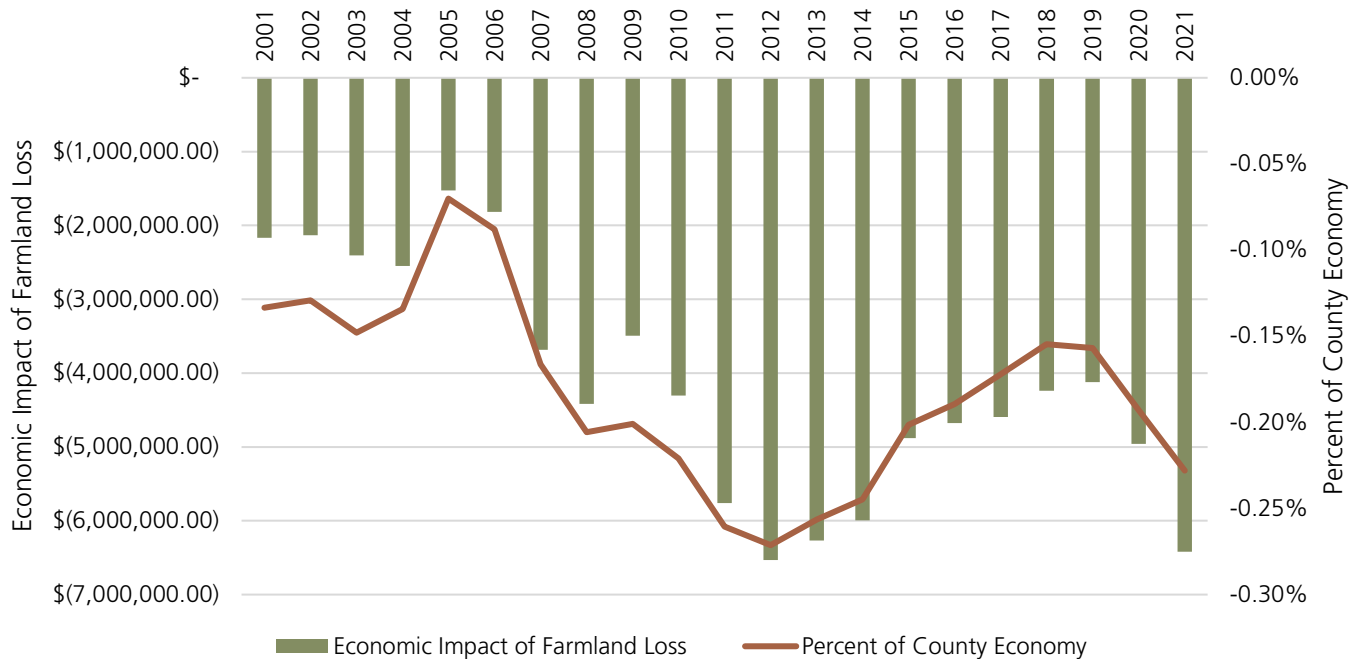
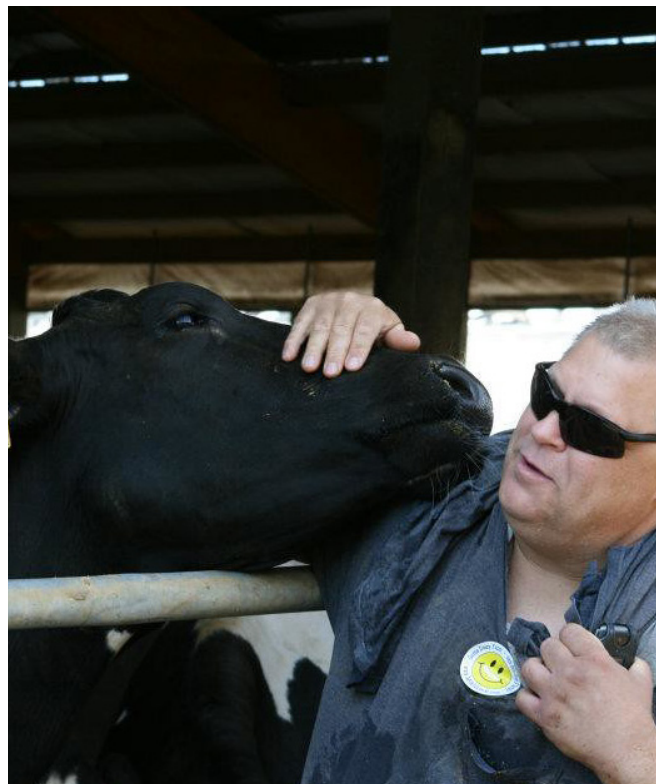


Table 15: Economic Impact of a 1% Reduction in Farmland, 2021

Direct Impact	Indirect Impact	Induced Impact	Total Impact
\$4,382,746	\$1,327,523	\$708,084	\$6,418,353

Therefore, a one-acre loss of farmland would result in an economic impact of -\$1,402.79 to the broader Sanilac County economy (0.00005% of the total county economy).

However, not all farmland is created equal. Some types of farmland are more economically productive than others, so losses of one type of farmland may be more or less economically impactful than others. To show the difference in the economic productivity of farmland, economic multipliers were calculated for each type of agricultural industry in Sanilac County. An economic multiplier is used to estimate how much economic activity is generated by a specific industry. For example, an industry with an economic multiplier of 1.4 would indicate that for every \$1 directly generated by that industry another \$0.40 would be generated elsewhere in the economy by other industries. The agricultural industry with the highest multiplier in Sanilac County is beef cattle ranching and farming. With a multiplier of 1.75, the beef cattle industry almost double the economic returns, county-



Source: Sanilac County

Table 16: Agricultural Industry Economic Multipliers

Agricultural Industry	Economic Multiplier
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	1.75
Grain farming	1.57
Oilseed farming	1.49
Animal production, except cattle and poultry and eggs	1.48
Sugarcane and sugar beet farming	1.43
All other crop farming	1.39
Dairy cattle and milk production	1.38
Vegetable and melon farming	1.37
Greenhouse, nursery, and floriculture production	1.32
Tree nut farming	1.29
Fruit farming	1.28
Poultry and egg production	1.26

Source: IMPLAN, 2021

wide. Understandably, beef cattle ranching is a somewhat intensive farming industry (need for feed, vet care, land, transportation, etc.) compared to the crop industries so it makes sense that the economic multiplier is higher as there are more economic linkages between the beef cattle industry and other industries.

Future Trends in Agriculture Land

Agriculture has been a cornerstone of the Sanilac County cultural identity but shifting national priorities and new technologies have introduced uncertainty into the future of agricultural land use. Two rapidly emerging uses of agricultural land are renewable energy and agritourism.

Renewable Energy

Recently, renewable energy has become a main priority at the federal and state level and now regulation around the impact of renewable energy has become a major flashpoint in Sanilac County. As it relates to land use policy in Sanilac County, the two primary renewable energy uses are solar energy and wind energy.

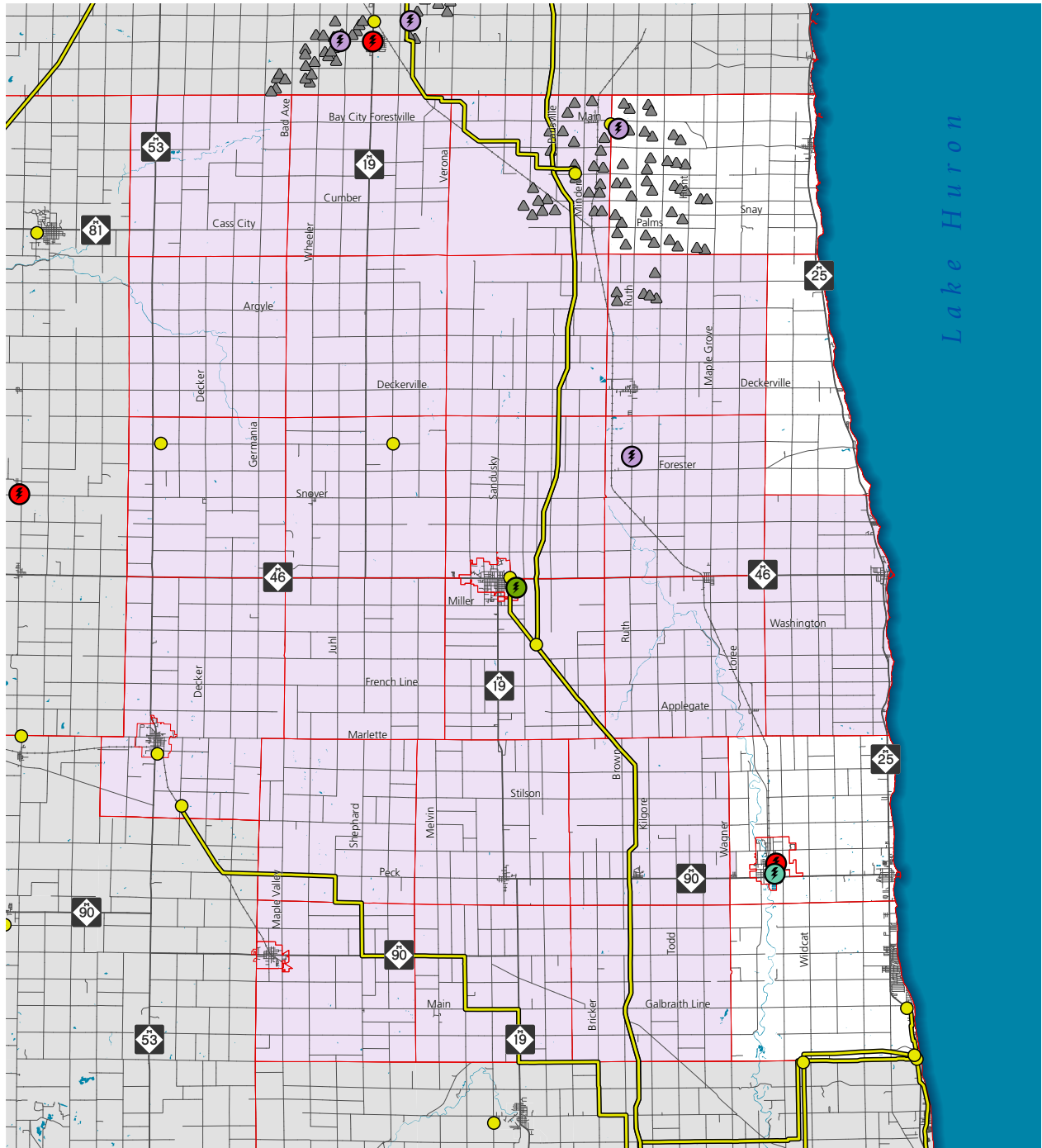
Justice 40

In 2020 the Biden Administration announced the Justice40 Initiative. This initiative is intended to equitably distribute federal investments and

opportunities to disadvantaged communities affected by environmental issues, such as pollution. The investments within the Initiative, which requires 40% of federal benefits be directed to applicable communities, cover investments in clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, remediation and reduction of legacy pollution, and the development of clean water and wastewater infrastructure. Most of Sanilac County is considered a Justice40 community, largely due to the high energy costs relative to household incomes. This designation means that energy developers likely gain access to federal funds and programs if they develop in Sanilac County, making the county an attractive area for renewable energy development.³

As of March 2023, there are two wind farms in Sanilac County, the Minden City Wind Farm and the Michigan 2 Wind Farm. While there are no large-scale utility solar projects in the county, there are nine such projects in the pipeline and one wind project.⁴ These planned projects would generate 1,493 MW of electricity – 7.1% of all renewable energy production currently being planned in the state. Indicating that Sanilac County is highly important for the renewable energy future of the entire state’s energy grid.

Map 4: Energy Infrastructure



Energy Infrastructure

Sources: Michigan Open Data Portal, Sanilac County, EIA

3 Miles
Beckett & Raeder, Inc.

Power Plants

- Biodiesel
- Natural Gas
- Wind
- Petroleum

Infrastructure

- Transmission Line
- Substation
- Wind Turbine

Justice40 Tract

Figure 8: Solar Energy Level of Support

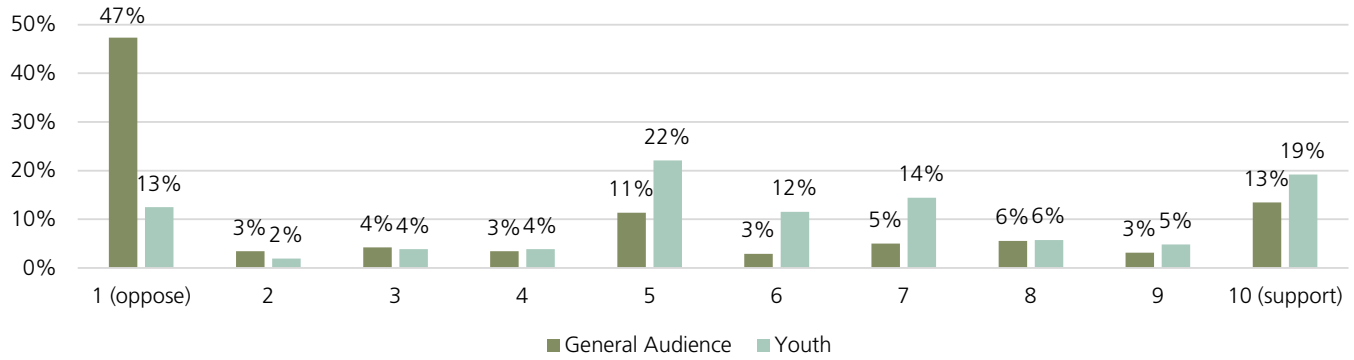
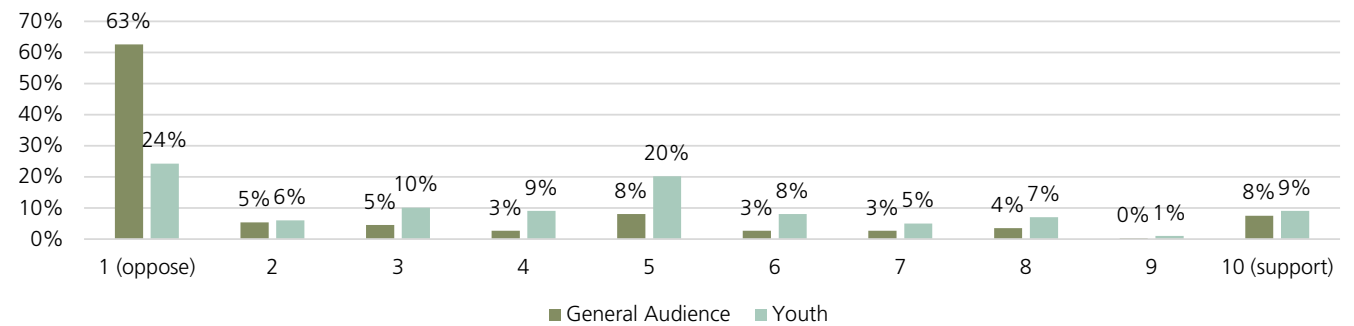


Figure 9: Solar Support, Displace Agricultural Land



Solar Energy

When many people think of solar energy, they think of places like Arizona, California, and Texas, places that receive an abundance of sunlight year-round, not Michigan which experiences a cloudy grey winter for almost half of the year. Despite not being considered a “sunshine state” solar in Michigan produces roughly 70% of the energy that a solar installation in Phoenix, Arizona would.⁵ As technology continues to improve, solar energy systems (SES) become increasingly cost-effective and utility companies across the state have begun to invest heavily in large scale SES. The rapid speed of SES development has left many local communities playing catch-up, only spurring reactionary local policy in regulation in response to a proposed SES project. To be best situated to address the development of SES, local communities need to take a proactive approach to local policy and regulation to avoid creating tension within the local community and legal issues that may arise from creating regulation retroactively.

In Sanilac County, the attitudes on solar energy are mixed, leaning opposed. When asked in the Sanilac County Master Plan survey “On a scale of 1 (oppose) to 10 (support), to what degree do you support large-scale solar energy development in Sanilac County?” the average response was 3.99 indicating a slightly negative attitude towards solar development. Almost a majority of survey respondents (47%), indicated that they were completely opposed to large-scale energy development, with slightly over a quarter (27%) of survey respondents indicating that they support (≥ 7) large-scale solar energy development. However, when the youth of Sanilac County were surveyed, the level of support shifted with the average level of support for solar energy development at 6.1.

Respondents were also asked, “On a scale of 1 (oppose) to 10 (support), to what degree do you support large-scale solar energy development in Sanilac County if it displaces working agricultural land?” When caveated with the displacement of agricultural land, attitudes shifted. The level

of support among the general respondents was 2.8 and 4.4 among youth. This indicates that the relationship between farmland and solar energy development is a point of tension in the community.

Despite the community sentiments around solar energy development, landowners are being presented with offers from utility companies that they cannot refuse. It is estimated that landowners can make \$500 - \$2,000 per acre annually by leasing their land to a utility company which is often higher than annual acreage returns for crop commodities.⁶ Regulations around solar energy development must find the balance between community desire, the financial needs and health of landowners, and the overall impact on the community.

In February 2023, Samsung commissioned a study titled “Economic Impact and Land Use Analysis of Watertown Solar Project” which outlined the economic and land use impact of a proposed solar project in Watertown Township. The report found that the proposed project would create 128 Sanilac County jobs during construction and 4.8 long-term Sanilac County jobs. Long-term the project would contribute \$753,458 to the county economy, annually. The project is planned at 611 acres, resulting in a long-term economic productivity of \$1,233.15 per acre, roughly the same as the per acre productivity of farmland (\$1,402.79). While the broader economic impact is relatively similar countywide, the impact for the landowners and tax roll is more substantial. The study found that the economic returns to farmers (the solar lease payments) are higher than the money earned by crop production on the land. Additionally, over the life of the project, the study estimated roughly \$2.7M in tax revenue for Watertown Township, \$8.7M in tax revenue for Sanilac County, and \$10.7M in tax revenue for the education special assessment districts. In summary, the study highlights that solar utility-scale projects are an incredible economic boom for landowners and the tax rolls, but their countywide economic impact is marginally less than the countywide impact of farmland. However, it is important to note that not all farmland is equally economically productive, therefore when solar utility systems are sited properly they can be net positive contributions to the countywide economy.

Table 17: Megawatts per Acre

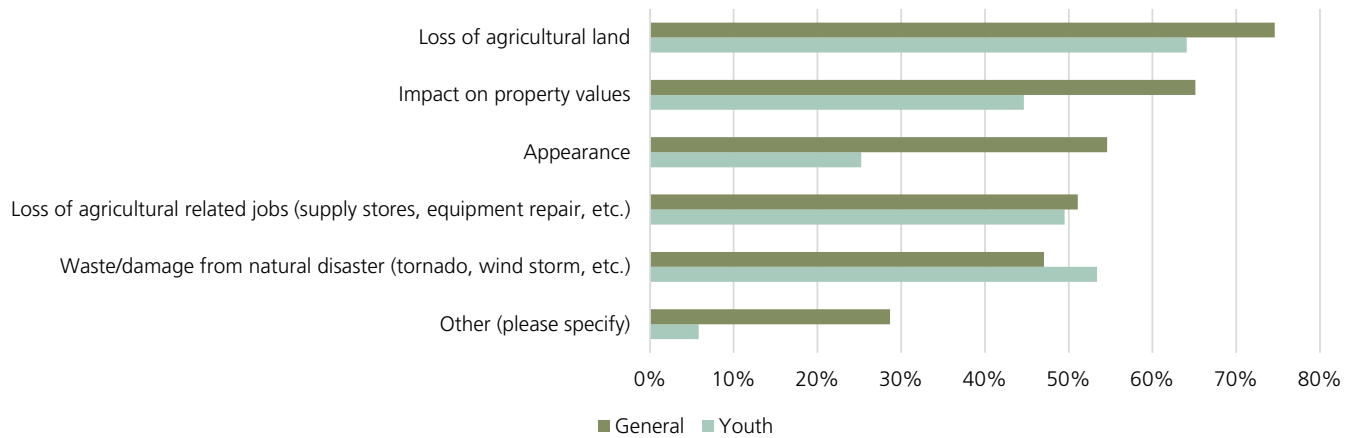
Megawatts	Acres
1 MW	5 – 10
2 MW	10 – 20
20 MW	100 – 200
100 MW	500 – 1,000
200 MW	1,000 – 2,000

The impact of SES varies depending on the type of system. There are three primary types of SES: accessory roof-mounted systems, accessory ground-mounted systems, and utility. Accessory roof-mounted SES are small installations on the tops of roofs and buildings. Generally, they provide electricity for the building that they are located on and do not contribute to the larger energy grid. Accessory ground-mounted systems serve a similar role as accessory roof-mounted SES as they are intended to provide energy production to one or several buildings but instead of being placed on a roof, they are affixed to a pole or structure near the ground. Finally, utility SES are large installations and are generally the principal use on the property as opposed to the two other SESs which were accessory uses to an existing structure or use. The scale of utility SES can range from a few acres to thousands. Policy and regulations for SES vary depending on intent and type of SES. Because of the negligible impact on surrounding properties and accessory status, accessory ground-mounted, and accessory roof-mounted SES, should be permitted in most zoning districts. However, in denser residential areas it is common to only permit roof-mounted SES.

Given the variation in the scale of utility SES, it is common to define small-scale v. large-scale utility SES. Small-scale SESs are considered to be under 2 megawatts (MW) of energy production which is roughly 20 acres. Regulations should differentiate between small- and large-scale utility SES as some regulation provisions may not be applicable at a small scale but may be essential when planning for thousands of acres of SES.

According to those surveyed, the most common concern about solar energy development

Figure 10: Solar Energy Concerns



in Sanilac County is the loss of agricultural land. Other top concerns include the impact on property values, appearance, and loss of agricultural-related jobs. Among youth, appearance, and impact on property values were not major concerns but the loss of agricultural land remained the top priority.

The most common “other” response was the concern about what happens to the solar installations when they are decommissioned and if the materials can be used and recycled. Other common open responses were about the impact on wildlife and the environment.

Solar energy development does not make farmland unfarmable indefinitely, panels and support posts can be removed and the land can be farmed again in the future. However, regulations that specify site design standards for large-scale SES can negatively impact the future viability of the land for agricultural purposes. Landscaping, screening, and stormwater management (common site design requirements for large-scale SES) can jeopardize the future productivity of the land by moving topsoil and disrupting drainage patterns. Regulations should be drafted to maximize the adaptability of the land in the future.

SESs do not completely limit the ability of the land to be used for agricultural purposes. Common “dual uses” allow for the growing of crops or raising of livestock around the SES. Planting groundcover that provides food and habitat for pollinators is another productive use of the land

around SES, as the benefits to pollinators will also benefit the larger ecosystem and nearby crops. When asked if they would be more likely to support large-scale solar energy if it would be grazed by livestock, 49% of survey respondents said yes as did 73% of youth.

There is no one size fits all approach to regulating solar energy systems, the regulations must be crafted with the involvement of the local community and according to the direction that the local community provides. For example, if the local community’s goal is to preserve the rural and aesthetic atmosphere the regulations around SES will look different than if the goal was to support sustainability and energy economic development.

Wind Energy

Like solar energy, wind energy is rapidly approaching Sanilac County. The flat undeveloped land is incredibly productive for wind energy and the proximity to Lake Huron means a steady supply of strong winds coming inland from the lake. Attitudes towards wind energy in Sanilac County are slightly more negative compared to wind energy. In the countywide survey when asked “on a scale of 1 (oppose) to 10 (support) to what degree do you support wind energy development in Sanilac County?” the average response was 3.54, slightly lower than the average support for solar energy at 3.99. However, when the youth of Sanilac County were asked the same question, their average response was 5.97, a much higher level of support than the general population.

Figure 11: Wind Energy Level of Support

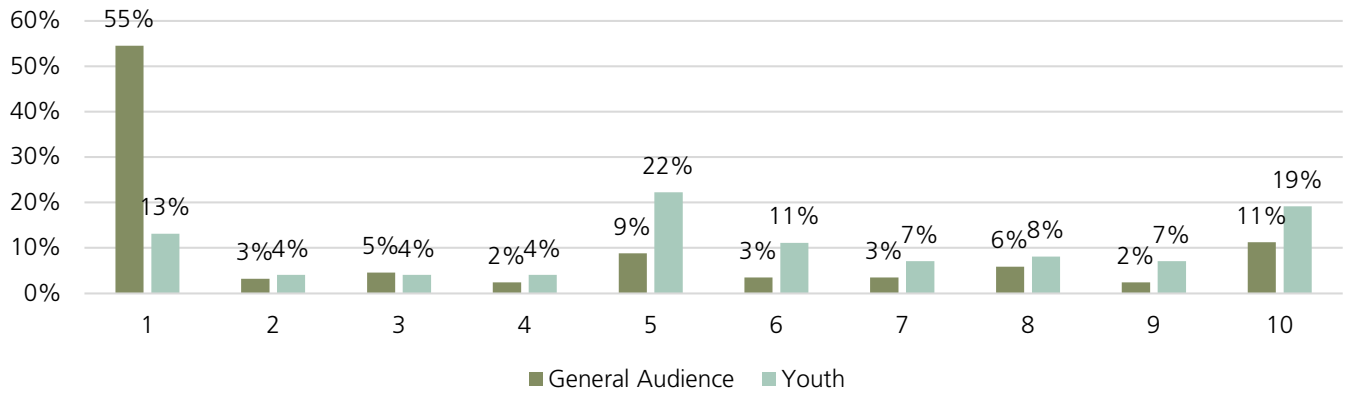
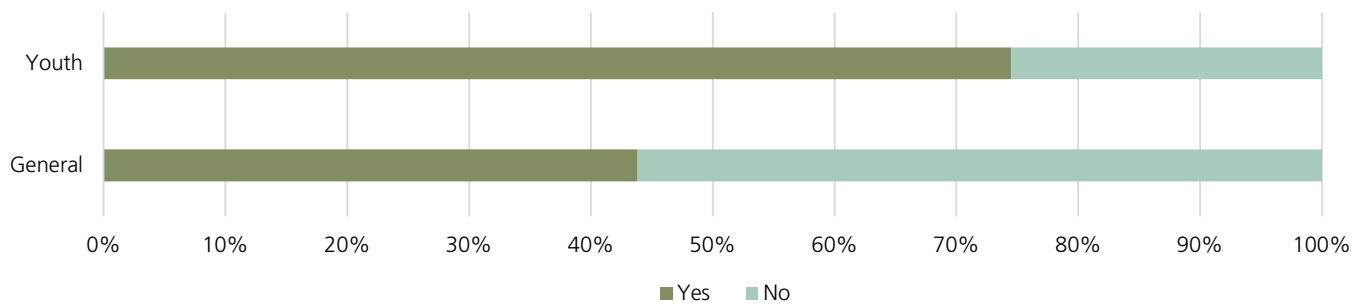


Figure 12: More Likely to Support if Land is Farmed



When asked if they (the survey respondent) would be more likely to support wind energy development if the land around the turbine was farmed, 44% of the general audience responded in the affirmative as did 75% of the youth indicating that if the land was kept as working agriculture it may assuage some concerns about wind energy in the community.

Wind turbines generally fall into two buckets, small-scale household use, and large utility-scale turbines. Small-scale turbines reach a maximum of 150' in height and are used primarily to generate energy for a household or a property. Large-scale turbines range from 300' – 600' in height. As wind turbine technology develops turbines have been getting larger and taller to capture more wind and generate more energy. These taller turbines also make areas that may not have been viable for wind energy development more suitable. Small-scale turbines intended for personal use have little to no impact on neighboring properties and should have minimal regulations and be permitted via special land use. Large-scale wind energy development needs much more through discussion and carefully crafted regulation.

When planning for wind energy development, energy developers look for four primary criteria: good wind energy resources, access to transmission lines, avoiding endangered species, and distance from urban areas. Sanilac County meets all four primary criteria meaning that energy development is an inevitable reality in the county.

There are benefits and concerns about wind energy development at the local level. Primary benefits, according to Dr. Sarah Mills, a renewable energy and farmland preservation researcher at the University of Michigan, include lease payments to landowners, tax payments, and jobs. The increase in revenue to landowners (usually farmers) is often reinvested into the property. For example, the money generated by the land lease has been used for field tiling, the purchase of equipment, or purchasing more land. Additionally, landowners with wind have better succession plans after the farmer is no longer able to operate the farm, the guaranteed money makes farming a less risky business. Payments extend beyond the primary lease-holder. Adjacent property owners also receive some payment.

Table 18: Benefits and Concerns of Local Impacts of Wind Energy

Local Benefits	Local Concerns
Landowner payments <ul style="list-style-type: none"> » Farm reinvestment » Farm succession » Impact beyond farmers 	Wildlife
Tax payments, developer donations	Noise/health
Jobs	Visual impacts <ul style="list-style-type: none"> » Aesthetic » Property values

Source: Dr. Sarah Mills Planning and Zoning for Wind Energy Webinar, Sanilac County Dec. 2022

Wind development is taxed as industrial property, which generally generates higher tax revenue than agricultural land, however, this tax model has run into legal challenges. In lieu of property taxes, some developers may make “in-kind” payments or donations. While wind development generates jobs, it generally generates jobs during the construction phase of the project and not over the long term. The jobs also tend to be occupied by specialized firms that bring workers in from outside the region.⁷

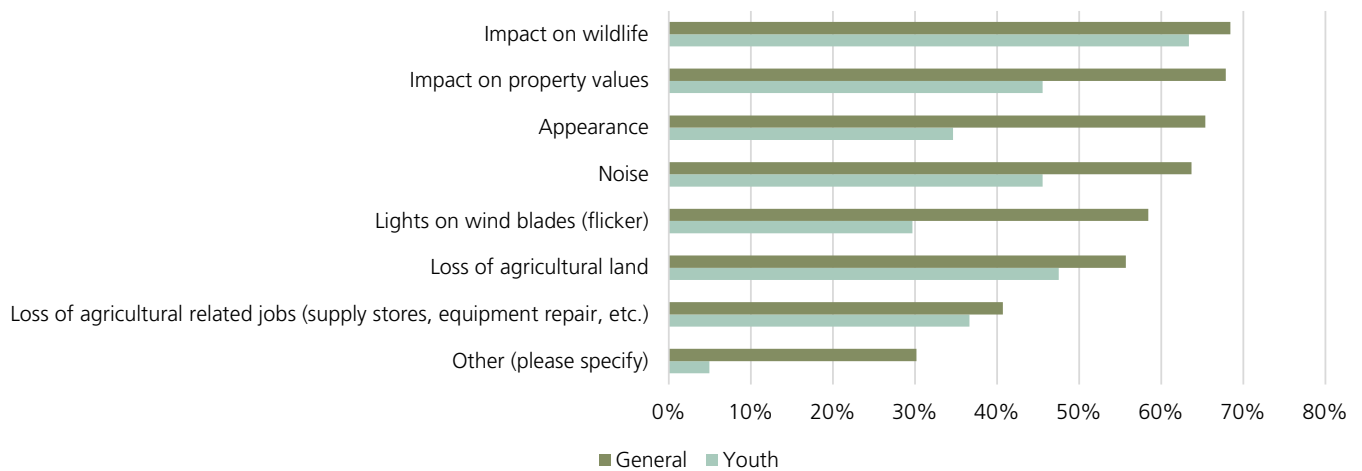
Common concerns are about the wildlife, noise/health, and visual impacts of the turbines. As it relates to wildlife, the top concerns are about how turbines impact birds and bats. On farmland birds and bats do not have ample habitat compared to a wooded area so turbines sited on farmland have less of a wildlife impact compared to

turbines near woodland. Most of the research into the health impacts of turbines connects the annoyance from wind turbine noise to health outcomes. The research has shown that the noise itself doesn’t cause any adverse health impacts, but it is the annoyance from the noise that can lead to negative health outcomes. Finally, the visual impact of turbines is a common concern both the aesthetic impact and the negative impact on property values due to the undesirable nature of seeing a turbine from the property. Turbines are required to have red lights on the tips of the blades to prevent aircraft collisions and often these lights stay on all night; however, there is a technology, that can be required by an ordinance, that only turns on the lights when there is an aircraft nearby. Current research in the United States suggests that there is no/limited impact on property values from wind turbines, however, research from Canada and Europe suggests there may be a relationship between wind turbines and property values.⁸

The main concerns of survey respondents were the impact on wildlife, the impact on property values, and appearance/noise. Overall, youth had fewer concerns about wind energy development and their top concerns were the impact on wildlife, loss of agricultural land, noise, and impact on property values. Common “other” responses were the disruption of the rural atmosphere, challenges in decommissioning, and health impacts on residents.

Like regulating solar energy, there is no one size fits all approach to zoning and regulating wind energy. The desires and direction of

Figure 13: Wind Energy Concerns



the community must guide the crafting of the regulation. All proposed regulations should carefully be crafted in consultation with a municipal land use attorney as there is recent and pending litigation that influences how a community can regulate wind energy development.

Given the challenges in regulating renewable energy, there is no one size fits all approach. In 2023, Sanilac County developed a guidebook that assists local jurisdictions in developing renewable energy zoning language. The guidebook can be found on the County’s website. This guidebook is a supplement to the existing resources from Michigan State University Extension, the “Planning and Zoning for Solar Energy Systems: A Guide for Michigan Local Governments” and “Sample Zoning for Wind Energy.” The Michigan Department of Environment, Great Lakes, and Energy offers funding through the Community Energy Management Program which can be used to update plans, policies, and/or ordinances to include energy systems. The application period ends at the end of May each year.⁹

Agritourism

Another emerging trend in the use of agricultural land is the emergence of agritourism. Agritourism is the touring (tourism) of agricultural areas to view agricultural operations or farms or

participate in agricultural activities. At a basic level apple picking and corn mazes are forms of agritourism. Agritourism can support agricultural operations by providing farmers with an additional source of income while maintaining the agricultural nature of their property. However, local regulations can inhibit agritourism by not permitting accommodations (guest rooms, bed and breakfasts, farm stays) as supplemental uses for agricultural properties. Additionally, local regulations should address special events, such as weddings, as these are a big part of the agritourism industry.

Residential Development

An emerging trend in agricultural areas is the development of “Barndominiums” or “Barndos,” which are essentially a barn-house combination in the same building. Survey results showed general support for Barndos with 50% of respondents saying that this type of housing is appropriate anywhere in the County and 38% of respondents supporting this type of housing in select areas and in limited quantities.

Farmland Preservation

Farmland in Sanilac County is facing development pressure from multiple fronts, most notably renewable energy development. For communities where farmland preservation

Table 19: Prime Agricultural Soils

	Prime Farmland		Prime Farmland if Altered		Farmland of Local Importance		Not Prime Farmland	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
Argyle Township	1,956	8%	14,338	62%	5,191	22%	1,765	8%
Austin Township	3,794	16%	10,033	43%	6,797	29%	2,513	11%
Bridgehampton Township	9,602	41%	8,448	36%	4,782	21%	329	1%
Buel Township	421	2%	18,719	78%	2,951	12%	2,009	8%
City Brown City	76.3	11%	597	86%	23	3%	1	0%
City of Croswell	226	15%	505	33%	543	35%	258	17%
City of Marlette	399	39%	516	50%	105	10%	15	1%
City of Sandusky	3.2	0%	1,328	95%	25	2%	49	3%
Custer Township	42.4	0%	20,345	90%	722	3%	1,478	7%
Delaware Township	7,250	24%	13,969	47%	6,977	23%	1,526	5%
Elk Township	647	3%	18,391	81%	2,596	11%	1,193	5%

Table 19: Prime Agricultural Soils (Continued)

	Prime Farmland		Prime Farmland if Altered		Farmland of Local Importance		Not Prime Farmland	
	Acres	%	Acres	%	Acres	%	Acres	%
Elmer Township	579.9	2%	18,351	79%	1,152	5%	3,174	14%
Evergreen Township	1,959	9%	11,039	49%	6,832	30%	2,880	13%
Flynn Township	1,393	6%	16,542	72%	3,279	14%	1,722	8%
Forester Township	291	2%	8,190	51%	4,544	28%	3,109	19%
Fremont Township	1,302	6%	19,008	85%	1,659	7%	446	2%
Greenleaf Township	2,589	11%	9,617	42%	7,017	30%	3,842	17%
Lamotte Township	1,340	6%	14,161	62%	4,786	21%	2,427	11%
Lexington Township	6,789	29%	9,088	39%	5,336	23%	1,935	8%
Maple Valley Township	866	4%	17,239	78%	1,743	8%	2,250	10%
Marion Township	6,768	29%	8,070	35%	7,929	34%	331	1%
Marlette Township	5,368	16%	22,029	66%	4,782	14%	1,407	4%
Minden Township	3,611	16%	5,820	25%	8,259	36%	5,426	23%
Moore Township	632	3%	17,479	75%	2,821	12%	2,306	10%
Sanilac Township	7,675	29%	7,762	30%	8,667	33%	2,015	8%
Speaker Township	4,231	19%	15,337	69%	1,540	7%	1,007	5%
Village of Applegate	119	3%	364	10%	3,074	85%	77	2%
Village of Deckerville	359	48%	205	28%	176	24%	1	0%
Village of Forestville	191	34%	233	41%	141	25%	1	0%
Village of Lexington	0	0%	652	73%	206	23%	31	3%
Village of Melvin	190	31%	370	60%	54	9%	6	1%
Village of Minden City	332	52%	171	27%	129	20%	1	0%
Village of Peck	55	8%	500	77%	98	15%		0%
Village of Port Sanilac	3	1%	172	32%	225	42%	140	26%
Washington Township	3,169	14%	12,415	54%	4,578	20%	2,986	13%
Watertown Township	96	0%	18,556	83%	1,134	5%	2,646	12%
Wheatland Township	872	4%	15,244	65%	4,887	21%	2,294	10%
Worth Township	5,227	21%	12,043	48%	5,542	22%	2,028	8%

Source: USDA

is paramount, there are several programs and strategies to ensure the long-term preservation of farmland.

The table titled “Prime Agricultural Soils” shows a breakdown of each municipality in Sanilac County according to soil classification. The United States Department of Agriculture rates soils based on their value to agricultural operations. Prime farmland are soils that are best suited for agricultural production, prime farmland if altered are soils that require some change (tiling, etc.) to become prime farmland, and farmlands of local importance are soils not classified as prime farmland, but are important for the local production of crops. While participation in a farmland preservation program is not dependent on soil classification, the table below does highlight that for some communities in Sanilac County, farmland preservation may be a high priority.

PA116 Farmland Preservation Program

The Farmland Preservation Program through the Michigan Department of Agriculture and Rural Development is the main tool to preserve farmland in the state, this program was previously known as the PA 116 Program. The program is a voluntary agreement between a landowner and the State of Michigan in which the landowner agrees to preserve their land for agriculture or

open space in exchange for tax credits from the state. As of 2023, there are 222,065 acres enrolled in the program, roughly 22% of the entire county. However, these agreements are not indefinite and have an expiration date but land owners may enter successive agreements with the state. Additionally, land enrolled in the program is permitted to have solar and wind energy systems installed, given that the energy developments meet the guidelines set by the state.

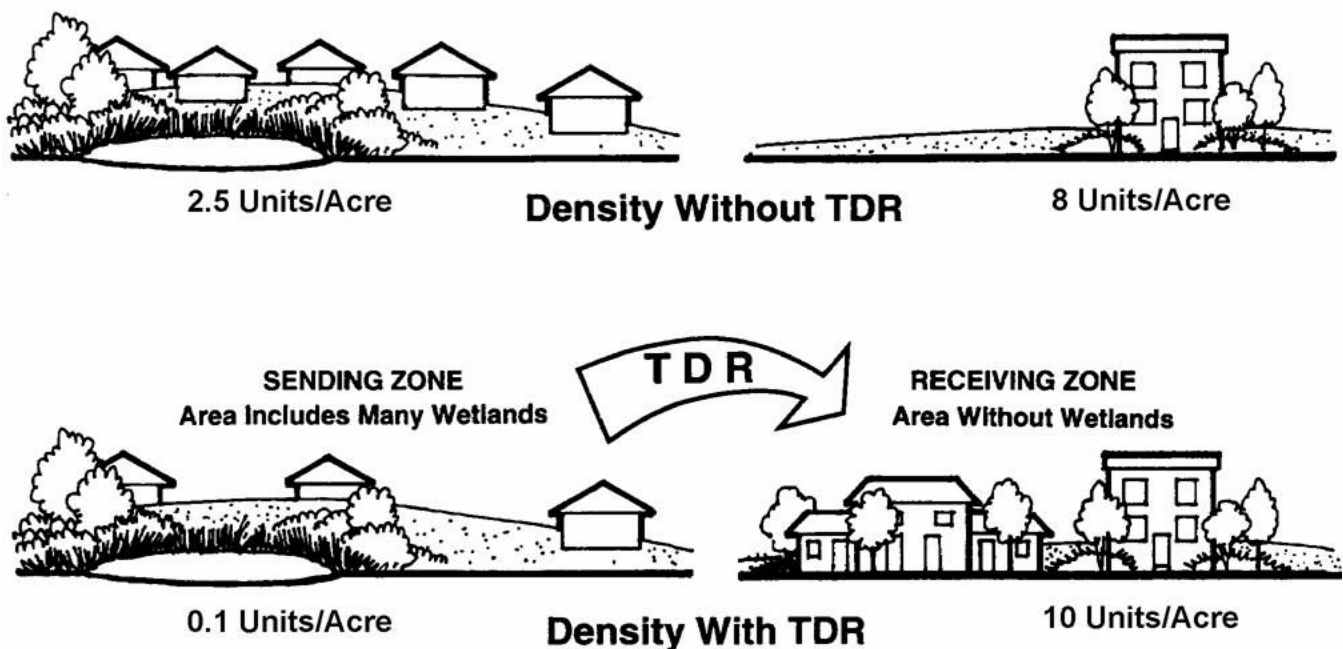
Purchase of Development Rights

Another strategy to preserve farmland is to outright purchase the development rights of property (PDR). PDR programs offer landowners a cash payment in exchange for the development rights of their property. The landowner maintains ownership of the property but is not permitted to develop the property beyond what is stipulated in the PDR agreement. Often PDR programs are run by a non-profit conservation organization.

Transfer of Development Rights

A transfer of development rights program (TDR), a cousin of the PDR, does not remove development rights from a property through purchase but shifts them (transfer) to another property. For example, if a residential developer wants to build a property (the receiving property)

Figure 14: TDR Program



Source: Madison-Morgan Conservancy

at a density greater than what is stipulated in the zoning ordinance they could “buy” that excess density from another (sending) property in the community. That sending property would then be limited in terms of density and could not build at a

density greater than what was transferred to the first (receiving) property. TDR programs need to be outlined in the zoning ordinance and identify the “sending” and “receiving” zones.

Recommendations

- » Publicize the County renewable energy guidebook and help local communities find the assistance they need in adopting renewable energy language.
- » Encourage local jurisdictions to explore agritourism as an economic development strategy and adjust zoning language to allow for agritourism uses (special events, farm stays, etc.).
- » Provide information on the Farmland Preservation Program (PA-116 Program) to interested parties.
- » Cultivate relationships with non-profit conservation organizations and develop a comprehensive PDR program.
- » Encourage local jurisdictions to include TDR language in their zoning ordinances.

Sources

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- 6 Bao, A. “More farmers may lease land for solar projects in Michigan”, Great Lakes Echo, Feb 2018. <https://greatlakesecho.org/2018/02/27/solar-projects-michigan/#:~:text=Under%20agreements%20with%20private%20solar,at%20Michigan%20State%20University%20Extension.>
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- 9 EGLE, Community Energy Management, <https://www.michigan.gov/egle/about/organization/materials-management/energy/rfps-loans/community-energy-management-program>



Source: Sanilac County

Towns & Villages



Source: Sanilac County

Towns and villages are a type of land use limited in space but important in Sanilac County – the smallest geographic transect, accounting for 0.5% of the county and 3,380 acres. The villages of Applegate, Carsonville, Deckerville, Forestville, Melvin, Minden, and Peck are all included in this transect. Towns and villages are small communities with several residential neighborhoods and limited commercial activity – however, these smaller commercial areas cannot meet the needs of the community’s population, leading residents to commute to other communities (primarily smaller cities) for their needs. Additionally, towns and villages often abut rural/agricultural zones and there is a strong connection between agricultural land and interspersed residential development.

Housing and Neighborhoods

Existing Housing Stock

The housing stock in Sanilac County's towns and villages is older than in the core areas of the towns and villages (around the main intersection). Homes in a "farmhouse" style are common, both within denser town center areas and as the towns and villages transition towards rural/agricultural land. Although most homes are in the two-story farmhouse style with attached porches, there are also smaller one-level ranch-style homes. Mobile homes are also fairly common, both in more rural areas and closer to the town center. Most towns are laid out with two primary perpendicular streets, generally, these streets are the main transportation routes people use to travel within the county. Sidewalk connections are minimal in towns and villages – although some towns have limited connections down their two primary streets.

Residential Rehabilitation

Rehabilitation is defined as "the repair, preservation, and/or improvement of substandard homes." In blighted areas, residential rehabilitation creates a cohesive and welcoming environment conducive to reinvestment and renewed success – in addition to improving public health and safety. Some communities in Sanilac County – those with older housing stock, particularly vacant housing stock – could benefit from reinvestment through rehabilitation. Identification of these communities and affected properties is the first step in rehabilitation – subsequently, the county can assist in identifying and applying for funding for municipal initiatives to improve neighborhoods, and undertake removal or remodeling of blighted structures. In communities with extensive blight, a program of municipal demolition may be appropriate to incentivize development and promote community health and safety – this approach has been adopted in other Michigan cities (Brighton, Detroit). Municipal demolition reduces construction costs by removing the demolition cost for the developer of the new construction/rehabilitation. Out of twenty-one communities in Sanilac County, seven have goals for redevelopment, rehabilitation, and infill of existing housing stock.

Residential rehabilitation assistance programs can be administered through local governments, with varied funding sources (commonly, federal funds). Community Development Block Grant programs and the HOME Investment Partnerships Program can fund local communities' administration of low-interest loan programs, accessible for individuals who may be unable to get financing from more traditional routes. Michigan municipalities including the City of Grand Rapids, Washtenaw County, and the City of Royal Oak administer housing rehabilitation programs. Additionally, some municipalities assist homeowners in identifying the necessary repairs to their properties.

The Michigan Economic Development Corporation provides a list of statewide resources available to certain communities for housing stock rehabilitation.¹ The Michigan Weatherization Assistance Program, with federal funding, provides free assistance with energy conservation to low-income Michigan residents. Housing Preservation Grants are also available through the USDA, based on income, for the rehabilitation of low-income rural housing. The Michigan State Housing Development Authority (MSHDA) also has a Property Improvement Program, which provides loans to homeowners with equity in their homes. Additional programs are listed on the MEDC's fact sheet.

Rural homeowners, defined as those in a "very low" income bracket, are also eligible for the federal Section 504 Home Repair program, or the Single Family Housing Repair Loans and Grants program. This program, administered through the USDA, allows homeowners to apply for a loan up to \$40,000 to "repair, improve, or modernize [their] home," or a grant up to \$10,000 for individuals ages 62 and older who would be unable to repay a repair loan.² The USDA's rural programs are targeted for communities with less than 50,000 residents – although final eligibility is determined upon application, the USDA Income and Property Eligibility Site includes Sanilac County in its eligible area.³

Housing Typologies

Missing Middle

Missing middle housing refers to long under-represented, denser forms of housing appealing

to neighborhood scale. Housing density in the United States typically jumps from single-family homes (low density) to mid-size apartment buildings (moderate density), but there is a range of housing typologies between the two. These homes, for a variety of reasons, have not been built at a high rate in the United States. These homes typically can provide housing to more individuals than traditional single-family homes, while remaining consistent in character with existing single-family homes – some types of missing middle housing can be retrofitted in existing single-family buildings (such as mansion apartments).

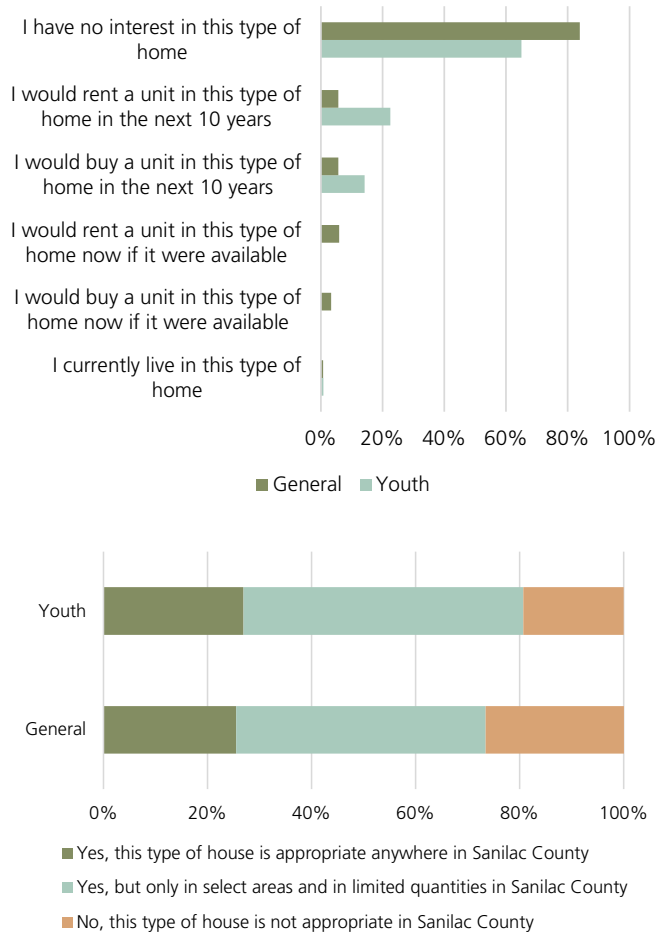
Missing middle housing in Sanilac County is essential for retaining and attracting young workers or recent high school/trade school/college graduates, as a diverse housing stock provides different types of housing for different needs (for example, a single young person may desire a different kind of living space than a family looking for several bedrooms). Within towns and villages, the missing middle housing types most conducive to the existing environments are the less-intense typologies that will fit in well to a rural landscape while still providing a diversity of housing options; appropriate options are described below.

Duplexes, side-by-side

Duplexes are structures, similar in appearance to single-family homes, designed to house two separate, unconnected households. These households may share a feature to connect them, but are otherwise totally distinct; in side-by-side duplexes, the two dwelling units are placed next to each other and therefore share a wall. Side-by-side duplexes are appropriate in communities where existing housing stock is one-level, including communities dominated by ranch-style or other longer homes. This includes the towns and villages in Sanilac County. Additionally, due to the similarity in appearance to single-family homes, side-by-side duplexes are inconspicuous in areas where agricultural land is interspersed with a few residential homes (as with the towns and villages of Sanilac County). Sample zoning language for side-by-side duplexes can be found in the appendix.

The majority of youth and general survey respondents have no interest in living in a side-

Figure 15: Side-by-Side Duplex Survey Results

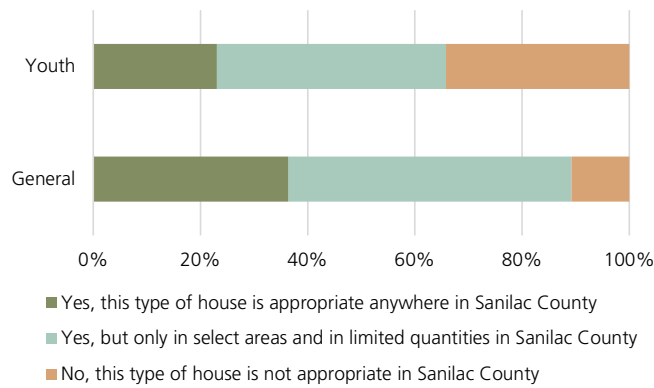
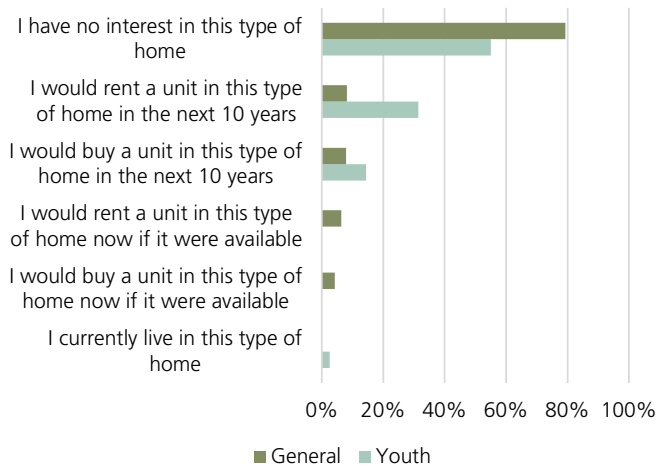


by-side duplex, but generally, youth are more interested in this type of home compared to the general survey respondents. While a majority indicated they would not live in this unit, a majority of respondents in both surveys indicated that this home was appropriate in Sanilac County.

Converted Buildings

Non-residential buildings can be remodeled and converted into residential use, and converted buildings present unique opportunities for housing stock. Building conversion presents upsides both for increased housing availability and historic preservation – rather than buildings falling into disrepair or being demolished, making them available as housing allows them to be maintained and preserved. Buildings that are sometimes converted to residential use include old schools, administrative buildings, and former retail stores – the buildings highlighted for conversion depend on the community’s prioritized historical resources. Key to converting large

Figure 16: Converted Buildings Survey Results



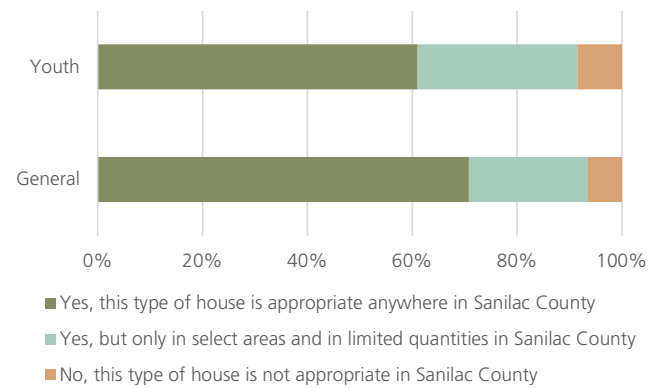
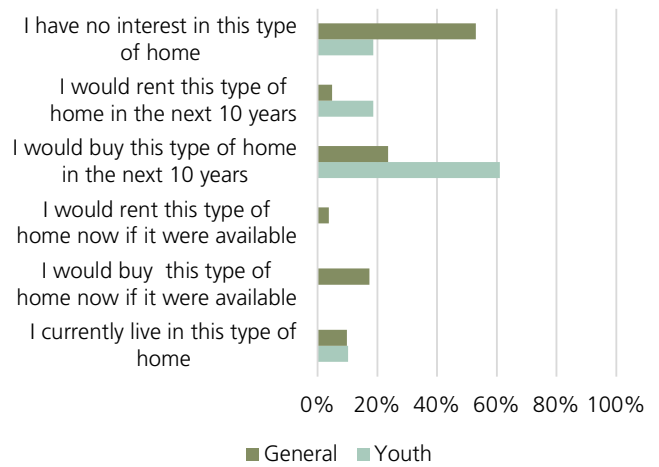
buildings is ensuring that the zoning ordinance permits the density of units that would be created by converting a non-residential building. This would also likely require rezoning the property to a residential use.

Youth survey respondents are more supportive of the idea of converted buildings, especially for rental units and a majority of youth and general survey respondents think that this type of residential building is appropriate in Sanilac County. General survey respondents are less supportive of the idea.

Modular Homes

Modular homes can be purchased from a designated floor plan and are built on-site from factory-built components, sited on a permanent foundation. Modular homes come in a variety of types, both one-level and two-story, with more diverse styles and finishes than in the past. This makes modular homes conducive to different

Figure 17: Modular Home Survey Results



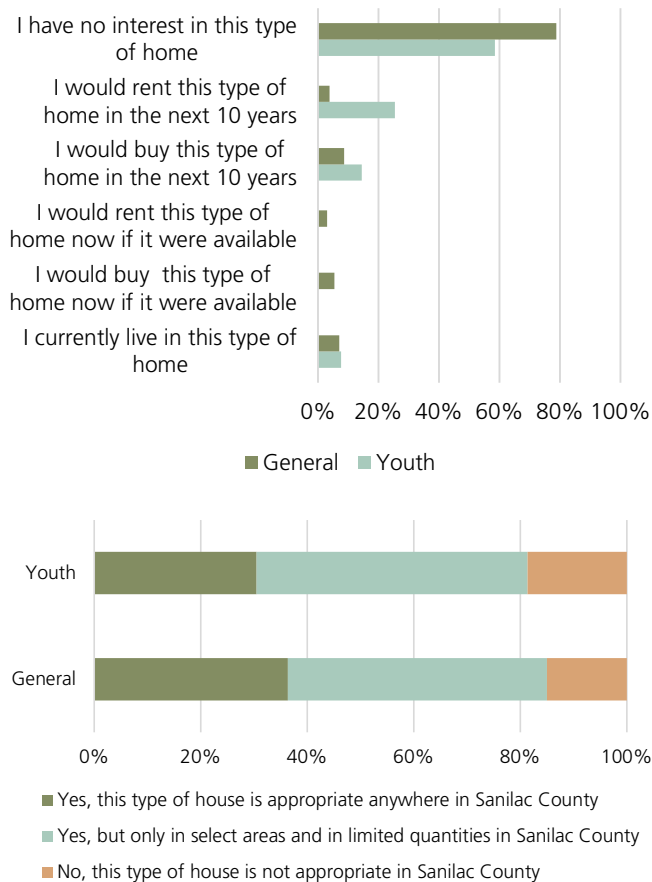
environments, including a rural landscape and situates them as a more affordable alternative to traditional single-family housing construction while producing similar buildings.

Modular homes have high levels of support, compared to the other types of homes included in the survey. A strong majority of youth survey respondents indicated that they would buy a modular home in the next 10 years. Modular homes had almost universal support for providing this type of home in the county.

Manufactured Housing (Mobile Homes)

While modular homes are factory built in pieces and assembled on-site, manufactured homes (mobile homes) are almost completely built in a factory setting. Another key difference is that manufactured homes are bound by a set of federal building codes as opposed to modular homes which are bound by local codes. Manufactured homes, commonly referred to as a

Figure 18: Manufactured Housing Survey Results



Double-wide manufactured housing.

Source: Sanilac County

trailer, single-wide, or double-wide, are seen as a low-cost option in the housing market. However, manufactured homes come with a unique set of trade-offs for their low entry price. Heating and cooling costs for mobile homes tend to be above national averages for other styles of homes and home maintenance costs can quickly pile up for mobile homeowners, as the federal building codes are insufficient in delivering a quality home product. The conditions within mobile home parks themselves also influence the livability of a mobile home, many mobile home parks do not have sidewalks, trees, or parks/playgrounds, leading to very isolated households and few community connections. The conditions within some mobile home parks have led to the moniker of mobile home parks as “rural ghettos.” Local ordinances governing mobile home parks can address some of the industry’s inadequate standards by mandating sidewalks, public space, and vegetation, although such ordinances would need to be filled with and approved by the Michigan

Mobile Home Commission. Finally, mobile homes are classified as personal property like that of a car or furniture and not as real property like a house or land. This leads to the value of mobile homes depreciating over time rather than accruing value like stick-built homes making it challenging for families living in mobile homes to build wealth over time.

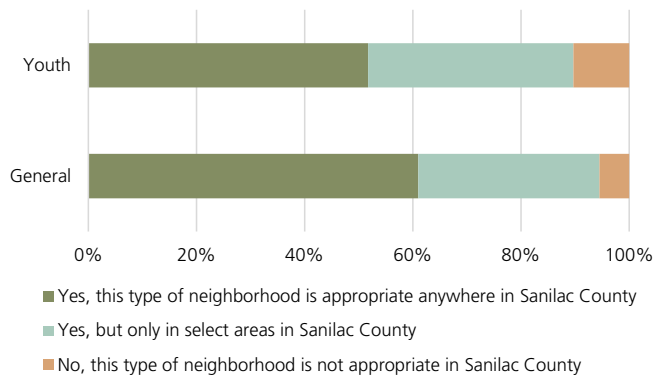
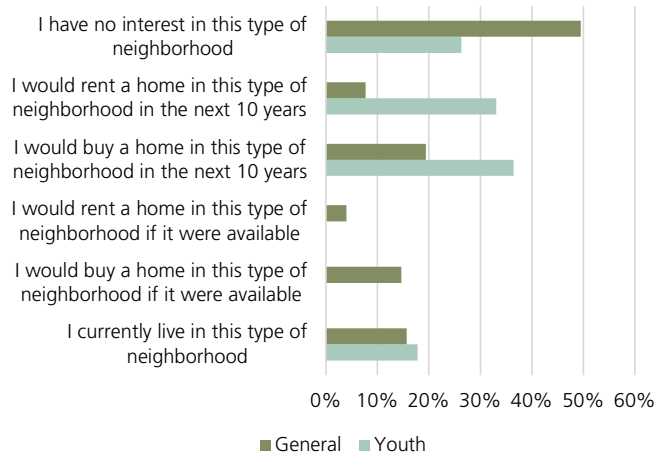
Survey responses on manufactured homes were somewhat mixed. Both a majority of general and youth survey respondents indicated that they have no interest in this type of unit, but a majority of both survey groups said that manufactured housing is appropriate in Sanilac County.

Neighborhood Typologies

Small-Town Neighborhoods

Small-town neighborhoods are primarily comprised of one- to two-story single-family homes, in some cases with interspersed multi-family housing that maintains the appearance of

Figure 19: Small Town Neighborhood Survey Results



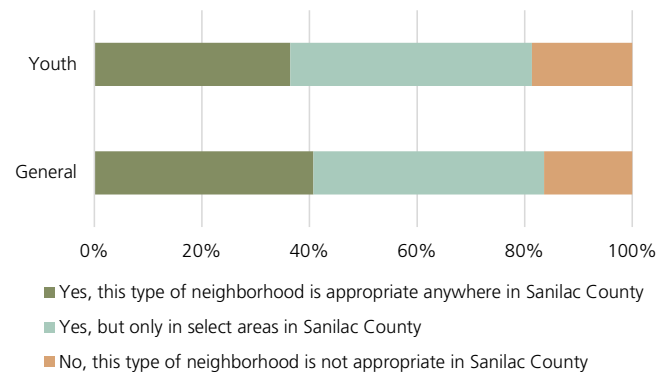
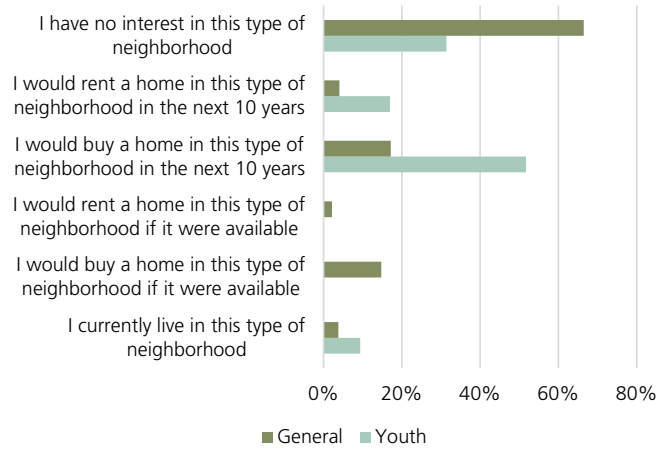
single-family homes. Lots are small in size, with housing densely clustered together and linked by networks of sidewalks. Small-town neighborhoods are typically located on smaller, less-intense roadways with lower speed limits, and roads are conducive to multiple modes of transportation. Additionally, many small-town neighborhoods are lined with street trees to foster a sense of enclosure and provide aesthetic value. Sample zoning standards for small-town neighborhoods are available in the appendix.

Of all the neighborhood types presented in the survey, this type had one of the highest levels of support. This is likely because many existing neighborhoods in Sanilac County are this neighborhood type.

Large-Lot Subdivision

Large-lot subdivisions are clusters of single-family homes (typically large single-family homes) on lots that include an extensive lawn – these lots

Figure 20: Large-Lot Subdivision Survey Results



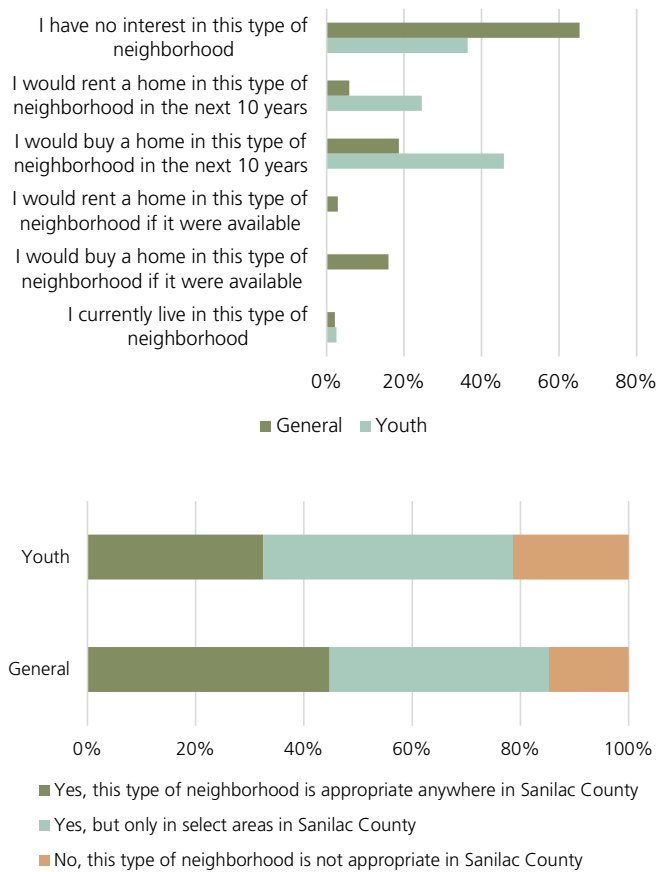
can be as large as several acres. Given the amount of undeveloped land required for the development of large-lot subdivisions, large-lot subdivisions are typically located on the outskirts of a small town or village and border natural or agricultural land. Sample zoning standards for large-lot subdivisions are available in the appendix.

This neighborhood type was one of the most popular among youth survey respondents, compared to the general responses who were less interested in this type of neighborhood. However, a strong majority of both groups stated that this neighborhood is appropriate in Sanilac County.

Conservation Subdivision

Conservation subdivisions are a kind of subdivision specifically focused on protecting vacant land in construction. As a result, subdivisions are modified from traditional

Figure 21: Conservation Subdivision Survey Results



requirements (for example, lot size), with homes clustered together in closer proximity on smaller lots – land, included in that development, that would have otherwise been developed is then preserved in a natural state. In addition to the preservation of the agricultural or rural character of an area, as well as the ecological benefits of retaining open land, this land can also serve as an important amenity for subdivisions. The residents of the subdivision know the land neighboring them will not be developed contributing to a rural and natural environment, which is an incentive to buy within that particular subdivision, and the land can be used for recreation even under development restraints. Therefore, the subdivision can have available, adjacent open land and trails. Sample language for conservation subdivisions can be found in the appendix.

Aligning with previous trends, youth survey respondents were more interested in the suburban large lot neighborhood type than the general survey respondents. Like all of the suburban-style neighborhoods presented in the survey, a strong number of respondents thought that this neighborhood type was appropriate in the county.

Concurrency

Concurrency refers to the planned phasing of adequate facilities for the city’s housing and commercial needs – specifically, as a city grows and expands. Some municipalities require concurrency to be planned, or implemented before buildings can be constructed in an area. Depending on the municipal regulations, this can be the responsibility of the developer or can be done by the local government and subsidized by the developer. Common utilities planned during concurrency include water, sanitary and/or stormwater sewer, power, and roads. Twelve out of twenty-one communities in Sanilac County have goals in their master plans related to concurrency.

Concurrency goals can be achieved through careful review of projects and existing infrastructure, as well as new development requirements when infrastructure needs are not met. Inventory of the current capacity of water, sewer, and power infrastructure is paramount to ensuring that new development either has the adequate infrastructure or is required to build it in advance of building. Additionally, close collaboration between municipalities, developers, and homeowners, to clearly convey requirements, is necessary. Sanilac County can facilitate discussions between municipalities where development may be crossing jurisdictional lines.

Economic Development

Commercial Nodes

A commercial node is the “hub of commercial activity” within a small town or village.⁴ Commercial nodes have a variety of uses combined in one distinct area: dining establishments, retail, offices, and personal services. Commercial nodes are effective because they place necessary amenities within close proximity. Therefore, businesses can take advantage of people who may be traveling to the area for other businesses and people can access several businesses and services without having to travel to several places. With adequate placemaking efforts and amenities, commercial nodes not only incentivize commerce but can serve as a community center – with appealing public spaces and gathering places.

Commercial nodes are best located in the center of a town, where there exists a “convergence of points that results in an accentuation or ‘bulge’ of activity.”⁵ Within the majority of small towns and villages in Sanilac County, commercial nodes are most appropriate at the two primary intersecting roads. Additionally, commercial nodes are best placed within communities with adequate density to support them. For small communities that are readily accustomed to going to a neighboring town for certain functions (e.g. if there is a large grocery store ten minutes away), commercial nodes can be more limited in scale and tailored to the needs and desires of the community.

Historic Preservation

Historic preservation works to preserve particular structures or neighborhoods, or distinctive elements of a city (such as architectural elements) as a city grows and changes, through the prioritization of key sites within a city. Historic preservation is important in maintaining the “feel” of a community, within communities that are undergoing revitalization and redevelopment efforts, historic preservation is key: both to retain the historic elements of the community and to provide a context for future efforts to ensure they remain consistent with the community’s historic character. Historic preservation is also important for communities that are struggling economically, to ensure that important places in a community remain well-maintained and have the potential

to draw people to the community in the future. Unique features from a community’s past, when restored and well-maintained, have strong visual appeal to define a community in the future – ensuring that landmarks are sustained gives small cities points of interest, which can draw in visitors and create a sense of place for residents.

Additional information about historic preservation, including potential economic benefits to the community and assistance in completing preservation projects, can be found in the Small Cities chapter.

Placemaking

Placemaking is the principle of designing spaces that are defined, welcoming, and functional for those who utilize them. For public spaces, increasing appeal in this way is particularly important to draw individuals into a space – this creates an opportunity for greater community building, as well as the overall social cohesion of the community. It also provides greater opportunity for economic activity by encouraging individuals to linger for longer periods of time in a space – since placemaking often includes multiple uses within walkable distance, the individuals utilizing a public space are likely to support the surrounding businesses. The Project for Public Spaces defines placemaking considerations into four considerations: sociability, uses and activities, access and linkages, and comfort and image.⁶ Placemaking improvements can often be experimented with through “lighter, quicker, cheaper” tactical urbanism, with a trial of temporary amenities like sidewalk cafes or interactive public art – the community’s reaction can show whether these uses would be worthwhile to implement permanently.

Often placemaking improvements are done in conjunction with larger municipal engineering projects like street reconstruction or utility improvements and the costs of placemaking can be absorbed into those efforts. Additionally, the Michigan Economic Development Corporation’s Public Spaces Community Places program is a crowdfunding initiative that assists local communities in fundraising for placemaking improvements and provides matching funds from the State. In Sanilac County, the Croswell Ice Rink, Sandusky George Haupt Memorial Park,

Table 20: Placemaking Matrix

Placemaking Type	Rural Agricultural Zone	Towns and Villages	Small Cities	Shoreline
Benches		✓	✓	✓
Bike infrastructure	✓	✓	✓	✓
Green space	✓	✓	✓	
Markets and fairs	✓		✓	✓
Public art		✓	✓	✓
Shared streets			✓	
Sidewalk cafes			✓	
Street lighting		✓	✓	✓
Street trees		✓	✓	
Temporary activity spaces	✓	✓	✓	✓
Transit connections	✓	✓	✓	✓
Water feature			✓	✓
Water fountains		✓	✓	✓
Wayfinding signs	✓	✓	✓	✓
Well-connected sidewalks		✓	✓	✓



Benches

Source: TimberForm Site Finishings

and Sandusky Pavilion at Diamond Trail Park all successfully crowdfunded and received matching funds from the state for their respective projects.

Benches

Including benches as a placemaking measure encourages individuals to linger in spaces, encouraging commerce and encouraging the formation of a relationship with a place -- whether a public park, main business district, or shoreline park space. Benches also serve as an accessibility measure for individuals with limited mobility and well-placed benches increase the level of comfort in utilizing a space, with knowledge that a place for rest is available.

Bike Infrastructure

There are varied measures to ensure that individuals can commute to and utilize a space, using a bicycle as their primary mode of transportation. These include adequate and secure bike parking, small workstations, and the availability of air pumps. The promotion of bicycling encourages placemaking by allowing individuals to have a closer relationship with their surroundings by moving at a slower pace and



Bike infrastructure - bike parking

Source: Strong Towns



Bike infrastructure - bike lane

Source: Momentum Mag

noticing things (sights and sounds) that they may not, necessarily, in a car. Infrastructure to ensure that bicyclists are well-protected as they travel (for example, separated trails or protected bike lanes) also works to develop a sense of place and encourage bicycling – these routes can be specifically routed through scenic areas, such as shorelines, or areas in which a community wants to encourage greater traffic.

Green Space

Dedicated green space encourages individuals to create their own uses within the space, such as using a public park to read, sunbathe, or play a game. Green space can also be utilized to host pop-up events, including markets and fairs.

Markets and Fairs

Markets and fairs are events targeted to sell a variety of merchandise that occur at a specific time. Markets and fairs can be seasonal – for example, focused on farmers' goods and fresh produce, holiday gifts from local artisans, summer carnival fairs, or with seasonal events (such as autumn fairs). They draw individuals to a particular area for the purpose of commerce, and encourage local business, particularly if the market takes place near an area with desired growth – for example, within a downtown district.

Public Art

Public art can come in a variety of forms conducive to the surrounding environment – whether this constitutes public murals, public sculptures, or interactive public art (such as a public checkers board). The appropriateness of a



Greenspace

Source: Wikipedia



Markets and fairs

Source: Wikipedia



Public art

Source: Strong Towns



Shared streets

Source: TheCityFix Learn, WRI Ross Center for Sustainable Cities



Sidewalk cafe

Source: Richmond, VA



Street lighting

Source: Bloomberg



Street trees

Source: Bloomberg

particular kind of public art depends on a variety of factors – the use of the space, the surrounding color palette, and whether the public art is meant to be the focal point of a particular space. In the right form, public art constitutes an opportunity for community engagement by stopping to examine the art piece.

Shared Streets

Shared streets are the designation of a particular street – for a short period of time, a recurring period of time such as a certain day of the week, or permanently if desired – to share multiple modes of transportation. Bicyclists and pedestrians are able to utilize the full extent of the street, and residents can engage in other activities within the street – for example, games. This can but does not need to, include the closure of a street to cars – if a street remains open to cars, there can be a slowing of traffic.

Sidewalk Cafes

Sidewalk cafes are the extension of restaurants within a commercial district, specifically within a downtown area, into the adjacent public sidewalks. Specific platforms for seating can be established. Individuals patronizing restaurants can sit outside and interact with the surroundings, including community-building through interactions with other individuals walking past.

Street Lighting

Street lighting is both a safety measure and a placemaking measure – ensuring spaces are well-lit at night encourages their safe use beyond daylight hours. Streetlights can create a desirable ambiance, encouraging individuals to spend time in a space.

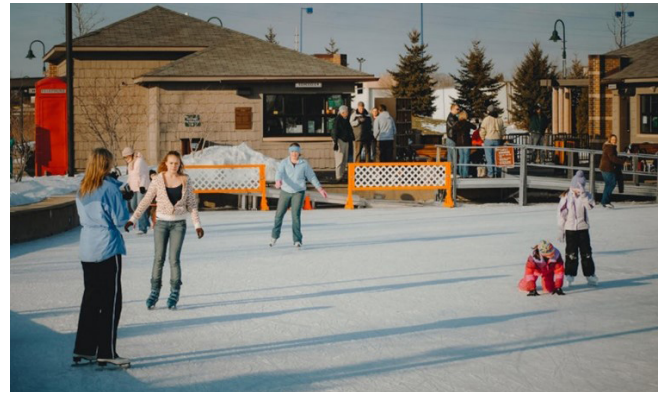
Street Trees

Street trees foster a sense of safety by the creation of a canopy, as well as mitigating urban heat island effects created by the growth of a city. Street trees benefit local governments through stormwater control while creating green space that is calming and appeals to individuals to spend greater time outdoors on their neighborhood streets.



Temporary Activity Spaces

Source: Strong Towns



Temporary Activity Spaces

Source: Discover Kalamazoo

Temporary Activity Spaces

Temporary activity spaces utilize public space in a similar way to markets and fairs – by creating one attraction meant to draw people into an area for an activity. Unlike markets and fairs, this does not need to be specifically commerce-oriented but can be a method of public engagement nonetheless – for example, hosting a community ice rink during the winter or setting up a street hockey facility. Shared streets can be one kind of temporary activity space. Individuals are encouraged to use public spaces to participate in communal activities and create community memories.

Transit Connections

Transit connections are the method by which all individuals can gain access to a community. Transit planning can be focused on areas in most need of service, that could benefit those desiring to greater engage with the community (for example, those in a particular subdivision) – and stops can be targeted to identified commercial districts or areas of a small city, village, or shoreline area.

Water Feature

A water feature can serve as a calming focal element while encouraging individuals to interact with a space (whether through throwing pennies in the fountain, sitting on its edge, or cooling off on a hot day). Water features have varied levels of interactivity – with larger elements such as splash pads serving as community recreational elements, while smaller elements such as fountains can be a form of public art.



Transit connections

Source: Politico



Water feature

Source: Wikipedia



Water fountain

Source: Elkay

Water Fountains

Water fountains allow individuals to stay safely well-hydrated and to cool off on hot days, as well as to stay hydrated during exercise in public parks. Individuals are able to stay in public areas longer when they are thirsty, without having to leave a particular area to find water for themselves, or their pets if pet water fountains are included. Water is also provided to individuals at no cost, which is a welcoming service to residents and visitors.

Wayfinding Signs

Wayfinding signs help visitors and residents alike to navigate to community focal points, and help familiarize individuals with their surroundings. Wayfinding signs encourage individuals to safely explore new areas of the community.



Wayfinding

Source: City of Hattiesburg

Well-Connected Sidewalks

Well-connected sidewalks, similar to bike infrastructure, allow individuals to navigate a community on foot, encouraging them to notice things that they may not have necessarily if they navigated by car. They also serve as an equitable measure, as individuals who do not have car access are still able to enjoy the community's amenities.



Well-connected sidewalks

Source: Where the Sidewalk Starts

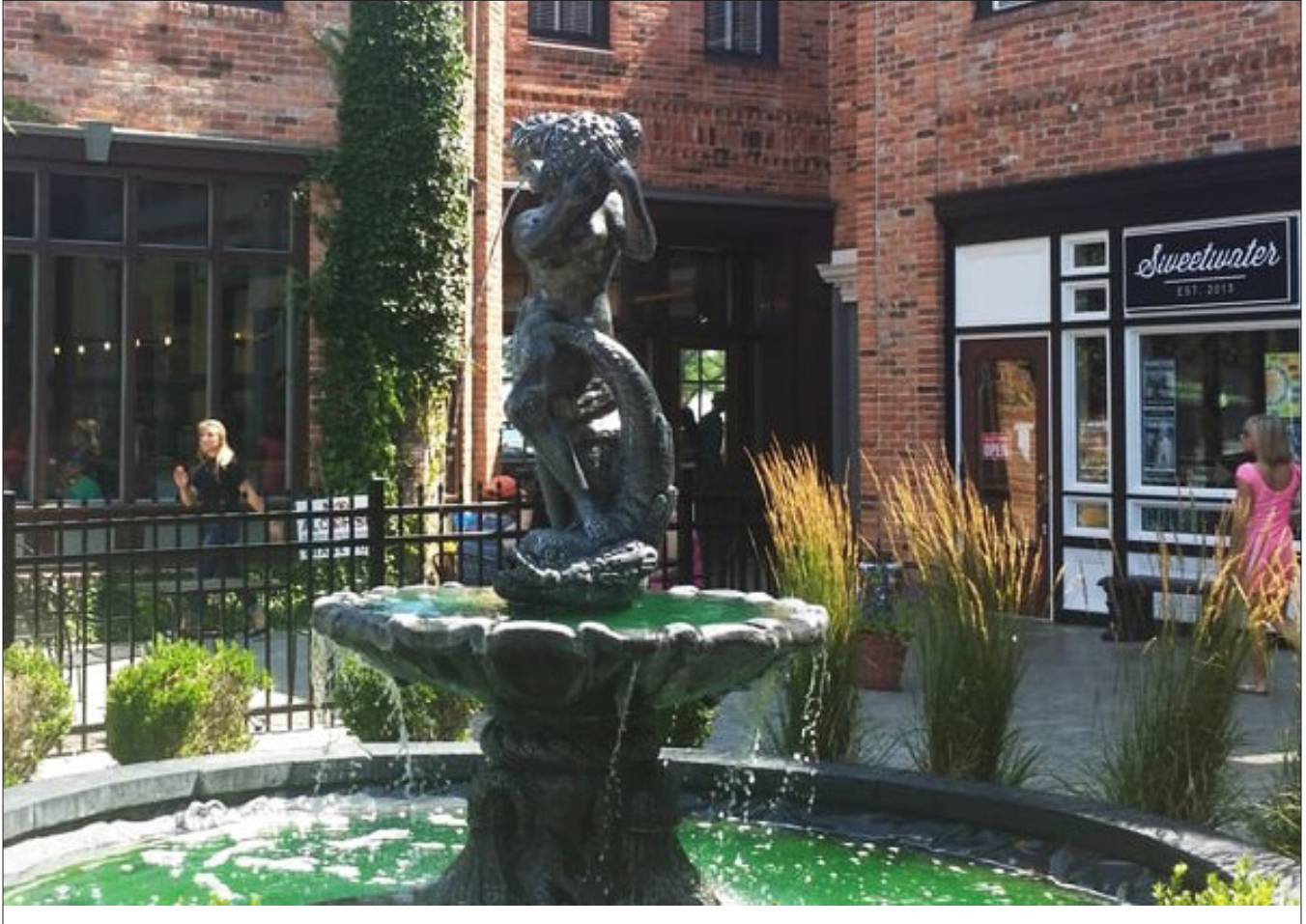
Recommendations

- » Utilize applicable funding programs to support residential rehabilitation and inform properties owners about available funding.
- » Encourage communities to adopt applicable missing middle housing language in their zoning ordinances.
- » Encourage communities to adopt regulations to expand applicable neighborhood typologies.
- » Facilitate discussions about concurrency between municipalities where development may be crossing jurisdictional lines.
- » Encourage communities to adopt placemaking strategies in major commercial districts or corridors and provide financial resources when appropriate.

Sources

- 1 Michigan Economic Development Corporation, Michigan Resource Guide, Single-Family Home Repair Programs, <https://www.miplace.org/48e067/globalassets/documents/cdbg/resources/single-family-home-repair-programs-resource-guide.pdf>
- 2 USDA, Single Family Housing Repair Loans and Grants Fact Sheet, https://www.rd.usda.gov/sites/default/files/508_rd_fs_rhs_sf504homerepair.pdf
- 3 USDA Rural Development, Single Family Housing Direct Property Eligibility Map, <https://eligibility.sc.egov.usda.gov/eligibility/welcomeAction.do?pageAction=sfpd>
- 4 Envision Oak Point, Plano TX, "Commercial Node," <https://content.civicplus.com/api/assets/8cd48e35-fa87-43c0-a608-0849517dc88b?version=0&q=e6300b36-8010-718e-68d3-f6115bfeb202>
- 5 Mid-North Indianapolis Commercial Node Study, <https://www.indymidtownmagazine.com/wp-content/uploads/2019/11/FINALMidNorthCommercialNodeStudySM.pdf>
- 6 What Is Placemaking? Project for Public Spaces, <https://www.pps.org/category/placemaking>

Small Cities



Source: Sanilac County

Small cities are larger than towns and villages and comprise 1.3% of the county's land use (8,018 acres). Within the transect's classification of land uses, small cities have more residential neighborhoods, as well as larger employers and more community resources. Small cities have a clearly defined commercial center and can meet the basic needs of the entire population – constituting economic and social centers despite having a relatively small land footprint.

Housing and Neighborhoods

Existing Housing Stock

Homes in small cities are overwhelmingly single-family, with occasional duplexes and multi-family developments interspersed. Neighborhoods within small cities have greater diversity than those in towns and villages and have more neighborhood amenities (parks, sidewalks, etc.). Most neighborhoods are primarily comprised of single-level (ranch or bungalow style), older homes on large lots. Newer or remodeled homes have larger buildings (including two-level colonial or Cape Cod-style homes) with more visible ornamentation. Neighborhoods that have more recent updates to their housing stock have smaller, narrower lots, with more ornate homes in closer proximity – these homes were generally constructed earlier (most in the 1910s) but appear newer than the single-level homes (generally built in the 1940s and 1950s). Neighborhoods are connected in a grid system, with sidewalk and pedestrian connections on the street-facing side of homes. For neighborhoods further out from the core of the community, sidewalk connection is more intermittent and less well-connected.

Residential Rehabilitation

Rehabilitation is defined as “the repair, preservation, and/or improvement of substandard homes.” In blighted areas, residential rehabilitation creates a cohesive and welcoming environment conducive to reinvestment and renewed success – in addition to improving public health and safety. Some neighborhoods in Sanilac County – those with older housing stock, particularly vacant housing stock – could benefit from reinvestment through rehabilitation. Identification of these neighborhoods is the first step in rehabilitation – subsequently, the county can assist in identifying and applying for funding for municipal initiatives to improve neighborhoods, and undertake removal of blighted structures.

The Towns and Village chapter provides more information on residential rehabilitation.

Housing Typologies

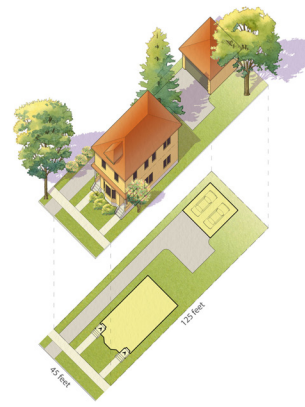
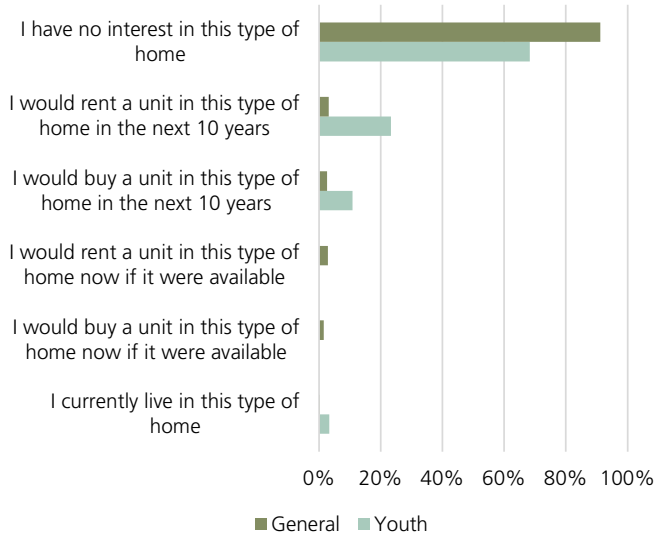
A healthy housing stock is a diverse housing stock, with homes varying in size, condition, typology, and age. However, most of the housing stock in Sanilac County’s small cities is fairly homogenous, dominated by single-family homes. Single-family homes, while still a desirable option for many people and families, are rising in costs for both purchase and construction. This is keeping some people from entering the housing market and limiting the number of new housing units being built. Additionally, non-single-family homes are rising in popularity for young people (under 30) and for those who are aging out of their single-family homes and in need of elder care.

Missing Middle

Missing middle housing refers to long under-represented, denser forms of housing appealing to neighborhood scale. Housing density in the United States typically jumps from single-family homes (low density) to mid-size apartment buildings (moderate density) but in reality there is a range of housing typologies between the two. These homes, for a variety of reasons, have not been built at a high rate in the United States, hence the “Missing Middle” moniker. These homes typically can provide housing to more individuals than traditional single-family homes, while remaining consistent in character with existing single-family homes – some types of missing middle housing can be retrofitted in existing single-family buildings (such as mansion apartments).

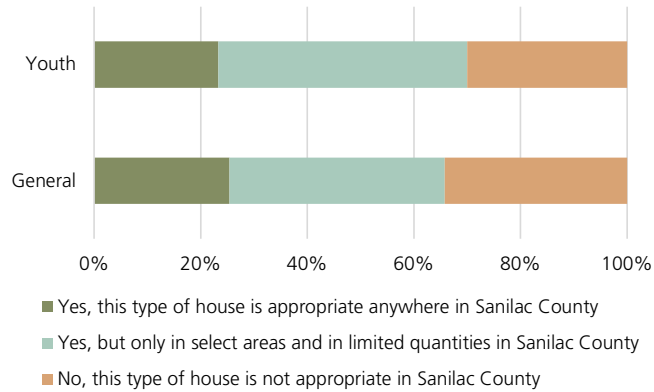
Missing middle housing in Sanilac County is essential for retaining and attracting young workers or recent high school/trade school/college graduates as a varied housing stock provides different types of housing for different needs (for example, a single young person may desire a different kind of living space than a family looking for several bedrooms). Missing middle is also essential for seniors to age in place in Sanilac County – the construction of more multi-family developments such as triplexes, courtyard homes, and more can allow individuals who cannot (or do not wish to) maintain their own single-family home to live independently.

Figure 22: Stacked Duplex Survey Results

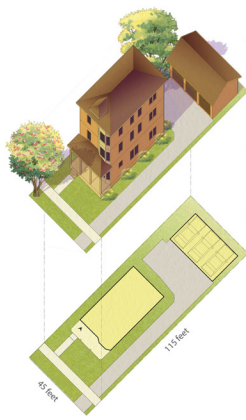


Duplexes, stacked

Stacked duplexes are structures that can house two distinct households while maintaining the appearance of a single-family home, with one household on an upper floor and another household on a lower floor. Stacked duplexes are appropriate in communities and neighborhoods that are predominantly comprised of two-story single-family homes. Implementing stacked duplexes in Sanilac County’s small cities will allow cities to increase their housing stock and tax base while limiting the need to expand municipal limits or infrastructure and maintaining the feel of a single-family neighborhood. Sample zoning language and dimensional standards for duplexes are available in the appendix.



Youth survey respondents generally are more in favor of living in stacked duplexes, identifying it as a preferred rental opportunity. The vast majority of general survey respondents had no interest in this type of unit. Despite the lack of interest from survey respondents, a majority agreed that this type of residential building is appropriate in Sanilac County.



Triplexes

Triplexes are structures housing three separate and distinct households – either side-by-side, giving the appearance of three adjoining single-family homes, or stacked, with households occupying different floors or levels. Triplexes are appropriate for communities looking to increase available housing stock due to demand or affordability and have a moderate level of existing housing density. Neighborhood fit also determines where triplexes are appropriate – stacked triplexes are comparable in size to a large single-family home, whereas side-by-side triplexes would fit a neighborhood footprint with narrow lots and smaller homes. Permitting triplexes in Sanilac County’s small cities will allow cities to increase their housing stock and tax base while limiting the need to expand municipal limits or infrastructure, and allowing for the retrofit of triplexes into districts with existing large single-family homes. Sample zoning language and dimensional standards for triplexes are available in the appendix.

Similar to the stacked duplex, the majority of youth and general survey respondents had no interest in living in a triplex. Notably, youth interest in renting a triplex was slightly higher than renting a stacked duplex. While a majority of respondents agreed that this type of building is appropriate in Sanilac County, there was less support compared to the stacked duplex, likely due to the higher density/bulk of a triplex.

Figure 23: Triplex Survey Results

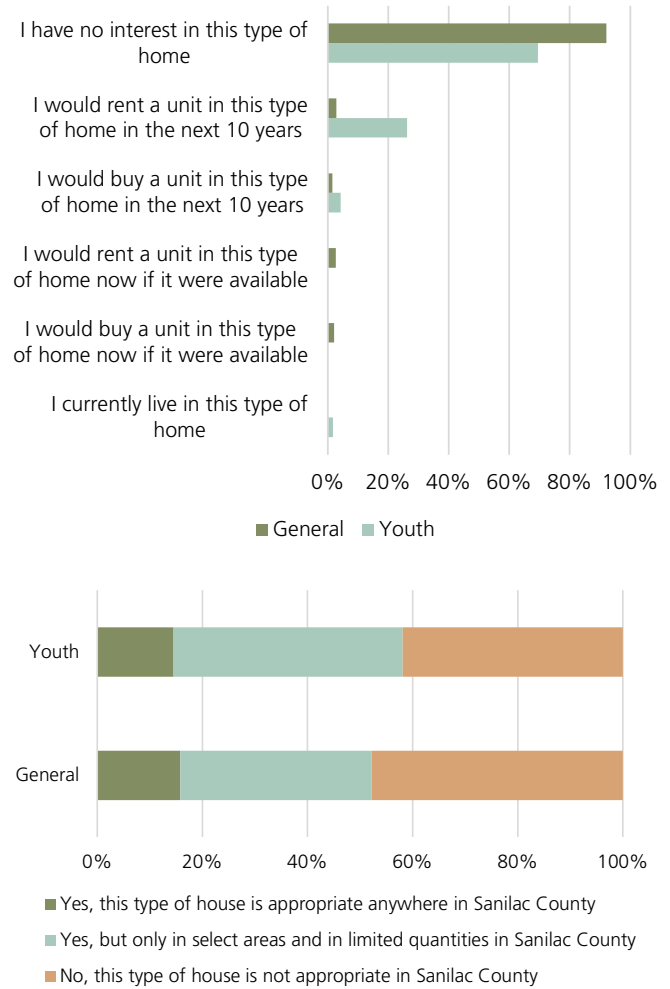
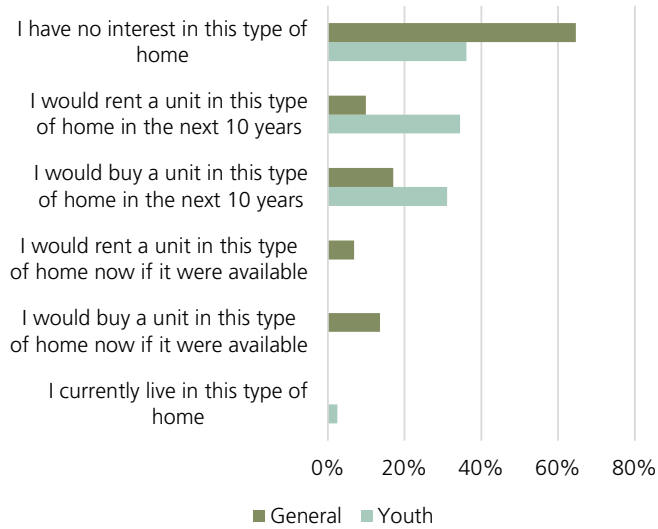
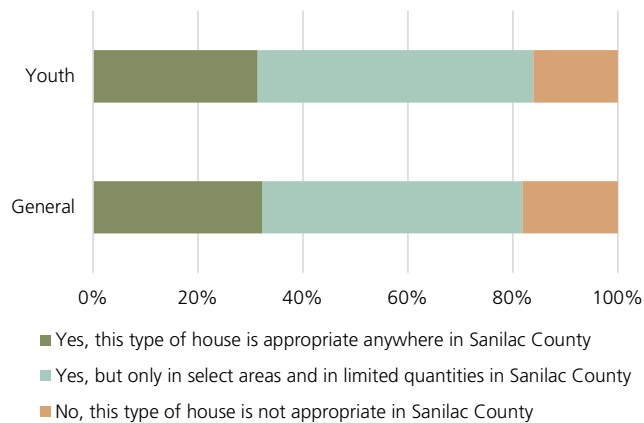


Figure 24: Cottage Courts Survey Results



Cottage Courts

Cottage courts are planned arrangements of small single-family homes, bordering one common space or “court.” Entrances to the homes are placed on the courtside, and the court faces the street. Cottage courts are appropriate in neighborhoods predominantly comprised of small homes – they can also be retrofitted onto large lots. Cottage courts are also appropriate to increase density while maintaining most aspects of the traditional single-family home experience since all units are separated while sharing access to a common court. Cottage Courts also offer a sense of communal living, where each household maintains its own private space but there are shared spaces. This makes them a popular option for senior housing (“age in place”) where a group of seniors can maintain a level of independence but are not responsible for a large property. Sample zoning language and dimensional standards for cottage courts are available in the appendix.



Cottage courts have one of the highest levels of support among all missing middle housing types, the level of interest in this type of unit is almost the same as the level of disinterest in youth survey responses. Additionally, over 10% of the general survey respondents would be interested in buying this type of home now or in 10 years. A strong majority of respondents agreed that this type of home is appropriate in Sanilac County.



Courtyard Homes

Courtyard homes are arrangements of multi-family homes, with several side-by-side or stacked duplexes or triplexes surrounding a common courtyard. Courtyard homes are appropriate for denser neighborhoods that allow multi-family homes. Depending on the units’ scale, they are comparable in scale to housing multiple large single-family homes on the same lot – therefore, they can be appropriate in neighborhoods with large lot sizes. Courtyard homes are very similar to cottage courts and have similar communal living benefits. The primary difference between the two missing middle typologies is that cottage courts tend to be standalone structures around a shared space while the individual units in courtyard homes tend to have shared walls. Sample zoning language and dimensional standards for courtyard homes are available in the appendix.

Courtyard homes have mixed interest in survey results, although youth survey respondents are more interested in courtyard homes compared to the general survey respondents. Despite lower levels of interest in the survey responses, the majority of respondents agreed that these homes are appropriate in Sanilac County.

Figure 25: Courtyard Homes Survey Results

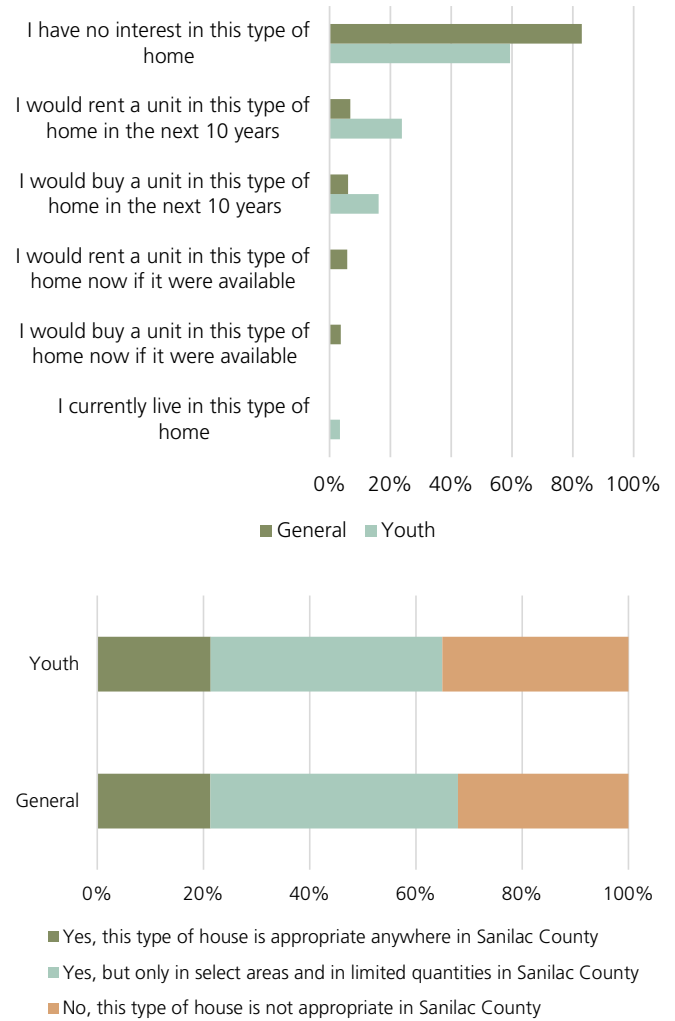
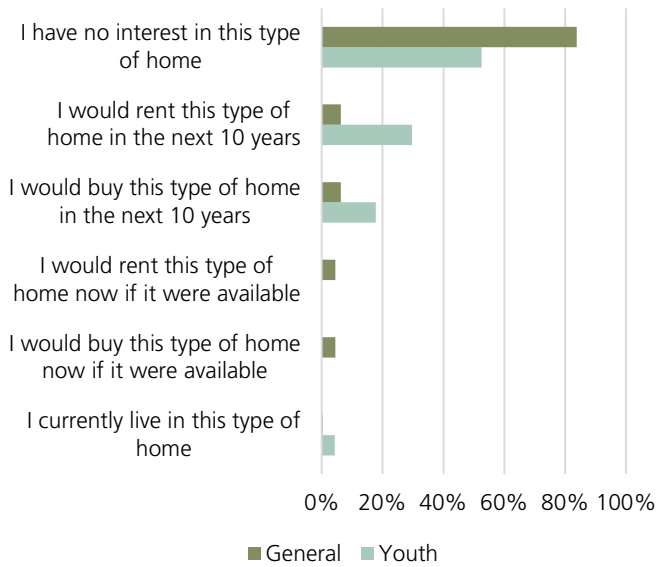
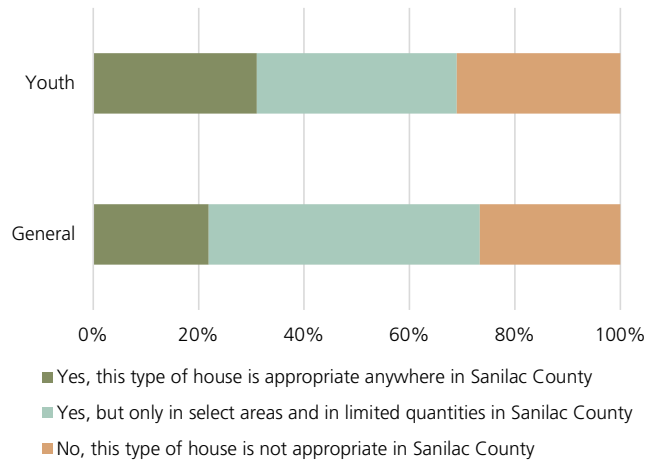


Figure 26: Townhomes Survey Results



Townhomes

Townhomes are structures with multiple connected dwelling units, horizontally arranged, each with its own independent entrance. Townhomes share one wall on each side with the subsequent unit, but border no other structure in front or back. Townhomes are appropriate for neighborhoods with single-family homes situated on narrow lots, as well as neighborhoods looking to foster placemaking. Townhomes convey a sense of walkability, as they are often located directly on the sidewalk, and are commonly found within walking distance of commercial centers or major amenities. Townhomes are also fairly common on the shoreline, as they have a low building footprint compared to other housing types and therefore are less intrusive on the shore. Sample zoning language and dimensional standards for townhomes are available in the appendix.



While the majority of respondents from both surveys indicated that they have no interest in a townhome, almost 30% of youth respondents indicated that they would be interested in renting a townhome in the next 10 years. Despite the lower level of interest in living in a townhome, a majority of respondents indicated that townhomes are appropriate in Sanilac County.



Live-Work

Live-work buildings are mixed-use facilities incorporating both residential, on the upper floors, and another use – typically commercial on the ground floor. Live-work buildings are most appropriate in a main commercial district or “Main Street,” giving individuals who work in that commercial district the opportunity to travel by means other than a car to their workplaces. However, they can also be located, in ways consistent with neighborhood scale, outside of a town center – for example, having a residential unit adjoining a small coffee shop. Sample zoning language and dimensional standards for live-work developments are available in the appendix.

Following trends with most of the missing middle housing types presented in the surveys, youth respondents had more interest in living in a live-work building compared to the general survey responses. A majority of respondents from both the youth and general survey indicated that a live-work building is appropriate in Sanilac County, with more support from the general survey respondents.

Figure 27: Live-Work Survey Results

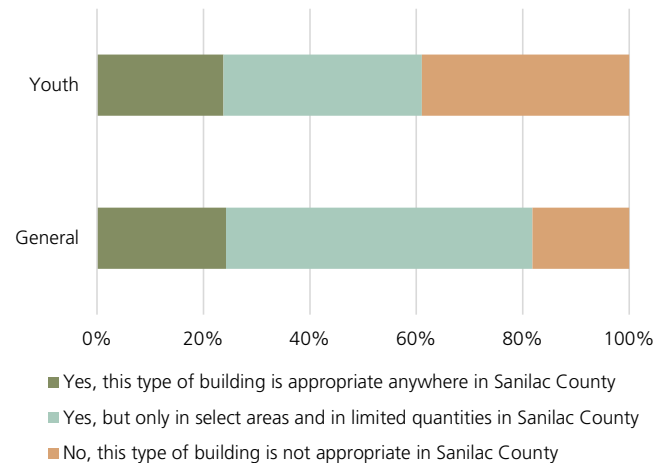
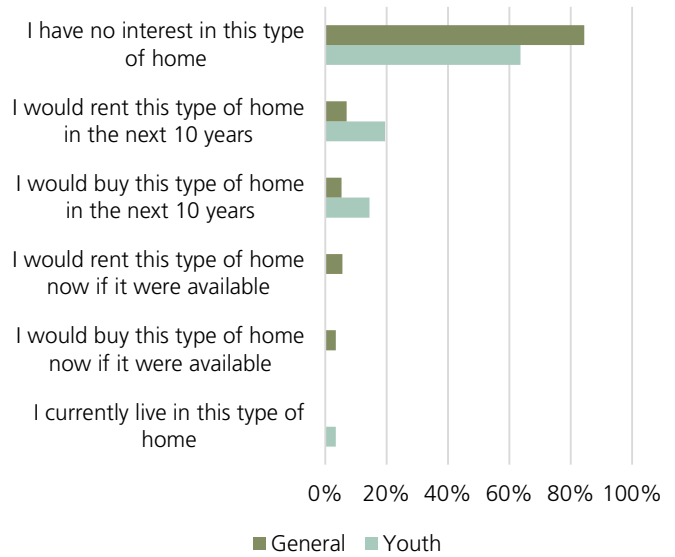
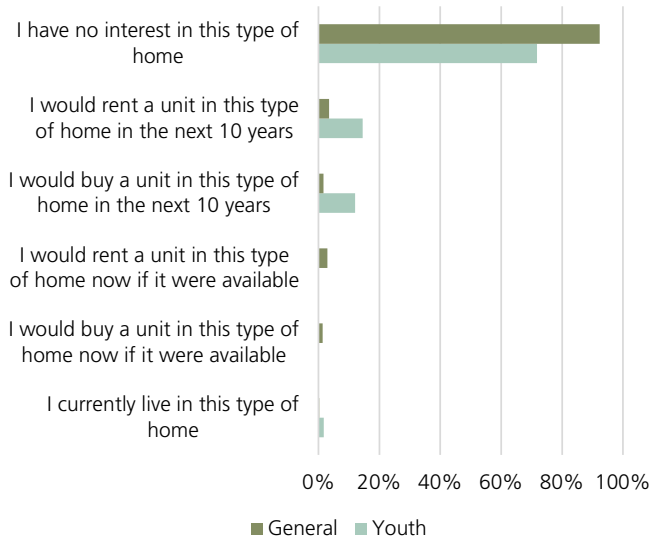


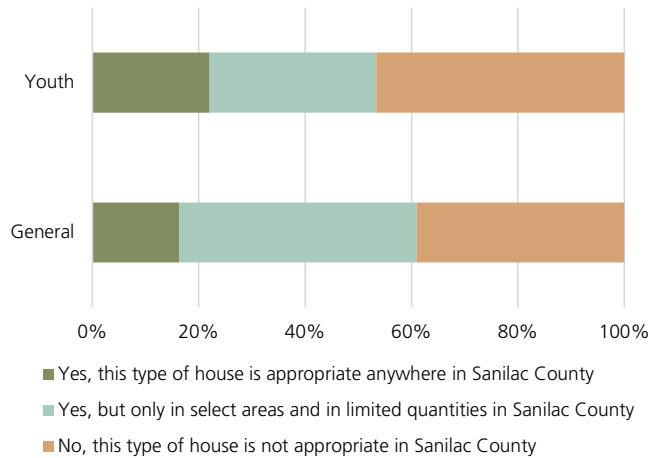
Figure 28: Fourplexes Survey Results



Fourplexes

Fourplexes are multi-family homes that can house four independent households – either stacked or side-by-side. They are comparable in scale to a large single-family home. Fourplexes are appropriate for neighborhoods with existing large single-family homes or those with very large lots. Sample zoning language and dimensional standards for fourplexes are available in the appendix.

Fourplexes had one of the lowest levels of support from both surveys, as over 70% of youth and general respondents had no interest in living in a fourplex. Despite the high levels of disinterest, the majority of both survey respondents agreed that fourplexes were appropriate in Sanilac County, although the levels of support for fourplexes in the county were lower than other missing middle housing types presented to survey respondents.





Mansion Apartments

Mansion apartments are dwelling units within a large building appearing to be a very large single-family home (or “mansion”) – these can be newly-built mansions but are more commonly converted existing structures. Mansion apartments are appropriate to include more housing availability within statement neighborhoods which are known for their architecture and are also appropriate for neighborhoods with evolving uses. They would be appropriate for small cities seeing housing trend away from large single-family homes (often with large amounts of upkeep for historical structures) and an increase in demographics seeking small and affordable dwelling units. Mansion apartments offer a sense of communal living and are a very common model for assisted living. Sample zoning language and dimensional standards for mansion apartments are available in the appendix.

The majority of survey respondents (both youth and general) have no interest in this type of unit but a majority do think that mansion apartments are appropriate in Sanilac County.

Figure 29: Mansion Apartments Survey Results

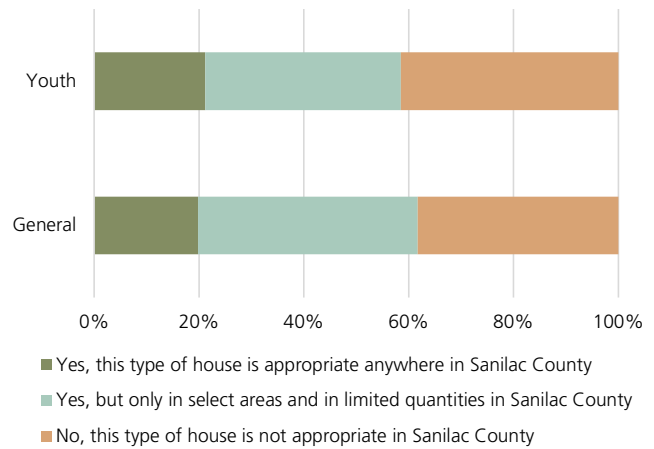
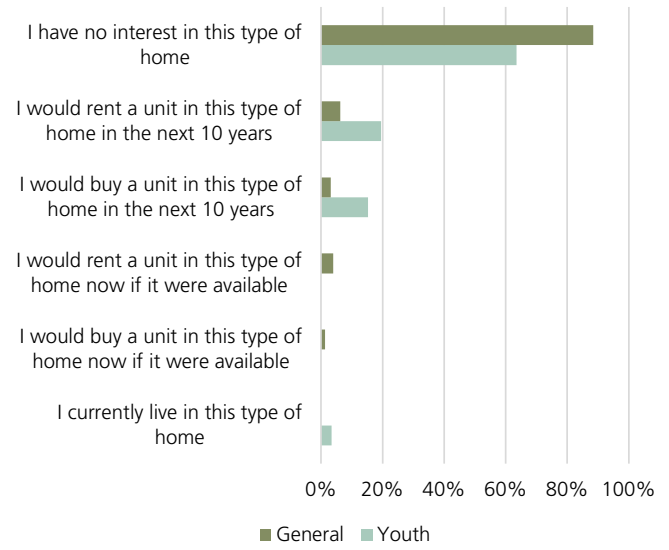
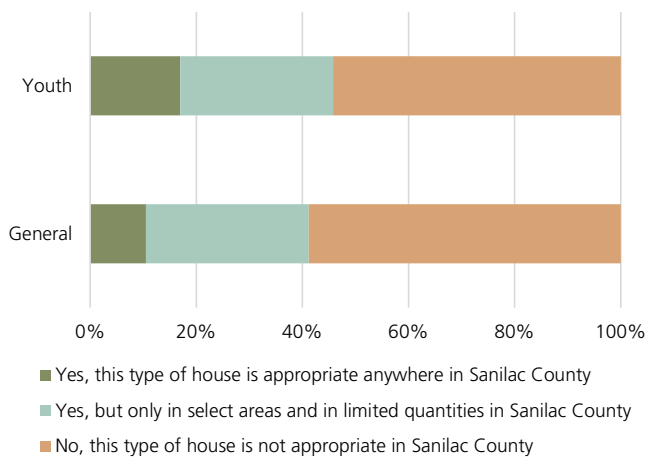
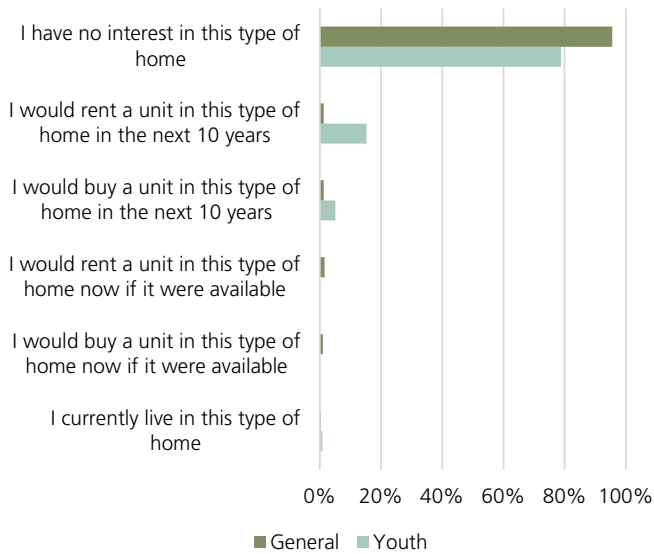


Figure 30: Co-Housing Survey Results



Other Housing Types

Co-housing

Co-housing, or group housing, is the location of multiple dwelling units with shared facilities (e.g., one central kitchen or shared bathroom) within one large structure. Upkeep and household responsibilities are shared by those renting dwelling units within the building. Co-housing may be familiar in college environments, with students individually renting bedrooms in one house. Co-housing is most appropriate for those who are in a transitional phase of their life and may be looking for inexpensive or temporary housing. They are most popular among young professionals. Additionally, they are also a model for senior living but are less common than the other examples described in this section. From a zoning and regulatory perspective, they are analogous to group homes and should follow the same standards.

Co-housing had one of the lowest levels of interest and support from survey respondents. While youth were more interested in living in a co-housing building, almost 80% of youth had no interest in living in co-housing. The majority of youth and general survey respondents indicated that co-housing is not appropriate in Sanilac County.

Neighborhood Typologies

Traditional Neighborhood Development

Traditional neighborhood development models district-wide planning and development after the way towns were developed before the 1940s. Traditional neighborhood developments include mixed uses in close proximity (including necessary uses such as grocery stores and educational facilities), with connections including sidewalks and dedicated bicycle infrastructure making transportation convenient for individuals utilizing all methods of transportation. Traditional neighborhood developments also include welcoming public spaces to foster community-building. This form of development can either occur on previously undeveloped land, or on existing land where redevelopment is desired (for example, a former industrial district).

While it is unlikely to see large-scale traditional neighborhood development in Sanilac County, traditional neighborhood principles can be incorporated into most neighborhoods – for example, by allowing multiple uses within one neighborhood or increasing sidewalk connectivity. The creation of a cohesive traditional neighborhood requires a large amount of space. This requires either redevelopment of a given area (working around, retrofitting, or replacing existing structures) or development of new land, fairly unlikely in Sanilac County.

Youth survey respondents were more interested in living in traditional neighborhood developments, compared to general survey respondents. Roughly a quarter of youth respondents were interested in renting or owning a home in a traditional neighborhood development. A majority of both survey respondents agreed that traditional neighborhood developments are appropriate in Sanilac County.



Figure 31: Traditional Neighborhood Development Survey Results

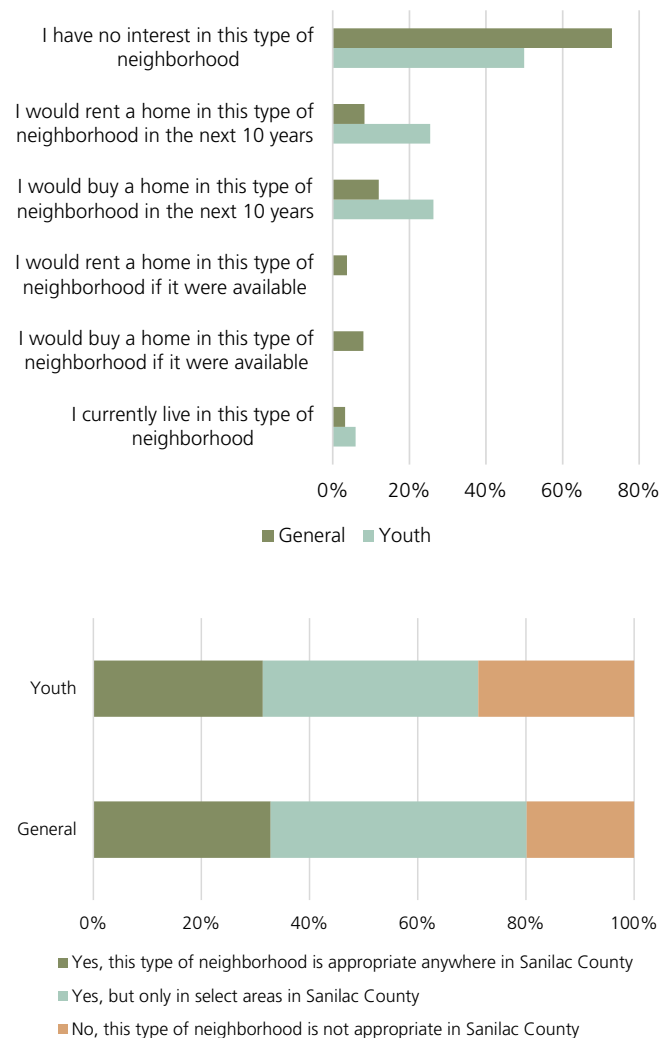
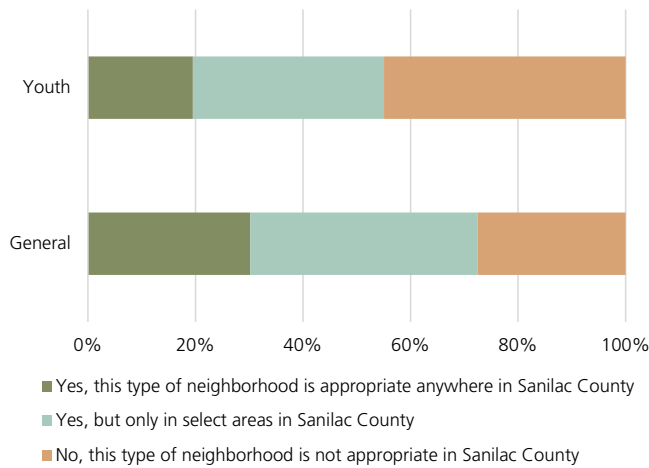
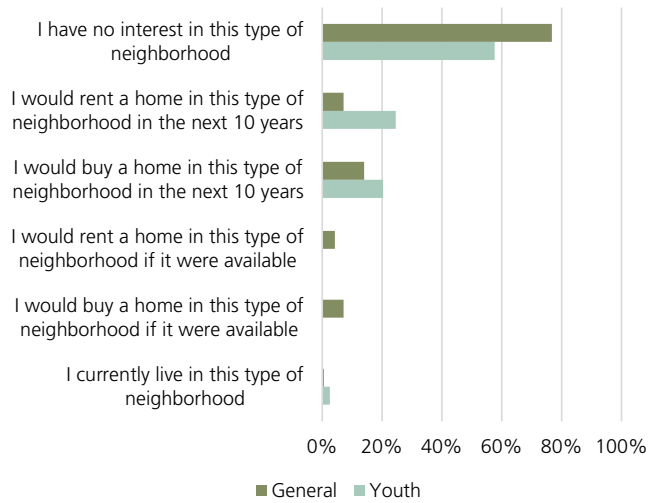


Figure 32: Pocket Neighborhoods Survey Results



Pocket Neighborhoods

Pocket neighborhoods, similarly, to cottage courts, involve multiple small single-family homes facing one common courtyard. These neighborhoods are designed to foster a sense of community and familiarity with neighbors and to increase social connectivity within a community. The courtyard, as a shared outdoor space, is important to foster a sense of community and ownership, with residents taking care of the common space. Pocket neighborhoods are appropriate within existing single-family neighborhoods, particularly with large lot sizes and/or existing small homes.

The majority of respondents (both in the youth and general survey) had no interest in living in a pocket neighborhood, although over 20% of youth were interested in renting and/or owning a home in a pocket neighborhood. Pocket neighborhoods also had lower levels of support compared to other neighborhood types, although a majority of respondents still thought they are appropriate in Sanilac County.

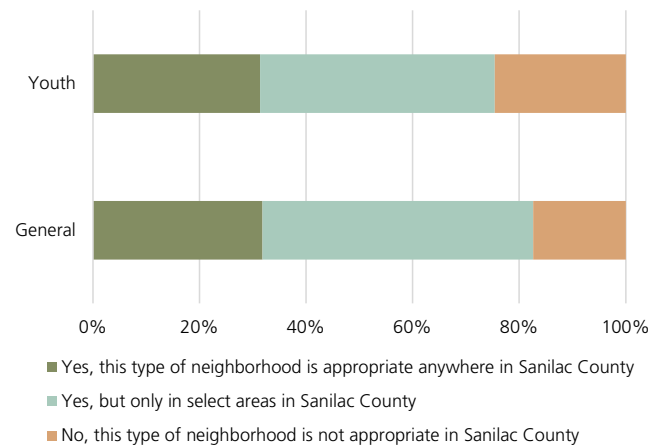
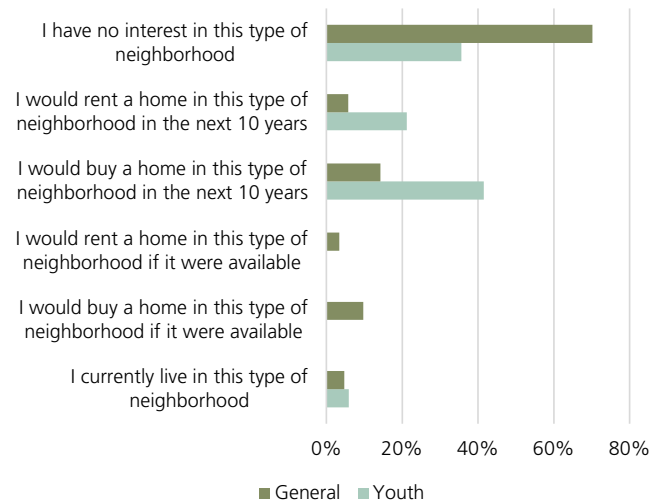


Small-Lot Subdivision

Small-lot subdivisions implement a single-family suburban neighborhood type on a reduced lot size, allowing for the use of less space than would otherwise be necessary. Small-lot subdivisions are appropriate in areas where there is existing or increased demand for suburban neighborhoods, as well as areas that have surrounding agricultural land (and thus need to balance development with agricultural preservation). Small-lot subdivisions allow for the planned creation of a distinct neighborhood community, creating a sense of place for that new neighborhood.

Small-lot subdivisions were one of the most popular neighborhood types among youth survey respondents. The level of interest in small-lot neighborhoods was less among the general survey respondents. However, both sets of respondents agreed that small-lot neighborhoods were appropriate in Sanilac County.

Figure 33: Small-Lot Subdivision Survey Results



Infill Development

Infill development is the building of new units of housing on already-developed land – for instance, by redeveloping parking lots or building on empty lots. Infill development decreases urban sprawl – reducing the new development of agricultural or forested lands – by allowing a community to house more individuals within its existing limits. In addition to conserving land in the rural/ agricultural and natural zones, infill development is also economically efficient, by placing new housing near current amenities and infrastructure, limiting the need to expand water, sewer, and electric utility coverage. Seven out of twenty-one communities that have Master Plans in Sanilac County currently have goals in their master plan around redevelopment, rehabilitation, or infill development. The county can utilize assessing records and GIS information to identify properties that may be suitable for infill development.

Concurrency

Concurrency refers to the planned presence of adequate facilities for a community’s housing and commercial needs – specifically, as a community grows and expands. Some municipalities require concurrency to be planned, or implemented before buildings can be built in an area. Depending on the municipal regulations, this can be the responsibility of the developer of a new residential or commercial development requiring utility expansion, or can be done through local government while subsidized by the developer. Utilities planned in concurrency include water, sanitary and/or stormwater sewer, power, roads, and schools in some instances.

More information about concurrency can be found in the Towns and Village chapter.

Age in Place

Planning for individuals to age in place is important for widespread accessibility, particularly in populations with large numbers of senior citizens. Support for aging in place ensures that individuals who live in Sanilac County can continue to live there as their needs evolve with their age. Community planning considerations to promote aging in place include the encouragement of universal access standards in new home design, the prioritization

of accessibility (e.g., available benches in the shade, ramps, and non-slippery surfaces) in public spaces, and designing spaces conducive to activities for a wide variety of age groups. Well-maintained public spaces and networks, particularly curbs and sidewalks, can help to prevent falls; the availability of public transit is also important for individuals who no longer drive.

Healthcare options, including accessible emergency, specialty, and primary care treatment, are paramount for communities that wish to create a community that prioritizes aging in place. It is generally important to minimize the necessary travel time to medical care. Therefore, communities that have healthcare assets (including a hospital) are at an advantage in providing age-in-place care. As the presence of a hospital in each small city may not be economically feasible, it is important for cities lacking these resources to institute a plan for quick emergency transportation, and for public transportation to appointments in other communities.

Currently, seven out of twenty-one communities in Sanilac County include goals for senior living as a priority in their master plans.

Housing Incentives

Zoning Reforms

Outdated zoning regulations are one of the biggest hurdles to building new housing units in the United States. Zoning emerged at the turn of the 20th century and over the early to mid-20th century, communities across the United States adopted zoning regulations. Many have not substantially updated their regulations since. Zoning barriers can be split into two main categories: the zoning ordinance itself and the development approval process. Dimension requirements and permitted housing types in the zoning ordinance can limit the quantity and type of housing that can be built. If the zoning regulations limit housing construction to a point where a developer cannot profit from the development, the homes will not be built. The dimensional and permitted uses suggested in the sample language in the appendix provide an example of regulations intended to incentivize housing development.

Additionally, for non-single-family homes, many communities require developers to go through a site plan review process which can be resource intensive (time and money), and in a rural community like Sanilac County – some planning commissions may meet less than once a month. Therefore, adjusting the development review process to allow moderate-density residential developments (duplexes, townhomes) by right would significantly reduce the resources a developer needs to spend to construct housing units. **Sanilac County should encourage local jurisdictions especially, those in the Small Cities transect, to adopt these zoning reforms.**

Pattern Book Homes

In the early 20th century, many suburban homes were ordered from a Sears of Aladdin catalog. These homes were inexpensive, easy to assemble, and met all necessary codes. Often referred to as “pattern book homes,” many are still in existence today. Recently, pattern book homes are making their way back into the housing construction industry. By adopting a set of pre-approved building patterns local governments can offer a library of construction options to developers that have already been reviewed by the necessary local government staff. This significantly reduces the time a developer needs to spend getting approval for their documents (site plan, construction documents, etc.). Pre-approved building plans do not completely remove municipal review as setbacks, dimensional requirements, and other zoning regulations will still need to be checked – as they change from site to site. Additionally, developers would not have to hire an architect or engineer to draft any plans as the pre-approved pattern book plans are detailed enough to meet construction standards. The Michigan Municipal League has a set of pattern book homes that

local governments can use and pre-approve. **Sanilac County should encourage local jurisdictions, especially those in the Small Cities transect, to pre-approve pattern book homes as a way to reduce costs for developers.**

Redevelopment Incentives

In addition to reducing zoning and administrative hurdles, local governments can also provide financial incentives for housing redevelopment.

Land Banking

Land banking is the process of holding land in public ownership, under an authorized land bank, and then selling the land at a reduced price to a developer in exchange for a desired project (housing). Because the land is held by a public entity, there is much more control over the developer and project selected as opposed to a transaction between private entities. Land is generally acquired by a land bank through tax foreclosure. Sanilac County’s Land Bank is managed through the county treasurer’s office. Compared to other rural land banks in the State, Sanilac County’s Land Bank is an underutilized resource. **Sanilac County should expand its land bank or dissolve it which would revert land banking responsibilities to the State of Michigan Land Bank.**

Brownfield

Brownfield redevelopment is a process of providing financial incentives for the redevelopment of contaminated properties. Brownfields use a financing mechanism called tax increment financing (TIF) that reimburses the developer for the costs of environmental remediation or construction. For example, if a contaminated property is valued at \$1,000

Figure 34: Pattern Book Homes



and the government collects a tax of \$1 on that property after redevelopment the property may be worth \$5,000, and rather than the government collecting \$5 in tax revenue, they continue to collect \$1 for the lifespan of the TIF (usually 20 – 30 years). The balance in tax revenue (\$4) is used to reimburse the developer for the costs of environmental remediation or construction. Properties that have been held by a land bank also qualify for brownfield status – a powerful relationship that is underutilized. Sanilac County's brownfield redevelopment authority is a county organization with five members.

Scattered Site TIF

TIF districts are often used to target financing for a specific area in a community, but they have also been implemented community wide. This would require adopting a TIF district that is essentially the entire boundary of the community. Then any eligible properties (as outlined in the TIF Plan) would be eligible to access TIF financing. However, widespread use of TIF can cause fiscal challenges as tax revenue is diverted somewhere other than the community's revenues.

Developer Workshops and Training

For housing developers, especially those who work in rural areas, it can be challenging to develop at a scale that becomes profitable. Additionally, every jurisdiction has its own set of zoning regulations and administrative procedures – complicating the process. **Sanilac County should host a county-wide housing development workshop and training and invite local developers to attend.** The session should cover the housing opportunities in the county, available funding opportunities, and willing local government partners. Sanilac County is well-positioned to take on a leadership and facilitation role between local governments and developers. This will also allow local governments and developers to build relationships and connections so that when projects do begin or are being planned there is a preexisting relationship – which is incredibly valuable during the development process. The Michigan Economic Development Corporation has compiled a collection of resources to assist developers through the housing development process.¹

New Housing Incentives

In 2022, the State of Michigan passed several sweeping bills aimed to increase housing supply and housing construction. This package of bills were passed with the support of housing coalitions statewide.

SB 432 – PILOTS for Housing

This bill would allow local governments the ability to develop Payment in Lieu of Taxes (PILOT) policies and enter into PILOT agreements with developers who are building or rehabbing affordable housing units. Currently, many local governments allow PILOTs for developments as part of the developer's process to be awarded low-income housing tax credits through MSHDA. This legislation allows local governments to review PILOT agreements for developments that are not applicants for state or federal tax credits, thus allowing a needed tool for governments and developers/builders to partner together to address local workforce housing needs.

The project is exempt from all ad valorem property taxes if: (1) the local municipality has opted in (2) the housing project is owned by a nonprofit housing corporation (3) a housing project that is being developed or rehabilitated for workforce housing that is located in a municipality (4) is subject to a municipal ordinance that is adopted by the governing body of that municipality to approve a housing project tax exemption under this subdivision.

The approval or denial of a tax exemption under this subdivision must be in accordance with an ordinance or resolution concerning the selection of workforce housing projects that are adopted by the governing body. The owner of a housing project exempt from taxation under this section shall pay the municipality in which the project is located an annual service charge for public services in lieu of all taxes.

New Construction: An amount that is the greater of the tax on the property on which the project is located for the tax year preceding date on which construction is commenced or 10% of the annual shelter rents obtained from the project.

Rehabilitation project: An amount that is the lesser of the tax on the property on which the project is located for the tax year preceding the

date on which rehabilitation is commenced or 10% of the annual shelter rents obtained from the project. The service charge must not exceed the amount in taxes that an owner would have otherwise paid if the housing project were not tax-exempt and must be paid in full for units not provided to low-income households.²

SB 364 – Neighborhood Enterprise Zone Expansion

Established Neighborhood Enterprise Zones (NEZ) have supported investment in infill revitalization for owner-occupied housing and mixed-use buildings in eligible communities. This bill extends the opportunity to use NEZs to all Michigan cities, villages, and townships. The governing body of a local governmental unit designates a neighborhood enterprise zone that cannot be less than 10 platted parcels of land (unless they are in a downtown revitalization district and total more than 10 facilities). The land must be compact and contiguous. The expansion will let the local government support new (in whole or in part) residential homes and condominiums or new (in whole or in part) mixed-use buildings that include residential units with ground-floor retail, and rehabilitated facilities that meet certain investment criteria.

The NEZ tax rate is equal to $\frac{1}{2}$ the tax rate during the year prior to the investment. Local units subject to the expansion may designate an NEZ only if the project encourages compact development, is adjacent to existing development, and can utilize existing infrastructure.³

SB 364 – Attainable Housing Facilities Act

A local government can create an “attainable housing district” where property owners can apply for a partial tax exemptions if they meet specific affordability criteria determined by the local government. This tool will reduce real property taxes by 50% of the statewide commercial, industrial, and utility average for up to 12 years if they meet certain affordability criteria determined by the local government. This tool will enable local governments to support and encourage investment in rehabilitation attainable housing in Michigan communities. Below are the criteria:

- » Providing units at a price point that does not exceed 120% of the county-wide median

income threshold for at least 30% of the units in the development.

- » Local governments have the flexibility to negotiate at or above the 30% to align with their goals. Local governments have the ability to negotiate the number of units and affordability requirements up to 120% AMI.
- » This tool can only be used for 4 or fewer rental units and a minimum of \$5,000 investment is required. For 5 or more rental units, see Residential Facilities Exemption.⁴

SB 422 – Residential Facilities Exemption

The creation of a residential Facilities Exemption would allow a temporary tax abatement on qualified new housing development in districts established by local units of government for developments of five or more units and a minimum investment of \$50,000. Local governments would have the ability to establish residential facility districts used to provide tax abatements for qualified residential facilities.

This abatement supports both the renovation and expansion of aging residential units as well as the construction of new residential units in these districts.

Qualified new housing developments may include multifamily or single-family homes that are targeted towards populations earning below 120% of the area median incomes, with assurances that units are occupied as principal residence (year-round) to eligible households.⁵

Economic Development

Housing

Available housing to meet a community’s needs draws economic activity, particularly when housing is located conveniently to access a community’s amenities. Adequate amounts at affordable prices can also draw new individuals to a community, purchasing homes and contributing to the community’s tax base. Different types of housing also contribute to a community’s tax base differently – for example, building a duplex or two primary dwelling units on the same parcel of land allows a small city to collect more revenue from that parcel than otherwise would have occurred. By incentivizing efficient construction of housing, Sanilac County’s planning efforts will allow cities

to increase their economic growth and population base while supporting workers in the community by providing convenient places to live that do not economically burden households. Appealing and accessible housing, of varied kinds to meet different market sectors, also increases the appeal of small cities to new residents – this can be newly built housing or residential redevelopment of existing structures.

Downtowns

Downtowns are important commercial centers for a small city. Downtowns serve as main shopping districts for residents and visitors, with a variety of uses (e.g., restaurants, retail uses, movie theaters, small drugstores). An appealing and inviting downtown can increase the appeal of a community as a whole, as well as make the community more livable for existing residents. Downtowns often have existing historical buildings and the distinctive architecture contributes to placemaking.

Downtowns can be managed by a variety of authorities, depending on a community's goal. Downtown Development Authorities are the most common authority. A DDA is a board specifically meant to oversee the success and improvement of a community's downtown area. The creation of a DDA allows communities to benefit from Tax Increment Financing (see the above section on Brownfield development for more information) for infrastructure and revitalization projects within the district. Similar in structure to a DDA, Tax Increment Financing Authorities can also be established for districts that use TIF funding methods for improvement. A variety of tools can be utilized to promote business within a downtown district. The establishment of a Chamber of Commerce works to advocate for local businesses and create a business community within a small city. Municipal governments can also support businesses within one particular region of a community, including a downtown, through the creation of a Business Improvement District – a region with an increased tax levy going to specifically fund projects within that district.

Within Sanilac County's small cities, placemaking efforts to create inviting streetscapes in downtown

areas will ensure that the districts are inviting for visitors and residents to linger, stroll, and shop. The creation of a Downtown Development Authority may be beneficial to help communities achieve their downtown goals. A DDA, or a separate entity like a Chamber of Commerce or other business association, can implement marketing initiatives to drive commercial traffic to the downtown district. Additionally, historic preservation efforts (mentioned below) can identify key landmark structures to define the look of a downtown.

Without an established pattern of commercial activity, it can be difficult to attract new business and therefore revitalize a downtown. In order to increase commercial activity in a downtown district, a governmental body (ideally one specifically focused on a downtown, like a DDA) can implement a variety of economic incentives like those listed above in order to encourage new business in the area.

Additionally, some downtown areas may struggle with dated façades or a look that is uninviting to visitors. Aesthetic remedies must involve the cooperation of businesses, as well as adequate funding. TIF funding, or the implementation of a Business Improvement District, can support projects in the downtown area. Small cities should prioritize the major aesthetic or placemaking concerns and create specific projects to address them, to create realized steps towards creating a more welcoming downtown space.

To assist downtowns in revitalization and preservation, communities with a "traditional downtown" can engage in the Michigan Economic Development Corporation's Michigan Main Street Program, where consultants aid the improvement of four main areas: design, economic vitality, promotion, and organization.⁶ Additionally, downtown management organizations (including DDAs, Chambers of Commerce, or another managing body) can join the Michigan Downtown Association, a statewide nonprofit dedicated to advocacy for downtown districts – the MDA includes additional resources for downtown managers, including professional development, training webinars, and publication of existing successful downtown events.



Port Sanilac Lighthouse

Historic Preservation

Historic preservation works to preserve particular structures or neighborhoods, or distinctive elements of a community (such as architectural elements). Historic preservation is important in maintaining the “feel” of a community, within cities that are undergoing revitalization and redevelopment efforts, historic preservation is key: both to retain the historic elements of the community and to provide a context for future efforts to ensure they remain consistent with the community’s historic character. Historic preservation is also important for communities that are struggling economically, to ensure that important places in a community remain well-maintained and have the potential to draw people to the community in the future. Unique features from a community’s past, when restored and well-maintained, have strong visual appeal to define a community in the future – ensuring that landmarks are sustained gives small cities points of interest, which can draw in visitors and create a sense of place for residents.

Currently, nine out of twenty-one communities in Sanilac County have goals in their master plans to support historic preservation. Given the widespread importance and appeal of preserving historic places within Sanilac County, there are several prominent programs that provide resources for historic preservation. Historic landmark designations are available at both the federal and state levels. The National Register of Historic Places, facilitated by the National Park Service, allows communities to apply to list a historic structure – if accepted

onto the Register, these buildings have stringent guidelines for maintenance, as well as any potential remodeling or repair efforts in the future. These strict standards guide communities and provide consistency in knowing how to manage these places. Historic Places on the National Register are also not limited to one structure – it is possible to place Historic Districts on the National Register.⁷ Substantial economic support is possible for the preservation of properties on the Register – primarily, the Historic Preservation Fund, which awards grants to state, tribal, and municipal governments and nonprofits (sometimes as matching funds for an existing project). The Historic Preservation Fund also has grants for specific types of projects. Additionally, if a site is classified as a National Historic Landmark, it may be prioritized for some funding, including the Save America’s Treasures grant program.⁸

Although there are federal- and state-level programs to further historic preservation goals, there are also actions that can be taken at the local level to further historic preservation. Municipalities can define their own historic districts and create processes to make redevelopment or demolition more contextually sensitive – such as first going to a board before completing a project – and can require certain standards in those districts. Zoning also allows for the preservation of historic sites and districts. This can be achieved through the institution of a form-based code – rather than a traditional use-based zoning code, a form-based code can set standards for a neighborhood’s design to provide consistency and appeal in the type of structures that can be built there.

Placemaking

Placemaking is the principle of designing spaces that are defined, welcoming, and functional for those who utilize them. For public spaces, increasing appeal in this way is particularly important to draw individuals into a space – this creates an opportunity for greater community building, as well as the overall social cohesion of the community. It also provides greater opportunity for economic activity by encouraging individuals to linger for longer periods of time in a space – since placemaking often includes multiple uses within walkable distance, the

individuals utilizing a public space are likely to support the surrounding businesses. The Project for Public Spaces defines placemaking considerations into four considerations: sociability, uses and activities, access and linkages, and comfort and image.⁹ Placemaking improvements can often be experimented with through “lighter, quicker, cheaper” tactical urbanism, with a trial of temporary amenities like sidewalk cafes or interactive public art – the community’s reaction can show whether these uses would be worthwhile to implement permanently. Placemaking is explored more in-depth in the towns and villages transect.

Redevelopment

Redevelopment is the process of improving a given area (whether commercial or residential) for functionality and aesthetics. This can be done through blight reduction, façade remodeling, and the revamping of existing public spaces for utility and accessibility. Districts or neighborhoods undergoing redevelopment should examine current unmet neighborhood needs and any current deterrents from economic and social activity. (For example, a blighted neighborhood may remove existing dilapidated structures to create a more appealing and safer public park; a commercial district with successful but unappealing businesses may create a Business Improvement District to fund remodels.)

Redevelopment produces economic benefits by making areas more appealing to visitors and more accessible for current residents. As redevelopment incorporates a community’s goals for a particular space, redevelopment activity can be aimed at drawing more individuals into a space, leading to increased commercial and economic activity.

Resources to encourage redevelopment within a community are available from a variety of sources. Brownfield redevelopment and land banking (see earlier in the chapter for further information) are currently utilized within Sanilac County. Brownfield redevelopment is one method of utilizing Tax Increment Financing (TIF) funds – other redevelopment projects may also qualify for TIF funding, and a Downtown Development Authority or similar entity can lead these efforts. Business Improvement Districts also encourage redevelopment by levying an additional tax on

businesses within the zone to fund improvements.

Lastly, the Redevelopment Ready Communities program, run through the Michigan Economic Development Corporation (MEDC), provides set guidelines and recommendations for redevelopment within a community. This can eventually lead to certification as a Redevelopment Ready Community – to begin the process, communities must complete training in each of the six RRC best practices. These best practices focus on 1) plans and engagement, 2) zoning, 3) development review, 4) boards and commissions, 5) economic development and marketing, 6) Redevelopment Ready Sites (post-certification).¹⁰ Additionally, local communities will need to meet standards for governance, zoning and land use regulations, and transparency to become a certified community. The RRC program also offers some match funding to support communities with financial challenges who are looking to implement RRC best practices. In addition to attracting business growth through consulting benefits, RRC participation is also one criterion in the awarding of the MEDC’s Community Development investments.¹¹

Industry Retention and Recruitment

Industry retention and recruitment programs work to incentivize employers to move to a particular area and provide good conditions for existing businesses’ continued success to motivate them to remain in a community. This includes the preservation of traditional industrial and manufacturing uses, the most prominent employment sector in Sanilac County.¹² Industry retention and recruitment are important for the economic viability of a community, and the increased presence of more industries provides more employment opportunities for the residents of the community. Additionally, the maintenance of existing employers and industries within a community ensures a stable foundation for residents who depend on those industries for their livelihoods.

Eleven out of twenty-one communities within Sanilac County have goals in their master plans for industry retention and recruitment. These goals can be achieved by making small cities in Sanilac County appealing to businesses through a close working relationship with municipal staff and solicitation of feedback from prominent employers in the community on planning efforts. Additionally,

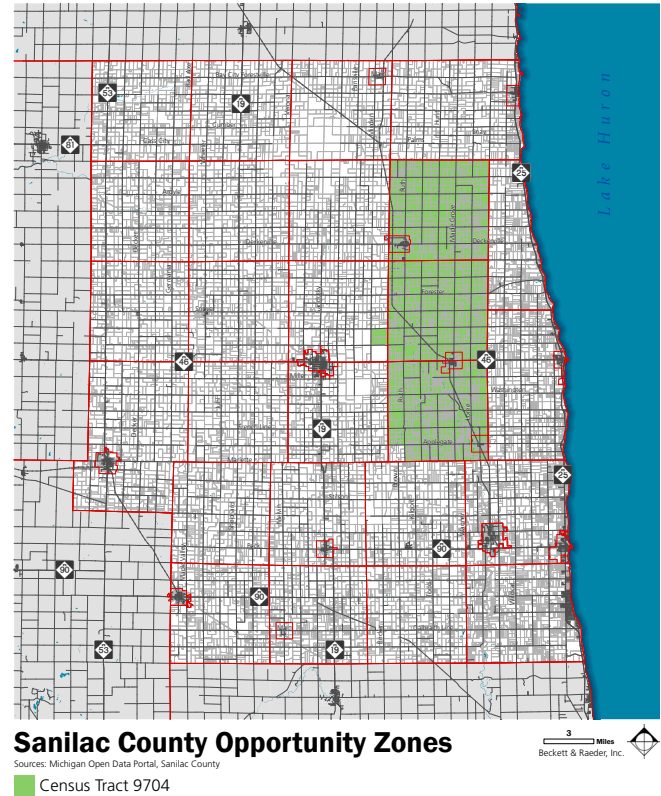
economic redevelopment tools such as Tax Increment Financing and Business Improvement Districts can be utilized to attract businesses to an area and demonstrate a community's commitment to supporting industry. Districts that are beginning a revitalization process, even non-business-specific are ripe for new companies to move in. Lastly, existing manufacturing-based businesses can be supported by consideration and inclusion of industrial use in new zoning and planning regulations, as well as new residential development.

Michigan's Opportunity Zone designation is a new, available resource for industry retention and recruitment, designed to incentivize businesses' moving into communities with limited access to capital through tax incentives. Zone 9704, within Opportunity Zone Prosperity Region 6, is entirely within Sanilac County.¹³ Retention is incentivized by this program, with financial benefits realized at their greatest level for when investments are held for over ten years. To increase participation and increase the number of businesses moving into the community, the Michigan Opportunity Zone program page provides a guide to Marketing Your Community: this plan includes placemaking recommendations and a step-by-step guide to creating a marketing plan.¹⁴ The Marketing Your Community guide also recommends using metrics compiled in Michigan State University Extension's Michigan Opportunity Zones dashboard.¹⁵

Workforce Development

Workforce development is the cultivation of a strong body of workers within a community by providing tools for success. By focusing on the tools available to support individuals, workforce development makes a place appealing to businesses for their operations, and appealing to workers who may be considering moving to a particular place. Education and training, including partnerships with businesses for on-the-job training, help communities to achieve workforce development goals. Workforce development is important to ensure a sustainable population within a small community, as well as a good quality of life for the individuals living there. Additionally, individuals who are well-supported and secure in their community provide a strong basis for the economic success of the region's most prominent employers.

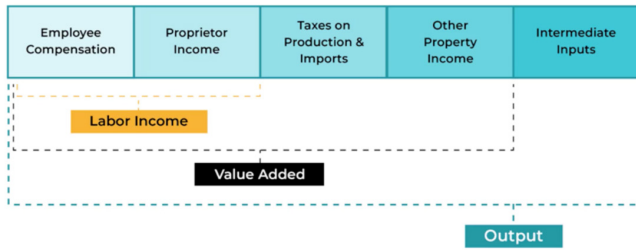
Map 5: Sanilac County Opportunity Zones



Workforce development can be achieved through a strong outreach plan showcasing a community's resources, as well as community support for the workforce already in place. This can include making a small city more appealing to move to by ensuring adequate and affordable housing that meets the needs of the desired workforce and having accessible and interesting public spaces for all ages. For young professionals with young families, this includes having educational and childcare facilities.

The State of Michigan provides workforce development resources through the Labor and Economic Opportunity office – this includes the Skills to Work initiative for continued education and the MI New Economy initiative to support business districts. MI New Economy emphasizes building strong communities to support a workforce, with adequate housing and broadband resources. There are additional opportunities to partner with the high schools of Sanilac County to develop pipelines for emerging workers and talent in the county. It is easier to retain workers who have community ties as opposed to recruiting those who have no ties to the community.

Figure 35: Economic Output



Economic Base Analysis

Economies are a diverse and complex web of relationships. Products on the shelf often go through multiple stages of manufacturing, source materials globally, and were designed, engineered, and built by a multitude of people. IMPLAN, an input-output economic modeling tool, was used to illustrate the interdependency of industries and sectors in Sanilac County. In total, 546 unique industries were quantified for the analysis. Data used in the analysis was sourced from various governmental sources including the Bureau of Economic Analysis, Census Bureau, and Internal Revenue Service. IMPLAN models upstream economic activity which includes the resources, supply, and manufacturing of goods and services, it does not model sales, use, and disposal activity.

INPLAN models several elements of economic output, including labor income, intermediate

output, and value add, see figure titled “Economic Output.” “Intermediate inputs” include the purchase of goods and services used to produce other goods and services. For example, a computer manufacturing company would need to buy metal, plastic, and electronic parts to produce the final computer, all of which would be considered intermediate inputs. “Value Added” represents the contribution to the gross domestic product. “Labor Income” is the total cost of labor and includes wages and all benefits. “Proprietor Income” is the income of the corporation/proprietor. “Taxes on Production & Imports” includes all taxes on goods and services including tariffs, property taxes, and sales taxes. Government subsidies and other tax exemptions are also included as negative values. “Other Property Income” is the remaining dollars after taxes, labor income, and intermediate inputs are purchased, essentially profit. Total economic output is the combined value of labor income, value added, and intermediate outputs.

Of the 546 industries modeled by IMPLAN, 213 are active in Sanilac County. The table titled “Top 5 Largest Industries in Sanilac County”, highlights the five industries with the largest economic output. The largest industry, in terms of total economic output, is “turned product, and screw, nut, and bolt manufacturing” (\$146,413K in total economic activity – 6% of the total economic

Table 21: Top 5 Largest Industries in Sanilac County

Industry	Total Economic Output (thousands)	Intermediate Outputs (thousands)	Value Added (thousands)	Labor Income (thousands)	Employment
Turned product and screw, nut, and bolt manufacturing	\$146,413	\$97,499	\$48,914	\$34,518	560.09
Motor vehicle seating and interior trim manufacturing	\$122,744	\$103,931	\$18,813	\$13,900	281.91
Valve and fittings, other than plumbing, manufacturing	\$119,260	\$81,992	\$37,268	\$24,715	377.25
Hospitals	\$118,206	\$69,651	\$48,555	\$41,396	783.25
Dairy cattle and milk production	\$110,929	\$94,032	\$16,897	\$6,902	342.75

Source: IMPLAN, 2019

Table 22: Top 5 Export Industries in Sanilac County

Industry	Location Quotient	Total Economic Output
Beet sugar manufacturing	103.91	\$99,783,921
Sugarcane and sugar beet farming	68.19	\$26,762,927
Other nonmetallic minerals	42.95	\$5,568,486
Valve and fittings, other than plumbing, manufacturing	28.79	\$119,259,480
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	26.39	\$37,837,820

Source: IMPLAN, 2019

Table 23: Industry Groups

	Description	Location Quotient	2014 – 2019 Economic Output
Growth Industry	Industries that have a strong presence in the region and are expanding.	LQ>1	Positive Change
Emerging Industry	Industries that are expanding but have yet to establish a strong presence.	LQ<1	Positive Change
Mature Industry	Industries that have been a specialty for the region but are declining.	LQ>1	Negative Change
Declining Industry	Industries with a small presence and declining economic activity.	LQ<1	Negative Change

output of the county). The largest agricultural sector is “dairy cattle and milk production” (\$110,260K in total economic activity – 4% of the total economic output of the county). Combined the top 5 largest industries account for a quarter of all economic output in the county, indicating a high degree of specialization.

To provide additional insights into the Sanilac County economy a base sector analysis was performed. A base sector analysis identifies which industries are exporting goods and services out of the region (Sanilac County) and which are importing goods and services. A location quotient (LQ) value of 1 or more indicates that the industry is exporting goods and services. An LQ value of below indicates that the industry is importing goods and services into the region. As shown in the table titled, “Top 5 Export Industries in Sanilac County” agriculture and manufacturing remain a regional specialty, 17 of the top 20 export industries in Sanilac County are agriculture or

manufacturing. Additionally, the top 20 export industries account for 36% of Sanilac County’s economic activity, indicating that the regional specialties are vital to Sanilac County’s economic health.

To identify economic trends, the 2019 figures for Sanilac County’s industries were compared to the 2014 figures. Industries were then classified into one of four groups: growth, emerging, mature, and declining, shown in the table titled, “Industry Groups.”

Sanilac County’s economy is in transition, while almost half of the employment and just over half of the economic output is in a growth sector, the high degree of emerging and mature industries indicates an economy in transition. The mature industries, which are the legacy industries (dairy production, sugar beet manufacturing, grain farming, etc.), are experiencing declining economic outputs and are at risk of losing their

Table 24: Industry Trends

	Industry Count		Economic Output (\$M)		Employment	
	Total	% of Total	Total	% of Total	Total	% of Total
Growth	65	31%	\$1,315	52%	7276.69	48%
Emerging	61	29%	\$348	14%	3077.9	20%
Mature	37	17%	\$771	31%	3941.14	26%
Declining	50	23%	\$83	3%	1018.46	7%

Source: IMPLAN, 2019

Table 25: Top 5 Largest Industries in Sanilac County

Top Industries	Growth Industries (\$K)	Emerging Industries (\$K)	Mature Industries (\$K)	Declining Industries (\$K)
#1	Turned product and screw, nut, and bolt manufacturing (\$146,413)	Other real estate (\$90,790)	Dairy cattle and milk production (\$100,929)	Employment services (\$6,082)
#2	Motor vehicle seating and interior trim manufacturing (\$122,744)	Insurance agencies, brokerages, and related services (\$25,311)	Beet sugar manufacturing (\$99,784)	Office of other health practitioners (\$5,257)
#3	Valve and fittings, other than plumbing, manufacturing (\$119,260)	Limited-service restaurants (\$24,510)	Grain farming (\$73,093)	Legal services (\$4,675)
#4	Hospitals (\$118,206)	Full-service restaurants (\$22,227)	Canned fruits and vegetables manufacturing (\$51,368)	Accounting, tax preparation, bookkeeping, and payroll services (\$4,403)
#5	Monetary authorities and depository credit intermediation (\$63,240)	Wholesale – other durable goods merchant wholesalers (\$18,489)	Other rubber product manufacturing (\$49,029)	Commercial and industrial machinery and equipment repair and maintenance (\$4,135)

Source: IMPLAN, 2019

cornerstone status in the regional economy. Of the economic output of the mature industries, 38% is from the agricultural sector and an additional 13% is in sugar beet manufacturing.

The industries that are performing well (the growth industries) are some of the existing big manufacturing industries in Sanilac County,

indicating that some of the drivers of the regional economy are performing well. Emerging industries are those in some professional services and food services, which align with national economic trends. Declining industries in Sanilac County are high education professional services (legal, engineering, and accounting services) and entertainment sectors.

Table 26: Telecommunications Providers in Sanilac County

Provider	Technology	Maximum Download Speed (Mbps)	Maximum Upload Speed (Mbps)
Agri-Valley Communications (Agri-Valley Services)	Fiber	300	300
	Fixed Wireless	35	3
TEC Advantage	Fiber	1,000	1,000
	Fixed Wireless	50	50
Michigan Bell (AT&T)	DSL	25	5
Lumen Technologies (CenturyLink)	DSL	80	10
Frontier Communications	DSL	100	10
Aspire Networks (Highline)	Fiber	1,000	1,000
M3 Wireless	Fiber	100	100
	Fixed Wireless	50	10
Northern Broadband (North Branch Wireless)	Fixed Wireless	100	20
T-Mobile	Fixed Wireless	100	20
COMCAST (Xfinity)	Cable	1,200	35
Starlink	Satellite	100	10

Source: ConnectedNation

Telecommunications Infrastructure

Telecommunications infrastructure allows communities to increase economic success by fostering connections through the internet and cellular networks. Cellular coverage in Sanilac County is primarily concentrated around small cities, as the population and commercial centers of the area, with the exact coverage area varying substantially between carriers. Broadband service is less intermittent; both cable and fiber are available in the county, with adequate speeds (a maximum of 100M). This infrastructure runs along main thoroughfares (including Sanilac Road and Sandusky Road), including all small cities in its connection.

Sanilac County has been innovative in its adoption of new connectivity technologies, including in partnerships with fiber providers such as Highline. Continued identification and implementation of new technologies will help the county’s residents and businesses continue to be competitive. The Sanilac County Broadband Committee was formed to identify and address issues with connectivity expansion, surveying 676 households and partnering with the national nonprofit, Connected Nation, to identify next

steps in a Technology Action Plan. Additionally, the prioritization of high-speed internet access for rural communities at the state level has coincided with Sanilac County’s efforts – the state has received substantial funding between 2018 and 2022 to support the expansion of broadband coverage, including \$363 million through the Federal Communications Commission’s Rural Digital Opportunity Fund, \$29 million of which went to support Sanilac County’s connectivity. However, challenges remain as investing in internet and cellular coverage in a rural community is not often a priority for telecommunications companies that have limited customers in rural areas.

Natural Features

Low Impact Development

Low impact development is a deliberate planning process that includes stormwater management by the facilitation of natural processes – in addition to producing environmental benefits, this can produce cost savings to a municipality due to a decreased burden on utilities. The EPA defines low-impact development as managing runoff “as close to its source as possible.” This ensures that



Low Impact Development

bodies of water and sensitive ecosystems nearby are not contaminated – for cities that source drinking water from groundwater, it also means that source water will be less contaminated. A variety of techniques work to achieve low impact development – the use of permeable pavers in lieu of asphalt, catch basins for stormwater, vegetated areas, and water collection systems.

Additionally, low-impact development encourages the incorporation of natural features – for example, in developing around existing terrain, rather than performing substantial amounts of excavation that leads to erosion. The Southeast Michigan Council of Governments provides a Low Impact Development manual supported by the Michigan Department of Environmental Quality (now Michigan EGLE).



Green Infrastructure

Green Infrastructure

Green infrastructure, similar to low impact development, incorporates existing natural processes to control stormwater and pollution (including flooding management). Green infrastructure can be implemented through green roofs, green streets, and green parking lots – in locations that typically produce an increased amount of pollution, adding vegetation (specifically native plants) to support filtration. In addition to presenting a cost savings with a decreased load on stormwater utilities, green infrastructure supports the ecological integrity of the surrounding area. Examples of green infrastructure include rain gardens, rain harvesting, bioswales, and permeable pavers allowing for stormwater and runoff filtration.

Recommendations

- » Assist in identifying and applying for funding for municipal initiatives to improve neighborhoods, and undertake the removal of blighted structures.
- » Utilize assessing records and GIS information to identify properties that may be suitable for infill development.
- » Encourage communities to adopt applicable missing middle housing language in their zoning ordinances.
- » Encourage communities to adopt regulations to expand applicable neighborhood typologies.
- » Encourage communities to adopt additional zoning reforms to reduce barriers to housing construction.
- » Encourage local jurisdictions, especially those in the Small Cities transect, to pre-approve pattern book homes as a way to reduce costs for developers.

- » Expand or dissolve the Sanilac County Land Bank.
- » Host a county-wide housing development workshop and training and invite local developers to attend.
- » Encourage communities to adopt placemaking strategies in major commercial districts or corridors and provide financial resources when appropriate.
- » Encourage local communities to adopt historic districts, where appropriate, and support historic preservation and historic contextual development through the zoning ordinance.
- » Encourage local communities to pursue RRC certification.
- » Market the Sanilac County Opportunity Zone to attract businesses and industry to the community.
- » Market the county as an attractive place to live, especially for those looking for a rural lifestyle, to attract talent.
- » Continue to expand and improve the telecommunications infrastructure in the community.
- » Encourage local communities to adopt green infrastructure language into their zoning ordinances and to include green infrastructure elements in municipal engineering projects.

Sources

- 1 Michigan Economic Development Corporation, “Developer Resources”, <https://www.miplace.org/developers/>
- 2 Housing North, Housing Tools Summary, <https://static1.squarespace.com/static/61768dc8a236c639b8fe44ec/t/64341515186ff73fb9e09196/1681134869637/Housing+North+-+Bill+Summary+2023+Final.pdf>
- 3 Ibid.
- 4 Ibid.
- 5 Ibid.
- 6 Michigan Main Street, <https://www.miplace.org/programs/michigan-main-street/>
- 7 How to Apply the National Register Criteria for Evaluation, National Park Service, https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf
- 8 Historic Preservation Fund, <https://www.nps.gov/subjects/historicpreservation/historic-preservation-fund.htm>
- 9 What Is Placemaking? Project for Public Spaces, <https://www.pps.org/category/placemaking>
- 10 Redevelopment Ready Community Best Practices, <https://www.miplace.org/4a714c/globalassets/documents/rrc/rrc-best-practices.pdf>
- 11 Redevelopment Ready Community FAQs, <https://www.miplace.org/programs/redevelopment-ready-communities/rrc-faqs/>
- 12 2020 American Community Survey, DP 03, Selected Economic Characteristics
- 13 Opportunity Zone Prosperity Region Maps, State of Michigan, <https://www.michigan.gov/mshda/developers/opportunity-zones/opportunity-zone-prosperity-region-maps>
- 14 Marketing Your Community Guide, Michigan Opportunity Zones, <https://miopportunityzones.com/marketing-your-community-guide/>
- 15 Michigan Opportunity Zones (dashboard), https://public.tableau.com/app/profile/msu.extension.gmi/viz/Book20_83/Dashboard1

Shoreline



Source: Sanilac County

Great Lakes' shorelines are some of the most unique and valuable assets in entire United States. They have limitless benefits to local communities including recreation, economic, and aesthetic contributions. The Lake Huron shoreline is dotted with small cottages and large homes. Harbors in Port Sanilac and Lexington provide boaters with access to open water for recreation and fishing. However, activity and development on the shore of a Great Lake is not without its challenges. Lake Huron, the third largest body of freshwater on the planet, is a very dynamic environment. Lake levels rise and fall in cyclical patterns, beaches and shoreland erode and are replenished, and extreme storms and high waves can violently pound the shoreland. These dynamics are often in conflict with development on the shore, erosion and beach depletion can threaten the stability of shoreland structures and homes. Therefore, it is essential to balance the health of shoreland and physical development.

Coastal Hazards and Risk Analysis

The elevation of Lake Huron fluctuates daily and over decades. The gravitational pull of the moon and wind patterns cause minute changes on a daily basis and cyclical changes in precipitation, runoff, and temperate cause the lake to rise and fall feet over decades. As shown in the figure titled “Lake Huron Water Levels”, Lake Huron follows a fairly routine pattern of rise and fall since the data started being recorded in 1918.¹ Lake Huron’s historic low was recorded at 576.02ft in January 2013 and peaked at 582.35ft in 1986. However, in June of 2020, Lake Huron was recorded at 582.19ft, coming within ~2” of the historic high. Indicating that Lake Huron was close to completing a change from a historic low to a historic high in a period of 7 years which has not happened since the data started being recorded 100 years ago. Rapid lake fluctuations present additional challenges because the shoreland does not have adequate time to adapt to periods of high and low water. This trend of rapid lake fluctuations from historic lows to historic highs will likely continue and accelerate.

Key to planning for future risk is understanding the current level of shoreland risk. Identifying what areas of the shore are likely to flood during a storm provides insight into where the greatest risk for people, structures, and the natural environment is located. While this analysis of coastal flooding from storms does not provide a

Shoreline: The intersection of the ordinary high-water mark and land.

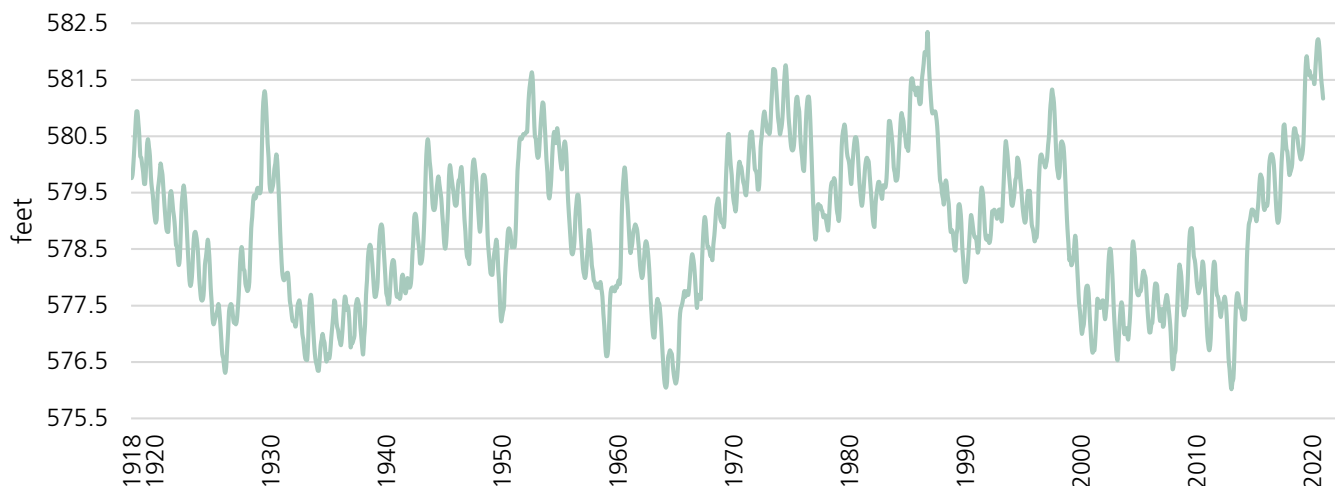
Shoreland: Commonly used to describe the shoreline ecosystem. Legally refers to the 500ft inward from the shoreline.

direct correlation to shoreland erosion, it does highlight what areas of the shore are likely to experience the most severe interactions with the water.

Methods

The analysis used a combination of elevation, water levels, storm surges, FEMA data, and Geographic Information Systems (GIS) to determine what areas are likely to flood in a given storm scenario.² The analysis uses three different storm scenarios, a “lucky”, “expected”, and “perfect” storm to accurately project the full range of risk. The lucky storm scenario is a best-case scenario and assumes that only the FEMA designated FIRM A & AE zones (below the base flood elevation) that connect to the shore are inundated during a storm event. The expected storm represents a more typical storm event and is the combination of the average still water elevation of Lake Huron, storm surge, and the FEMA FIRM A & AE zones to determine what areas are at risk. The perfect storm represents

Figure 36: Lake Huron Water Levels



Source: Army Corps of Engineers

Figure 37: Coastal Hazard Areas

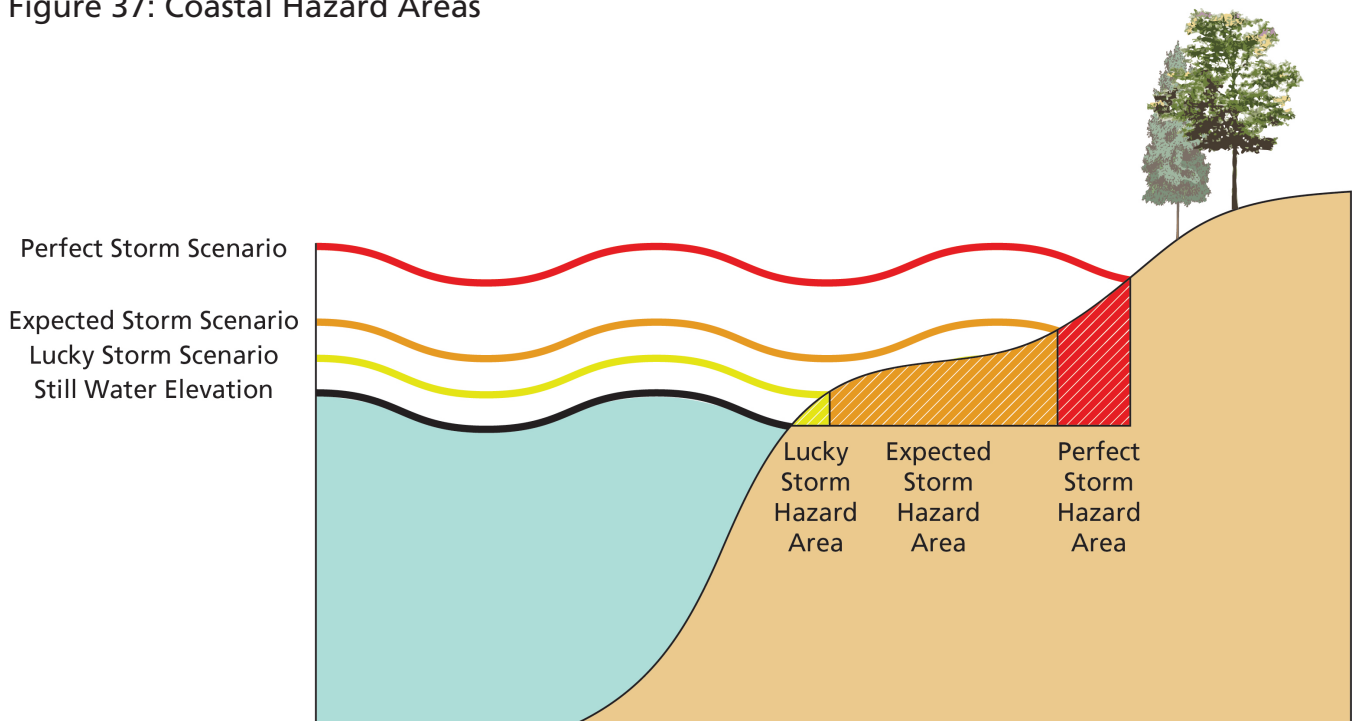


Table 27: Coastal Risk

	Lucky Storm		Expected Storm		Perfect Storm	
	Number of Properties	Percent of Properties	Number of Properties	Percent of Properties	Number of Properties	Percent of Properties
Delaware Township	151	16%	151	16%	156	17%
Forester Township	385	25%	385	25%	415	27%
Lexington Township	204	10%	204	10%	204	10%
Sanilac Township	229	14%	229	14%	265	16%
Village of Forestville	60	21%	60	21%	67	23%
Village of Lexington	39	4%	39	4%	45	5%
Village of Port Sanilac	101	18%	101	18%	115	21%
Worth Township	324	9%	324	9%	341	9%

the worse-case scenario when the lake is at its highest elevation. The perfect storm is modeled using the historic lake high, a storm surge, and the FEMA designated FIRM A & AE, and shaded X zones (all FEMA designated flood hazard areas). The expected storm hazard area also includes the lucky storm hazard area and the perfect storm hazard area includes all three hazard areas.

Results

As shown in the table titled “Coastal Risk”, the shoreline communities in Sanilac County have very low levels of risk from flooding during a storm event. Forester Township has the highest level of risk, although only 27% are estimated to be impacted during a perfect storm event. Overall, risk of coastal flooding during a storm event is fairly low in Sanilac County.

High Risk Erosion Areas

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) designates high risk erosion areas, shoreland that is eroding at a rate equal to or greater than 1ft per year, for all coastal areas in Michigan. The purpose of determining high risk erosion areas is to prevent substantial loss to property on the shore. Structures in high risk erosion areas can become unstable and uninhabitable as the shoreland becomes eroded underneath the structures. Septic systems in high risk erosion areas risk failing and falling into the lake. Most construction or development in a high risk erosion area requires obtaining a permit from EGLE. High risk erosion areas are delineated on the maps at the conclusion of this chapter.

Coastal Resiliency

Coastal resiliency is the ability of shoreland and near shore environments to effectively adapt to extreme events, such as erosion and coastal flooding, with minimal impact on the environment, property, and assets. There are three main elements of coastal resiliency: coastal health/preservation, risk mitigation, and asset protection. Successful coastal resiliency strategies address all three elements.

Coastal Health/ Preservation	Risk Mitigation	Asset Protection
Ensuring that the shoreland and near shore environments remain ecologically and environmentally healthy	Reducing risks from coastal hazards such as coastal flooding and shoreland erosion	Stabilizing coastal structures, private land, and assets to ensure their continued use

Coastal Setbacks

Simply building a safe distance from the shore is one of the best strategies to enhance coastal resiliency. This is done by establishing setbacks from the shore. Of the three communities at highest risk from coastal flooding (Forester Township, Village of Forestville, and Village of Port Sanilac), two of the communities (Forester Township and Village of Port Sanilac) have established setbacks from the shoreline. However, these setbacks only apply to high-

risk erosion areas, not all shoreline properties. Sanilac County should encourage local jurisdictions to establish setbacks from the ordinary high-water mark (the visual boundary of high-water). Sample language for a setback can be found in the appendix.

Coastal Health/ Preservation	Risk Mitigation	Asset Protection
Setbacks allow for coastal areas to be preserved by prohibiting construction or more intensive uses in shoreland environments	The undeveloped land within the setback acts as a “run-up” area for flood waters and dampens the impact of flooding as it moves inland	Structures that are built further from the shoreline are at lower risk from coastal hazards

Greenbelts & Vegetative Buffers

One challenge with shoreline development is that property owners and builders place a premium on being as close to the shore as possible. Often this mentality extends to personal lawns and outdoor space. However, even moderate levels of activity (like mowed lawns) can have negative impacts on the health and stability of the shoreland. Vegetation, like dune grass and juniper shrubs, have evolved to thrive in shoreland environments. Vegetation provides stabilization to shoreland and reduces risk from wave and wind erosion. Establishing greenbelts and vegetative buffers in the zoning ordinance can significantly improve coastal resiliency. Sanilac County should encourage local governments to adopt greenbelt and vegetation requirements for shoreline properties, sample language can be found in the appendix.

Coastal Health/ Preservation	Risk Mitigation	Asset Protection
Greenbelts and vegetative buffers provide important habitats for many coastal species and help restore native ecosystems	Roots and woody plants help stabilize shoreland reducing the risk of erosion and providing catchment areas for flood waters	Vegetative shoreland stabilization can prevent the need for other more harmful protection measures like hard armoring structures

Open Space Preservation

Most Great Lakes shorelines are a composition of small cottages, large residential homes, hotels and resorts, and public land. There are very few tracts of undeveloped non-public land left along the coasts. Therefore, when coastland is inundated by water or experiences erosion often personal property and structures are impacted. There is very little space/land for flood water to go where it will not impact property. Additionally, because the land has been altered in some way (by a structure or landscaping) it is not as resilient to coastal hazards as natural shoreland, increasing the severity of a hazard event. Natural shorelands are the best at adapting and responding to coastal hazards because they have evolved over thousands of years to be resilient to these events. Preserving natural shoreland can greatly increase the resiliency of coastal areas and has additional benefits neighboring properties by providing flood waters a natural place to inundate. Preserved open space can also be used as public access and for recreation. Sanilac County should identify property for potential acquisition or work with partners such as the Blue Water Conservation District to preserve coastal property.

Coastal Health/ Preservation	Risk Mitigation & Asset Protection
Open space along coastlines provides larger areas of natural space, providing important habitat for coastal species	Coastal flood water follows the path of least resistance. Open space provides a low impact area for flood waters, reducing the impact on structures and property

Habitat Restoration

Shorelands that are dotted by residential homes often do not resemble the native shoreland environment. Especially in communities that do not have greenbelt requirements, mowed lawns and personal property often extends to open beach. Coastal plants and animals often struggle to become established, both of which are essential to a healthy ecosystem. Native plants, dune grasses and coastal shrubs, stabilize fragile dunes and shoreland, reducing risks of erosion. The root systems of grasses and shrubs also infiltrate flood waters reducing the amount of water that flows inland. Native planting

requirements in existing greenbelt requirements is the best approach to encouraging shoreland property owners to restore native ecosystems. Habitat restoration projects on public land can also greatly improve coastal health.

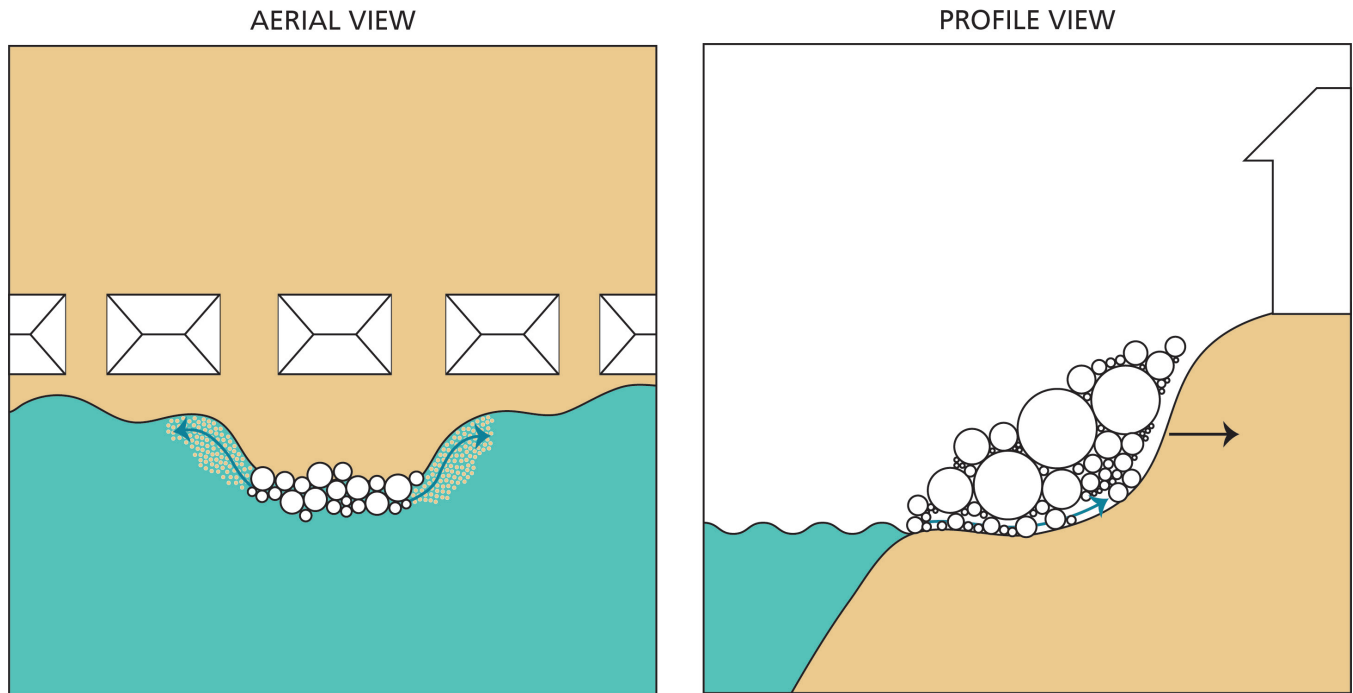
Coastal Health/ Preservation	Risk Mitigation	Asset Protection
The majority of shoreland is developed and lacks natural systems. Restoring native ecosystems even along private property contributes to systematic improvements to shoreland health	Native ecologies have been engineering through thousands of years of evolution to best respond to coastal hazards. Native systems are the most effective risk mitigation tool	Native plants and their root systems stabilize dunes and coastland, reducing the risk of erosion. Floodwater is also infiltrated into the ground by grasses and shrubs

Hard Armoring

One common strategy to mitigate rising lake levels and coastal flooding are hard structures, or armors. These structures are often built of rock and placed near or at the ordinary high-water mark to prevent further coastal erosion. Other types of armoring structures include sheet pile breakwalls. While intended to prevent coastal erosion, shoreline armoring structures have the opposite impact. Wave action that runs into the hard structure is directed to either side of the structure eroding the neighboring beach and shoreland, see figure titled “Failure of Armoring Structures.” In response to a neighboring armor structure adjacent property owners may establish armoring structures on their own property to prevent the erosion of their property, leading to the rapid armoring of entire shores. Additionally, over time water will reach behind the armor and start to erode the shoreland that the structure was intended to preserve leading to additional armoring or overall degradation of the shore.

Shoreline armoring has substantial negative impacts on shoreline health. If an entire beach was to become armored, over time the beach would disappear completely. The armoring structures also impede sand from naturally being deposited, preventing beach replenishment.

Figure 38: Failure of Armoring Structures



Therefore, to restore these beaches, artificial beach nourishment would be required, an expensive and environmentally taxing process. The loss of the shore and the beach would have profound impacts on the whole county, including a loss in recreational assets and the main tourist attraction. Sanilac County should encourage local jurisdictions to prohibit hard armoring structure in favor of more natural stabilization efforts.

Funding

The Coastal Zone Management Program (CZMP), a division of EGLE, provides grant funding for technical assistance, infrastructure, habitat restoration, and expanding public access along the Great Lakes shoreline. Project costs range from \$10,000 to \$200,000 and require matching dollars from local communities. There are five eligible project types:

Coastal Health/ Preservation	Risk Mitigation	Asset Protection
Hard armoring structures lead to the long-term deterioration of the shore and prevent the natural replenishment of shoreland and beach	While hard armoring structures provide temporary protection for the subject property, they intensify wave action for adjacent shoreland. Additionally, hard armoring structures will fail over time requiring continued maintenance and construction	Hard armoring along the shoreline can negatively impact adjacent land and property and when entire sections of the shoreline become armored it is often the open space and public beaches/parks that suffer

- » **Coastal Community Development.** Plan and manage future growth and wise development on lands adjacent to the coast, while protecting coastal natural resources, maritime heritage resources, water-dependent livelihoods and recreation, and other assets and activities that contribute to the community's sense of place. Examples of funded projects include resilient master plans, zoning ordinances, and community planning along the shore.
- » **Coastal Hazards.** Increase coastal communities' understanding of coastal hazards risks associated with living on the coast to build the adaptability to absorb and respond to impacts from coastal storms and Great Lakes water level variabilities (e.g., the highs and the lows). Examples of funded projects include coastal hazard mapping and infrastructure plans.

- » **Coastal Habitats.** Protecting, preserving, and restoring healthy coastal wetlands, beaches, and dunes. As the first defense against storm surge, (e.g., reducing the risk of flooding and coastal erosion), natural infrastructure is critical for coastal communities' resilience, as well as maintaining beneficial ecological plant and animal communities. Examples of funded projects include habitat restoration and ecological inventories.
- » **Coastal Waters.** Protection and management of coastal waters to slow the flow and alleviate coastal flooding challenges. Planning and installing nature-based solutions such as green infrastructure benefit ecosystem services (e.g., tourism and biodiversity) and manages storm water flooding in coastal areas. Examples of funded projects include community workshops, stormwater plans, and green infrastructure plans.
- » **Public Access.** Protecting, restoring, and enhancing public access to the Great Lakes using approaches that support coastal communities; foster appreciation of our natural, cultural, and historic resources; and create outdoor recreation and tourism opportunities. A holistic approach to preserving and enhancing public access to Great Lakes beaches and other coastal public trust resources are essential. Examples of funded projects include construction of boardwalks, boat launches, and lighthouse restoration.

Grant applications are accepted each year and are generally due in early December. Projects are generally expected to begin in October of the following year and take 15 months to complete. Projects are required to be within the coastal zone management boundary, which generally encompasses the land between M-25 and Lake Huron. Sanilac County and local governments should leverage CZMP funds for eligible projects along the Lake Huron shore.

Short-Term Rentals

Short-term Rentals (AirBnB, VRBO, etc.) are the brief occupancy (commonly defined as less than 30 days) by a non-owner occupant. In communities without traditional accommodation (hotels, motels, etc.) they are often the only place for visitors to stay. While short-term rentals (STRs) are not exclusively located on the shoreline of Sanilac County, it is where they are most common. STRs are a somewhat controversial practice as many people see STRs as a non-residential use but yet they are often found in residential areas. The constant turnover of occupants, traffic, and noise can create disturbances in neighborhoods, upsetting residents. Additionally, the purchase of housing for the sole purpose of short-term renting has negative consequences on the housing market.

Therefore, it is important to ensure that STRs are properly regulated and controlled through local zoning or other ordinances. Regulating STRs is a balance, if visitors can't find a place to stay because the regulations are too tight it may hurt the tourism industry, but too lax regulations may do little to address residents' concerns. As of September, 2023 no trusted source (MAP, MML, MTA, MSU – Extension) has published a standardized sample STR ordinance. However, many communities in Michigan have adopted STR ordinances, including the City of Frankfurt, City of Marquette, and City of Elk Rapids.

When crafting STR ordinances it is important to consider the following items:

- » Should there be a cap on the number of STRs? If so, how many? How will you determine who gets a STR license?
- » Does the owner need to live on the property? Live in the community? Have a designated agent who lives in the community?
- » Where should STRs be permitted? Anywhere? In specific districts? Can they be located near each other or is there a limit to the number of STRs on an individual street (see City of Marquette Code of Ordinances)?
- » What other regulations are applicable to the operation of an STR? Noise Ordinance?

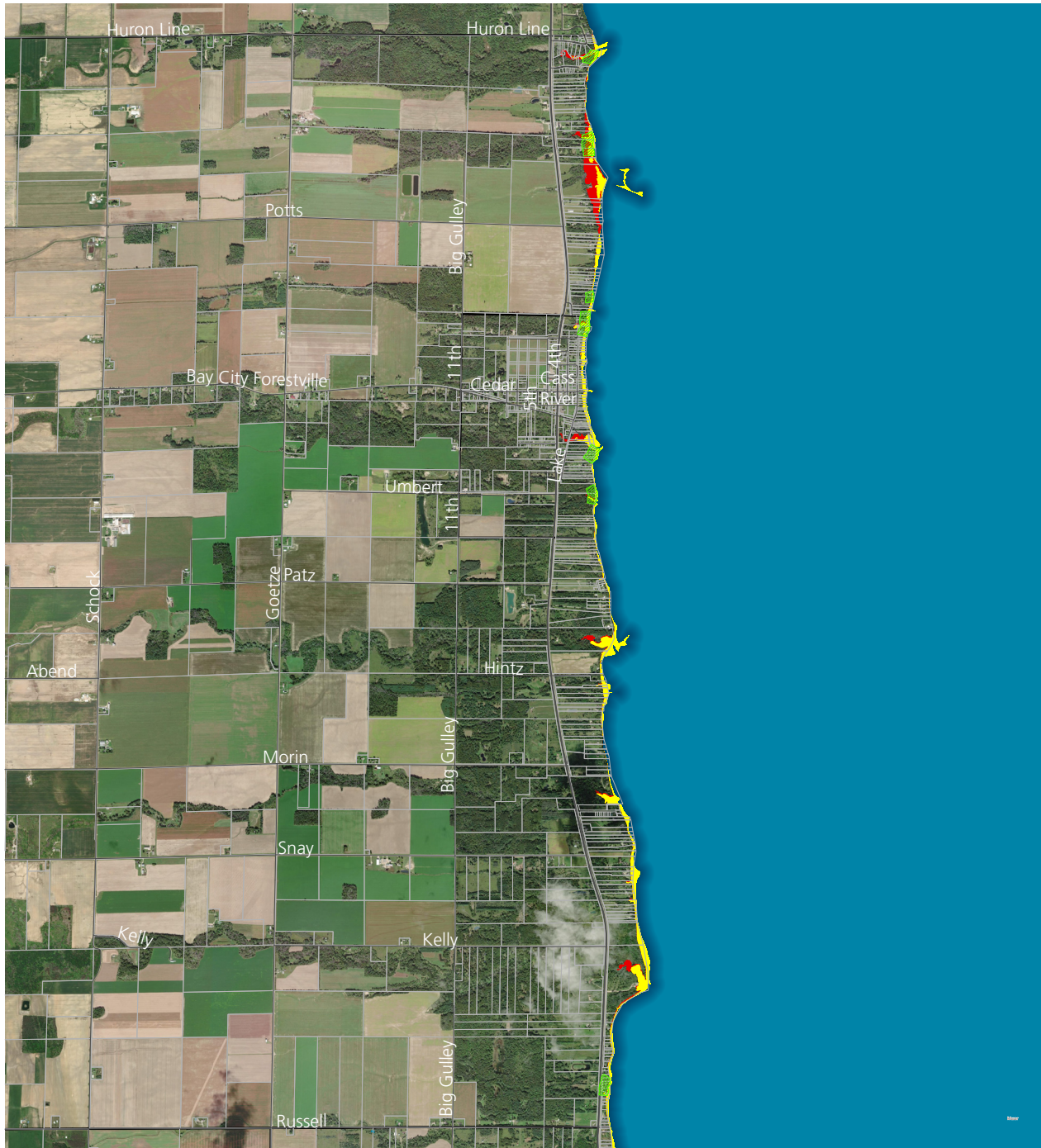
Recommendations

- » Encourage local jurisdictions to:
 - Establish setbacks from the ordinary high-water mark (the visual boundary of high-water)
 - Adopt greenbelt and vegetation requirements for shoreline properties
 - Require native plantings in greenbelts
 - Prohibit hard armoring structures along shorelines
- » Identify property for potential acquisition or work with partners such as the Blue Water Conservation District to preserve coastal property
- » Pursue funding from the Coastal Zone Management Program for eligible projects

Sources

- 1 United States Army Corps of Engineers, Monthly mean lake wide average water levels, <https://www.lre.usace.army.mil/Missions/Great-Lakes-Information/Great-Lakes-Information-2/Water-Level-Data/>
- 2 “Identifying High-Risk Flood Areas”, Resilient Great Lakes Coast, <http://resilientgreatlakescoast.org/home/planning-analysis/identifying-high-risk-flood-areas/>

Map 6: Coastal Hazards and Risk - Delaware Twp



Coastal Hazards and Risk - Delaware Twp

Sources: Michigan Open Data Portal, Sanilac County

Coastal Storm Flood Risk

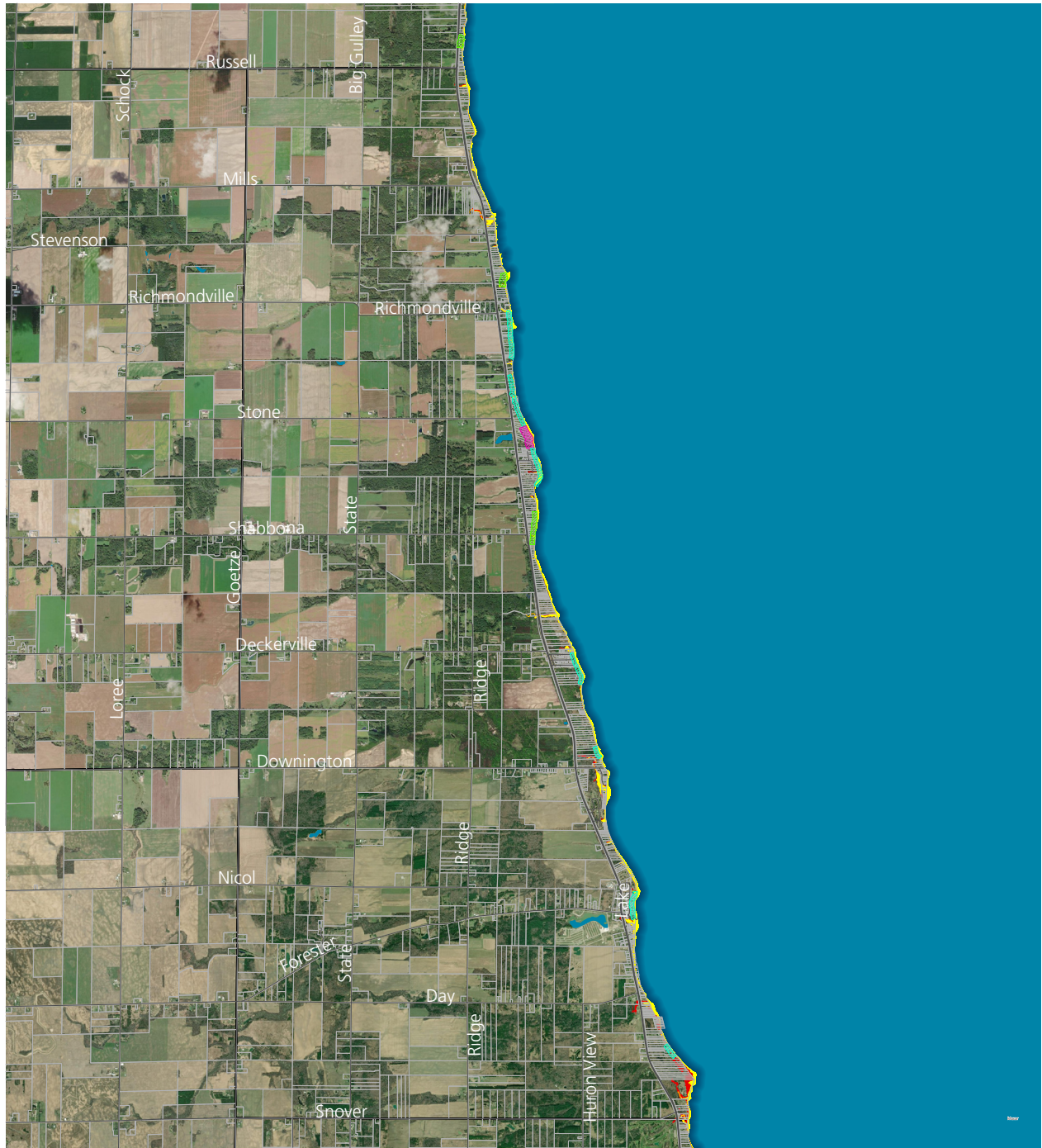
- Lucky Storm Hazard Area
- Expected Storm Hazard Area
- Perfect Storm Hazard Area

High Risk Erosion Zones

- 0.5' - 1.9' / year
- 2.0' - 2.9' / year
- 3.0'+ / year



Map 7: Coastal Hazards and Risk - Forester Twp



Coastal Hazards and Risk - Forester Twp

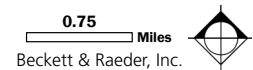
Sources: Michigan Open Data Portal, Sanilac County

Coastal Storm Flood Risk

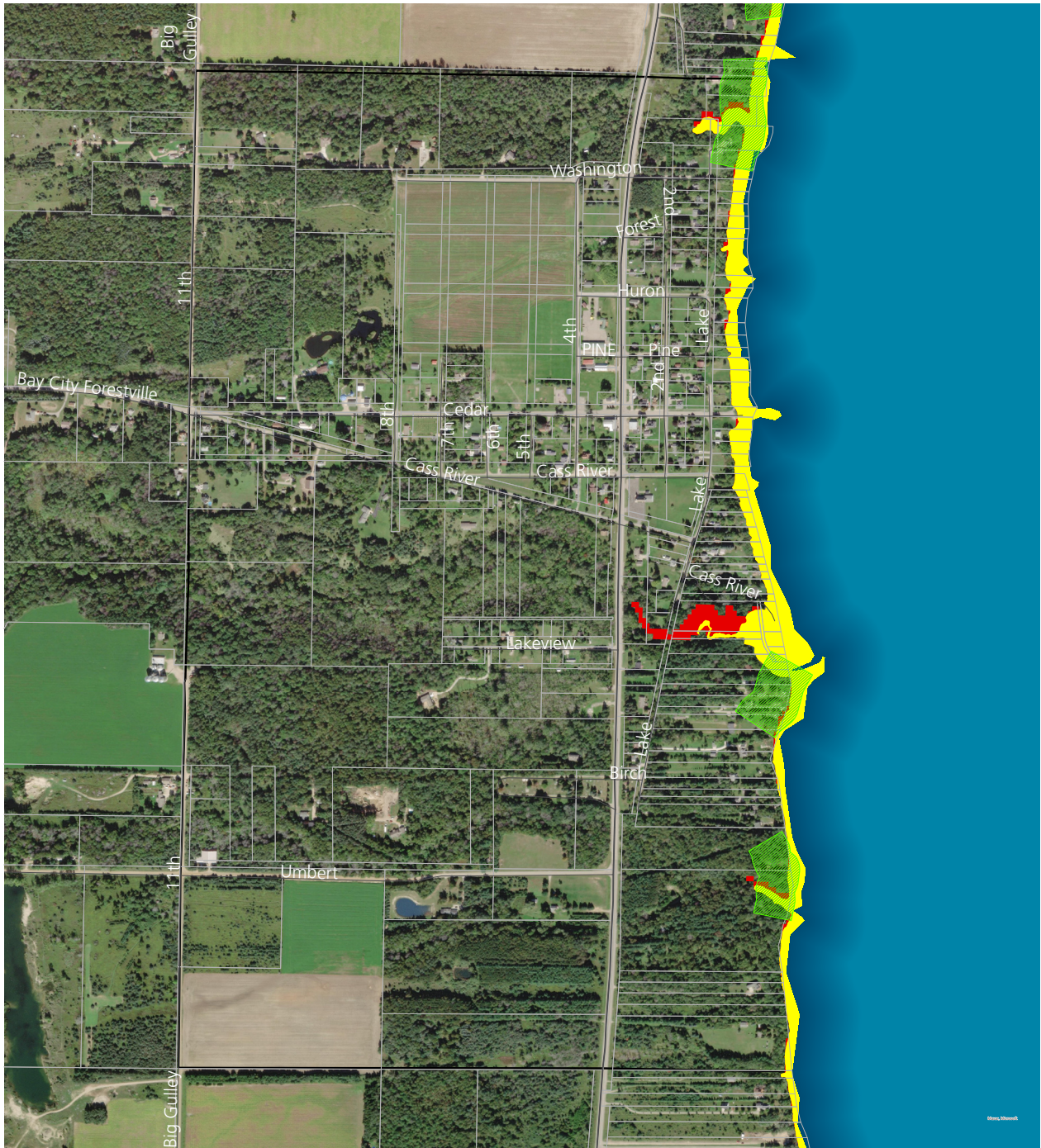
- Lucky Storm Hazard Area
- Expected Storm Hazard Area
- Perfect Storm Hazard Area

High Risk Erosion Zones

- 0.5' - 1.9' / year
- 2.0' - 2.9' / year
- 3.0'+ / year



Map 8: Coastal Hazards and Risk - Forestville



Coastal Hazards and Risk - Forestville

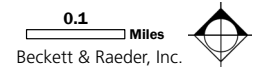
Sources: Michigan Open Data Portal, Sanilac County

Coastal Storm Flood Risk

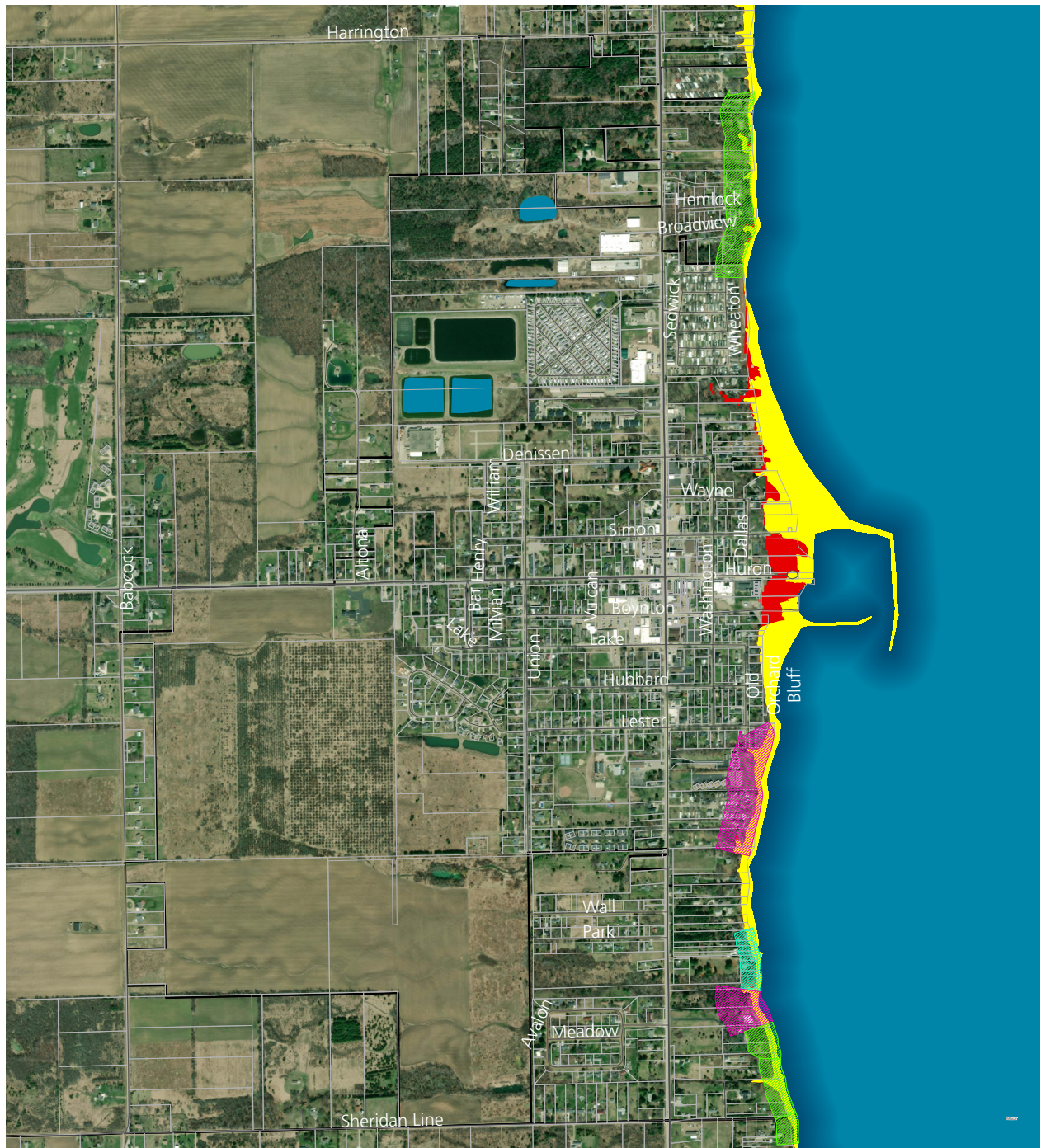
- Lucky Storm Hazard Area
- Expected Storm Hazard Area
- Perfect Storm Hazard Area

High Risk Erosion Zones

- 0.5' - 1.9' / year
- 2.0' - 2.9' / year
- 3.0'+ / year



Map 9: Coastal Hazards and Risk - Lexington



Coastal Hazards and Risk - Lexington

Sources: Michigan Open Data Portal, Sanilac County

Coastal Storm Flood Risk

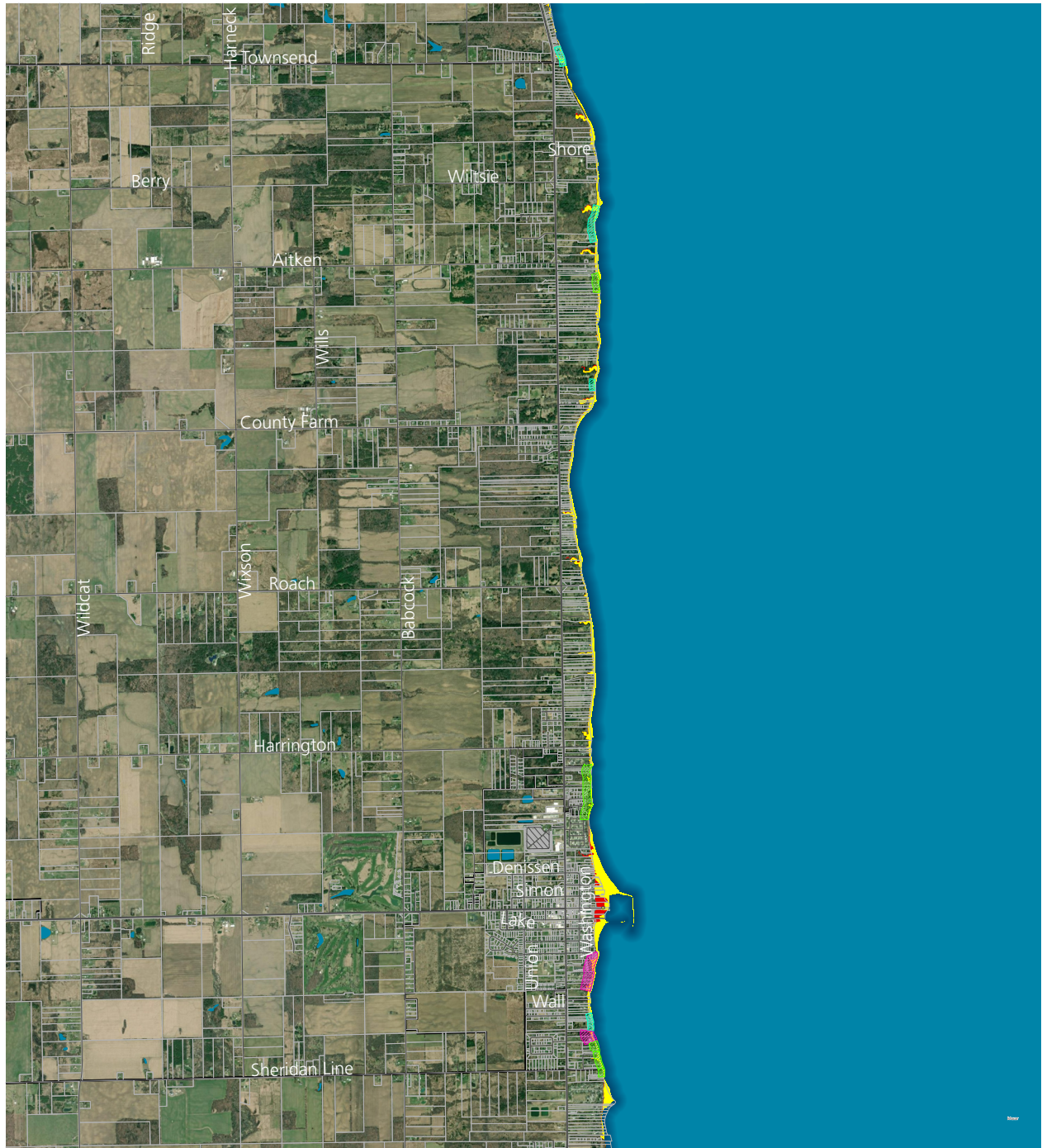
- Lucky Storm Hazard Area
- Expected Storm Hazard Area
- Perfect Storm Hazard Area

High Risk Erosion Zones

- 0.5' - 1.9' / year
- 2.0' - 2.9' / year
- 3.0'+ / year



Map 10: Coastal Hazards and Risk - Lexington Twp



Coastal Hazards and Risk - Lexington Twp

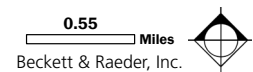
Sources: Michigan Open Data Portal, Sanilac County

Coastal Storm Flood Risk

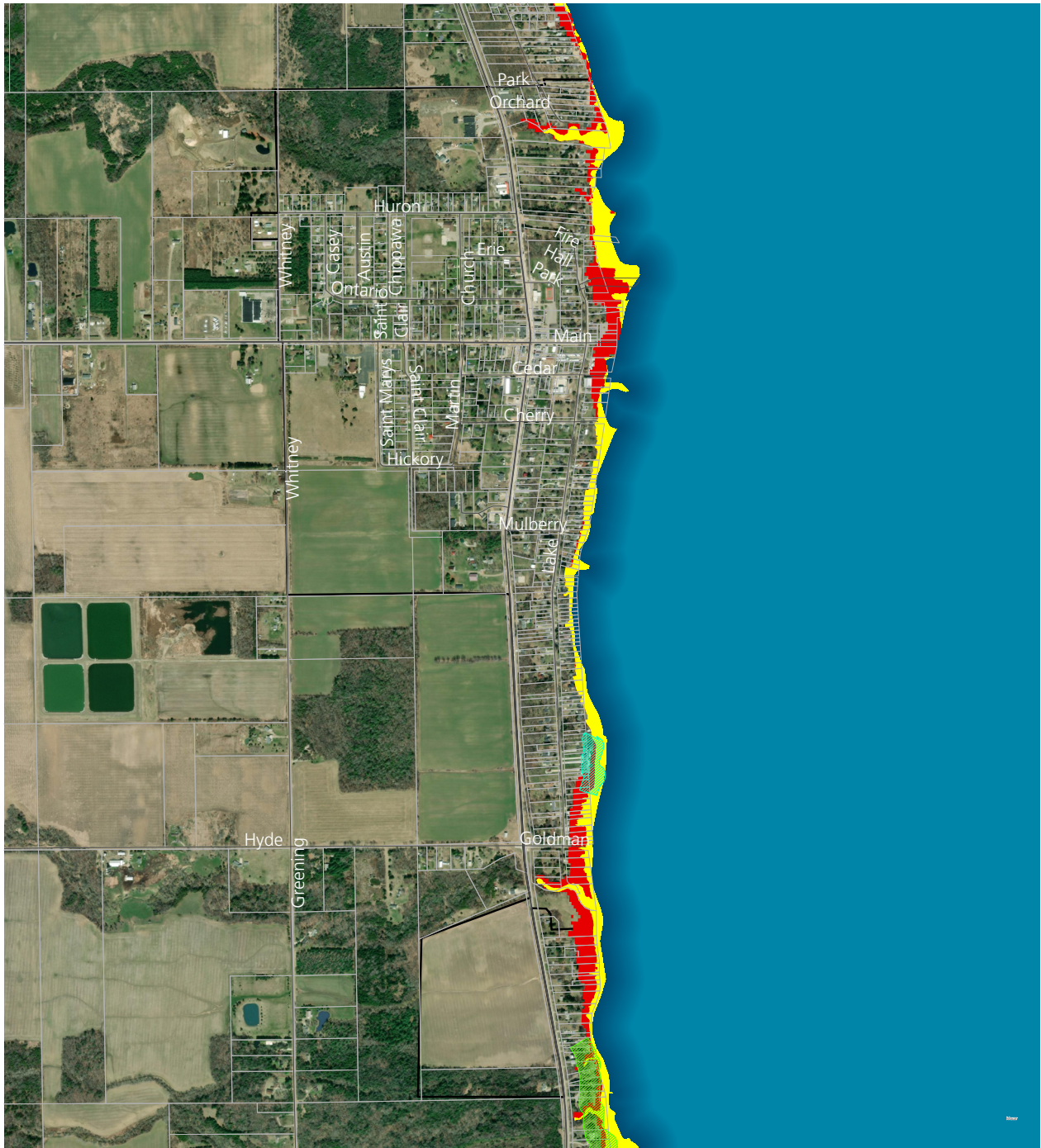
- Lucky Storm Hazard Area
- Expected Storm Hazard Area
- Perfect Storm Hazard Area

High Risk Erosion Zones

- 0.5' - 1.9' / year
- 2.0' - 2.9' / year
- 3.0'+ / year



Map 11: Coastal Hazards and Risk - Port Sanilac



Coastal Hazards and Risk - Port Sanilac

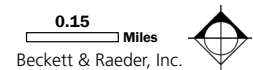
Sources: Michigan Open Data Portal, Sanilac County

Coastal Storm Flood Risk

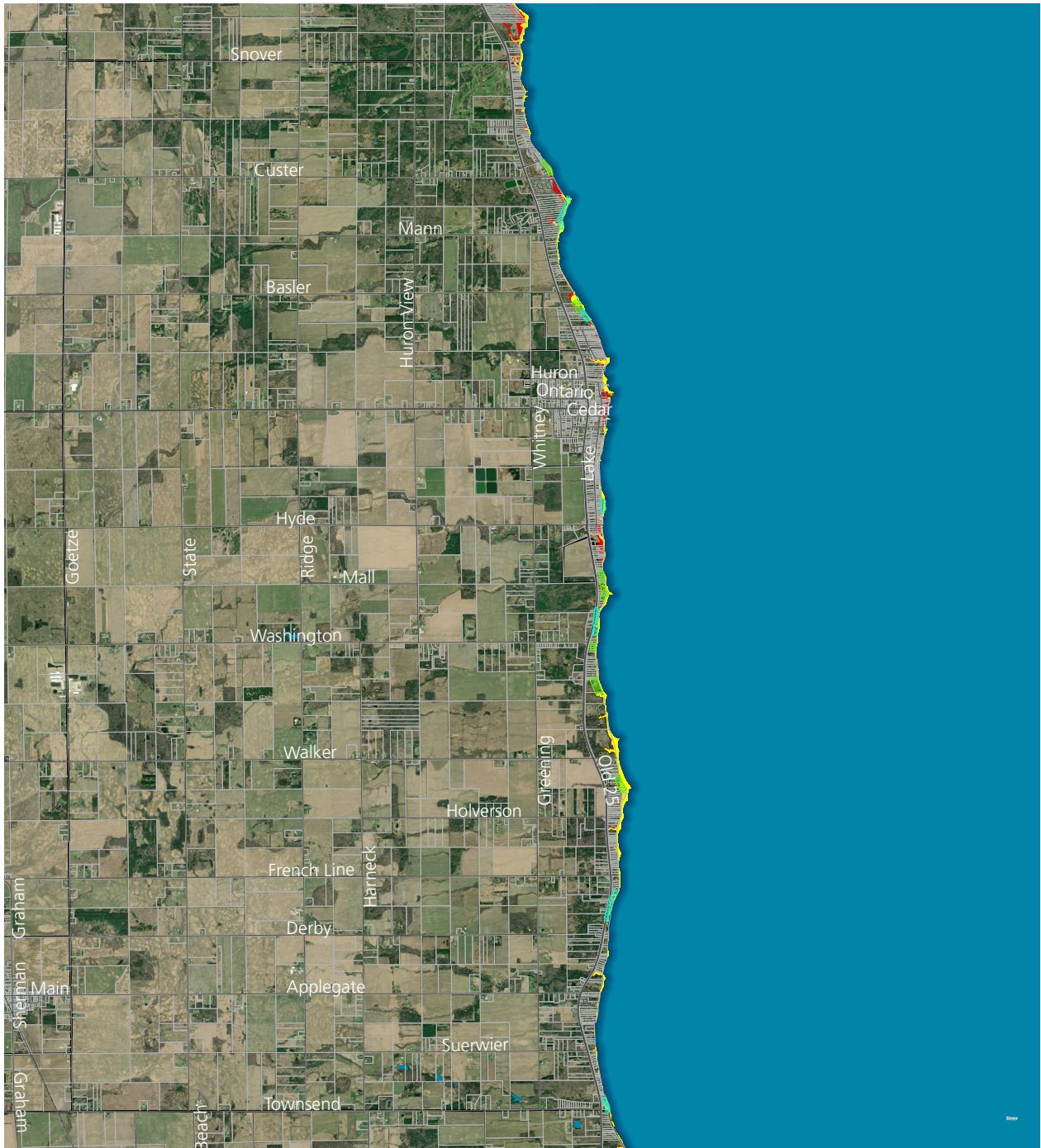
- Lucky Storm Hazard Area
- Expected Storm Hazard Area
- Perfect Storm Hazard Area

High Risk Erosion Zones

- 0.5' - 1.9' / year
- 2.0' - 2.9' / year
- 3.0'+ / year



Map 12: Coastal Hazards and Risk - Sanilac Twp



Coastal Hazards and Risk - Sanilac Twp

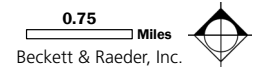
Sources: Michigan Open Data Portal, Sanilac County

Coastal Storm Flood Risk

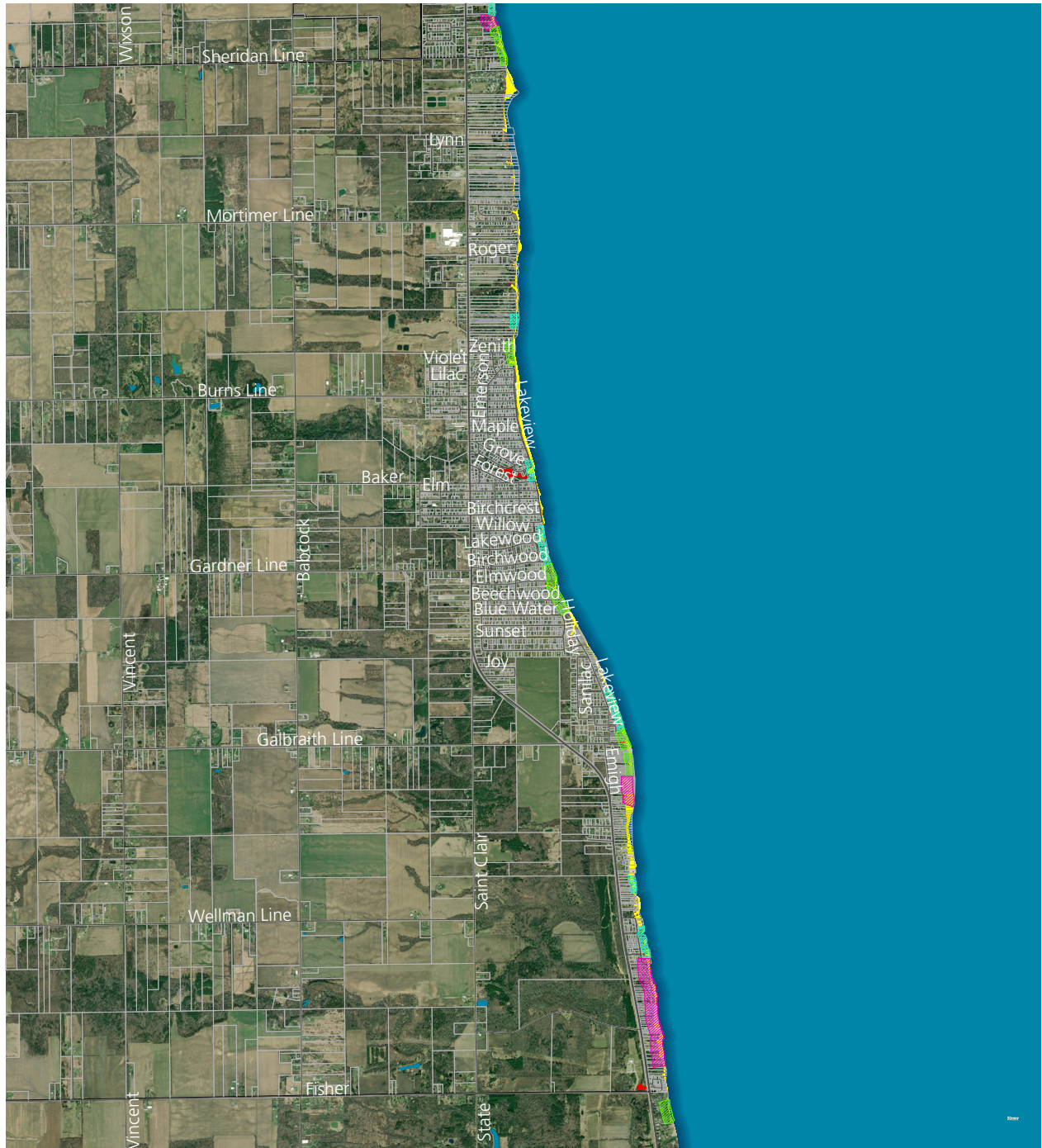
- Lucky Storm Hazard Area
- Expected Storm Hazard Area
- Perfect Storm Hazard Area

High Risk Erosion Zones

- 0.5' - 1.9' / year
- 2.0' - 2.9' / year
- 3.0'+ / year



Map 13: Coastal Hazards and Risk - Worth Twp



Coastal Hazards and Risk - Worth Twp

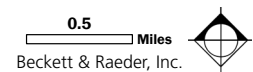
Sources: Michigan Open Data Portal, Sanilac County

Coastal Storm Flood Risk

- Lucky Storm Hazard Area
- Expected Storm Hazard Area
- Perfect Storm Hazard Area

High Risk Erosion Zones

- 0.5' - 1.9' / year
- 2.0' - 2.9' / year
- 3.0'+ / year



Future Land Use & Recommendations



Source: Sanilac County

Implementation

Several themes emerged as priorities in Sanilac County based on the goals of the master plan, the community engagement conducted during the planning process, and the findings of this master plan. The following themes are outlined as the cornerstones of Sanilac County, in no particular order.

Agriculture and Rural Land

Sanilac County is a heavily agricultural community. Farmland and the agricultural industry is ingrained in the history and the culture of the community. Throughout the master planning process preserving farmland and the agricultural economy were persistent community desires and most of the master plans of the local jurisdictions in the county had goals and actions relating to agricultural land preservation. The increased interest in utilizing agricultural land for renewable energy development has become a pressing issue in the community and represents one of the most significant shifts in land use in the county in decades. Therefore, the balance of agricultural land/the agricultural economy and renewable energy development must be addressed by the county.

- » Develop a guidebook to help local jurisdictions in developing renewable energy regulations and policies
- » Encourage local jurisdictions to explore agritourism as an economic development strategy and adjust zoning language to allow for agritourism uses (special events, farm stays, etc.)
- » Provide information on the Farmland Preservation Program (PA-116 Program) to interested parties
- » Cultivate relationships with non-profit conservation organizations and develop a comprehensive PDR program
- » Encourage local jurisdictions to include TDR language in their zoning ordinances



Wind Farm.

Source: Sanilac County

Housing and Neighborhoods

Sanilac County remains a very affordable place to live, as housing costs are low relative to the State of Michigan. Despite the low costs, the quantity of housing remains a challenge, as housing construction has slowed and turnover in the housing market is not frequent enough to maintain a steady supply of homes available for new and existing county residents. The housing and neighborhood goals of the Sanilac County master plan focus on preserving and improving the existing housing stock, encouraging new housing development while maintaining affordable costs, and ensuring neighborhoods remain enjoyable places to live.

- » Utilize applicable funding programs to support residential rehabilitation and inform properties owners about available funding
- » Encourage communities to adopt applicable missing middle housing language in their zoning ordinances
- » Encourage communities to adopt regulations to expand applicable neighborhood typologies
- » Assist in identifying and applying for funding for municipal initiatives to improve neighborhoods, and undertake removal of blighted structures.
- » Utilize assessing records and GIS information to identify properties that may be suitable for infill development
- » Encourage communities to adopt additional zoning reforms to reduce barriers to housing construction
- » Expand or dissolve the Sanilac County Land Bank
- » Host a county-wide housing development workshop and training and invite local developers to attend
- » Encourage local communities to adopt historic districts, where appropriate, and support historic preservation and historic contextual development through the zoning ordinance



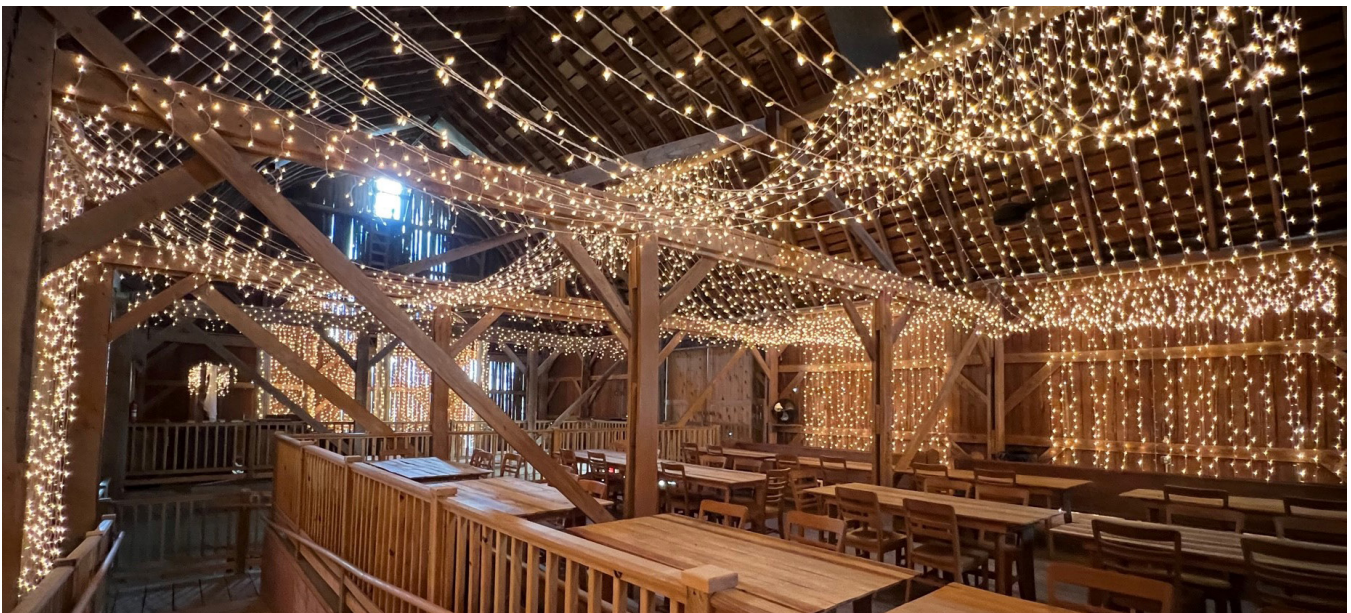
Sunrise by the Lake.

Source: Debra McNiven

Economic Development

The agricultural and manufacturing industries have made Sanilac County what it is today, but as the regional and national economies continue to transition away from an agricultural and manufacturing base, it is critical that Sanilac County explore other economic development strategies to continue to support the county economy, workers, and residents.

- » Develop a coordinated marketing strategy that promotes the recreational facilities in Sanilac County
- » Develop a guidebook to help local jurisdictions in developing renewable/alternative energy regulations and policies
- » Encourage local jurisdictions to explore agritourism as an economic development strategy and adjust zoning language to allow for agritourism uses (special events, farm stays, etc.)
- » Encourage communities to adopt placemaking strategies in major commercial districts or corridors and provide financial resources when appropriate
- » Host a county-wide housing development workshop and training and invite local developers to attend
- » Encourage local communities to adopt historic districts, where appropriate, and support historic preservation and historic contextual development through the zoning ordinance
- » Market the Sanilac County Opportunity Zone to attract businesses and industry to the community
- » Market the county as an attractive place to live, especially for those looking for a rural lifestyle, to attract talent
- » Continue to expand and improve the telecommunications infrastructure in the community
- » Explore the development of a non-motorized trail system in the Sanilac County
- » Explore the development of a motorized trail system in Sanilac County



Wedding Barn in Marlette.

Source: Sanilac County

Natural Features

Across the county, you can find pockets of forests and wetlands and along the eastern border of the county is mostly undeveloped Lake Huron shoreline. These features provide numerous benefits to the county and recommendations in this master plan are intended to preserve and enhance the natural assets of the county.

- » Encourage jurisdictions in Sanilac County with zoning authority to adopt zoning language that preserves woodlands.
- » Encourage jurisdictions in Sanilac County with zoning authority to adopt zoning language that preserves wetlands.
- » Encourage local jurisdictions to establish setbacks from the ordinary high-water mark (the visual boundary of high-water)
- » Encourage local jurisdictions to adopt greenbelt and vegetation requirements for shoreline properties
- » Encourage local jurisdictions to require native plantings in greenbelts
- » Encourage local jurisdictions to prohibit hard armoring structures along shorelines
- » Identify property for potential acquisition or work with partners such as the Blue Water Conservation District to preserve coastal property
- » Adopt a time of sale or transfer well and septic inspection ordinance at the county level

Transportation and Infrastructure

Both transportation and infrastructure systems cross jurisdictional lines and require coordination at a higher level of government. Sanilac County can serve in a facilitation and solicitation role for many transportation and infrastructure issues, notably the improvement of the telecommunications infrastructure which was a major community priority.

- » Facilitate discussions about concurrency between municipalities where development may be crossing jurisdictional lines
- » Continue to expand and improve the telecommunications infrastructure in the community
- » Encourage local communities to adopt green infrastructure language into their zoning ordinances and to include green infrastructure elements in municipal engineering projects
- » Explore the development of a non-motorized trail system in the Sanilac County
- » Explore the development of a motorized trail system in Sanilac County
- » Work with the Sanilac County Transportation Company to develop a schedule of bus service to the major population centers
- » Work with the Sanilac County Transportation Company to implement a pilot fixed-route service

Management and Leadership

While Sanilac County does not exercise any responsibility over the zoning or land use planning of local jurisdictions, it can play a role in facilitating land use decisions/processes and providing resources for local jurisdictions so that they can achieve their goals. This master plan is intended to serve as one of many resources to help local communities plan for and manage their communities effectively and productively.

- » Facilitate discussions about concurrency between municipalities where development may be crossing jurisdictional lines
- » Encourage local communities to pursue RRC certification
- » Pursue funding from the Coastal Zone Management Program for eligible projects

Implementation by Transect

Natural Zone

- » Encourage jurisdictions in Sanilac County with zoning authority to adopt zoning language that preserves woodlands.
- » Encourage jurisdictions in Sanilac County with zoning authority to adopt zoning language that preserves wetlands.
- » Adopt a time of sale or transfer well and inspection ordinance at the county level.
- » Develop a coordinated marketing strategy that promotes the recreational facilities in Sanilac County.
- » Explore the development of a non-motorized trail system in the Sanilac County.
- » Explore the development of a motorized trail system in Sanilac County.

Agricultural Zone

- » Publicize the County renewable energy guidebook and help local communities find the assistance they need in adopting renewable energy language.
- » Encourage local jurisdictions to explore agritourism as an economic development strategy and adjust zoning language to allow for agritourism uses (special events, farm stays, etc.).

- » Provide information on the Farmland Preservation Program (PA-116 Program) to interested parties.
- » Cultivate relationships with non-profit conservation organizations and develop a comprehensive PDR program.
- » Encourage local jurisdictions to include TDR language in their zoning ordinances.

Towns and Villages

- » Utilize applicable funding programs to support residential rehabilitation and inform properties owners about available funding.
- » Encourage communities to adopt applicable missing middle housing language in their zoning ordinances.
- » Encourage communities to adopt regulations to expand applicable neighborhood typologies.
- » Facilitate discussions about concurrency between municipalities where development may be crossing jurisdictional lines.
- » Encourage communities to adopt placemaking strategies in major commercial districts or corridors and provide financial resources when appropriate.

Small Cities

- » Assist in identifying and applying for funding for municipal initiatives to improve neighborhoods, and undertake the removal of blighted structures.
- » Utilize assessing records and GIS information to identify properties that may be suitable for infill development.
- » Encourage communities to adopt applicable missing middle housing language in their zoning ordinances.
- » Encourage communities to adopt regulations to expand applicable neighborhood typologies.
- » Encourage communities to adopt additional zoning reforms to reduce barriers to housing construction.
- » Encourage local jurisdictions, especially those in the Small Cities transect, to pre-approve pattern book homes as a way to reduce costs for developers.
- » Expand or dissolve the Sanilac County Land Bank.
- » Host a county-wide housing development workshop and training and invite local developers to attend.
- » Encourage communities to adopt placemaking strategies in major commercial districts or corridors and provide financial resources when appropriate.
- » Encourage local communities to adopt historic districts, where appropriate, and support historic preservation and historic contextual development through the zoning ordinance.

- » Encourage local communities to pursue RRC certification.
- » Market the Sanilac County Opportunity Zone to attract businesses and industry to the community.
- » Market the county as an attractive place to live, especially for those looking for a rural lifestyle, to attract talent.
- » Continue to expand and improve the telecommunications infrastructure in the community.
- » Encourage local communities to adopt green infrastructure language into their zoning ordinances and to include green infrastructure elements in municipal engineering projects.

Shoreline

- » Encourage local jurisdictions to:
 - Establish setbacks from the ordinary high-water mark (the visual boundary of high-water)
 - Adopt greenbelt and vegetation requirements for shoreline properties
 - Require native plantings in greenbelts
 - Prohibit hard armoring structures along shorelines
- » Identify property for potential acquisition or work with partners such as the Blue Water Conservation District to preserve coastal property
- » Pursue funding from the Coastal Zone Management Program for eligible projects

Trainings for Local Officials

Key to the implementation of this Master Plan and the local Master Plans is the support and action of the County Planning Commission and Local Planning Commissions. When these bodies have dedicated people guiding land use decisions the goals and priorities of residents and the local Master Plans can be achieved. Often a hurdle to implementation is a lack of training for local officials, who are volunteers and have other responsibilities. There are several training courses for local officials that provide a range of knowledge for those who have just joined a local board or those who have served for decades.

Citizen Planner Program – MSU Extension

The Citizen Planner Program, offered by MSU Extension, is a training program for local planning officials. The course covers the roles and responsibilities of planning officials and the best practices for planning and zoning in Michigan. The course is offered in a classroom format (6 sessions over 6 weeks) or can be completed online in a self-paced format. The total cost for the program is \$250.

Workshops – Michigan Association of Planning

The Michigan Association of Planning (MAP) offers various workshops, both in-person and online. Workshops cover a wide variety of planning and zoning issues. Workshops cost \$100 per participant and \$75 for members of MAP. Upcoming workshops are posted on MAP's events calendar and additional workshops can be scheduled by contacting MAP.

Township Governance Academy – Michigan Townships Association

The Township Governance Academy (TGA) is a voluntary credentialing program intended to give township board members and other leaders the knowledge and skills needed to make effective decisions for the benefit of their township. It's designed to professionally challenge you and enhance your experience serving in your township. The Academy offers new ideas, shares "best practices" in township government and provides a hands-on approach to help you deal more effectively with everyday issues that your board faces. The program consists of 70 required credits, obtained by attending a curriculum of 11 courses and earning electives credits. Enrollment costs \$35 and individual courses range from \$1000 - \$125.

Elected Officials Academy – Michigan Municipal League

The Elected Officials Academy is a voluntary continuing education program established to encourage and recognize the effort local elected officials put into becoming more effective leaders. The EOA is a free program designed to meet the needs of dedicated public servants. Earn credits by taking League and other courses, attending conferences, serving on committees, advocating on League issues and more.

Publications – Michigan Association of Planning

MAP has published a variety of guides covering planning and zoning at the local level. Publications range in depth and knowledge base providing valuable information for all local officials, even those with extensive experience. Publications can be purchased on MAP's website and range from roughly \$10 to \$50.






Future Land Use

The future land use described below is intended to serve as a general guide to local governments when conducting local land use planning. As the county does not hold any authority of land use planning or zoning at the local level, detailed future land use planning is best done by the local planning commissions. The basis for the future land use plan are the transects that frame the entirety of this plan. The transects were developed using existing land use patterns and aerial imagery.

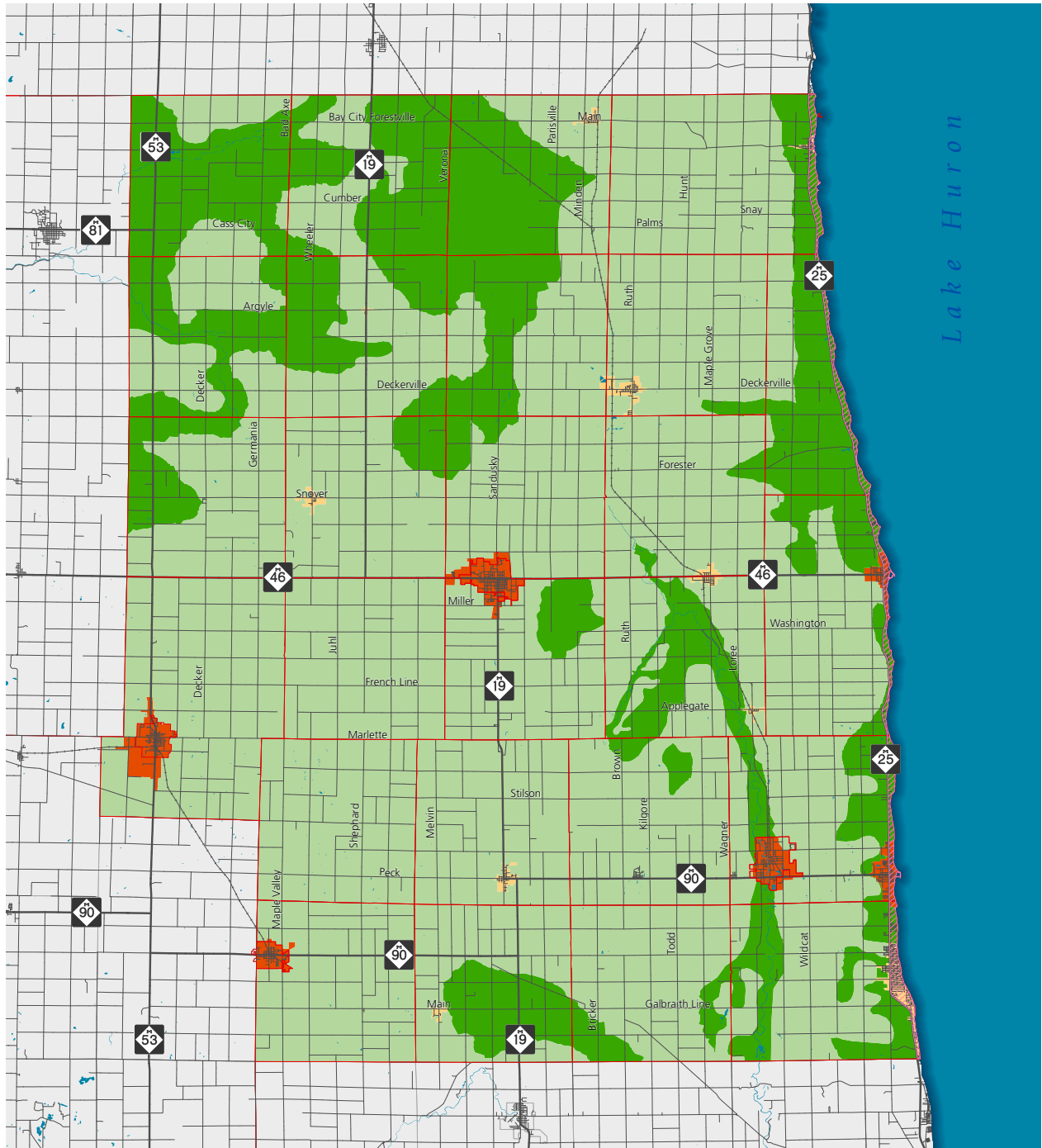
Zoning Plan

As the Sanilac County does not have zoning authority over any land within the county, a zoning plan is not applicable for this Master Plan. However, throughout the Master Plan there are recommendations for zoning changes at the local level. These changes are not directives for local units of government but are intended to serve as guides and points of consideration for local planning commissions. The appendix of this Master Plan is intended to serve as a resource for zoning language.

Table 28: Future Land Use Categories

Future Land Use	Description	Example
Natural/Open Space	This area is intended to be used for primarily recreation purposes and development of this area should be discouraged.	
Rural/Agricultural	Uses in this zone should support the working agricultural base of Sanilac County. Large scale residential development (subdivisions) should be discouraged.	
Towns and Villages	The land use pattern of the towns and villages should support their function as a collection point for the rural areas of the county. Commercial and residential development in and around towns and villages is encouraged.	
Small Cities	Small cities should continue to be the hubs of the county with a wider variety of commercial activity (compared to the towns and villages). Larger scale development of commercial, residential, and industrial uses is encouraged to support Sanilac County's small cities.	
Shoreline	Development along the shoreline should be carefully considered. Large scale development and transformation of the shoreline is discouraged. Outside of the population centers on the shoreline, development should be minimal and sensitive to the delicate nature of the shoreline.	

Map 14: Future Land Use



Future Land Use

Sources: Michigan Open Data Portal, Sanilac County

- Natural Zone
- Rural/Agricultural Zone
- Towns and Villages
- Small Cities
- Shoreline

3 Miles
 Beckett & Raeder, Inc.

Appendix

- A. Sample Zoning Language
- B. [Community Survey Results](#)
- C. [Sanilac County Energy Guidebook](#)

A. Sample Zoning Language

Conservation Zoning

Conservation Zoning is achieved by adopting zoning districts where the intent is to preserve the natural environment and promote compatible uses like passive recreation. An example of conservation zoning district intent and uses is below.

District Intent

The provisions of this Chapter are intended to create a zoning district which recognizes these unique natural characteristics while at the same time permitting uses where such uses are compatible with the land's location, soil characteristics, and topography, and where such uses have no adverse effect upon the natural environment.

Permitted Uses

- » *Harvesting of timber in accordance with approved conservation practices.*
- » *Outdoor, low impact recreational activities such as hunting (including licensed upland game bird hunting preserves), trapping, hiking, skiing, or snowmobiling which do not have an adverse effect upon the natural environment.*
- » *Greenhouses, nurseries, orchards, groves and vineyards, apiaries, habitats, and sanctuaries for wild birds and animals, provided the sanctuaries be approved by the Michigan Department of Natural Resources.*

Landscaping Standards

Landscaping standards are standalone sections in a zoning ordinance and applied during a site plan review or are incorporated into the site plan review standards. They are most applicable in communities with at least a moderate level of development. The language below is an example of language in the site plan review standards intended to preserve natural features. Site plan approval can be contingent upon standards like the one below.

Conserve open land, including areas containing unique and sensitive natural features such as woodlands, wetlands, steep slopes, streams, groundwater recharge areas, floodplains, by setting them aside from development.

Wetland Preservation Ordinance

Adopted wetland preservation police power ordinances, separate from the zoning ordinance, are the most effective tool for preserving wetlands. A sample wetland preservation ordinance recommended by EGLE can be found on their local wetland regulations webpage.

Wetland Setbacks

Wetland setback provisions of a zoning ordinance are enforced through the site plan review process; therefore, a zoning ordinance needs language that triggers a site plan review if wetlands are present on the parcel.

Each application for a land use permit for a use or structure on a parcel containing wetlands shall require site plan review.

In the site plan review standards, a map of the wetlands on the site needs to be required as part of a site plan application. The specific setback also needs to be included in the site plan review standards. Wetlands setbacks can range from zoning ordinance to zoning ordinance but generally fall between 20ft and 100ft.

No structure shall be permitted within ____ feet of a designated wetland.

Coastal Setbacks

The following standards shall apply to all private development and/or use of that portion of a lot or parcel of land within fifty (50) feet of the following:

1. The ordinary high water mark on Lake Huron

As defined the ordinary high water mark is the line between upland and bottomland, which persists through successive changes in water levels, below which the present action of the water is so common or recurrent that the character of the land is marked distinctly from the upland and is apparent in the soil itself, the configuration of the surface of the soil and the vegetation.

1. Permitted structures shall require a land use permit and shall be limited to the following:
 - Patios and Decks: One (1) permeable patio or deck, not to exceed two hundred (200) square feet. Patios and decks shall be limited to a maximum of two (2) feet above average finished grade surrounding the structure. Fill and excavation shall be prohibited.
 - Walkways and Stairs: A maximum of one (1) walkways, including portions constructed as stairways and boardwalks, shall be allowed per parcel to allow reasonable private riparian access. Walkways and/or stairs shall be limited to four (4) feet in width and constructed of a permeable surface. Allowance may be permitted by the Administrative Review Committee on a case by case if the applicant can document the necessity of additional width requirement for accessibility needs.
2. All permitted structures shall be constructed of pervious material such as porous concrete, patio blocks, wood chips, gravel, or decking.
3. All permitted structures shall meet the standards of any applicable federal, state, or local agency requirements and shall secure any necessary permits.

Vegetative Buffer

1. **Purpose:** The purpose of the natural shoreline buffer is to protect water quality by preventing soil erosion, providing a filter for the removal of nutrients, pesticides, fertilizers, and other potential water pollutants, and to preserve a visual barrier by maintaining a strip of natural vegetation along the shoreline.
2. **Extent:** The natural shoreline buffer shall include all lands located within twenty-five (25) feet of the ordinary high water mark on Lake Huron.
3. **Preservation:** Vegetation within the natural shoreline buffer shall be maintained in a natural state. The removal or pruning of trees, shrubs or other native vegetation, and the mowing of grasses and herbaceous

plants shall be prohibited within the natural shoreline buffer with the following exceptions:

- Pruning to remove dead portions of trees, shrubs or other vegetation.
- Removal of dead trees, shrubs or other vegetation, however, the root systems shall be left in place for shoreline stabilization.
- Removal of invasive species as identified by the Michigan Invasive Species Network.
- Removing limbs and/or branches from living trees up to a height of twelve (12) feet above grade and trimming herbaceous plants that exceed a height of four (4) feet above grade to establish filtered views.
- Clearing and removal of vegetation to accommodate a walkway, a deck or patio structure, and/or to provide reasonable water access. Such allowed vegetation clearings shall be limited as follows:

For parcels along Lake Huron, such clearing shall be limited to twenty (20%) percent of lot width at the ordinary high water mark, or twenty (20) feet, whichever is less.

4. Restoration: For any project or development requiring a land use permit on a waterfront lot that does not have an established natural shoreline buffer meeting the standards of this Section, the establishment, restoration, and/ or maintenance of a natural shoreline buffer shall be required that meets the following standards:

- Any and all fill material placed within the natural shoreline buffer shall be removed, except those placed as part of an approved shoreline stabilization structure. Only soil substrates consistent with the composition of the preexisting on-site soil substrates shall be allowed when necessary for growth of new vegetation. The placement of beach sand shall be prohibited.

- The natural shoreline buffer area shall be replanted solely with native, noninvasive species best suited for that habitat. The placement of the trees and shrubs shall be so designed as to imitate the natural shoreline exemplified along the waterfront and to evenly distribute root structures throughout the natural shoreline buffer area to provide soil stability against erosion. The remainder of the natural shoreline buffer area shall be planted with native wildflowers, vines, grasses, rushes, sedges, and/or ferns.
- All natural shoreline buffer restorations shall require a landscape plan satisfying the requirements of the standards and shall be reviewed and approved by the Zoning Administrator.

Duplexes, Side-By-Side¹

A small (1 to 2-story), detached structure that consists of two dwelling units arranged side-by-side, each with an entry from the street. This type has the appearance of a small-to-medium single-unit house and may include a rear yard.

Recommended Dimensional Standards	
Lot Width	55–75 feet
Lot Area	5,000–11,250 square feet
Front Setback	10–25 feet
Side Setback	5–12 feet
Rear Setback	30–60 feet

Duplexes, Stacked²

A small (2 to 2.5-story), detached structure that consists of two dwelling units arranged one above the other, each with an entry from the street. This type has the appearance of a small-to-medium single-unit house, may include a rear yard and fits on narrower lots than the side-by-side duplex.

Recommended Dimensional Standards	
Lot Width	45–75 feet
Lot Area	4,500–11,300 square feet
Front Setback	10–25 feet
Side Setback	5–12 feet
Rear Setback	30–60 feet

Triplexes³

A small-to-medium (3 to 3.5-story) sized detached structure that consists of 3 dwelling units typically stacked on top of each other on consecutive floors, with one entry for the ground floor unit and a shared entry for the units above.

Recommended Dimensional Standards	
Lot Width	40–65 feet
Lot Area	4,000–9,750 square feet
Front Setback	10–25 feet
Side Setback	5–12 feet
Rear Setback	5–30 feet

Cottage Courts⁴

A group of small (1 to 1.5-story), detached structures arranged around a shared court visible from the street. Entrances should be from the shared court.

Recommended Dimensional Standards	
Lot Width	115–160 feet
Lot Area	11,500–24,000 square feet
Front Setback	10–25 feet
Side Setback	5–15 feet
Rear Setback	5–15 feet

Courtyard Homes⁵

A medium-to-large sized (1 to 3.5-story) detached structure consisting of multiple side-by-side and/or stacked dwelling units oriented around a courtyard or series of courtyards. Each unit is accessed from the courtyard and shared stairs each provide access up to 3 units.

Recommended Dimensional Standards	
Lot Width	100–135 feet
Lot Area	11,000–20,250 square feet
Front Setback	10–15 feet
Side Setback	5–12 feet
Rear Setback	10–20 feet

Townhomes⁶

A small-to medium-sized attached structure that consists of 2 to 16 multi-story dwelling units placed side-by-side. Entries are on the narrow side of the unit and typically face a street or courtyard. The street façades have entrances and avoid garages.

Recommended Dimensional Standards	
Lot Width	18–25 feet
Lot Area	1,530–3,000 square feet
Front Setback	10–25 feet
Side Setback	0–12 feet
Rear Setback	30–60 feet

Live-Work⁷

A small- to medium-sized (2 to 3.5-story) attached or detached structure consisting of one dwelling unit above or behind a fire-separated flexible ground floor space that can accommodate a range of non-residential use. The flex space and residential unit typically have separate street entrances.

Recommended Dimensional Standards	
Lot Width	18–25 feet
Lot Area	1,530–3,000 square feet
Front Setback	10–25 feet
Side Setback	0–12 feet
Rear Setback	30–60 feet

Fourplexes⁸

A detached (2 to 2.5-story) structure with four dwelling units, two on the ground floor and two above, with shared or individual entries from the street.

Recommended Dimensional Standards	
Lot Width	95–120 feet
Lot Area	9,500–18,000 square feet
Front Setback	10–25 feet
Side Setback	5–12 feet
Rear Setback	30–60 feet

Mansion Apartments⁹

A detached (2 to 2.5-story) structure that consists of 5 to 12 dwelling units arranged side-by-side and/or stacked, typically with a shared entry from the street.

Recommended Dimensional Standards	
Lot Width	50–75 feet
Lot Area	5,000–11,250 square feet
Front Setback	10–25 feet
Side Setback	5–12 feet
Rear Setback	30–60 feet

Sources

- 1 Missing Middle Housing, <https://missingmiddlehousing.com/types>
- 2 Missing Middle Housing, <https://missingmiddlehousing.com/types>
- 3 Missing Middle Housing, <https://missingmiddlehousing.com/types>
- 4 Missing Middle Housing, <https://missingmiddlehousing.com/types>
- 5 Missing Middle Housing, <https://missingmiddlehousing.com/types>
- 6 Missing Middle Housing, <https://missingmiddlehousing.com/types>
- 7 Missing Middle Housing, <https://missingmiddlehousing.com/types>
- 8 Missing Middle Housing, <https://missingmiddlehousing.com/types>
- 9 Missing Middle Housing, <https://missingmiddlehousing.com/types>