Negaunee Township

Master Plan

August 2023

For Distribution

INSERT RESOLUTION

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1. Introduction

WHAT IS A MASTER PLAN?

A Master Plan is a community's policy document used to guide decisions that affect its land, people, and structures. It is often thought of as a long-term "road map" to guide officials and decision-makers when faced with difficult land use and infrastructure decisions that have long-term impacts on the community. The Master Plan inventories several systems to identify how they work together, how trends have affected these systems over time, and what improvements a community can make that strengthen these systems to positively influence residents' quality of life. The Master Plan inventories the following features:

- Demographics
- Housing
- Natural features and climate
- Community facilities and services
- Open space and recreation
- Transportation systems
- Economic development
- Land Use

The Plan then lays out "where we should go" based on a combination of residents' priorities and findings drawn from the inventory process. These priorities are the basis for actions that community leadership may pursue through policy, particularly through zoning ordinance updates.

The Michigan Planning Enabling Act (PA 33 of 2008) enables municipalities to create master plans to do the following:

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

The Plan is designed to be comprehensive, future-oriented, and accessible to the public, because it reflects the community's preferences and aspirations.

The Framework Plan (page 67) forecasts how Negaunee Township land uses will consolidate over a twenty-year time horizon. This vision and the action program will be reviewed every five years by the Planning Commission to determine what has been accomplished and what needs to be refined based on land use decisions and market trends.

REGIONAL CONTEXT

Negaunee Township sits in the northern center of Marquette County and spans roughly 44 square miles. Bordered by Marquette Township to the north and east, Ishpeming Township to the west, Sands Township to the east, the City of Negaunee, and Richmond Township both to the south. The Township's eastern border is roughly four miles to downtown Marquette and northeast corner roughly two miles to the shore of Lake Superior.

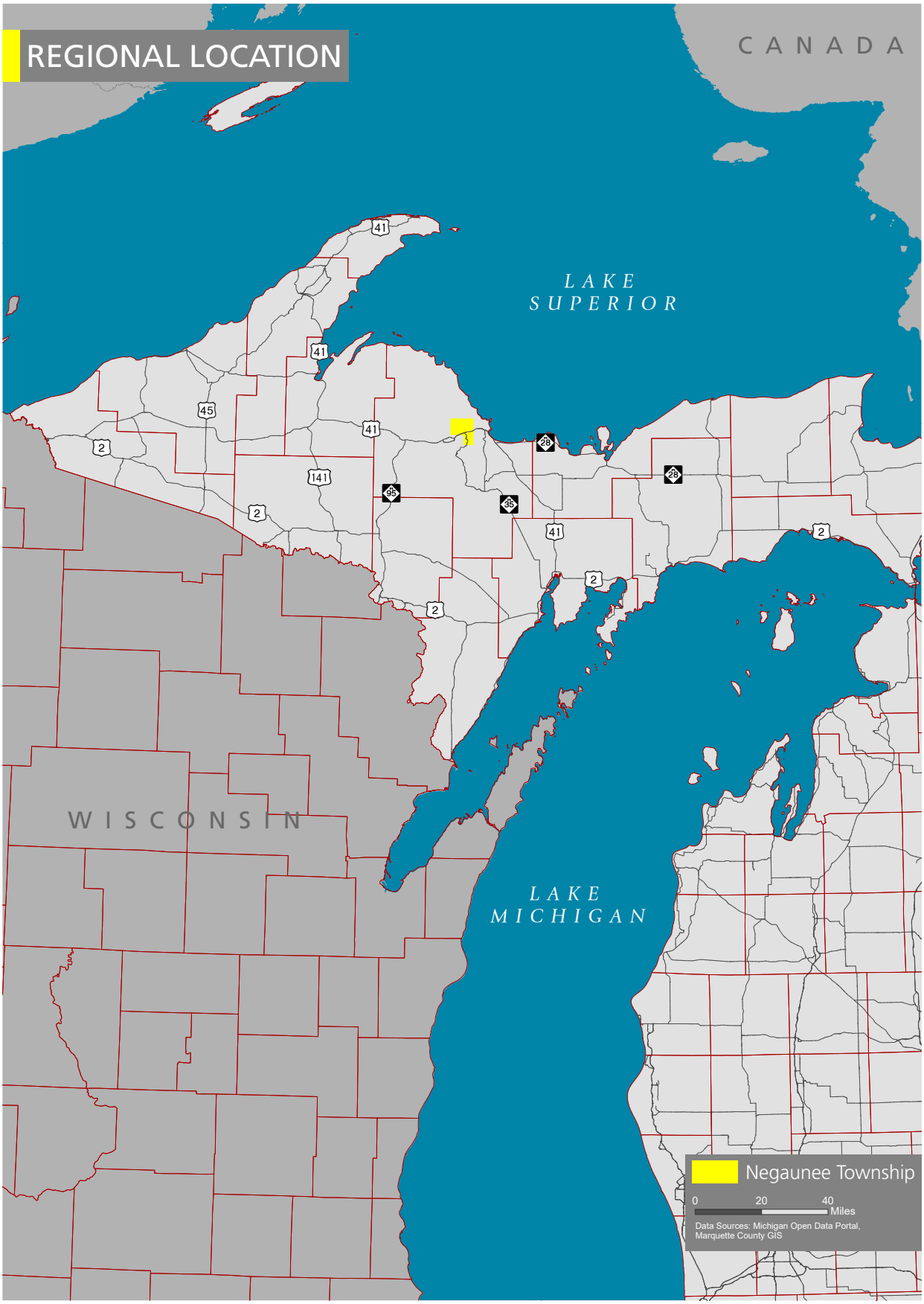
HISTORY

As with many settlements in the Upper Peninsula, the settlement of Negaunee resulted from the discovery of iron ore that lead to subsequent mining operations. The first documented discovery of iron ore in the area is accredited to William A. Burt in 1844.[1] Another exploration party, headed by Phil Everett, led to an outcropping of iron ore which resulted in the establishment of the Jackson Mine in 1847.

Later, a processing plant was established to refine the raw iron ore in the same vicinity as the mine. The Carp River forge was constructed in 1847 in the southwest corner of present-day Negaunee Township. A charcoal-blast furnace was constructed later in that same year in present-day downtown Negaunee, on Partridge Creek, which produced pig iron beginning in 1858 through 1893.[2]

Peter S. White choose the name "Negaunee," which is a native Chippewa word that has a connotation of "pioneer" or "first."[3] In 1865, miners of the Negaunee region were the first in the world to ship iron ore pellets, living up to the pioneering meaning of their community's namesake. Producing iron ore pellets was a technological advantage for the region,

Map 1: Regional Location



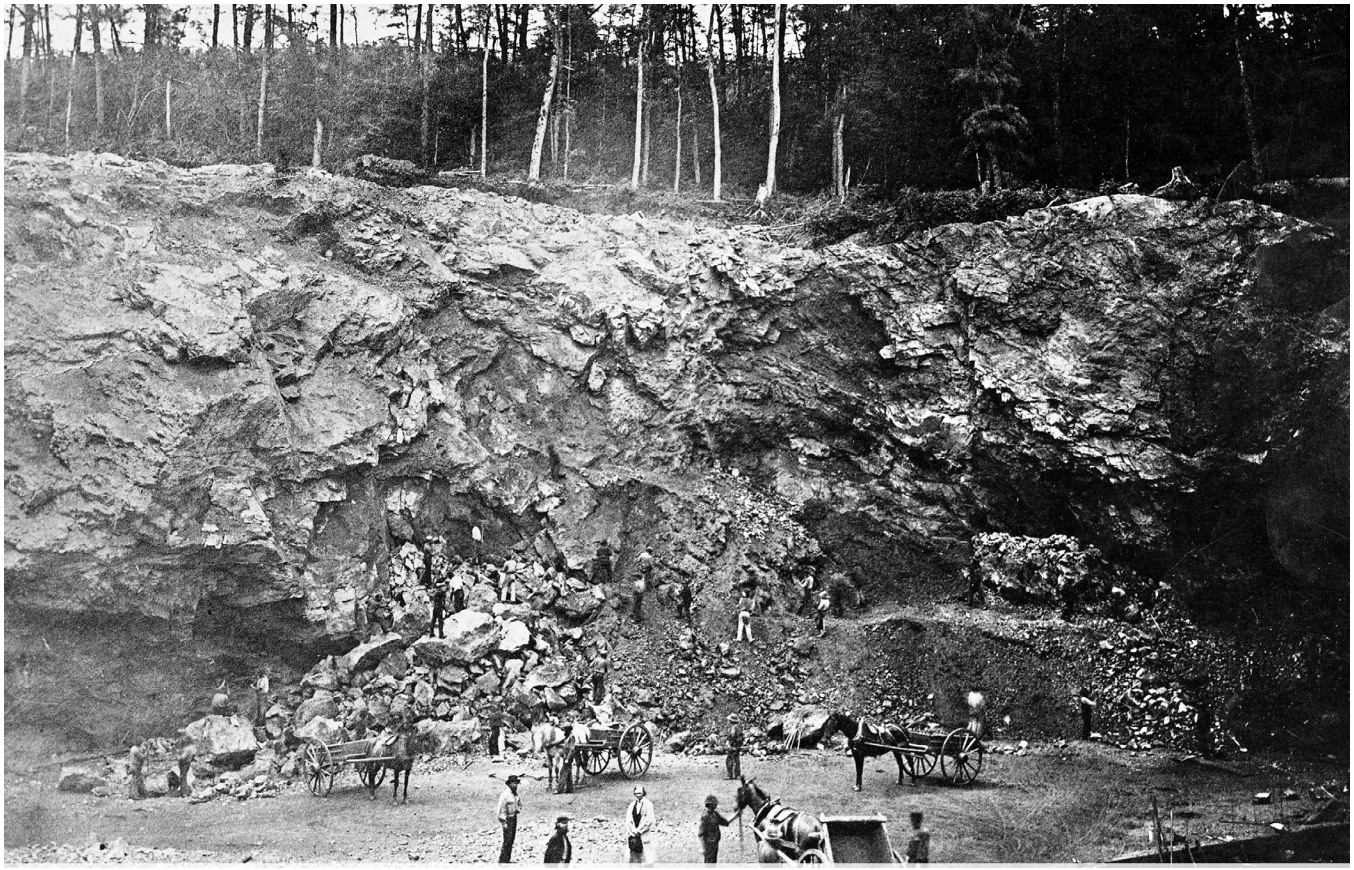
and the capabilities of the Pioneer Pellet Plant in Negaunee Township added vitality to the Marquette Iron Range.

The Jackson Iron Company reached peak production in the late 1860s and early 1870s. The Jackson Mine, located in the City of Negaunee, decreased production and permanently closed in 1924. The mine had recorded just over four million tons of iron ore extraction since its inception.[4] In 1956, the mine was designated a Michigan State Historic Site, and in 1971 was placed on the National Register of Historic Places.[5] Likewise, some residents of Negaunee Township have seen employment in the Cleveland Cliffs Empire and Tilden Mines , located in Tilden Township. The Empire Mine closed in August 2016 and the Tilden Mine still has the capacity to operate for several additional decades.

PAST PLANNING

Negaunee Township adopted its most recent Master Plan in 2014, which had been previously adopted in 1998. The planning process included a community survey upon which the Plan's vision statement was based. Township residents desired to maintain the rural character of the Township while also embracing diverse strategies and a new economic framework to achieve a more resilient and sustainable future. Top priorities in the 2014 Master Plan included the following:

- Regional cooperation between communities
- Youth retention
- Local business support to both new and existing businesses
- Sustainable tourism and ecotourism
- Recreational assets
- Natural features preservation
- Public and private energy conservation
- Public infrastructure improvements
- Nonmotorized infrastructure advancements
- Consolidation of services where possible
- Smart Growth and sustainable development.[6]



Jackson Mine ~ 1860

Source: Google Images

Morgan Creek Rail Trestle

Source: Tom Sertich

Sources

1 Negaunee Township Master Plan 2014.
2 Negaunee Township Master Plan 2014.
3 Negaunee Township Master Plan 2014.
4 Lake Superior Iron Ore Association 1952.
5 Jackson Mine, Historic Sites, Michigan State Housing and Development Authority.
6 Negaunee Township Master Plan 2014.

2. Demographics & Housing

DEMOGRAPHICS

An analysis of a community's demographic characteristics is essential in the planning process. A community-focused approach begins with an understanding of the types of people that live there, its economic characteristics, and attributers of the surrounding environment. The following section details select demographics of Negaunee Township, how the Township compares to other surrounding jurisdictions, and how the Township has changed over time.

Data Sources

The demographic information in this chapter was sourced from the following locations, in this preferred order:

» **2020, 2010, 2000, and 1990 US Decennial Censuses.** The decennial censuses are the most accurate source of demographic information in the United States. Mandated by the United States Constitution the aim of the decennial census is to count 100% of the US Population. Because the decennial census has been operating since 1790 it offers a valuable reference point to illustrate how populations have changed over time. While the decennial census has been administered for over 200 years the questions have shifted to better reflect modern populations. For example, your history of rebellion against the United States is no longer a question on the form.[1] Information collected in the most recent counts includes information about age, sex, race, the

Figure 1: Population Trends and Key Indicators

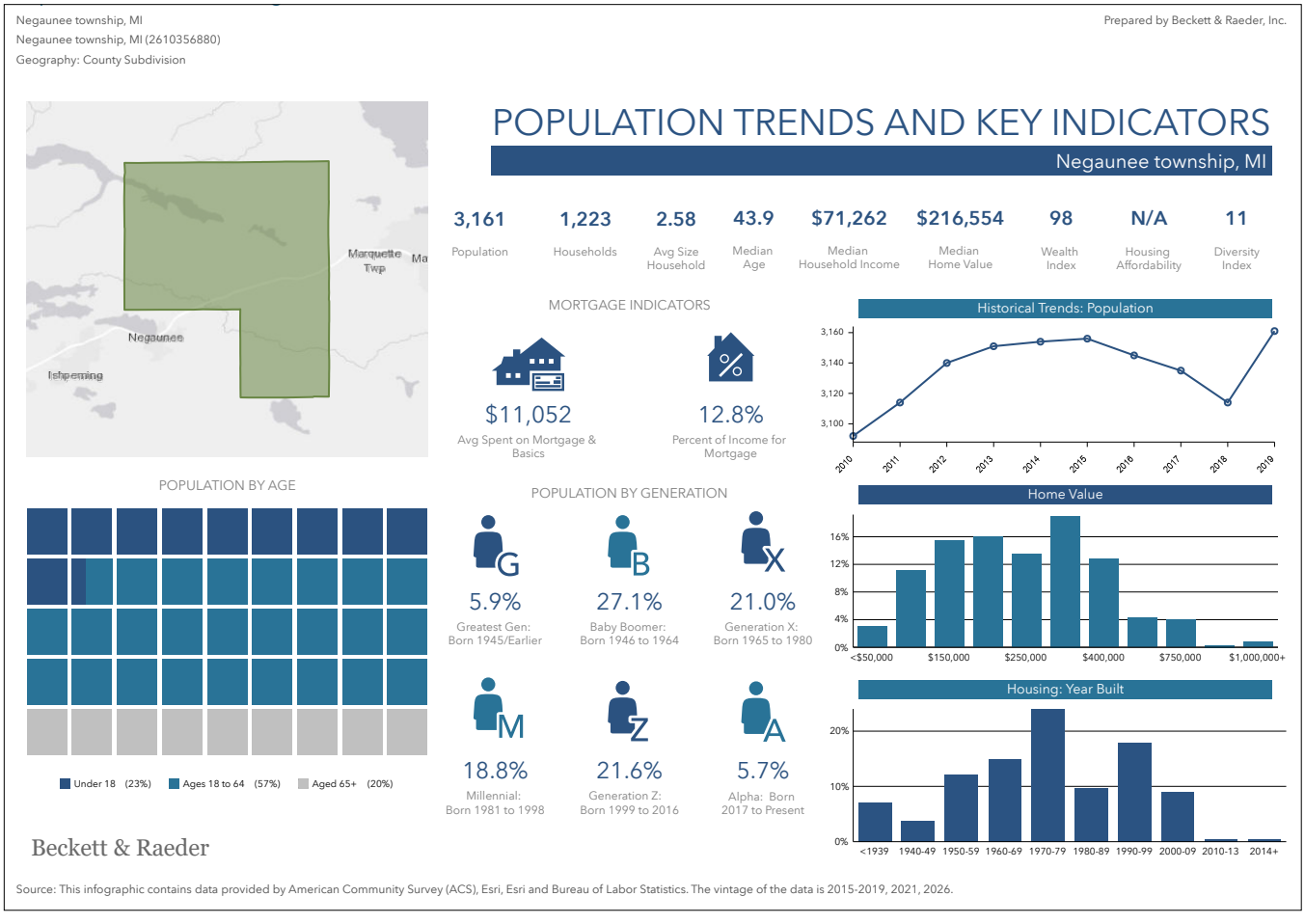
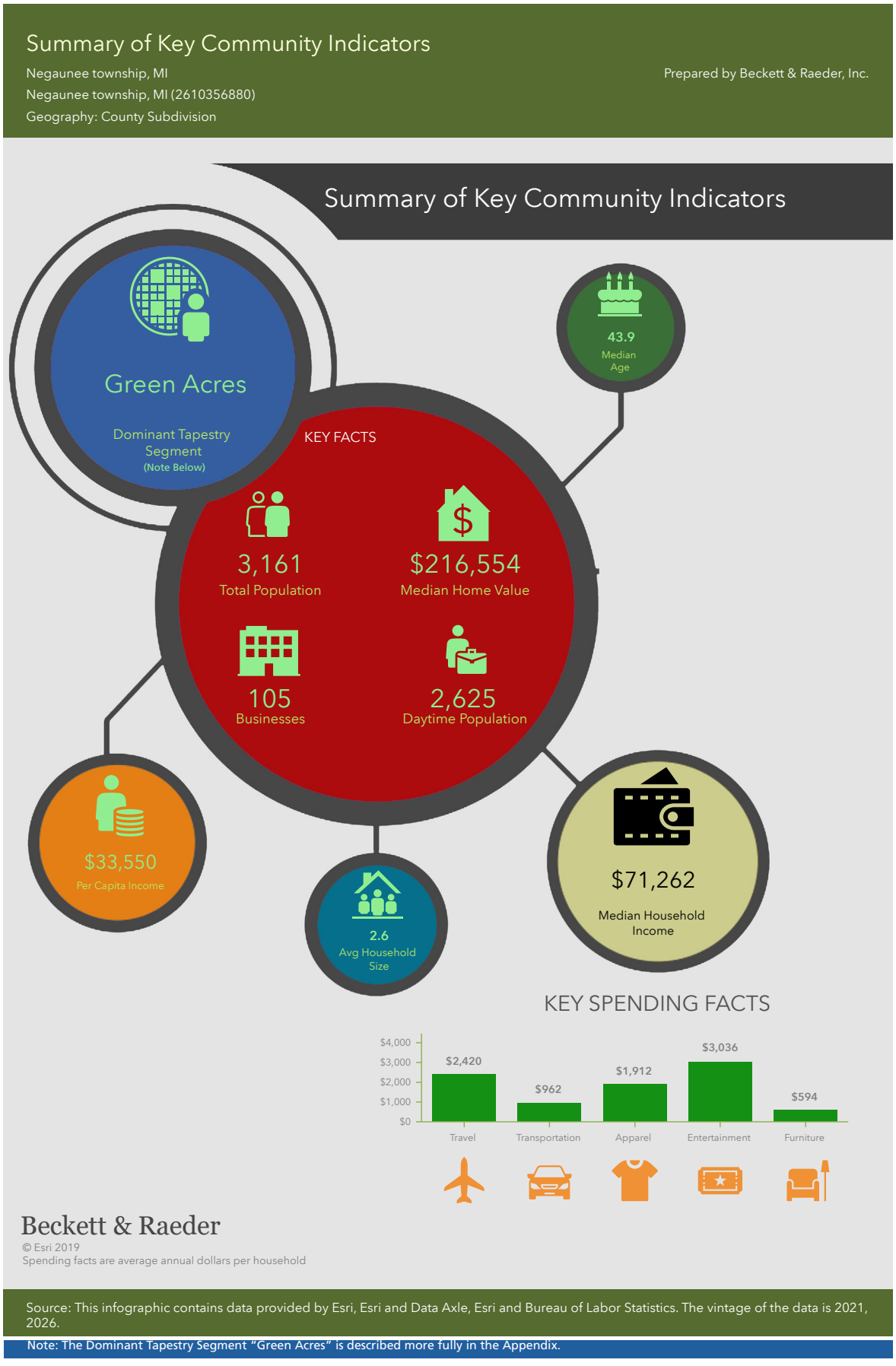


Figure 2: Summary of Key Community Indicators



Source: This infographic contains data provided by Esri, Esri and Data Axle, Esri and Bureau of Labor Statistics. The vintage of the data is 2021, 2026.

Note: The Dominant Tapestry Segment "Green Acres" is described more fully in the Appendix.

relationship between household members, and household tenure.

» **American Community Survey.** The American Community Survey (ACS) replaced the "long-form" Census questions beginning in 2000, collecting the same types of information about social, economic, and housing conditions on a continual basis. Including these questions in the decennial census would be more resource-intensive and could reduce the response rate for the more critical decennial census. The ACS is not a complete survey of the United States but a sample. A random selection of households are sent the ACS every year and the Census Bureau uses the responses to create estimates for the rest of the population. Because the ACS is a sample smaller communities require multiple years of sampling to create accurate estimates. Communities with less than 20,000 people must be sampled over 60-months to create estimates, these estimates are referred to as 5-year estimates. Negaunee Township does not have a population over 20,000 so this plan will use ACS 5-year estimates. Because of Negaunee Township's population size, the ACS estimates sometimes have a wide margin of error due to their sampling methods.

Population

Over the past 30 years, Negaunee Township has experienced positive growth, contrary to the regional and state trends. Between 1990-2000 and 2000-2010, the Township grew by roughly 14% each decade. This growth at the end of the 20th century is inconsistent with the population changes of Marquette County and the surrounding population centers, indicating that as the region declined, the Township remained an attractive location. Between 2000 and 2010, Marquette County's population partially rebounded but did not return to 1990 levels. Negaunee Township continued to grow, and the City of Marquette also experienced some population growth, further indicating the attractiveness of the community. The most recent Census (2020) showed the population growth in Negaunee Township remained in the positive direction but has slightly slowed. Regionally, Marquette County slightly declined during this period as did the Cities of Marquette and Ishpeming.

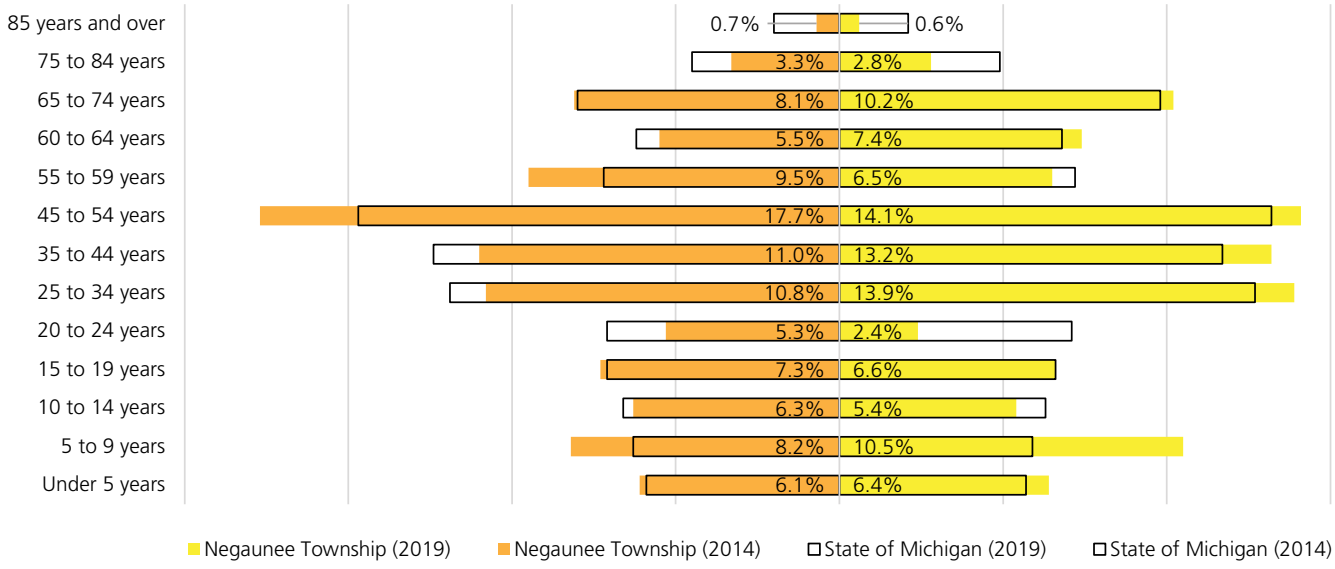
From 2014 to 2019, the total number of households in Negaunee Township decreased from 1,267 to 1,148. Normally, a population increase results in an increase in the total number of households, but the increasing population and decreasing households in Negaunee Township indicates a shift in household structure. This counterintuitive balance may be attributed to one or a combination of several shifts. One possible explanation is that households are leaving the Township while those that remain are increasing their size through childbirth/adoption, and that the number of people leaving is smaller than the number of new children, resulting in a positive population gain. Another possibility is that households are leaving and being replaced by new residents with larger household sizes than those that leave, likely 4- or 5-member households. The formation of multi-generational households where elderly family members and younger members form a single household could also contribute to

Table 1: 1990 – 2020 Population

Municipality	1990	2000		2010		2020	
	Count	Count	Growth	Count	Growth	Count	Growth
Negaunee Twp	2,368	2,707	14.3%	3,088	14.1%	3,232	4.7%
City of Negaunee	4,741	4,576	-3.5%	4,538	-0.8%	4,627	2.0%
City of Ishpeming	7,200	6,686	-7.1%	6,470	-3.2%	6,140	-5.1%
City of Marquette	21,977	19,661	-10.5%	21,355	8.6%	20,629	-3.4%
Marquette County	70,887	64,634	-8.8%	67,077	3.8%	66,017	-1.6%
State of Michigan	9,295,297	9,938,444	6.9%	9,883,640	-0.6%	10,077,331	2.0%

Source: 1990, 2000, 2010, 2020 Decennial Census

Figure 3: Population Pyramid



Source: 2014 & 2019 American Community Survey 5 Year Estimate, DP05

the decreasing household size. These population/household dynamics would also be evident in an increase in the average household/family size. In 2019, the average household size was 2.86 and the average family size was 3.23, an increase from 2.73 and 3.16 in 2014. This increase indicates that these population dynamics are likely the cause of the decline in total households but an increase in the overall population.[2]

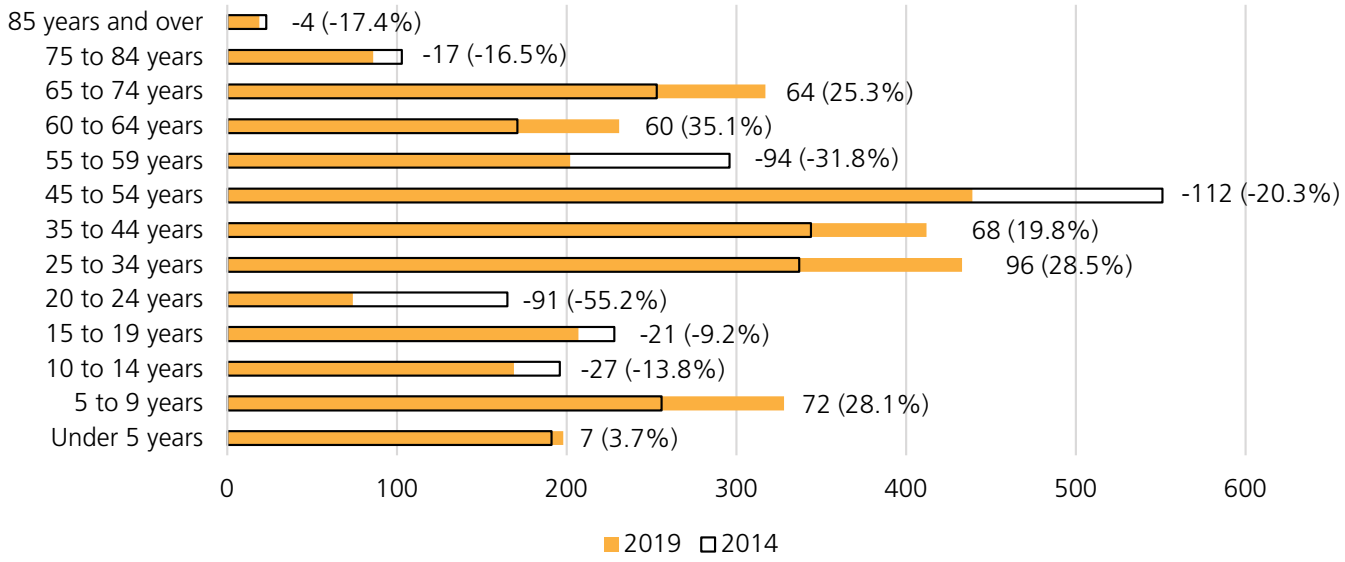
Age

Negaunee Township has a unique age composition. When comparing the median age of the Township (39 years) to Marquette County (39.1 years) and the State (39.7), it appears that the Township follows a fairly normal age distribution; however, when broken into age cohorts, the data shows some stark differences. As shown in the figure titled "Population Pyramid," there are some differences between the age distribution of the State (shown in the black outline) and the Township. At the top of the pyramid, the percentage of Township residents over the age of 75 is lower than the State. The overall representation of those over the age of 75 stayed fairly consistent between 2014 and 2019. The exact percentage that each age cohort represents of the total population of Negaunee Township is illustrated in numerical format on the figure. The percentage of residents aged 25 to 54 is slightly higher than the State average. Notably, there is a significant gap of residents aged 20 to 24. This is a critical age cohort because it is when most people either attend higher education, start their careers, or both. The gap of people in this age cohort indicates that people who grew up in Negaunee Township are spending these critical early adult years outside of the community. Finally, the last major deviation from the State averages in the 5- to 9-year-old cohort. Over 10% of Negaunee Township residents are in this cohort, almost double the State average of 5.9%.[3]

One challenge of using percentages to describe age distribution is that it can mask changes within each cohort. For example, if there was growth in one specific cohort and all other cohorts remained consistent, the percentages for all but one of the cohorts would decrease even through the raw number of each cohort remained consistent. Therefore, it is also important to consider how each cohort changes in terms of exact numbers, as shown in the figure titled "Negaunee Township Population Change" on the following page.

The age cohorts that had the largest gains were the "25 to 34" cohort which grew by 28.5%, the "5 to 9" cohort which grew by 28.1%, and the "65 to 74" cohort which grew by 25.3%. Those that lost the most were the "20 to 24" cohort which

Figure 4: Negaunee Township Population Change



Source: 2014 & 2019 American Community Survey 5 Year Estimate, DP05

Table 2: 1990 – 2019 Population

Age Cohort	2014	2019		Net Change
		Naturally Aged	Census Estimated	
Under 5 years	190	n/a	198	n/a
5–9 years	255	190	328	138
10–14 years	196	255	169	-86
15–19 years	227	196	207	11
20–24 years	165	227	74	-153
25–29 years	125	165	230	65
30–34 years	212	125	203	78
35–39 years	156	212	231	19
40–44 years	190	156	181	25
45–49 years	252	190	198	8
50–54 years	299	252	241	-11
55–59 years	296	299	202	-97
60–64 years	171	296	231	-65
65–69 years	174	171	192	21
70–74 years	81	174	125	-49
75–79 years	59	81	28	-53
80–84 years	44	59	58	-1
85+ years	22	n/a	19	n/a

Source: 2014 & 2019 American Community Survey 5 Year Estimates, S0101
Margin of Error between 1.0% to 3.1%

decreased by 55.2%, the "55 to 59" cohort which decreased by 31.8%, and the "45 to 54" cohort which decreased by 20.3%.[4]

Further complicating matters is that populations age, so comparing the same age cohort at two different periods in time does not accurately measure who is entering and leaving the community. Estimating how populations age provides a better understanding of population migration. The table titled "Net Population Change" breaks each cohort into migration figures.

To calculate, the net change of each age cohort from 2014 was "aged" by 5 years. For example, Negaunee Township residents 50 to 54 in 2014 would be 55 to 59 in 2019. The "naturally aged" population estimate is then compared to the Census 2019 estimate to calculate how many people in each cohort immigrated, emigrated, or died. The age cohort that gained the most people above expected was the cohort of children aged "5 to 9" indicating that households with children in that age range moved into the community. The "20 to 24" cohort lost the most people confirming earlier figures that this age range is leaving the community. Also notable is that the age cohorts that include people aged 50 to 64 all lost people. Many of these people are likely recent empty nesters, potentially indicating that as children

age out of the household, all members leave the community. Cohorts with people aged 70 to 84 also all lost population indicating that seniors are leaving the community or are passing away.

Disability

Disability is an important factor in master planning because disabilities can significantly impact how and what in the built environment causes challenges or limitations for the disabled community. Roughly 14% of Negaunee Township residents have a disability. The most common disabilities are an independent living difficulty (9.0%), cognitive difficulty (6.4%), and ambulatory (mobility) difficulty (5.6%). Additionally, there is a positive correlation between age and disability. The highest rates of disability are among those aged 65 and up. The most common senior disabilities are ambulatory difficulty (25.8%), hearing difficulty (19.4%), and cognitive difficulty (12.6%).[5]

Socioeconomic Indicators

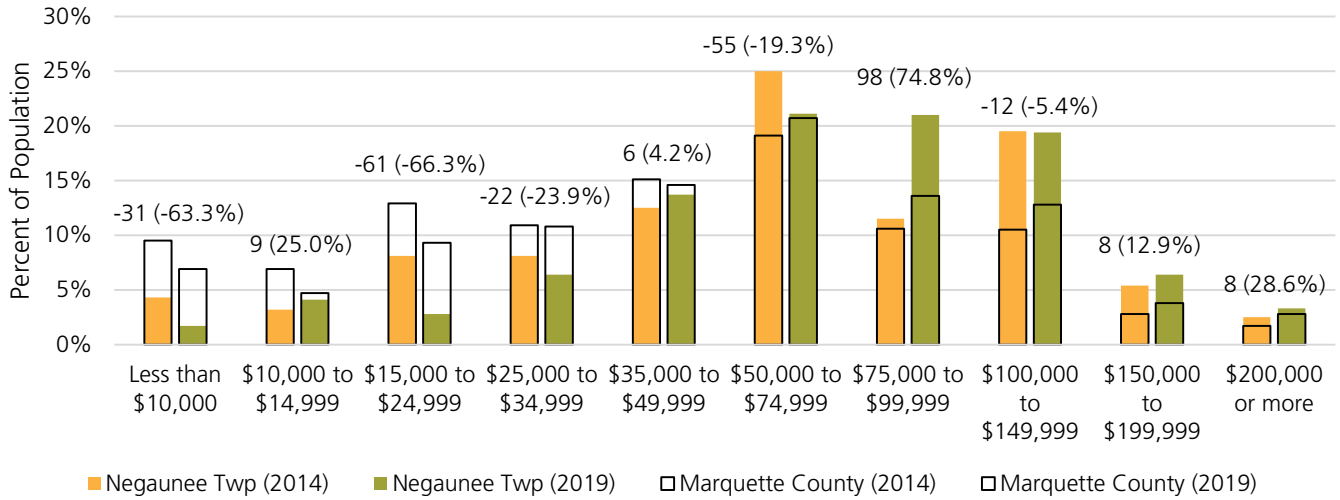
Education

Educational attainment is a key link to economic stability and mobility in the United States. It also impacts the makeup of community's economy because some industries require highly educated workers compared to others. According to Census data, roughly 99% of Negaunee Township residents over the age of 25 have at least a high school degree, and roughly 34% have at least a bachelor's degree.[6] Both of these measures are slightly higher than Marquette County at 95% and 33%, respectively. The percentage of Michigan residents over the age of 25 who have at least a high school degree is 91%, and the percentage of those who have at least a bachelor's degree is 29%. Compared to other population centers in the region (Cities of Ishpeming, Negaunee, and Marquette), Negaunee Township has a higher high school degree attainment level but is second to the City of Marquette in bachelor's degree attainment (44%). The educational attainment data highlights that the residents of Negaunee Township have slightly higher levels of educational attainment compared to the County and some of the surrounding population centers.

Income and Earnings

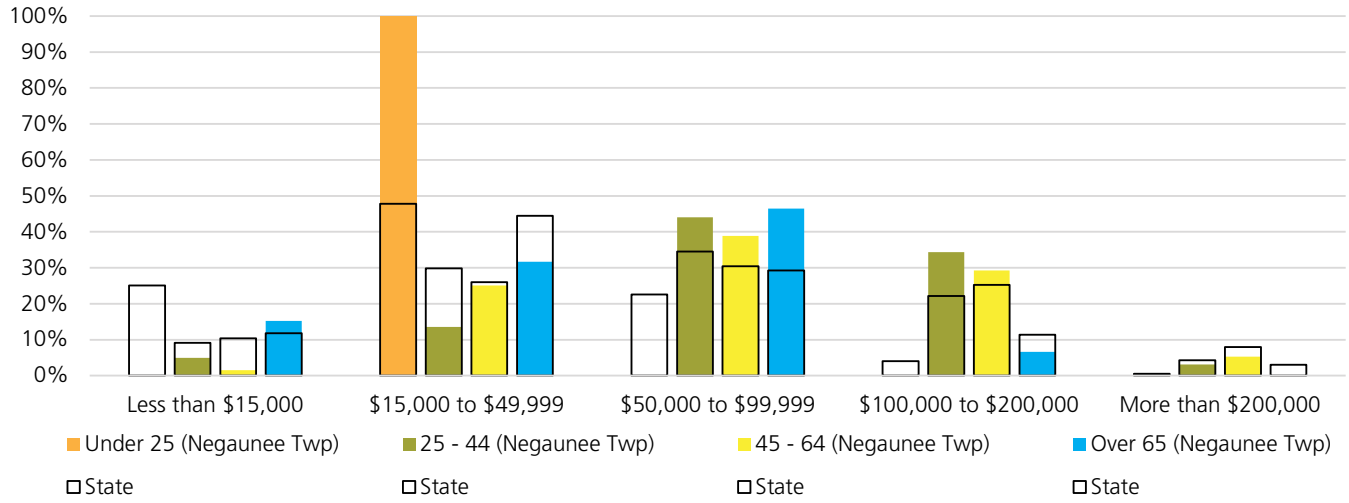
Often communities with higher levels of educational attainment have higher incomes, and Negaunee Township is no exception. The median household income in Negaunee Township was $75,139 which is much higher than the State ($57,144) and Marquette County ($53,970). Compared to the State, Negaunee Township had a higher percentage of residents in each income bracket above $50,000 in both 2014 and 2019. Additionally, the number of residents in the lower income brackets is decreasing. The total number of households earning less than $75,000 decreased by 154 between 2014 and 2019. This indicates

Figure 5: 2014 and 2019 Household Incomes



Source: 2014 & 2019 American Community Survey 5 Year Estimates, DP03

Figure 6: Income by Age



Source:2019 American Community Survey 5 Year Estimates, B19037

that either households in Negaunee Township saw their incomes increase, or lower income households moved out of Negaunee Township and were supplanted by higher income households. In reality it is likely a combination of both.[7]

However, incomes range significantly by age. 2019 Census estimates indicate that all households headed by someone under the age of 25 earn between $15,000 and $49,999.[8] Negaunee Township residents aged 25 to 64, generally the working age, earn above average incomes, compared to the State, specifically in the $50,000 to $200,000 income range. Where an individual lives generally does not influence how much they earn but is more a function of personal desire. The Census data indicates that those with above-average incomes and aged 25 to 64 are choosing to live in Negaunee Township.

Poverty

The US Census Bureau determines poverty status by comparing annual household income with the number of individuals in the household. Negaunee Township has a lower overall poverty rate (6.0%) compared to the County and State. Additionally, overall poverty has been decreasing in the community since 2014, following similar trends in Marquette County and the State of Michigan. However, not all populations of people experience the same levels of poverty. Vulnerable populations, including single mothers, children, and seniors are most at risk because of high expenses and lower/ fixed incomes. In Negaunee Township, the poverty for two of the vulnerable groups, single mothers and seniors, increased from 2014 to 2019. The poverty rate for single mothers jumped by roughly 20% to 64% overall, a substantial number and higher than both the County (47%) and the State (39%). However, this population is relatively small and represents roughly 1% of the overall Township population. The small size of the population means changes to a few households can substantially change the overall percentages. Despite comprising a small portion of the population, the high poverty rate among single mothers is still concerning. Single-mother households are more at risk than single-father households because of the gender pay gap. Women who live in Negaunee Township earn $0.67 for every $1.00 of their male counterparts.[9]

The poverty rate for seniors in Negaunee Township (11%) is also higher than the County (6%) and the State (8%).[10] This increase is counter to the downward trend in the County. At the State level, the senior poverty rate remained fairly consistent. Most concerning is the substantial increase in the senior poverty rate from 2014 to 2019, indicating a large shift in the wrong direction. As seniors age, expenses for health care, transportation, and housing can increase, worsening the financial burden for households in precarious situations. Therefore, it is important to ensure that the senior population is adequately served to mitigate and relieve financial challenges for those on limited/ fixed incomes.

While poverty is a helpful measure for determining the percentage of people experiencing high levels of financial hardship, it often does not capture those who are one accident or large financial cost from poverty. ALICE, which stands for Asset Limited, Income Constrained, Employed, is a measure that captures individuals who may be above the federal poverty level but still struggle with regular expenses and costs. In Negaunee Township, an estimated 16% of households fall into the ALICE threshold, including those who meet the federal poverty level.[11] This indicates there is an additional 10% of residents who experience some financial hardship but are not considered in poverty. The ALICE threshold is calculated by comparing household income to household expenses such as childcare, transportation, food, etc.

HOUSING

According to a study by the National Low Income Housing Coalition, in order to afford a 2-bedroom apartment in Marquette County, an individual would have to work 1.6 minimum wage jobs, approximately 64 hours a week. This highlights the challenges of the housing market in the area and how housing costs and shortages impact residents.[12]

Housing Types

There are an estimated 1,363 housing units in Negaunee Township. Of these units, roughly 88% are single-family homes, 2% are multi-family units, and 10% are mobile homes.[13] The distribution of housing typologies in the Township skews towards single-family residential homes. Marquette County and the State of Michigan average substantially more multi-family units and townhomes, the latter of which is not present in the Township. A homogeneous housing stock can make it challenging for those who want a different housing type, limiting the appeal of the community to new residents. Additionally, without a diverse housing stock the competition for the limited types of housing units (multi-family) increases which can have a negative impact on affordability.

Tenure and Vacancy

Of the 1,089 occupied housing units, 95% are owner-occupied – a higher level of home ownership compared to Marquette County (71%) and the State (71%). There is a strong contrast in the household size between owner and renter households. Households that own their housing unit average 2.94 people and those who rent average 1.41 people. This indicates that households with children or multi-generational households own their units, and single-person households are more likely to rent.[14]

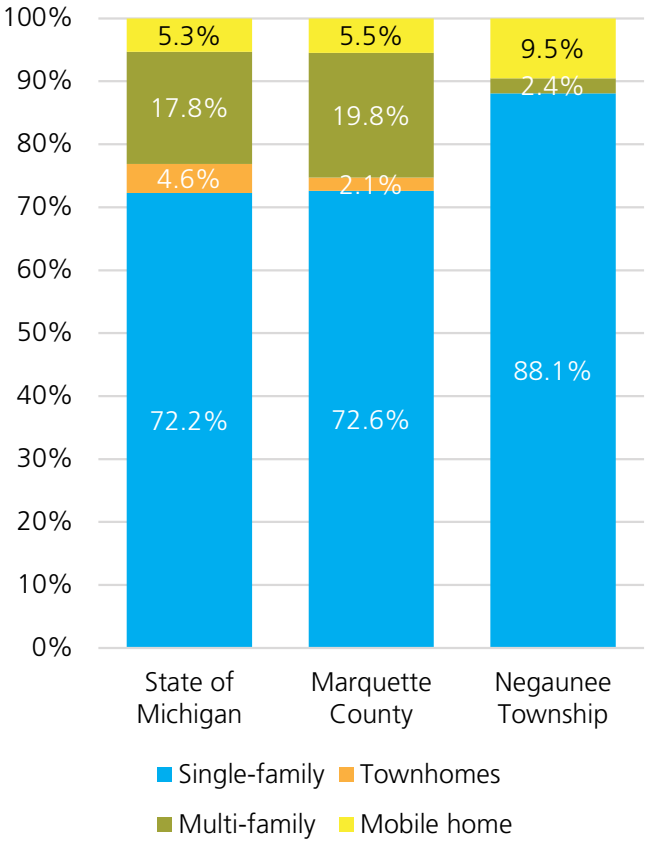
Table 3: Poverty Rate

	2014	2019
Negaunee Township	**7.5%**	**6.0%**
Single female headed households with children	42.3%	64.1%
Children	11.6%	5.4%
Seniors	1.3%	10.9%
Marquette County	**16.8%**	**15.6%**
Single female headed households with children	41.6%	46.6%
Children	17.3%	16.7%
Seniors	7.8%	6.3%
State of Michigan	**16.9%**	**14.4%**
Single female headed households with children	45.3%	39.2%
Children	16.9%	19.9%
Seniors	8.1%	8.4%

Source: 2019 American Community Survey 5 Year Estimates, DP03

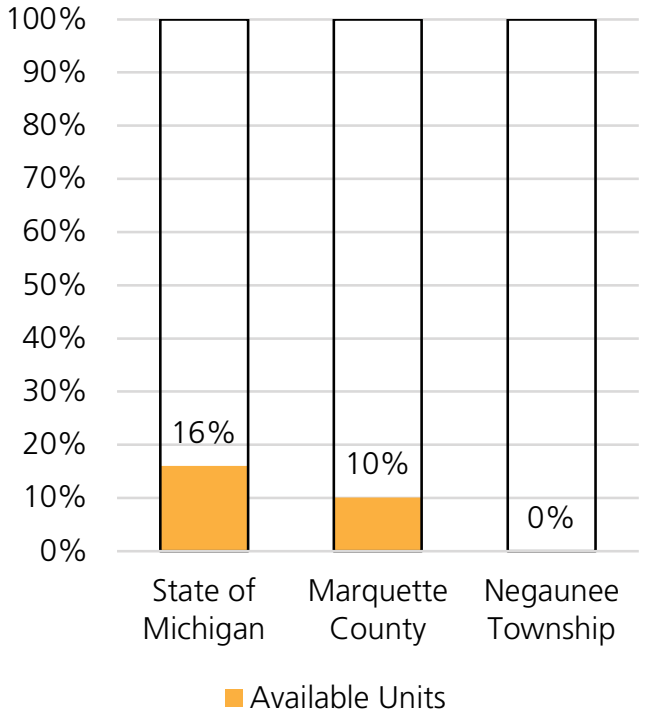
About 11% of the housing stock in Negaunee Township is vacant, which is lower than the vacancy rate of the County (34%) and the State (14%).[15] However, vacancy is a broad term and includes units for sale, seasonal housing units, and migrant-worker housing. Therefore, while the unit may be "vacant," it may not be available for a household to purchase/occupy. In fact, Negaunee Township has no available units to purchase or rent, indicating that the housing stock is at occupancy capacity. This limits those who wish to relocate into the community or move into a different unit within the Township. For comparison, 10% and 16% of the vacant units in Marquette County and Michigan are available, respectively.[16] A housing scarcity has profound impacts on housing value. When a housing unit does become available there is a bidding process that can be inflated because

Figure 7: Housing Types



Source:2019 American Community Survey 5 Year Estimates, DP04

Figure 8: Available Units



Source:2019 American Community Survey 5 Year Estimates, B25004

of unit scarcity, resulting in people paying above average values for the home. While this benefits existing residents because it increases the value of their home, it makes it incredibly challenging for those who cannot enter a bidding war to live in the Township.

Housing Value and Cost

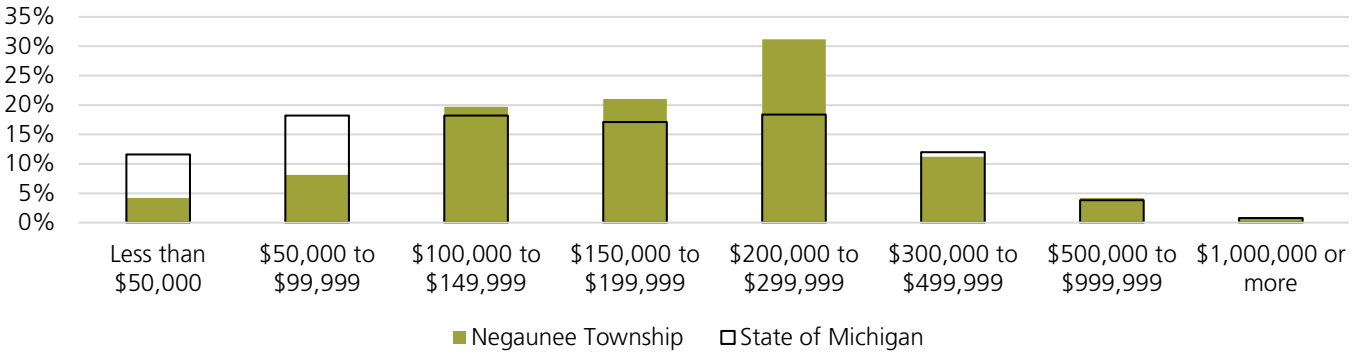
The scarcity of housing units is likely one contributing factor for the high median housing value in the Township ($191,900), which is higher than Marquette County ($153,400) and the State ($154,900). As shown in the figure titled "Housing Values," the housing values in the Township skew towards the middle to higher end, compared to the State distribution. There is a significant lack of homes valued less than $99,999, a price point for a starter home. The lack of homes at this end of the spectrum makes it challenging for first-time home buyers to enter the market in Negaunee Township. Therefore, renters or young adults looking to buy a home may have to leave the community to find housing at their price point.

While home values are valued above State averages, the rental market follows a more normal distribution. The figure titled "Monthly Rent" outlines the monthly rent for rental units in the Township compared to the State. Rent at the lower end of the spectrum falls close to the State average or exceeds it. There is a lack of units that rent at high prices, likely a result of location. Rental units along the lakeshores and in downtown environments generally command the highest rents, and Negaunee Township does not have a traditional downtown. The average gross monthly rent in the Township is $775, which is slightly higher than the average gross rent in Marquette County ($738) but is lower than the State average of $871.[17]

Affordability

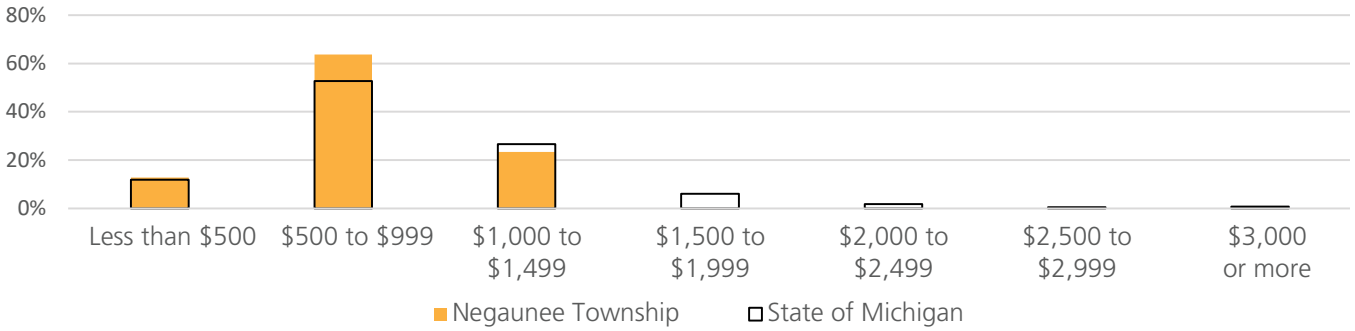
When considering housing value and rent, it is important to compare how value and rent compare to income. Affordability is the measure of how a household's income compares to the housing cost. A household is considered to live in an affordable housing unit if members spend less than 30% of their income on housing, unaffordable is 30% to 50%, and severely unaffordable is greater than 50%. Of those who own their units, 83% live in an affordable unit, 13% live in an unaffordable

Figure 9: Housing Value



Source:2019 American Community Survey 5 Year Estimates, DP04

Figure 10: Monthly Rent



Source:2019 American Community Survey 5 Year Estimates, DP04

Basin Ridge Home

Source: Realtor.com

Housing Costs as a Percentage of Household Income

Affordable: <30%

Unaffordable: 30% - 50%

Severely Unaffordable: >50%

unit, and 4% live in a severely unaffordable unit, indicating a vast majority of homeowners in the Township have adequate incomes compared to housing costs.[18] Inversely, the majority of renters (57%) live in a severely unaffordable housing unit, 9% live in an unaffordable unit, and 34% live in an affordable unit.[19] The Census data points to a stark difference between owned and rented units. While rents in the Township are low, the incomes of those renting are so low that they are not able to afford rent. Roughly 46% of households that rent units in the Township earn between $10,000 and $19,999.[20] Seniors are most likely to be renters in Negaunee Township as almost one-quarter of those aged 75 to 84 rent their housing unit, the highest proportion of any age cohort. In total, those over the age of 65 represent 37% of all renters.[21]

Future Projections

A combination of a growing number of households and no available housing stock indicates a need for more housing units. Because the population is increasing, this results in a need for more housing units, especially if there are no available vacant units for the new households to occupy.

The following housing analysis assesses the existing housing stock of Negaunee Township against the housing preferences of the community. Housing preferences are based on the tapestry segmentation profiles of the community and national averages from the American Community Survey. Tapestry segmentation profiles are select consumer groups developed by ESRI and defined by shared traits such as demographics, socioeconomic status, and consumer behavior. An "expected" housing stock was generated based on the tapestry segmentations in Negaunee Township and represents a housing stock that perfectly matches the preferences of the community. This "expected" housing stock was then compared to the existing housing stock, comprised of occupied and available (for sale and for rent) units, to identify what housing types are over- and underrepresented. While this analysis is helpful at showing how well the existing housing stock fits the current population, it is most helpful when considering population change. ESRI population projections were added to the model resulting in an "expected" 2026 housing stock. Because this "expected" housing stock accounts for overrepresentations of one or multiple types of housing, achieving a perfectly fit housing stock by 2026 would require demolishing units and constructing other units of a different type in their place, an unlikely and unfeasible option. Therefore, the analysis accounts for no demolition and provides a breakdown of how many units and of what type

Table 4: Housing Preferences, 2019 & 2026

Housing Type	2019			2026		
	Existing Units	Expected Units	Balance	Expected Units	Balance	Balance (no demolition)
1 unit, detached	993	864	-129	979	-14	0
1 unit, attached	0	36	36	40	40	35
2- to 4-unit structure	3	41	38	41	38	33
5+ unit structure	30	61	31	63	33	34
Mobile home	63	87	24	102	39	34
Boat, RV, van, etc.	0	1	1	1	1	1
Total	1,089	1,089	-	1,225	136	136

Source: Beckett & Raeder, Inc.

should be built to approach a housing stock that better fits the preferences of the community.

The model demonstrates that the existing housing stock is roughly a 75% match to the preferences of the tapestry segmentations in the community. Single-family homes (1 unit, detached) are slightly overrepresented in Negaunee Township, and there is a lack of multi-family unit structures and mobile homes. By 2026, it is projected that the Township will need an additional 136 housing units, the majority of which should be multi-family units. If the 136 new units are built according to the "Balance (no demolition)" column, Negaunee Township's housing stock will be 97% aligned with the housing preferences of the community.

CONCLUSION

From 1990 – 2010, Negaunee Township experienced consistent growth. In the most recent decade, the growth slowed, however, the population is anticipated to increase. It is anticipated that the change will likely come from households seeking more reasonable housing prices that the Township offers compared to other communities in Marquette County. The existing housing stock is dominated by single-family units, with a small number of multi-family and mobile home units. The median housing price for units in the Township is roughly $40,000 higher than the median price in the County and the State, potentially a result of the lack of available units in the market. Notably, renters in the Township struggle to find housing that matches their price point, as most renters (57%) pay a rate deemed unaffordable for their income level. By 2026, it is anticipated that the Township will need an additional 136 housing units to meet the demand from the growing number of households. These new units should primarily be multi-family to fill the existing gap in the community. At a county and regional level, CUPPAD (Central Upper Peninsula Planning and Development) and Lake Superior Partnership are leading efforts to assess and plan for housing in Marquette County. According to preliminary assessments conducted by CUPPAD, Marquette County ranked highest in housing price increase of Michigan's 83 counties and over half of Marquette County renters spend 50% of their income on rent. This income supports the need for more housing choices, at different price points, throughout the county. These housing planning efforts reinforce the premise that housing isn't a local unit of government issue but a county and regional issue.

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3. Land Use

Land use is a core element of community planning because of its impact on residents' daily lives. When combined with demographic data and community input, land use planning creates an outline which Negaunee Township may use to ensure future development of the Township is consistent with the vision framed by the Master Plan.

EXISTING LAND USE VS. FUTURE LAND USE VS. ZONING

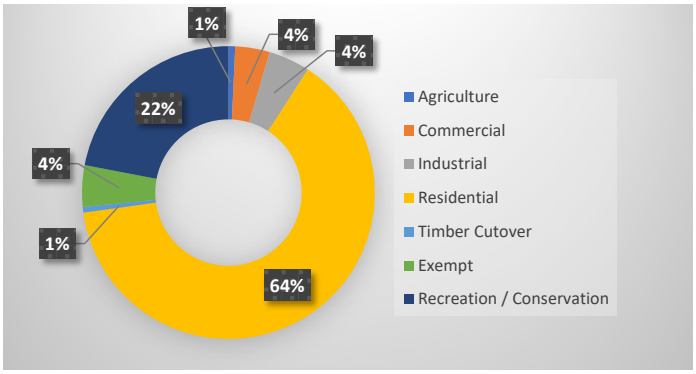
There are three primary components to the following land use analysis: existing land use, future land use, and zoning. Existing land use codes are applied to parcels using assessor tax valuation categories, which are identified as agricultural, residential, commercial, industrial, and exempt. The Future Land Use Map is based on the existing land uses but goes on to project land use change over time, as defined by the citizens of Negaunee Township and best planning practices. Finally, future land use categories lay the groundwork for modifying the land use regulations in the Zoning Ordinance so that eventually local law aligns with the vision set forth in the Master Plan. The table titled "Zoning Plan" compares the descriptions of the proposed land use categories to the existing zoning districts.

EXISTING LAND USE

Negaunee Township's current pattern of development, spanning 26,087.5 acres, has been determined to a large degree by the physical separations and barriers caused by US-41, M-35, and the Dead River basins and tributary. US-41 highway runs east-west and splits the Township in half. The northern portion provides improved residential properties and vacant land for future residential development. There are several residential improved properties clustered along the Dead River basins and tributaries. Additionally, several parcels on the northern side of the Township are working agricultural properties and timberlands or former timberlands, which are now designated recreation and conservation properties.

The southern half of Negaunee Township includes M-35 and a variety of land use classifications, with improved and vacant residential as the two primary designations. The major commercial district is also in the southern portion of the Township; however, according to the most recent assessor's data, parcels in this district are mostly vacant. Throughout the Township, there is a sprinkling of tax-exempt land classifications, predominantly religious organizations and state- or township-owned properties.

Each parcel is classified by the local assessor into one of seven classes, and each class is broken down by its status as "vacant" or "improved" where applicable.



Residential

Residential land use is the largest category in Negaunee Township and accounts for 16,614 acres (64%) of land. The residential land use is segmented into three categories: improved parcels with a standing structure, vacant parcels with no standing structure, and condominiums. The vacant land total is the highest in the residential category with 8,529 acres, improved residential properties total 7,976 acres, and condominiums account for 108 acres.

Commercial

Commercial land uses in the Township account for 993 acres (3.8%) of the total land area. Predominately located along the northern side of the US- 41 corridor, the commercial district

Map 2: Existing Land Use

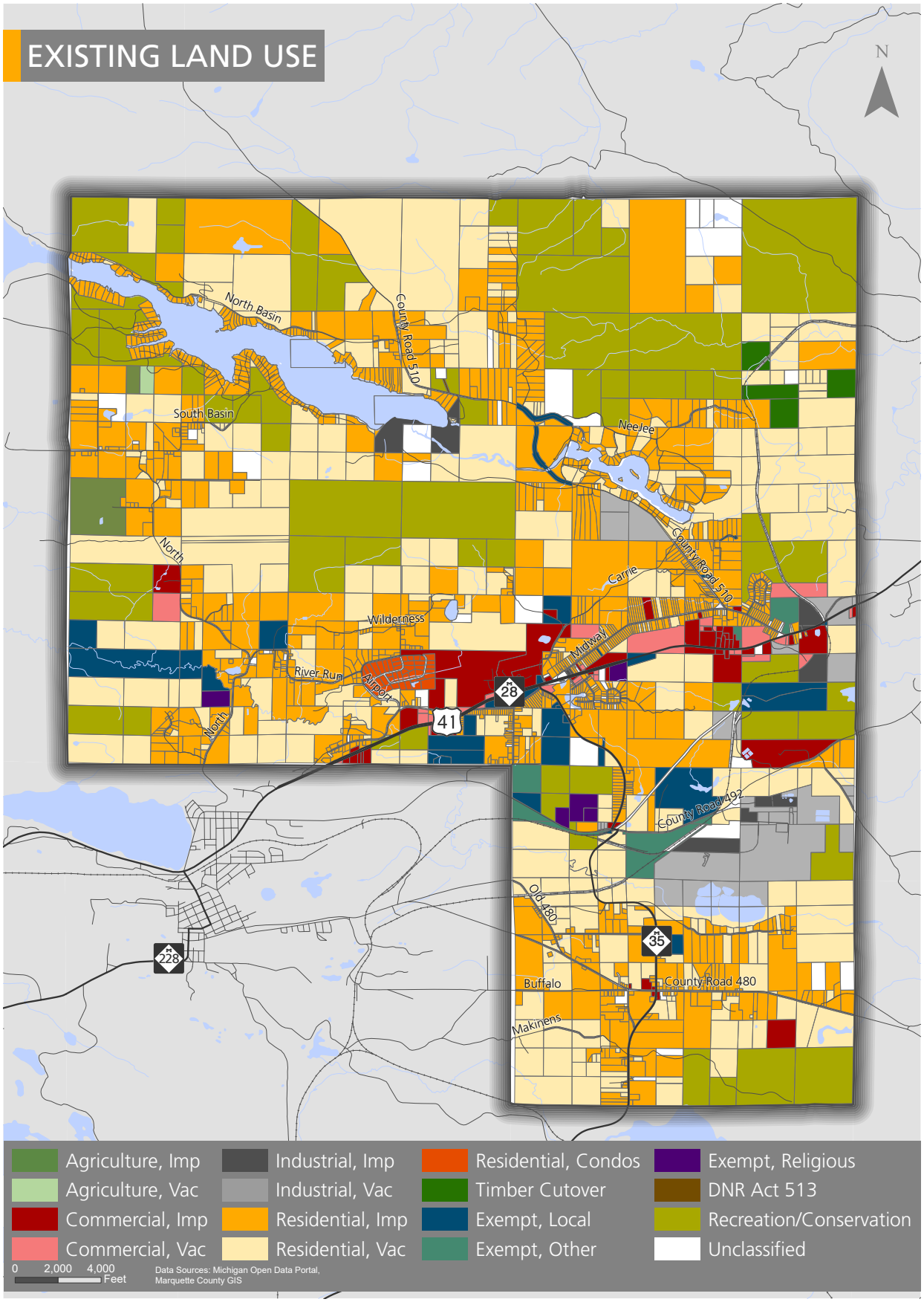


Table 5: Existing Land Use

Land Use	Acres	Percent of Total
Agriculture	**193.2**	**0.7%**
Improved (standing structure)	173.4	0.7%
Vacant (no standing structure)	19.8	0.1%
Commercial	**993.2**	**3.8%**
Improved	730.9	2.8%
Vacant	262.2	1.0%
Industrial	**1,194.5**	**4.6%**
Improved	320.4	1.2%
Vacant	874.1	3.4%
Residential	**16,613.8**	**63.7%**
Improved	7,976.2	30.6%
Vacant	8,529.90	32.7%
Condos	108.1	0.4%
Timber Cutover	**160.9**	**0.6%**
Exempt	**1,194.9**	**4.6%**
Local	879.9	3.4%
Other	224.8	0.9%
Religious	90.1	0.3%
Recreational and Conservation	**5,735.6**	**22.0%**
TOTAL	**26,087.5**	**100%**

Source: Marquette County Equalization Department

stretches the length of the Township. Of the 993 acres, 731 acres are improved, and 262 acres are listed as vacant. There are also three other small enclaves of commercial land in the following areas of the Township: 1) the central west portion, 2) the southern section at the corner of M-35 and County Road 480, and 3) the southeastern corner. Some of the commercial-designated property includes the former Marquette County airport property.

Recreational and Conservation

The third-largest land use in Negaunee Township is the recreational and conservation category, which totals 5,736 acres (22%) of the Township. These areas are primarily in the northern half of the Township; however, there are several large parcels along the southern border and a handful of parcels mixed into the more commercialized area near the US-41 corridor.

Industrial

Industrial land use within the Township accounts for 1,195 acres (4.6%) of land. Interestingly, the current use of industrial land is inverted, with 874 acres of vacant land and only 320 acres of improved properties, indicating significant opportunity for future growth.

Exempt

The exempt land classification includes parcels that are excluded from property taxes such as local, county, state, religious, and other . Within the Township there are 1,195 acres (4.6%) that fall into this category.

Commercial Forest Program

The Act 531 Forest classification applies to properties in the Commercial Forest Program (Map 6). The Commercial Forest Program is a voluntary program through the Michigan Department of Natural Resources that requires participating landowners to manage their land for long-term timber production in exchange for reduced property taxes. Commercial forest lands are open to public foot traffic for hunting, trapping, and fishing. The Township has 6,003 acres consisting of 55 parcels that are registered in MDNR program. A significant portion of this acreage is classified as Residential-Vacant in assessment records.

Agriculture

In Negaunee Township, agricultural land related to food production is very low, totaling 193 acres (0.7%) of the total land area, representing a very small portion of the Township.

Negaunee Township Forests

Sources: Pure Michigan (Justin Carlso)

4. Natural Features & Climate

NATURAL FEATURES

It is important to inventory the natural resources to ensure proper management and preservation. Present-day Negaunee Township and the greater Marquette Iron Range region were established on the vigorous extraction of iron ore and hardwood timber. The economic benefits that natural resources initially provided the Township are less prevalent today; however, there are other environmental features in the region that require proper stewardship. This chapter discusses the many natural features in Negaunee Township and their impact on local community planning and land use.

Land

Topography

Negaunee Township is located on the edge of a glacial ground moraine which accounts for the undulating slopes in the area. The ground terrain includes flat portions and rolling hills with river valleys throughout the Township. The highest point in Negaunee Township is in the northwestern corner near Reany Lake and is roughly 1,600 feet above sea level. The lowest point is in the eastern portion of the Township along the Dead River and is roughly 1,000 feet above sea level but only 398 above Lake Superior.[1]

The topography of a region is directly related to the land-use function of a community's development. The degree of slope in an area determines the land use, ranging from structural development to recreation or natural areas. Steep slopes can hinder vegetative growth, which enhances erosion and flooding during heavy rain events. Most of the steepest slopes in the Township are along the Dead River valley.

Due to the topography of Negaunee Township, there are many options for outdoor recreation such as skiing, hiking, rappelling, and sightseeing. However, the same rolling slopes that provide unique recreation opportunities create obstacles for urban development. As the grade of a slope increases, so does the opportunity for landslides and soil movement that can cause structural damage to built structures. There are rock outcrops scattered through the Township which have shaped its character and development patterns. There are regions in the Township that have a slope of 10% or greater which are hazardous to high-density development and should be avoided.[2]

Geology

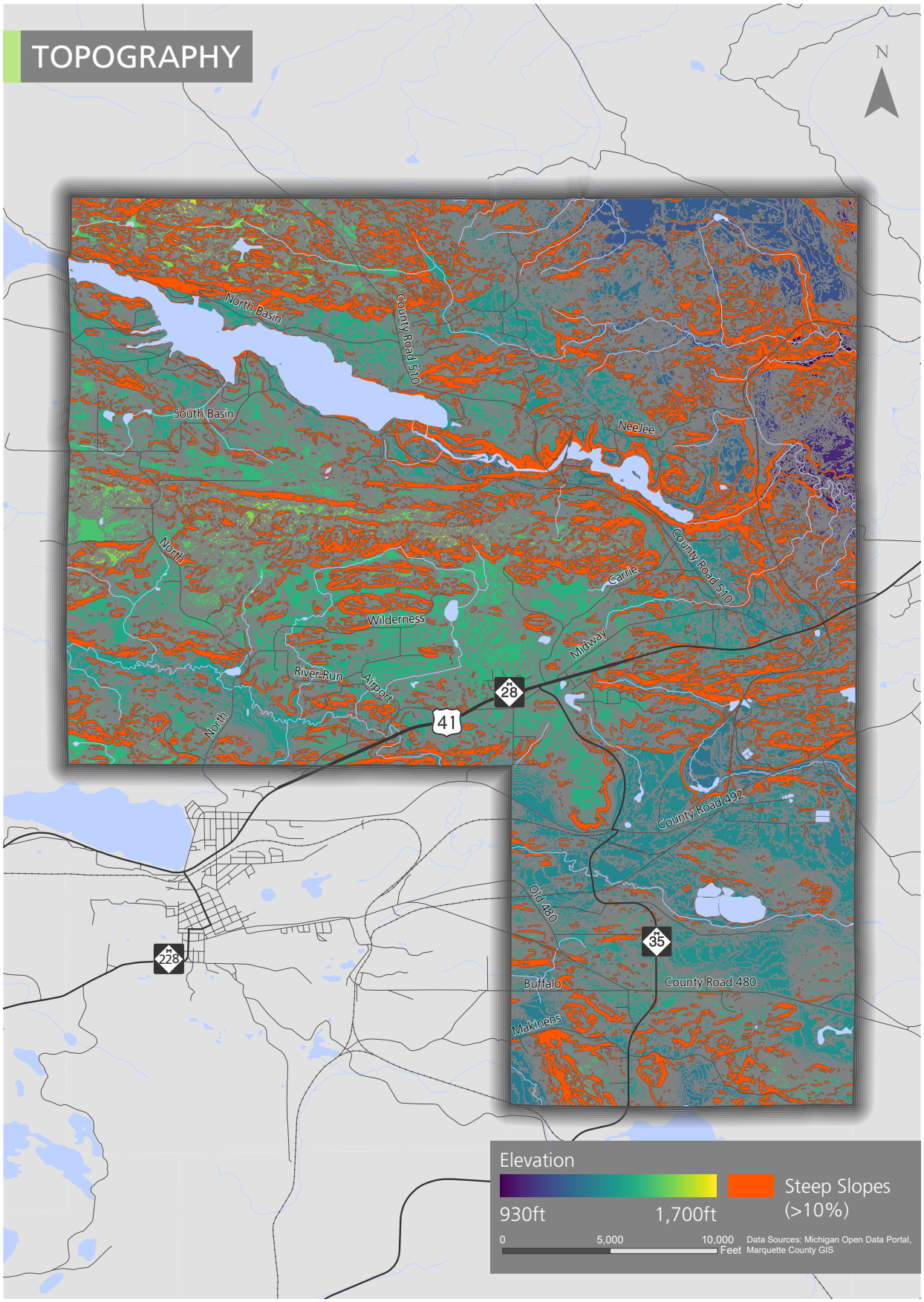
Bedrock and surface geology have a significant role in a region's ability to develop for human settlement. Bedrock geology is comprised of rock formations below the surface layer of the Earth. The various formations have developed over millions of years through natural evolutionary processes that most often occur below surface geology. The bedrock geology in Negaunee Township includes, volcanic & sedimentary and Michigamme sedimentary formation, granite & gneissic, slate & quartzite.[3] Surface geology, such as sand, silt, clay, and organic content, also plays a vital role in the ability of a community to develop in certain regions due to the relationship the components have with groundwater. Types of surface geology found in Negaunee Township include coarse and thin glacial till, and glacial outwash of sand and gravel.[4]

If the surface geology of a region is lacking drainage functionality and groundwater comes directly from porous bedrock without passing through the filtering layers of surface geology, the water would not be suitable for distribution into a community. Surface geology also acts as a filter for runoff water, removing contaminants as it percolates through the layers of gravel, sand, and clay.

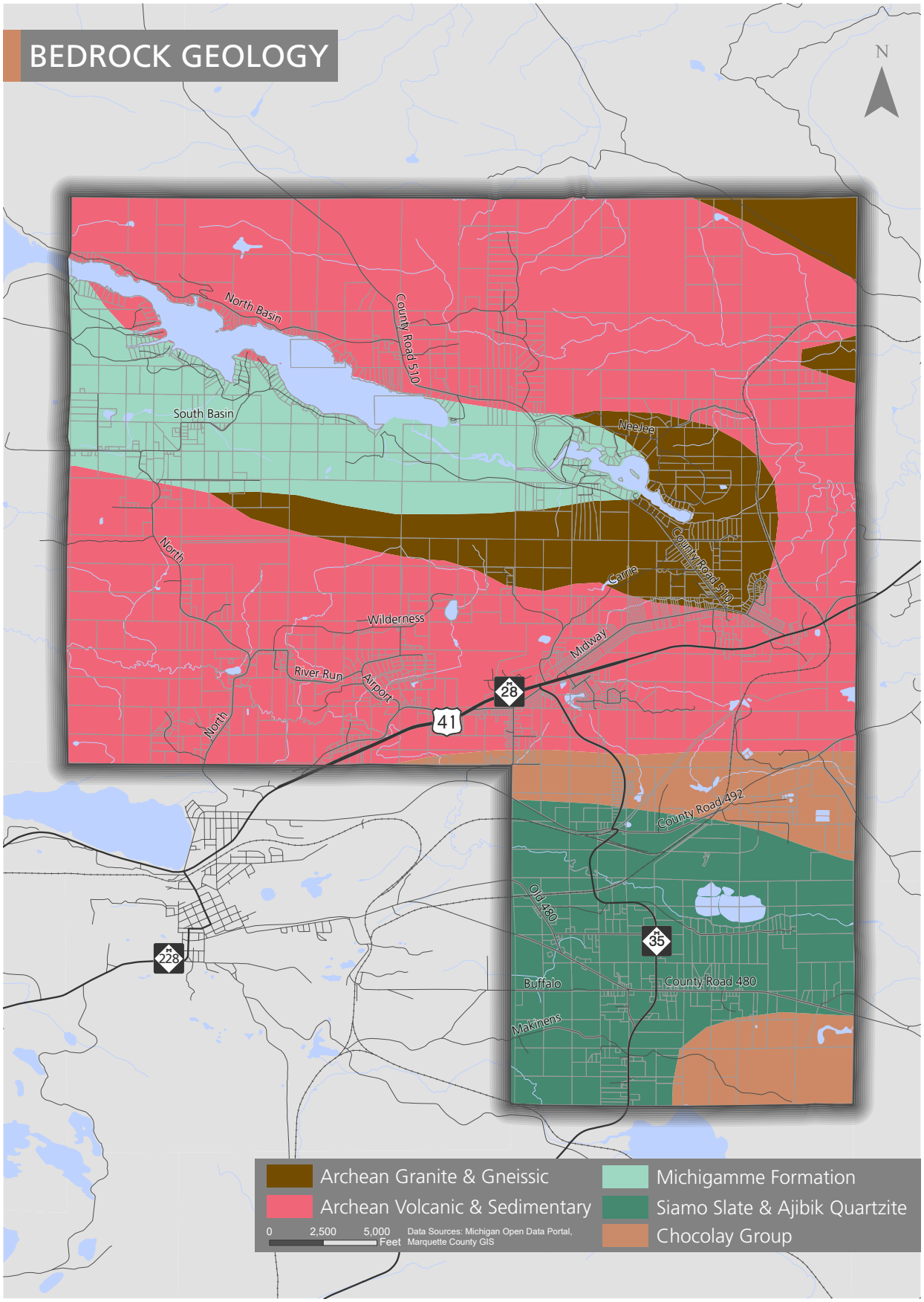
Soil Composition

A vital part of the ecosystem that plays a major role in vegetation growth and suitability for structural

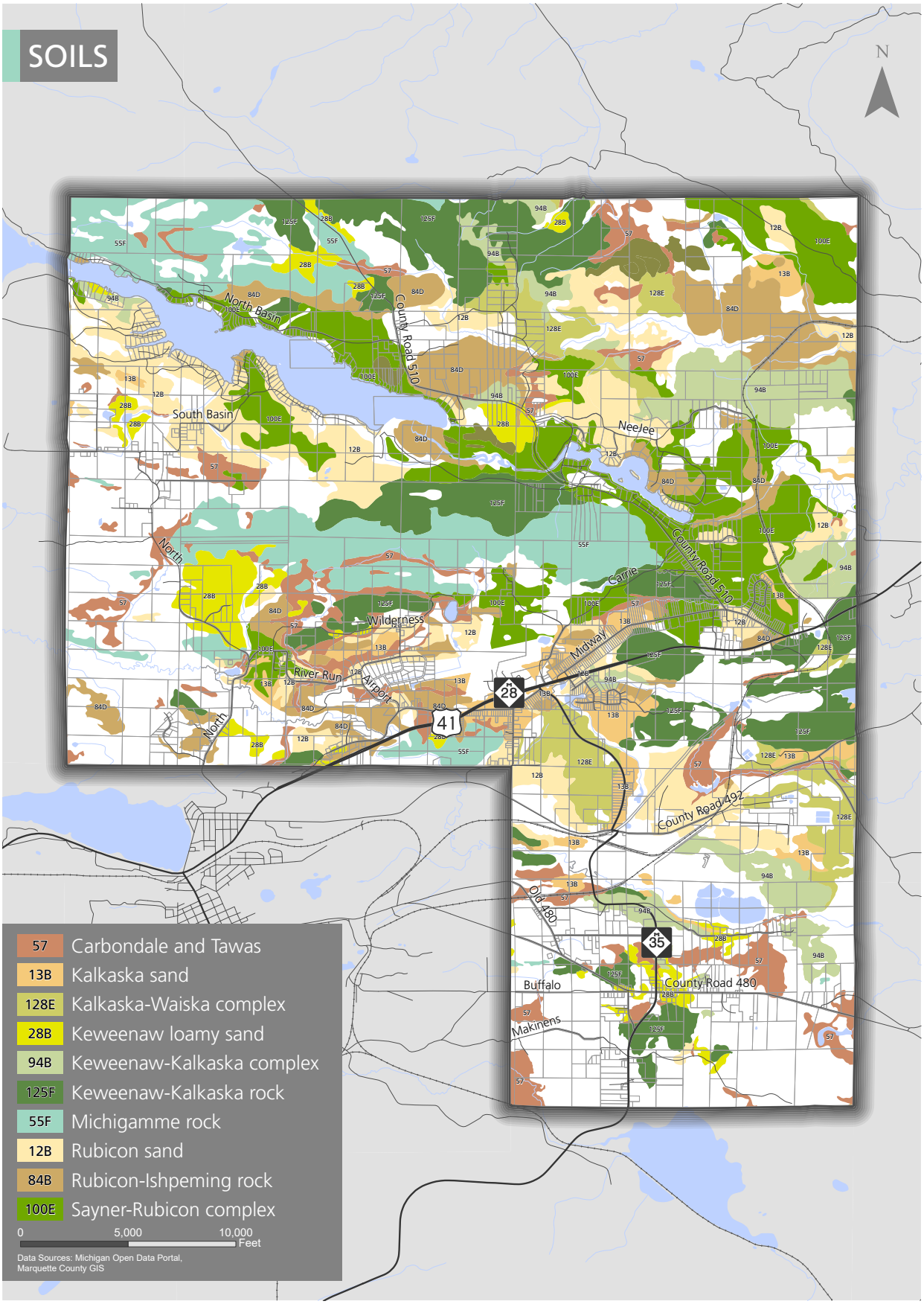
Map 3: Topography



Map 4: Bedrock Geology



Map 5: Soils


SOILS
N
North Basin
South Basin
County Road 510
NeeJee
Carrie
Midway
Wilderness
River Run
Airport
North
28
41
35
County Road 492
Old 480
County Road 480
Buffalo
Makinens
57 Carbondale and Tawas
13B Kalkaska sand
128E Kalkaska-Waiska complex
28B Keweenaw loamy sand
94B Keweenaw-Kalkaska complex
125F Keweenaw-Kalkaska rock
55F Michigamme rock
12B Rubicon sand
84B Rubicon-Ishpeming rock
100E Sayner-Rubicon complex
0
5,000
10,000
Feet
Data Sources: Michigan Open Data Portal, Marquette County GIS

development in a region is soil composition. Soil is unconsolidated mineral and organic matter that has a range of chemical properties depending upon the underlying material. In Negaunee Township, the soil composition is primarily sand or sandy loam near the surface, turning to gravel at greater depth.[5] The Soil Survey of Marquette County which the U.S. Department of Agriculture Natural Resource Conservation Service (NRCS) produces, provides detailed descriptions of soil composition within the region.

The soils are grouped into associations based on common characteristics such as texture, slope, and drainage. When planning for development, soil composition can severely limit construction options or increase the cost to build. For example, various engineering techniques can overcome poorly draining soil for a septic tank/field; however, if the soil has poor drainage properties and the engineered solutions fail during a heavy rain event, the consequences could be extremely damaging and costly.

Out of the 25 soil associations in Marquette County, Negaunee Township has seven. They include the Keewaydin-Michigamme-Rock Outcrop Association, the Tilden-Michigamme-Rock Outcrop Association, the Kalkaska-Ishpeming-Rock Outcrop Association, Pits-Pumps Mine-Slicken Association, the Rubicon-Sayner Association, the Rubicon-Keweenaw Soil Association, and the Keneenaw-Kalkaska-Waiska Association.[6] Before any structural development occurs, a complete soil inventory of a site should be examined. Depending on soil properties such as moisture, bearing capacity, permeability for drainage, and susceptibility for erosion, it could be determined that engineered solutions would not withstand the capacity of natural environmental systems.

Boreal Forests

Timber is a critical natural resource that has played a pivotal role in establishing many of the communities in the Upper Peninsula. Hardwood, often associated with boreal forests, are the dominating type in the U.P. and as such, have been a driving economic force in many communities in the region. Negaunee Township is predominately a Boreal Forest area, which includes conifer-hardwood environments that support trees such as (but not limited too) white pine, mountain-ash, northern white-cedar, balsam fir, paper birch, and maple.[7]

Wetlands

There are three types of wetlands in Negaunee Township that provide crucial ecosystem services: emergent, forested, and restorative. Emergent wetlands are characterized by their location along the edges of streams and lakes and the presence of rooted herbaceous and grass-like plants that grow through and above the water's surface. Forested wetlands contribute roughly 50% of overall tree canopy. Forested wetlands are found on glacial outwash plains, moraines, and outwash channels.[8] In addition to identifying existing wetlands, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) also identifies where wetland restoration is possible. Areas where wetlands were historically located and have disappeared, likely due to development, are considered restorative. These "restorative" areas are the best places for any additional wetland expansion or rehabilitation because the natural environment has already demonstrated an ability to support a wetland.

Water

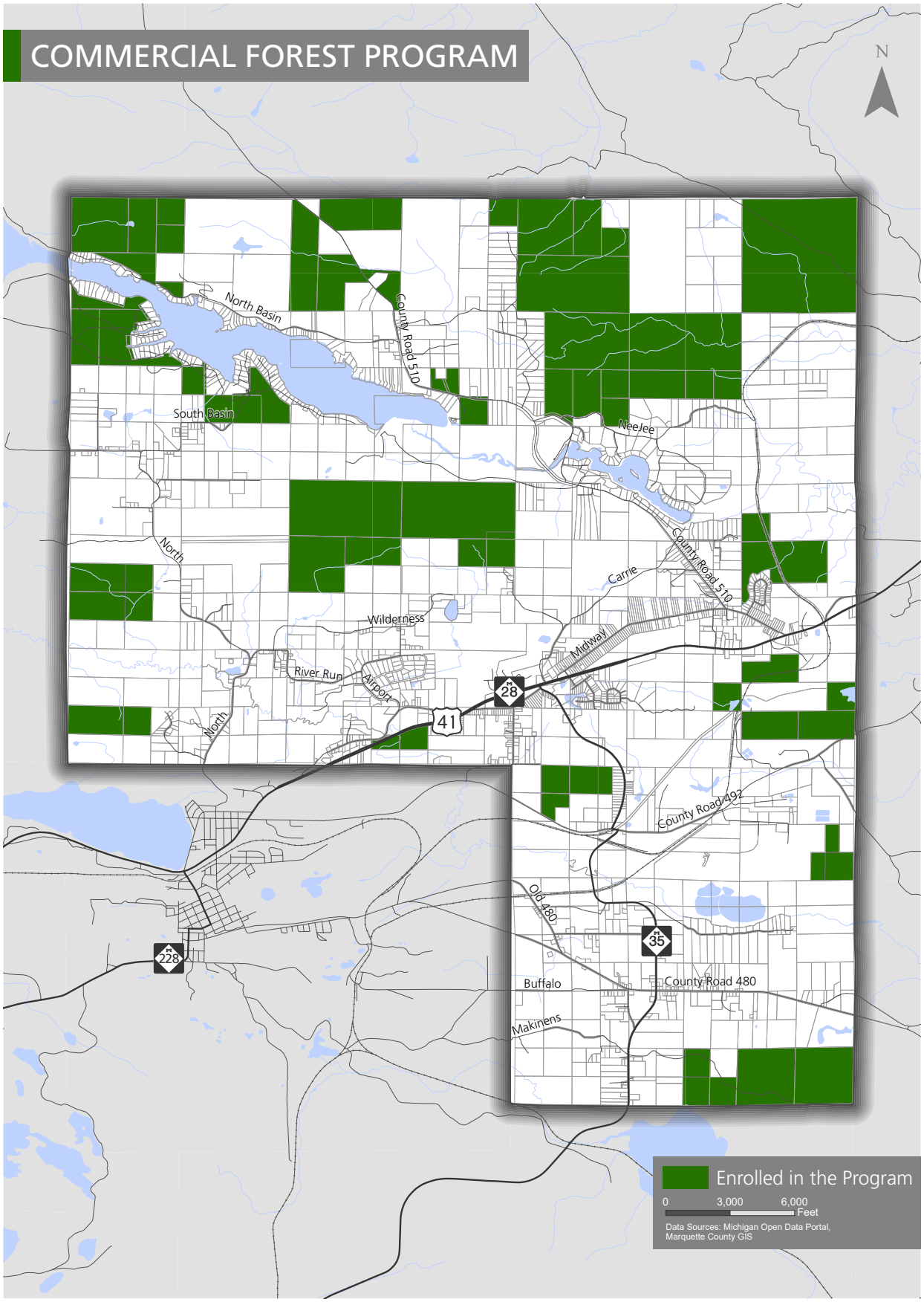
Watersheds

Watersheds are delineated by high points in topography which generate waterflow patterns that form a distinct boundary, forming a bowl shape which then establish water drainage routes. Negaunee Township is located within the Lake Superior Basin which includes the Dead River Watershed, Lower Dead River Watershed, Carp River Watershed, and the Goose Lake Watershed. The primary first-order drainage routes that bisects the Township are the Dead River through the northern section, and the Carp River through the mid-southern region. Second-order drainage branches include Midway Creek, Holyoke Creek, and Reany Creek.

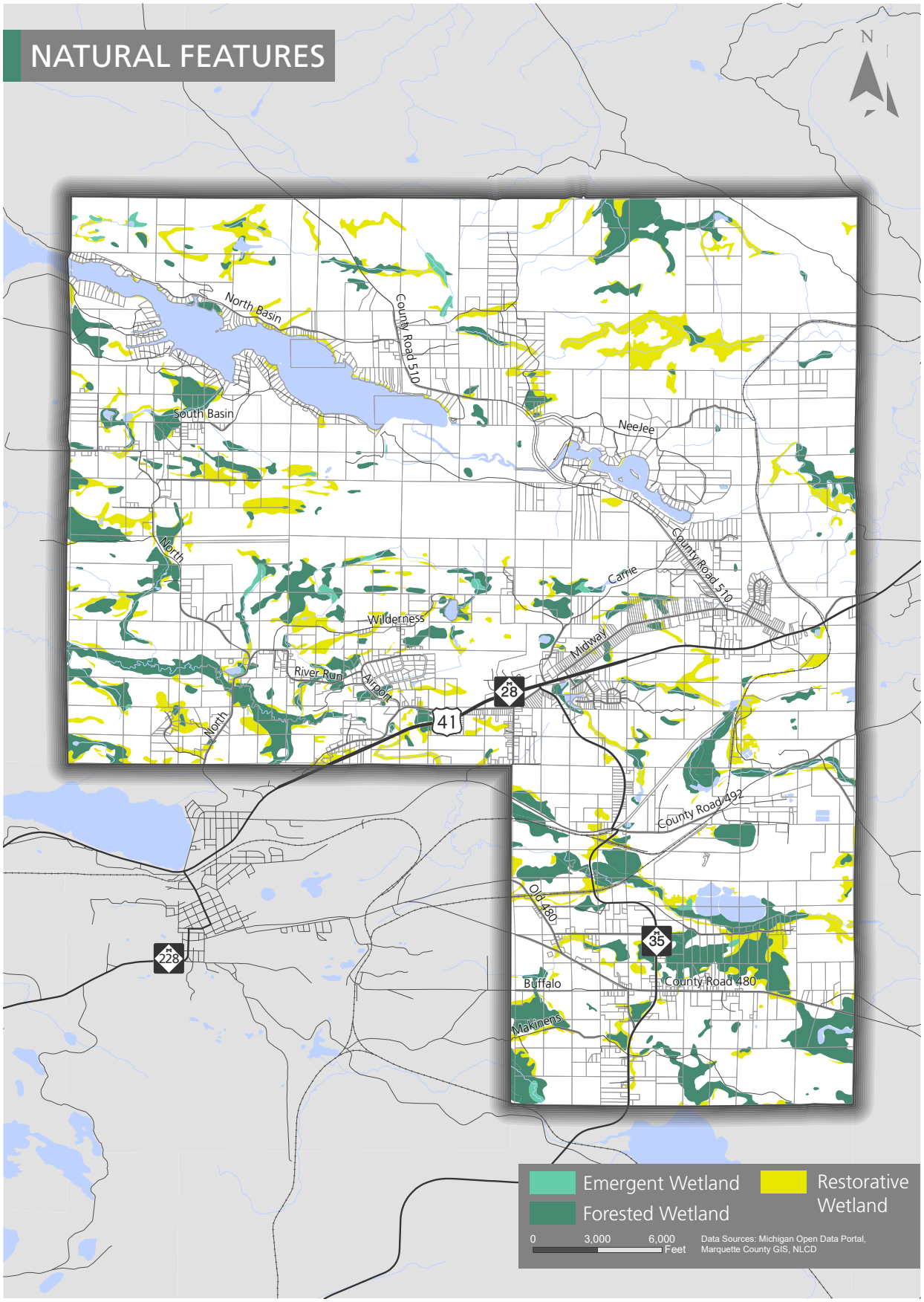
The Superior Watershed Partnership adopted the Lower Dead River Watershed Management Plan in 2003, which provides strategies for protecting and enhancing the natural resources within the Lower Dead River watershed. Key goals and recommendations of the Plan include the following:

» Reduce stormwater runoff, which negatively impacts water quality and aquatic habitat by identifying and addressing areas of sedimentation and erosion.

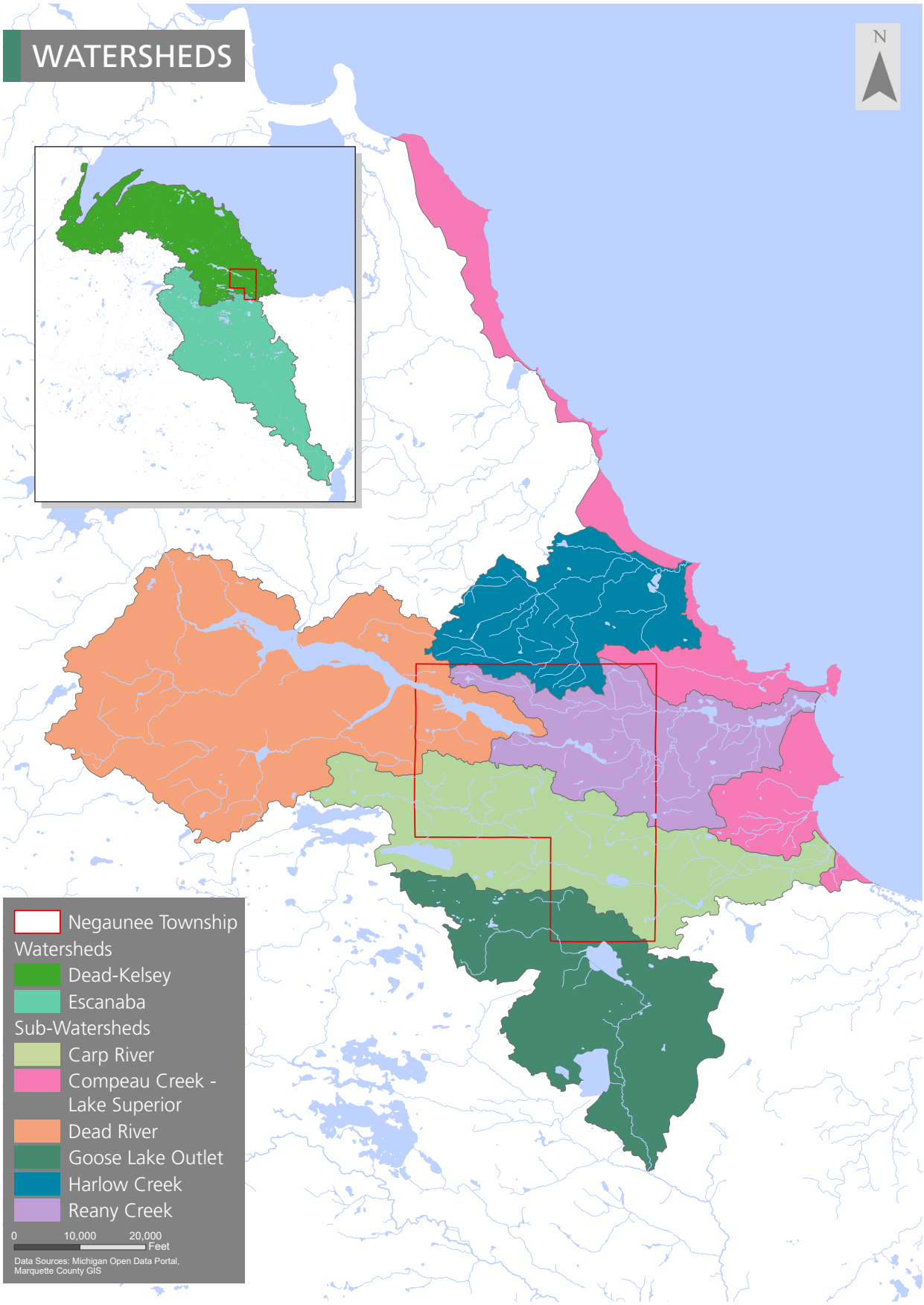
Map 6: Commerial Forest Program



Map 7: Natural Features



Map 8: Watersheds



» Improve water quality and aquatic habitat by creating stream monitoring programs, improving riparian standards in zoning ordinances, and establishing more stringent stormwater management techniques.

» Implement open space planning and low-impact development practices to protect ecological resources while still supporting economic and social growth.[9]

Storage Basins

Located within Negaunee Township are two water storage basins, the Dead River basin and the McClure basin. The Dead River basin is impounded by five dams, although only the Hoist and McClure Dams are in Negaunee Township. The Upper Peninsula Power Company operates the Hoist (5.5 MW) and McClure (10 MW) powerhouses, which produce a combined output of 15.5 megawatts.[10]

Water Quality

The two current sources of water quality degradation come from the use of impervious surface material during development and the two water storage basins in the Township. Impervious surface materials, such as concrete or asphalt are not porous which forces runoff to discharge at concentrated points, increasing erosion and sediment pollution.[11] The historic mining operations in the region are also noteworthy in relation to water quality; however, State officials have not found toxicity levels associated with the mining sites to be of concern and to the delight of citizens, the Township's water has been declared as the best tasting water in the U.P. by the American Water Works Association.[12]

CLIMATE

It is well documented that the climate is changing. As scientists' predictions come true, municipalities need to consider how they will be impacted. While not all of the changes will be negative, most of them will likely usher in an identity shift along with the climate shift. For those who value the cultural mainstays that revolve around seasonality, their slow fade out of prominence may cause emotional discomfort. While the urgency with which this crisis must be handled calls for global cooperation, from the municipal standpoint, there is a greater need for state and federal leadership. Fortunately, the state of Michigan has developed strategies that municipalities can use as guidance.

What is Michigan Doing About Climate Change?

Summary of Major Impacts

The National Climate Assessment (NCA), a report given to Congress roughly every four years details the impacts of climate change on the United States and its regions. The NCA identified six key climate change impacts to the Midwest. A helpful resource, the Upper Peninsula can tap into this wealth of data to build strategies that mitigate the impacts and adapt to a new future.

In 2022, the State of Michigan published the MI Healthy Climate Plan, a statewide commitment to achieve a 100% economy-wide carbon neutrality by 2050. By 2030, Michigan plans for a 52% reduction in greenhouse gas emissions by cleaning the energy grid; electrifying vehicles and increasing public transportation; repairing and decarbonizing homes and businesses; driving clean innovation in industry; and protecting Michigan's land and water. The initiative also commits to environmental justice and pursuing a just transition to a carbon neutral future. Many of these objectives, designed to spur action, are a response to the NCA's summary of major impacts.

In Marquette County, Climate Adaptation Task Force (CATF), convenes quarterly to discuss and address climate change issues and strategies that influence the county and Upper Peninsula. The group is responsible for the publication entitled, "Climate Adaptation Plan for Marquette County, Michigan," which focused on six themes that should be addressed in climate adaptation. These issues included land use, water resources, forest health, public health, food security, and tourism.[113]

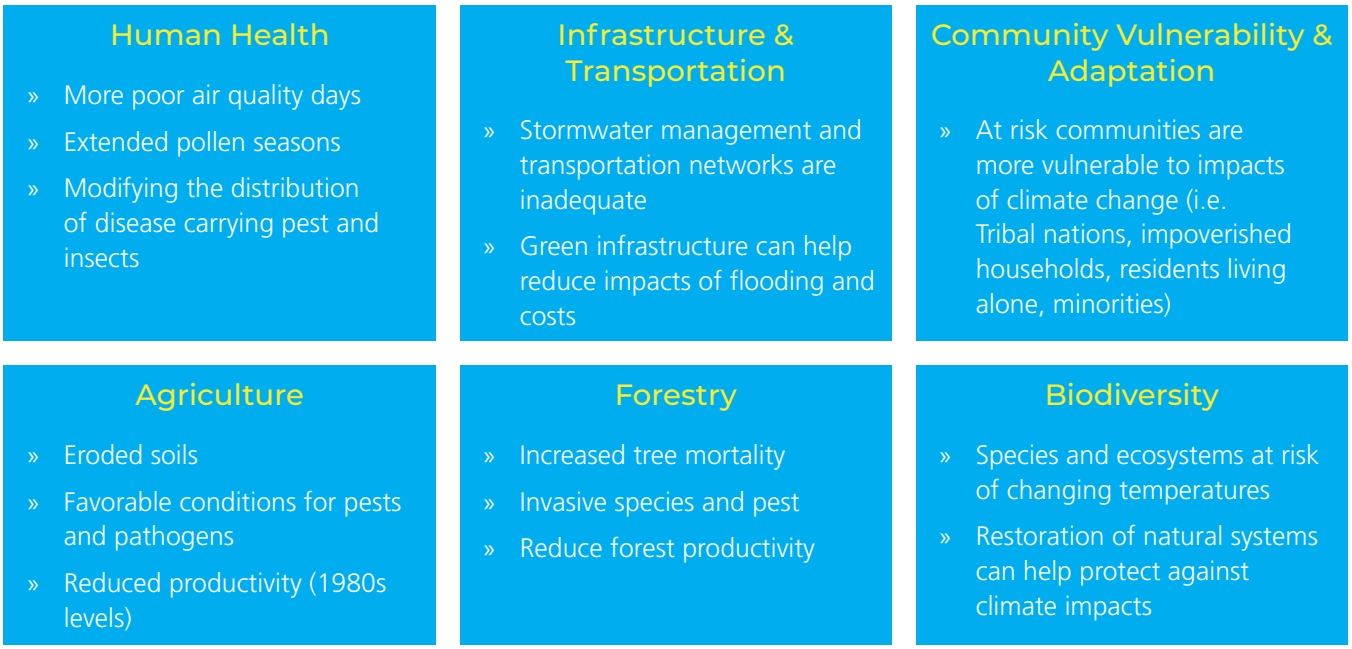
In addition to this report, Michigan State University (MSU) published a four-volume series entitled, "Marquette Area Climate and Health Adaptation Guidebook."[14]

Climate Trends for the Upper Peninsula

The trends referenced have been observed by local weather stations established by the Great Lakes Integrated Sciences and Assessments (GLISA) for several decades. The table titled "Summary of Climate Trends and Impacts" summarizes observed trends from the Marquette National Weather Station located in Negaunee Township and then

1

Figure 11: Key Climate Change Impacts to the Midwest



Source: National Climate Assessment (NCA)

Table 6: Summary of Climate Trends and Impacts

Major Climate Trends	Potential Impacts
Warmer temperatures	Longer growing season, less ice cover on lakes and warmer lake temperatures, less predictable snowfall and fewer days of snowpack, hotter summers with increased instances of allergies and asthma, greater instances of drought and wildfire, increased need for air conditioning and higher energy costs, shorter winter season for snow sports/recreation
Increased number and severity of rain events	Higher instances of flooding, greater damage to infrastructure, property, and human life, erosion, increased runoff that contaminates the watershed

Source: Great Lakes Integrated Sciences and Assessments (GLISA)

extrapolates the larger scale impacts to the entire ecosystem. Because the region's ecosystems were perfectly adapted to the existing climate, changing temperatures and precipitation will alter their composition (i.e., forests and cold water fish) and everything that depends on those ecosystem to survive. And while all humans will be impacted by these changes, the most vulnerable populations will suffer disproportionately greater impacts, as historically they have not able to rebound as quickly from major shocks and stresses to the system.

An illustrative example of this is Lake Superior's changing water levels, which in 2020 was recorded at 603.02, just shy of the 1985 record high . Influenced by precipitation, snowmelt runoff, drought, evaporation rates, the water levels are always fluctuating but as of late are hitting historic highs that impact in erosion, flooding, infrastructure, habitat, and structures.[15] This is an all-encompassing crisis.

Warmer Temperatures

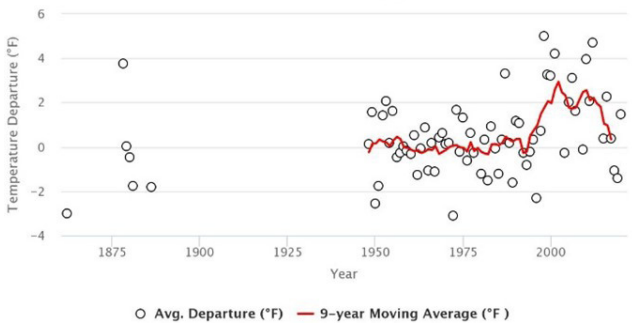
The National Weather Station in Negaunee Township has recorded temperatures for over 70 years and found that the annual average temperature has risen by more than two degrees since 1962. This is a faster rate than national and global rates. Every white circle in Figure 12 represents the departure from the 1951-1980 historical reference for a single year, which illustrates the rise in the last 20 years.

Winter

Warmer temperatures will eventually translate to milder winters with less snowpack. The rise in average annual temperatures record the highest increases coming from winter months. The region is known for its heavy lake effect snow fall; on average it receives about 150 inches per year.[16] Through 2002, it was the 5th snowiest city in the U.S.[17] As such, there is an established culture and industry that embraces the cold and relies on snow for beloved winter activities and tourism. Between 1962 and 2014, frost-freeze days have increased by 24 days and snow depth has declined by 5%. The freeze-free period is projected to lengthen by another 30-60 days under high emissions scenarios. For agricultural occupations, a lengthened growing season is a boon, but for snow-based recreation, the opposite is true.

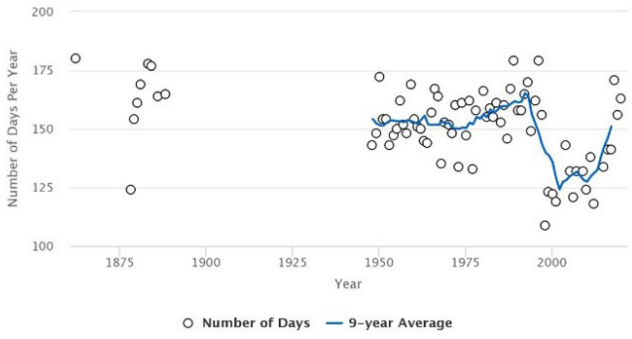
Summer

Figure 12: Annual Temperature Departure



Source: GLISA

Figure 13: Days Per Year Below 32˚ F



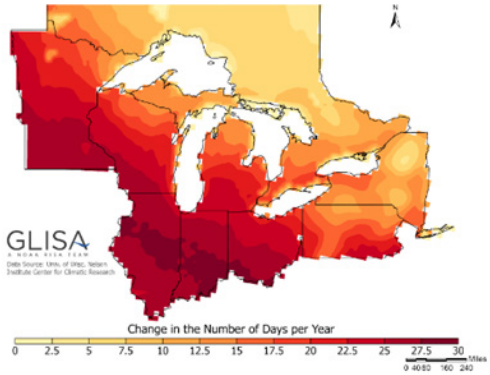
Source: GLISA

The number of days over 90˚F is already rising but heat waves are expected to increase. So far, days over 90˚F have remained stable in the Upper Peninsula. On average, fewer than three days per year exceed 90 ˚F. GLISA has modeled, assuming the higher case scenario for emissions, there will be about 14 more days per year over 90˚F and less summertime precipitation by 2050. This is dangerous – heat is the leading weather-related killer in the United States.[18] Heat related stress, illness, and death will also increase, especially for those most at risk: those with cardiorespiratory disease, allergies, or asthma. Households without air conditioning may also have greater exposure to heat with little relief. From a municipal perspective, the greater demand for energy during the hottest periods will strain the current system's capacity. However, the Upper Peninsula's moderate heating compared to downstate makes it possible that the region could become a summer resort destination on Lake Superior.

Increased Number and Severity of Rain Events

Paradoxically, because the number and severity of rain events are expected to fall in condensed and intense bursts, the state will be more prone to flooding and drought. The increase of heavy precipitation events will lead to increased and more severe flooding events. Many municipalities have counted on FEMA flood maps to predict areas at heightened risk of flooding, but these maps do not include climate projections, but rather outdated models based on historic patterns. The projections for precipitations totals vary too widely to provide even an estimated increase. Deluges of stormwater will be even harder to manage. With concentrated rainfall, contaminants are swept into the watershed, polluting beloved water bodies that are key to the region's image as a natural getaway.

Figure 14: Annual Temperature Departure



Source: GLISA

CR-510 Bridge

Infrastructure that can accommodate greater volumes of precipitation is needed to protect properties and human life.

Moreover, longer periods without rain, and higher temperatures are a recipe for drought and wildfire. While this is not an immediate threat to the Upper Peninsula, it would require additional expertise if the region finds itself in this situation more often.

For example, between April 30 and May 2, 2023 the Negaunee Township area received 28.7 inches of heavy snow followed warm temperatures resulting in localized flooding.

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5. Community Facilities & Services

Community services and facilities sustain the function of a municipality, as well as the daily lives of the municipality's residents. From daycare and early childhood social service programs to the senior center, the provision of needed resources for a community's success aids its residents at every stage of life. Many service providers are involved in creating a network of support for Negaunee Township residents – from the Township itself, to partner municipalities, to contractors, to nonprofit organizations and citizen groups who work to better the community.

Residents within the Township are generally most satisfied with Fire and EMS service (with a weighted average rating of 3.18 out of 5.00), but are satisfied with other utilities, as well. Recycling service, the water system, and police in the Township received favorable ratings (the weighted averages for these utilities, respectively, were 3.18, 3.00, and 2.75). Recreation facilities, roads, and internet service were rated less favorably (2.47, 2.26, and 1.94, respectively).

Generally, Negaunee Township's targeted improvements must focus on infrastructure. Improvements to broadband and internet service need to occur to aid Negaunee Township's citizens and business – potentially through the use of state and federal funding designated for connectivity improvements to rural areas. Improvements over the next decades to allow more homes to join municipal water system (which has the capacity for many more connections) and connections to natural gas are important for the quality of life of Negaunee Township's residents. Parks and recreation improvements, including important safety and accessibility improvements, are identified in the Parks and Recreation Master Plan.

PUBLIC UTILITIES + SERVICES

Water, Sewer, and Stormwater

Negaunee Township provides water service to its residents one mile north and south of US-41/28 – approximately 473 customers in December 2018.[1]

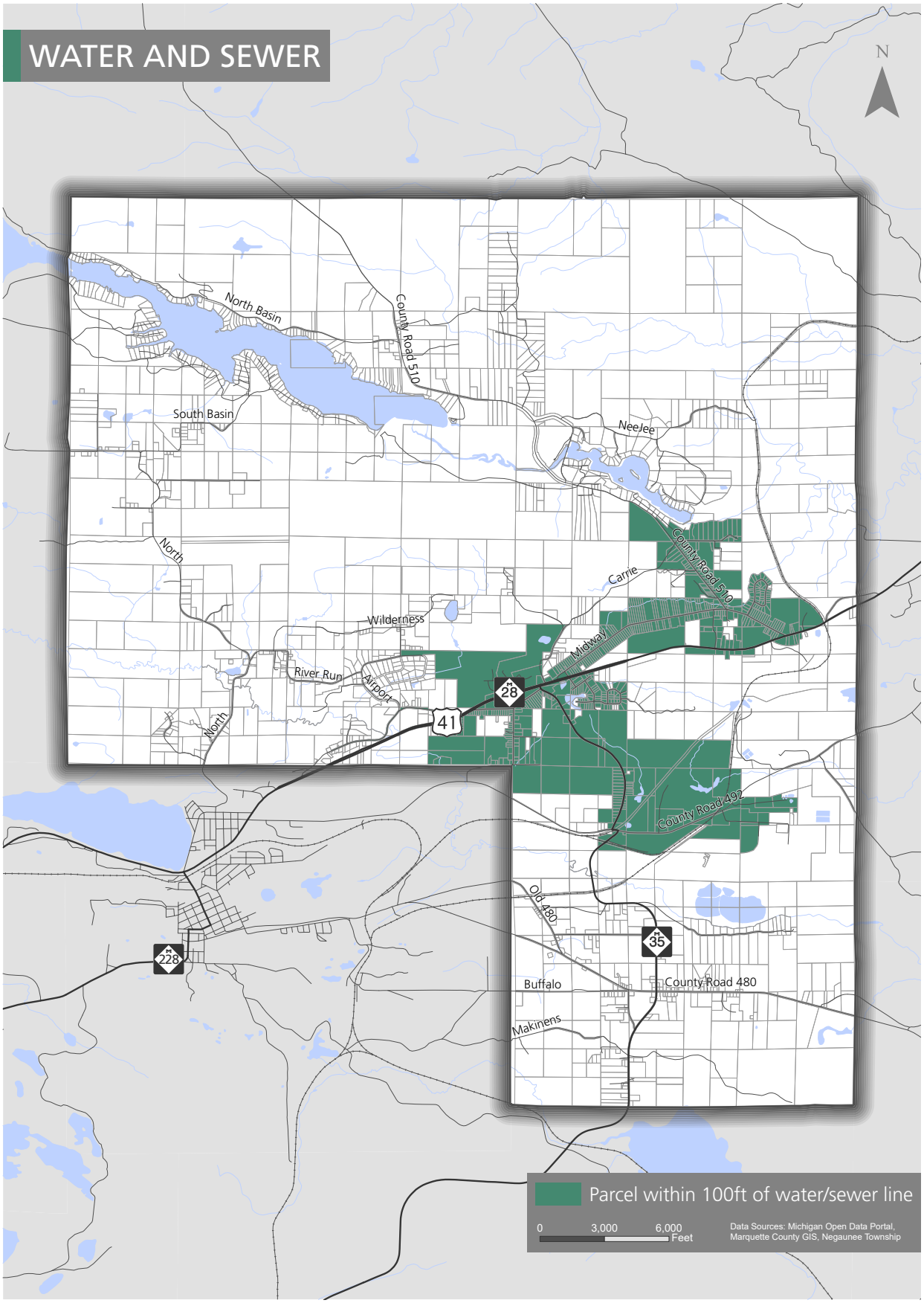
Negaunee Township has two wells (sourcing from groundwater) and an elevated, 300,000 gallon storage tank by the Community Center on M-35. Existing pumps have a capacity of 792,000 gallons per day; usage has remained level over the past decade at approximately 85,000 gallons per day during the winter and approximately 110,872 gallons per day during the summer. Approximately 31,000,000 gallons of water are delivered by the Township per year. Not all residents are connected to the municipal water system; many residents have water wells on their property – approximately 872 dwellings have wells. Water service has been expanded; the Township has accomplished the goal of implementing a water main under US-41 near Brebner Road, following the south side of the highway to the Carpenters' Union training facility.

Sewer service is not present within the township, except for a four-inch force main, connecting the former Marquette County airport to the City of Negaunee, serving one building. There is currently no stormwater service – there is a County Drain Commissioner, although they have not yet adopted policies related to stormwater.

Former Marquette County Airport Project

Ground and groundwater contamination (specifically, PFAS) near the former Marquette County Airport has led to goals to connect residential dwellings in that area, to move residents in that area from well service to the Township's water service. Out of 47 residential well samples which were analyzed, 12 samples from wells in the area were below the drinking water criteria for PFAS, and 34 had no detection of PFAS (1 exceeded the drinking water criteria); regardless, by sourcing water from the Township's lines, households in the area of the airport would receive municipal water instead. This project would involve an extension of the Township's water lines; the Township is in the process of applying for grants to support the project. In addition, future water service to this area could position the former airport property for a higher and better use as a potential mixed-use district.

Map 9: Water and Sewer



Electric and Gas Utilities

Electricity for Negaunee Township is administered by the Upper Peninsula Power Company (northwestern portion of the Township, near the Hoist Storage Basin area) and Marquette Board of Light and Power. SEMCO Gas Company provides natural gas service to Negaunee Township – however, natural gas access is intermittent. Only 55.0% of survey respondents stated that they were served by natural gas at their home or business. Propane heating is common, instead.

Broadband and Cell Service

The availability of high-speed internet services was ranked by 39.8% of respondents as an essential area of focus within Negaunee Township's master planning process – making it respondents' top-ranked priority. Respondents (34.1%)rated Negaunee Township's existing internet service as poor; an additional 41.5% rated it as average. Most of Negaunee Township is connected through cable internet, with speeds of at least 25M, and overlapping coverage with DSL of at least 10M. A small portion of the township, north of the community of Eagle Mills, is served by fiber internet with at least 100M speeds. However, there is a complete gap in coverage to the west of Eagle Mills, along railroad lines – not served by fiber, cable, or DSL.

Additionally, Northern Michigan University provides a program called the Education Access Network.[2] Speeds begin at a download speed of 10M per second, with an option to upgrade to 25M for an additional charge. However, EAN is limited in its capacity within Negaunee Township due to the area's topography; as a result, reliability is limited.

Cell service is intermittent in Negaunee Township, with coverage by T-Mobile, Verizon, and AT&T along US-41 – however, areas further away from the US-41 corridor have sparse or nonexistent cell service. Expansion of fiber optic networks are underway by FiberTech and 906 Technologies.

Road Maintenance

Road maintenance is conducted by the Marquette County Road Commission, with Negaunee Township responsible for part of the cost of improvements to local roads. Road improvement projects are scheduled by the Marquette County Road Commission, with townships able to signify priority. A road millage was instituted by the Township from 2018-2032, due to the deteriorating conditions of roads at the time; a study by firm UP Engineers & Architects found that half of Negaunee Township roads were considered to be "failing" in 2017, leading to the passage of this millage. Today, roads are substantially improved, with only 0.2% as "failing:"

Table 7: Road Conditions

Road Rating	Percent Qualifying
1 (Failing)	0.2%
2 (Very Poor)	15.5%
3 (Poor)	10.5%
4 (Fair)	8.3%
5 (Fair)	15.5%
6 (Good)	17.8%
7 (Good)	28.0%
8, 9, 10 (Excellent)	4.3%

Source: UP Engineers & Architects

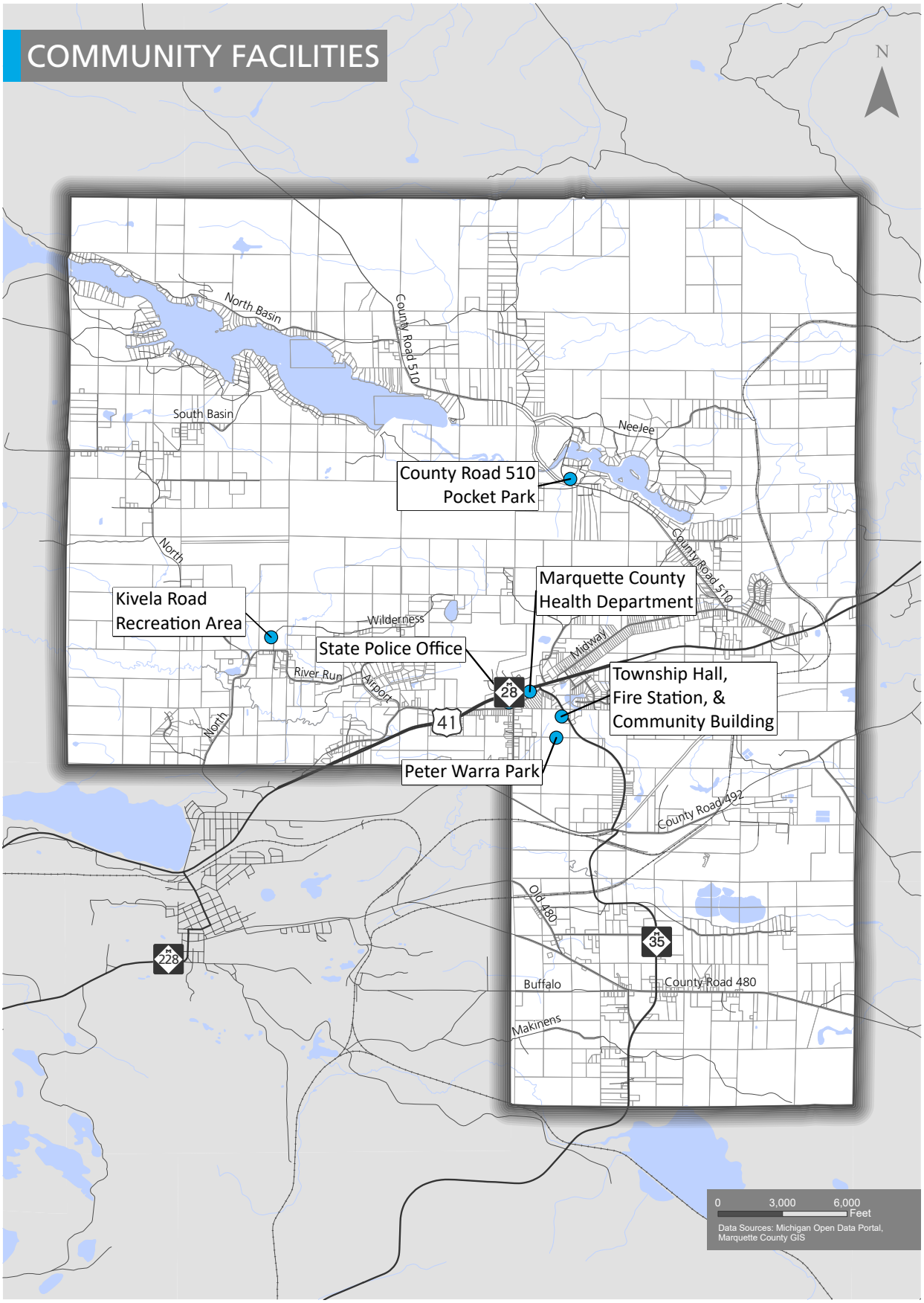
PUBLIC FACILITIES

Township Hall + Surrounding Buildings

The Negaunee Township Hall serves as a community center and municipal building. Constructed in 1970 and expanded in 2002, the township hall contains offices and meeting rooms for Township business, as well as a gymnasium open to the public. Meetings of the Township Board and Planning Commission occur here, and the building also serves as a polling station for elections. The township hall can also be rented for private events and meetings – it hosts youth and adult events, such as craft shows and youth sports. The township hall borders Warra Park, which is the most-visited recreational site in the Township.

There are several buildings located on the premises of the Township Hall. The Department of Public Works building is located north of Township Hall, and houses township vehicles, including grounds maintenance equipment The Water Department

Map 10: Community Facilities



Garage is located on the same parcel of land as the Township Hall, next to the water tower. The garage is used to store vehicles and equipment, as well as overflow equipment and vehicles. The Building and Recreation Committee Facility is located behind Township Hall – half is used for vehicle and equipment storage, as well as a workshop facility, with the other half used for concessions for gatherings at the Township Park. The building has an indoor restroom, additionally.

PUBLIC SAFETY

Police

Police service to the township is provided by the Michigan State Police's post in Negaunee Township, as well as the Marquette County Sheriff Department. The Marquette County Sheriff Department provides several resources to the community, in addition to responding to calls. A Community Corrections Office provides alternative sentencing options to the court, including alternatives such as community service or residential substance use treatment. There is a two-person Detective Division (one Detective/Lieutenant and Undercover Narcotics Detective) to investigate crimes committed within Marquette County and transport inmates.

Michigan State Police's post No. 81 is located at 180 US-41 East, in Negaunee Township. Michigan State Police officers respond to calls within Negaunee Township, and Marquette County Central Dispatch is located in the Negaunee State Police Post facility. Marquette County Central Dispatch incorporates Smart911 service (allowing residents to create a Safety Profile for their household, giving first responders access to that information in the event of an emergency), and Text to 911 service.[3] Additionally, police departments from the cities of Negaunee, Ishpeming, and Marquette will respond to calls within Negaunee Township if requested by the Marquette County Sheriff Department or Michigan State Police as backup. Additionally, the Marquette County Sheriff Department has a Rescue Unit – this unit provides non-transporting basic life support services.

Emergency Medical Services

The Negaunee Township Fire Department created an Emergency Medical First Responders unit in 2004 – the EMS group has 11 EMTs, one EMT specialist, and two paramedics. The unit responds to an average of 183 calls per year, over the last three years. Negaunee Township is within the ambulance service area for UP Health System – Marquette, which provides advanced life support care.

Negaunee Township Fire Department

Fire Department

Negaunee Township is served by the volunteer Negaunee Township Fire Department. The Negaunee Township Fire Department is connected to the Township Hall. Additionally, mutual aid agreements are established with Ishpeming, Marquette, Richmond, and Sands Townships, the City of Ishpeming and the City of Negaunee. The Negaunee Township Fire Department currently has two tankers (one purchased in 2015; one purchased in 2022), and a wilderness fire vehicle (purchased in 2012).

PUBLIC HEALTH

Waste Management

The Marquette County Solid Waste Management Authority oversees waste management within Marquette County, and is owned by the municipalities within Marquette County. The Marquette County Landfill (owned and operated by MCSWMA), receives 50,000 tons of solid waste per year; residents must obtain a landfill permit from the township before bringing waste to the landfill. The landfill has a life expectancy of 20 years. North Country Disposal currently contracts with the township to provide household curbside refuse pickup, as well as recycling services, which began in November 2020. 1,353 township residents receive curbside waste services. Sanitation rates are set at $49.00 per quarter.

Additionally, after the addition of recycling carts through the Recycling Partnership Cart Grant, recycling has increased by 52% in Negaunee Township. Carts were distributed in October 2020, with service beginning in November 2020. In the first quarter after cart distribution, there was approximately 25 pounds of recycling refuse per household per month; in the same quarter, the year prior, there had been 11 pounds of recycling per household. This demonstrates the impact of cart distribution within Negaunee Township.[4]

Marquette County Health Department

The Marquette County Health Department's offices are located in Negaunee Township, serving the entire county. The Health Department conducts a myriad of preventative and remedial health services – including the Dental Outreach program (which distributes toothbrushes and mouthwash to area schools, and fluoride treatments for young children), adolescent health, breast and cervical cancer screening services, immunizations, treatment for and testing of sexually transmitted infections (as well as distribution of supplies to prevent STIs).

The Health Department also operates the prevention-focused Community Health Services program, aiming to educate the community on health best practices. The department maintains a health resource library, and conducts public service announcements to incentivize healthy behaviors within the community. They are also responsible for permitting well and septic systems.

Women, Infant, and Children (WIC) Program

The WIC program is a federal program meant to address issues of malnutrition in "pregnant and breastfeeding women, women who recently had a baby, infants, and children up to 5 years who are at health risk due to inadequate nutrition."[5] The program includes nutrition education and medical screenings, as well as the Project Fresh program for grocery support. The Marquette County Health Department is a clinic location for WIC services, within Negaunee Township.

MDHHS Marquette County

The Michigan Department of Health and Human Services maintains an office in Marquette, covering all of Marquette County. Resources provided by MDHHS include abuse and neglect investigations for adults and children, adoption and foster care services, juvenile justice, child welfare and behavioral health resources, assistance programs (WIC; childcare; food assistance; emergency relief for home, relief, and burial expenses), environmental health, domestic and sexual violence resources, firearm safety, and safe sleep resources.

MEDICAL RESOURCES

Hospitals

The UP Health System operates several facilities in Marquette County and surrounding areas. UP Health System – Bell, a hospital in nearby Ishpeming (8 miles from Negaunee Township), has 25 beds and is a verified chest pain center and sleep medicine center. UP Health System – Bell is a Joint Commission Accredited Critical Access Hospital, and provides inpatient stays, birthing services, an express care walk-in clinic, laboratory

services, outpatient rehabilitation, inpatient swing bed care, a sleep center, occupational medicine, family medicine, and more.[6]

UP Health System – Marquette is the largest hospital close to Negaunee Township with 222 beds, and UP Health System-Marquette is a level II trauma center. The hospital cares for approximately 9,000 inpatients and more than 350,000 outpatients per year. UP Health System – Marquette is a specialty care hospital, with a Heart and Vascular Institute, Cancer Center, Brain and Spine Center, Rehabilitation Center, Behavioral Health, Digestive Health, Bariatric Medicine and Weight Management Center, and a Women's Health, Family Birthing, and Pediatrics Center. There are more than 1,800 employees at UP Health System – Marquette, and more than 200 doctors.[7]

Specialized Treatment

Great Lakes Recovery Centers (GLRC) has several locations across the Upper Peninsula, providing outpatient and residential services for behavioral health recovery – including substance use disorders and recovery from mental health disorders. GLRC also provides community Mental Health First Aid training. Residential locations include the Adolescent Services Center in the City of Negaunee, as well as Adult Residential Services in Marquette.[8]

UP Health System has 42 additional clinic locations across the Upper Peninsula. The UP Health System – Negaunee Family Medicine is a primary care facility in the City of Negaunee, administered by the UP Health System. Negaunee Family Medicine provides both pediatric and adult services, as well as allergy injections, minor outpatient surgery, and more.[9]

EDUCATION

Schools

Daycare and Preschool

Lily Pad Learning Center in Negaunee Township provides child care services for a maximum of 60 children. Negaunee Cooperative Preschool is located in the City of Negaunee, within Negaunee Middle School. Additionally, Community Action Alger-Marquette provides the Head Start program – originally beginning as a summer program, and transitioning to a preschool for three- and four-year-olds. CAAM serves 284 students in Alger and Marquette Counties, across nine Head Start sites.[10]

More child care programs can be found utilizing Great Start to Quality's child care finder.[11]

Negaunee School District

The Negaunee School District consists of three municipalities: Negaunee Township, Richmond Township, and the City of Negaunee. Within Negaunee Public Schools, there is one elementary school (Lakeview Elementary School), one middle school (Negaunee Middle School), and one high school (Negaunee High School). 1,511 students attend Negaunee Public Schools – there are 374 staff members, with a student-to-teacher ratio of 16.9:1, consistent with state averages.[12] Niche.com gives the Negaunee Public Schools an overall rating of B (academics B+, teachers A-, and diversity C+)[13]. Negaunee Public Schools has many after-school program, arts, and athletic opportunities; more information on these programs can be found through the schools.[14,15,16] Negaunee School District participates in MI Schools of Choice, with non-residents able to apply to attend school in Negaunee Public Schools.[17]

Ishpeming-Negaunee-NICE Community Schools is an alternative and adult continuing education program in Negaunee Township. [18]

Additional Public School Options

North Star Montessori Academy, is a free public charter academy in Marquette, promoting the cultivation of children's identity as "respectful, responsible, self-disciplined, independent, creative, self-motivated, organized, global thinkers, collaborators, and leaders."[19]

Additionally, Upper Peninsula Virtual Academy (UPVA) is a tuition-free online school available to all students in grades K-12 in the Upper Peninsula; through the Schools of Choice Program, individuals can enroll part-time or full-time with Gladstone Area Schools or Public Schools of Calumet, Laurium, and Keewenaw while participating in UPVA.[20]

Private Schools

Father Marquette Catholic Academy is a private Catholic school for students in grades pre-K through 8th. FMCA, located in Marquette, is supported by four parishes, with classical academics and incorporation of music, athletics, forensics, and faith formation.[21] Discovery Central is an

independent school, established in 2010, that is nature-focused, play-based, and Reggio-Emilia (a child-driven learning philosophy) inspired. Discovery Central has preschool and kindergarten students, in one mixed-age class with up to 22 students. Students engage in field trips to explore Presque Isle.[22] The Marquette Seventh-Day Adventist School is a Christian school based in Negaunee Township.[23]

Higher Education

The closest institution of higher education is Northern Michigan University in Marquette, which has a population of approximately 7,000 undergraduate and graduate students and has been in existence since 1899. NMU has over 170 degree programs, including 25 graduate programs. [24] Additionally, Michigan State University maintains an extension program in Marquette County (located in Negaunee Township), providing continuing education in natural sciences. Additionally, the Negaunee Carpenters and Millwrights Training Center is a 33,000 square foot facility, available as part of the Michigan Statewide Joint Apprenticeship Training Program; individuals train with a union contractor for four years, while also attending classes at the training site.[25]

Museums and Libraries

Libraries

The City of Negaunee Public Library is most frequently used by Negaunee Township residents, with 47.2% of master plan community engagement respondents stating that it was the library they used most often. The Negaunee Public Library offers more than 39,000 items that can be checked out by residents, as well as community social and educational events for adults and youth. Peter White Library in Marquette is used second-most frequently by Negaunee Township residents, with 37.4% of master plan community engagement respondents stating that it was the library they used most often. The Peter White Public Library has been located in the City of Marquette since 1904, and hosts events including crafting, youth events, movie screenings, and the Great Lakes Poetry Festival. Ishpeming Carnegie Library is used less frequently by Negaunee Township residents, with 8.1% of respondents stating that it was the library they used most often.

Museums

The Michigan Iron Industry Museum shares the history of the iron industry in Michigan through interactive exhibits, artifact exhibitions, and tours along the Iron Ore Heritage Trail. The museum is open to the public year-round. The Negaunee Historical Society Museum is located in the City of Negaunee, and provides exhibits on local history, including Native American history, artifacts from past Negaunee businesses, and historic Negaunee sports. Several nearby museums are also located within the City of Marquette. The Marquette Regional History Center highlights the environment, industry, and culture of the Upper Peninsula.[26] The Marquette Maritime Museum discusses the history of nautical navigation and shipwrecks in the region[27]. The Upper Peninsula Children's Museum, also located in Marquette, has interactive exhibits and educational programming about biology, ecology, and Upper Peninsula history.[28]

Community Center and Recreation Centers

The Negaunee Township Community Center is the most-visited recreational facility in Negaunee Township, hosting both recreational and municipal needs (such as voting, township offices, and municipal meetings. The building has indoor recreation facilities – including a small gymnasium with basketball hoops, shuffleboard, table tennis, volleyball, and a kitchen. The community building can also be rented for community events. More information about the Negaunee Township Community Center can be found in the Open Spaces and Recreation chapter of the master plan.

The Negaunee Senior Center, located nearby in the City of Negaunee, provides services to senior citizens, including financial planning services, chore and homemaking services, and health clinics such as blood pressure and foot care. Recreational activities, such as communal meals, cribbage, pinochle, bingo, aerobics, and tai chi are also conducted through the Senior Center.[29]

The Negaunee Ice Arena hosts the Negaunee Miners High School Hockey Team, the Iron Range Hockey Association, and more – the arena is owned by the City of Negaunee, and was constructed with donations from businesses and residents, as well as

volunteer assistance. The arena is typically open to the public daily, though the specific hours vary. The arena can also be rented for events.[30]

The Negaunee Elks Lodge #1116 is a social club, which conducts gatherings for its members – the Negaunee Elks also support education in the community, with student scholarships and features of exceptional local students. The Lions Club in Negaunee supports local organizations and events through volunteerism and fundraising, aiming to encourage volunteerism among their members.[31] The Negaunee Eagles Club #1944 serves as a social center for the community, hosting events such as Friday night bingo, and donating funds to support resources in the City of Negaunee, Negaunee Township, and Richmond Township. The VFW Post #3165 serves as a social facility and bar, with live music performances, and community sports viewing, in addition to the VFW's ongoing mission of supporting and honoring veterans in the community. There are several area Kiwanis Clubs; the Kiwanis Club of Marquette, Greater Ishpeming Area Pioneer Kiwanis Club and the Kiwanis Club of Ishpeming. Both promote community volunteerism to support youth and community activities. The Kiwanis Club of Ishpeming also sponsors Key Clubs at Ishpeming, Westwood, and Negaunee High Schools, to promote youth leadership.[32,33] The Rotary Club of Ishpeming, promoting service in the community, also partners with local municipalities on beneficial projects, such as accessibility improvements to local recreation facilities.[34]

Other Community Organizations

The Greater Ishpeming-Negaunee Area Chamber of Commerce serves the Cities of Negaunee and Ishpeming, and the following nine townships: Negaunee, Ishpeming, Ely, Tilden, Republic, Michigamme, Champion, Richmond, and Humboldt. The Chamber of Commerce supports the business community in the area, providing benefits to its members (such as advertising and insurance discounts, as well as a business directory listing) and providing a visitors' guide.

The Negaunee Irontown Association is a local heritage society, seeking to preserve the heritage of the City of Negaunee, and conducts community activities and celebrations throughout the year.[35]

The Upper Peninsula Animal Welfare Shelter (UPAWS) is a nonprofit animal shelter, working to care for animals without homes and to find homes for them.[36]

They also seek to educate individuals as to the responsibilities of proper pet ownership. UPAWS has 11 paid staff members and approximately 100 active volunteers.

Social Support

The United Way of Marquette County provides a broad range of social support services with the goals of promoting high school graduation, increase the financial stability of working families, and increasing healthy behaviors in youth. 211 services connect individuals with organizations providing needs such as bill assistance, childcare coordination, and legal help to vulnerable populations, at low or no cost. The SingleCare/ Familywize prescription service coordinates decreased prescription costs. United Way of Marquette County also coordinates a mobile food pantry, and provides resources such as masks to the community and socks to individuals in need.

Community Action Alger Marquette supports individuals in the county with housing, utility, nutrition, and childcare needs for low-income individuals. 23,347 individuals receive services from CAAM, including 3,499 individuals receiving housing services.[37] These services include weatherization assistance, home repair assistance, COVID emergency rental assistance, and assistance maintaining water service if bills are unpaid.

Big Brothers Big Sisters of Marquette County provides mentorship and friendship to youth within the Marquette County area. Supported by United Way of Marquette County, individuals are matched with mentors or mentees to increase their involvement in the community and build social skills. The Big Future program counsels high school students and alumni of the program, providing connections and leadership resources through age 24, with the aim of helping former mentees reach goals of higher education, trade school, military service, or employment.

CONCLUSION

In conclusion, Negaunee Township has a wealth of resources, due in part to its location close to the Cities of Negaunee and Marquette. Marquette County has several important healthcare and social service providers, which supplement Negaunee Township's municipal resources.

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6. Open Space & Recreation

Open space and recreation is an important community resource, with safe, well-designed places for recreation encouraging healthy living.

Within Negaunee Township, township-owned recreation facilities, which open in the Spring, and other nearby recreation facilities provide the opportunity to be active in a beautiful, scenic place. However, parks and recreation was the third-lowest-rated community amenity in Negaunee Township, as rated by respondents to the Master Plan and Recreation Survey (with 52.5% of respondents rating parks and recreation within the township as "fair" or "poor") – showing that continued growth in this area is desired. Continued improvements to these facilities for safety and accessibility will increase their importance to the community and the use by the community. The recent Negaunee Township Parks and Recreation Master Plan for the years 2023-2027 will guide the Township's continued development of these resources, and can be referred to for greater specificity in parks and recreation direction for the area.

TRENDS AND IMPACTS – RECREATION

In addition to benefiting public health by increasing opportunities for physical activity and outdoor connection, community parks and recreational facilities have important economic and environmental impacts. Parks are the largest source of open land in the United States – as such, they have impacts on air and water filtration, aquifer replenishment, and more.[1] Economically, a study by the National Recreation and Park Association found that in 2019 (the most recent year for which data is available), parks and recreation capital investments resulted in approximately $4.1 billion in economic activity and $1.1 billion in labor income within the State of Michigan.[2]

RECREATION BACKGROUND

Recent surveying for the Master Plan and Recreation Survey found that of the current recreation facilities available in the township, Negaunee Township (Warra) Park is the most frequently visited, followed by the Negaunee Township Community Building (which is also frequently visited for non-recreational purposes).

Disability is an additionally important consideration to parks and recreation needs within the township, ensuring facilities are accessible to residents' needs. Fourteen (14%) of Negaunee Township residents live with a disability. The most common types of disabilities in Negaunee Township are independent living disabilities (9%), cognitive disabilities (6.4%), and ambulatory disabilities (5.6%). However, 29.0% of individuals within Marquette County reported some form of activity limitations due to a health condition, indicating an increased need for accessible recreation.[3]

Organizational Structure

The Negaunee Township Board manages township-owned recreational facilities, advised by the Negaunee Township Community Center Board and Recreation Committee. The Community Center Board is a seven-person elected board, established in 1995 for the purpose of overseeing the Community Center Building's structure and maintenance. The Community Center Board advises the Township Board on recreation-related matters. The Recreation Committee Board is an appointed five-person board, meetings typically occur after the Negaunee Township Board meeting to discuss township grounds and recreation programming. The committee primarily addresses maintenance and facility management of the township grounds, as opposed to the Community Center Board which is focused on the bigger picture elements of parks and recreation planning.

Community Health Needs Assessment

An Upper Peninsula-wide Community Health Needs Assessment was performed in 2021, with partnerships by six Upper Peninsula health departments, including Marquette County. Lack of

leisure exercise is an associated factor with chronic illnesses such as heart disease, cancer, COPD, hypertension, and diabetes, as well as adverse health events such as strokes and heart attacks.[4] Mental health conditions, such as depression and anxiety, can also incorporate exercise as a part of treatment, to reduce symptoms. In the Upper Peninsula (as in the United States), the combination of obesity and physical inactivity is projected to overtake tobacco use as the leading cause of preventable mortality, morbidity, disability, and life lost – specifically, with increases of cardiovascular disease and diabetes.[5]

Approximately 9.0% of individuals in Marquette County reported that they engaged in no leisure-time physical activity in 2021, a decrease from 13.5% in 2017.[6] In addition, 60.4 % of Marquette County individuals rated the lack of affordable facilities or programs for year-round physical activity or recreation as "very important" or "fairly important" within the Community Health Needs Assessment survey.[7]

Additionally, a 2022 Community Health Needs Assessment was conducted for Marquette and Houghton Counties by UP Health System. The assessment found that 70% of Marquette County individuals had adequate access to locations for exercise – this is lower than 77% across the state of Michigan.[8]

The community survey found that 73.6% of individuals in Marquette and Houghton Counties engage in exercise activities less than 5-7 days per week. The survey did not specify the duration of activities in each case; the Center for Disease Control & Prevention recommends 150 minutes of moderate-intensity physical activity and two days of muscle-strengthening activity, which equates to approximately 30 minutes of activity, five days per week.[9]

Out of individuals who do not engage in exercise (identified as "never" in the frequency inventory), respondents identified several reasons. Most common reasons included a lack of motivation (56.4%), lack of time (34.6), not feeling healthy enough to exercise (16.4%), not knowing where to go (12.7%), and not having a safe place to exercise in their neighborhood (9.1%).[10]

In interviews and focus groups, exercise habits were identified as one of the most significant health issues facing minority populations, as well as youth and children. Safe places to exercise, as well as "great" places to exercise (including parks with natural beauty and proximity to natural features), were identified as factors having the biggest impact on community health.[11]

Table 8: Frequency of Physical Activity*, Marquette and Houghton Counties

Timeframe	Percentage
Every once in a while	19.1%
1-2 times per week	24.1%
3-4 times per week	23.4%
5-7 times per week	23.8%
Several times per day	1.7%
Never	7.0%

*e.g. fitness walking, running, weight lifting, team sports

Source: 2022 UP Health System Community Health Needs Assessment

OPEN SPACE

Given that Negaunee Township is a rural area, preservation of culturally and ecologically important natural features is required to sustain the character of the area. In Negaunee Township's case, the preservation of boreal hardwood forests (conifer-hardwood, pine, ash, white-cedar, fir, birch, maple), and wetlands (emergent and forested) is important. Parklands are conducive to preservation of sensitive land, as they primarily consist of open space, are permanently designated for no other purpose than to remain open recreational land, and land developments such as the creation of trails can be targeted in less sensitive areas.

The township is also currently targeting property for future preservation through parkland acquisition. Property along Carp River Falls, as a historical and viewshed resource, was recently acquired by the Superior Watershed Partnership – this property would link to the township's Michigan Iron Industry Museum, and provide walking paths and viewing areas of the falls.

OUTDOOR PARKS AND RECREATION INVENTORY

The following section is an inventory of the parks

and recreation facilities within Negaunee Township. Additional information about these facilities can be found in the Negaunee Township Parks and Recreation Master Plan.

Mini Parks

CO-510 Pocket Park

The CO-510 Pocket Park, the only mini park in Negaunee Township, is a small park located off County Road 510. Despite its small size, the CO-510 Pocket Park is a unique rest stop, with a view of the Dead River bridges over gorge, educational signage about the view, and picnic tables. Many survey respondents stated that they were unaware of this pocket park.

Neighborhood Parks

Midway Drive Mini Park

Midway Drive Recreation Park is a one-acre neighborhood park, serving the Midway Drive residential neighborhoods. The park includes picnic tables, a spinning play feature, basketball court, a swing set (poor condition) and a portable restroom. A playground set was recently removed due to safety concerns. Temporary improvements identified for Midway Drive include raised beds, a disc golf course and additional picnic table and bench areas. This facility has been proposed to be sold, but could be improved to be a more useful recreation resource for the community. Survey respondents appeared to be generally dissatisfied with the state of Midway Park, with many stating the importance of the park to their children. Many residents identified a desire for replacement of the playground equipment at the park as a way to increase use.

Kivela Road Recreation Area

Kivela Road Recreation Area is 40 acres of well-developed recreational land on the west side of Negaunee Township; the facility has a baseball field, restrooms, large playground, and a 2.7 mile loop walking trail that is used as a cross-country skiing trail in the winter. Identified future improvements include improved picnic facilities, a disc golf course, and a forest management plan. 21.1% of survey respondents rated the park's quality as "very good" or "good," while 20.4% of respondents rated the park as "acceptable." Respondents primarily identified a desire for updated playground equipment, as well as additional and improved walking and skiing trails (including the addition of lights).

Community Parks

Negaunee Township Park / Waara Park

The Negaunee Township Park was identified by survey respondents as the most frequently-visited facility. The 71-acre park is located adjacent to the township offices and surrounding municipal buildings, along M-35. The park has four baseball/softball fields (two of which have dugouts), which are most heavily used by community baseball/softball programs. The park also has picnic facilities, a pavilion, horseshoe fields, a soccer field, play equipment, tennis courts, batting cage, a cross country ski trail, and an outdoor hockey rink. To meet the heavy use of this facility, there is a current playground project in development, with phase 1

MDNR Park Classifications

Mini Parks: Typically, less than one acre and located less than ¼ mile from a residential setting, mini parks address limited, isolated, or unique recreational needs. Mini parks can be put into place on parcels of land as small as a parking space, and can serve as an additional source of greenspace, or host a particular recreational element, such as a basketball court.

Neighborhood Parks/ Playgrounds: With an area between 1-10 acres and located ¼ to ½ mile distance uninterrupted by physical barriers, these parks serve as the recreational and social focus of a neighborhood, with opportunities for both informal active and passive recreation.

Community Parks: Community parks are usually larger than neighborhood parks and serve a broader purpose by showcasing an array of recreational facilities which cater to at least two neighborhoods—½ to 3-mile distance.

to be completed in Spring 2023. This park has been identified as requiring a site master plan.

Accessibility

Park accessibility ratings reflect facilities' ratings based on criteria displayed here, delineated by the Michigan Department of Natural Resources: out of township parks, the CO-510 Pocket Park, Negaunee Township Park, and Midway Drive Park received a rating of 2, and Kivela Road Recreation Area received a rating of 1. These scores should be boosted to at least 4 to be accessible for Negaunee Township residents with some form of activity limitations. 29.0% of individuals within Marquette County reported some form of activity limitations due to a health condition, indicating an increased need to consider accessibility needs in recreation planning.[12]

Trails and Recreational Facilities in Negaunee Township

Iron Ore Heritage Trail

The Iron Ore Heritage Trail is a 47-mile, year-round, multi-use trail crossing the Marquette Iron Range. It also serves as an outdoor linear museum, with individuals able to hike and bike along the trails historically used to haul iron.

DNR Snowmobile and Off-Road Vehicle Trails

There are 10 miles of Department of Natural Resources-maintained snowmobile trails in Negaunee Township, out of the more than 6,000 miles of designated snowmobile trails in Michigan. Additionally, the MDNR maintains off-road vehicle trails in Michigan; the 46.3 mile C Route spans Negaunee, Ishpeming, Tilden, and Ely Townships.[13] A trail from the Negaunee Township Community Center connects the township to this trail.[14]

DNR Boat Launches

The McClure Storage Basin boat launch, along the Dead River, is owned by the Michigan DNR. The 1.03 acre facility has a hard-surface launch ramp to accommodate up to medium-sized watercraft. The Hoist Basin Access Site, a 1.82 acre facility also owned by the Michigan DNR, also has a hard-surface launch ramp.[15]

Rod and Gun Club

This private club includes facilities for skeet shooting and trap shooting; rifle, pistol, muzzle loading, and handgun ranges; archery facilities; and horseshoe and basketball courts.[16]

MDNR Accessibility Rating Scale

1 = none of the facilities/park areas meet accessibility guidelines

2 = some of the facilities/park areas meet accessibility guidelines

3 = most of the facilities/park areas meet accessibility guidelines

4 = the entire park meets accessibility guidelines

5 = the entire park was developed/ renovated using principals of universal design

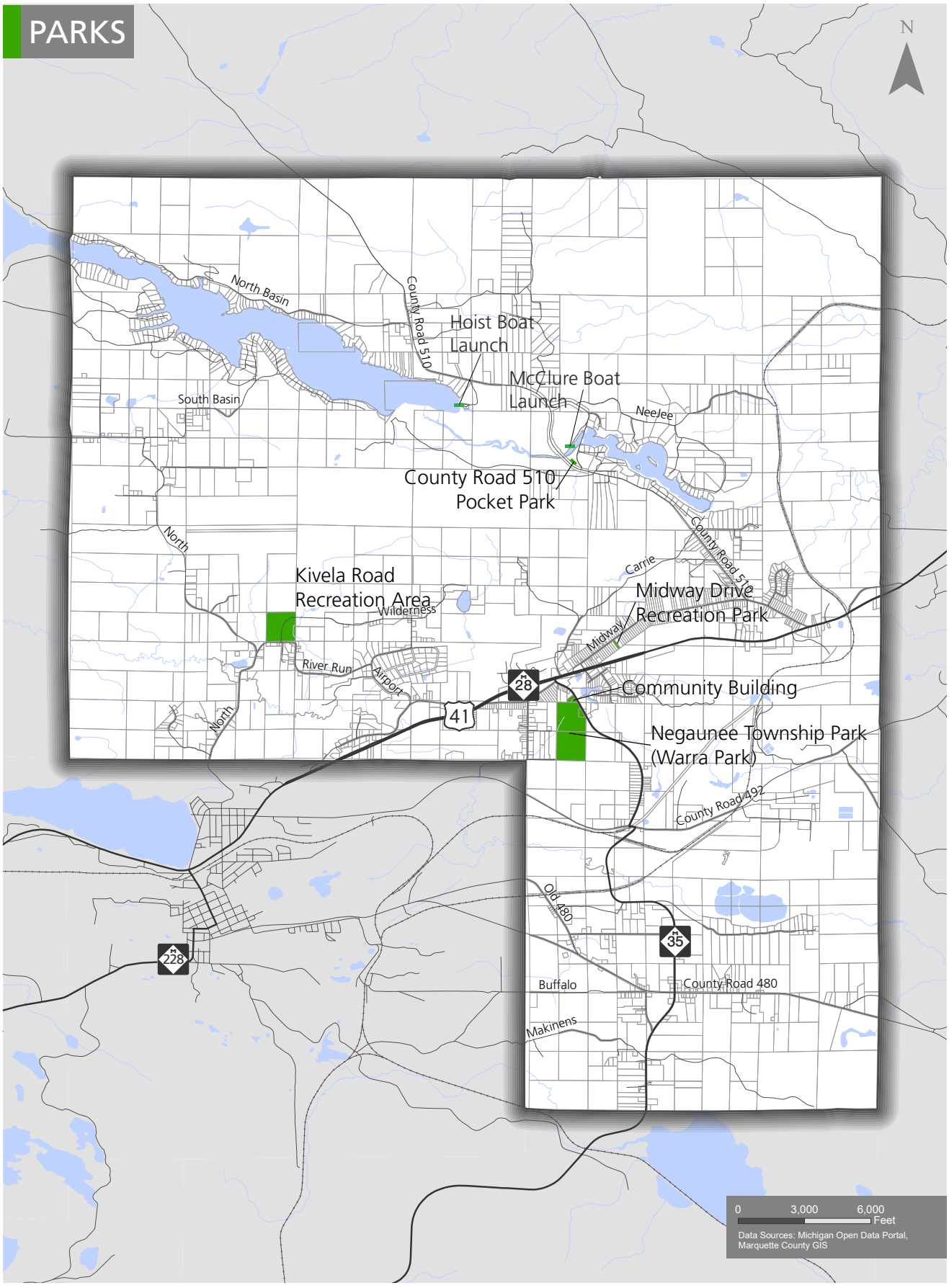
INDOOR RECREATIONAL FACILITIES INVENTORY

Negaunee Township Community Center

The Negaunee Township Community Center was identified by survey respondents as the second-most visited facility in Negaunee Township – although, the building is also visited for non-recreational purposes (e.g., voting, municipal meetings). The building has indoor recreation facilities – including a small gymnasium with basketball hoops, shuffleboard, table tennis, volleyball, and a kitchen. The community building can be rented for community events. Survey respondents generally rated the community building highly (with 75.5% rating the quality of facilities as "very good" or "good") – some individuals identified a desire to see interior updates. In 2023, the gym was painted and an HVAC system was installed.

The Negaunee Township Community Center Trail Network, starting at the building itself, includes motorized and non-motorized groomed trails to be utilized by the public. This includes a connection to the multi-use Iron Ore Heritage Trail, and the MDNR's snowmobile trail network.[17]

Map 11: Parks


PARKS
N
North Basin
South Basin
County Road 510
Hoist Boat Launch
McClure Boat Launch
NeeJee
County Road 510 Pocket Park
North
Kivela Road Recreation Area
Wilderness
River Run
Airport
North
Carrie
County Road 510
Midway Drive Recreation Park
Midway
28
41
Community Building
Negaunee Township Park (Warra Park)
County Road 492
Old 480
35
228
Buffalo
County Road 480
Makinens
0
3,000
6,000
Feet
Data Sources: Michigan Open Data Portal, Marquette County GIS

CONCLUSION

Parks and recreation opportunities within Negaunee Township will be continually expanded and updated to meet individuals' needs, as identified with the upcoming projects listed in the Parks and Recreation Master Plan. As parks and recreation opportunities are one of the lower-ranked municipal amenities within Negaunee Township, expansion and accessibility improvements are needed to increase the function and appeal of Negaunee Township recreational facilities.

Additionally, year-round recreation opportunities, as identified in the Community Health Needs Assessment, are important to ensure residents can stay active and outdoors throughout all seasons in a four-seasons climate. In addition to a well-groomed trail network for activities such as cross-country skiing and fat-tire biking, this can also include increased indoor recreation facilities for activities such as jogging and walking.

Source: Google Images - UP Snowmobiling

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7. Transportation

NETWORK

The primary transportation network within the township is comprised of an integrated system of federal, state and county roads. The primary road, US-41, extends from Miami, Florida and terminates at a cul-de-sac east of Fort Wilkins State Park in the Keweenaw Peninsula. In Marquette County US-41 and M-28 converge connecting the communities of Skandia, Harvey, Marquette, Negaunee and Ishpeming serving as the primary traffic pipeline through the Upper Peninsula In Negaunee Township, US-41 and M-28 handles approximately 18,000 to 19,000 vehicle trips per average day.

Another main arterial in the Negaunee Township is M-35. This trunkline also begins in Menominee, MI at an intersection with US-41 and commences north along Lake Michigan turning north at Gladstone until it intersects US-41 in the township. Supplementing these two highways are four major county roads, 480, 492, 510, and 502, and a series of county local paved and unpaved roads.

The township road network is influenced to a large degree by natural topography and the Dead River and McClure Storage Basins. These natural features ultimately determine where the highway routing and crossings will occur. The township north of US-41 is primarily served at a network of county local paved and unpaved roads. South of US-41 the township is served by County Road 480 and County Road 492.

The location and width of US-41 forms a physical barrier that bifurcates the Township. The width of the highway from edge of shoulder to edge of shoulder is approximately 105 feet. This distance includes a grass median that averages 18-20 feet in width. Further, there are no definable pedestrian crossings or snowmobile crossings along this section of US-41 in the Township. For all intents and purposes, US-41 is very pedestrian unfriendly and predominantly limits intra-township travel to motorized vehicles.

Dead River Basins in Negaunee Township

Source: GLISA

ANTICIPATED IMPROVEMENTS

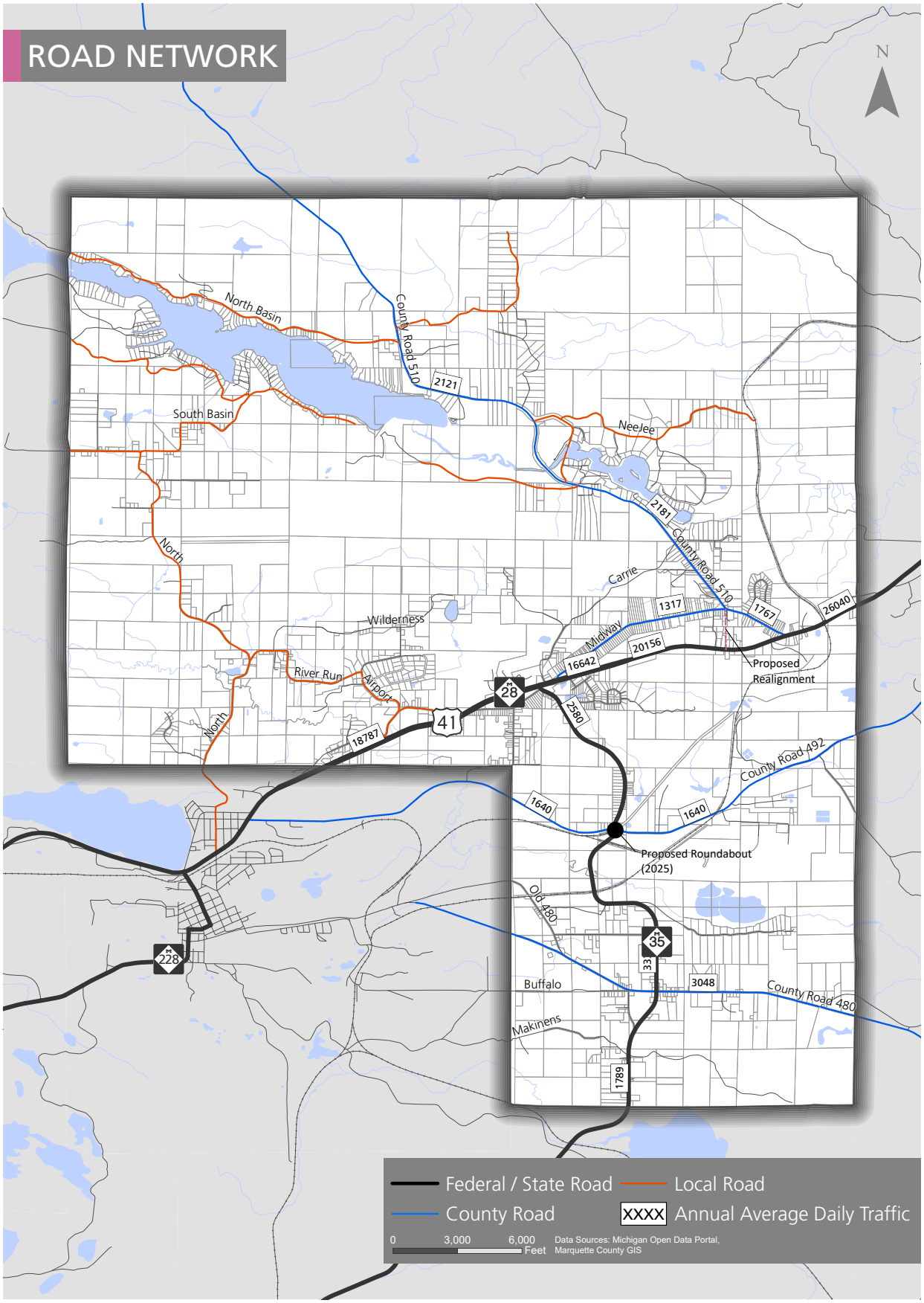
In the near term there are several road improvement projects planned for the township. In 2024, the bridge on Heritage Drive over the Carp River will be replaced. This will be followed in 2025 by the realignment of the M-35 / County Road 492 intersection resulting in the installation of a roundabout. A longer term project, the realignment and extension of County Road 510 to US-41 being contemplated by the Marquette County Road Commission (MCRC). This project would also result in the east intersection closure of Midway Drive (County Road 502) at US-41.

In addition to these projects, federal funds will be used to resurface portions of US-41 from Brickyard Road to Iroquois Street in 2023, with some modifications to several of the crossovers, resulting in the installation of additional "indirect" left turns pockets along the highway.

ACCESS MANAGEMENT PLAN

The US-41 / M-28 Access Management Plan has several projects delineated along the corridor that would improve vehicular access and safety. One of the plan recommendations calls for a single entrance into the former county airport site and the installation of a parallel service drive. Pending the realignment and extension of County Road 510

Map 12: Road Network



to US-41, indirect left turns are proposed where Midway Drive enters US-41.

BRIDGES

Negaunee Township currently has four bridges on County Roads. They include the Carp River Bridge on County Road JAD (Heritage Drive), Carp River Bridge on County Road JA, the Dead River Bridge on County Road 510 (no longer used for vehicle traffic) and the Steel Bridge Road (old CR 510).[1] In 2024, the bridge on Heritage Drive over the Carp River will be replaced.

COMMUTING METRICS

According to the Center for Neighborhood Technology, a household's second-largest expenditure, transportation costs are largely a function of the characteristics of the neighborhood in which a household chooses to live. In Negaunee Township the location efficiency metric is 0% which means that employees do not live near their place of employment. In turn, this means the average household pays a higher percentage of their monthly and annual household income on transportation-related costs such as vehicle loan payments, maintenance, and fuel. Household average annual vehicle miles traveled in Negaunee Township is 31,988 and the annual transportation costs are $18,707. Transportation-related costs as a percentage of annual household income is 35%. Due to the amount of driving and commuting the annual greenhouse gas per household is 14.58 tons.[2]

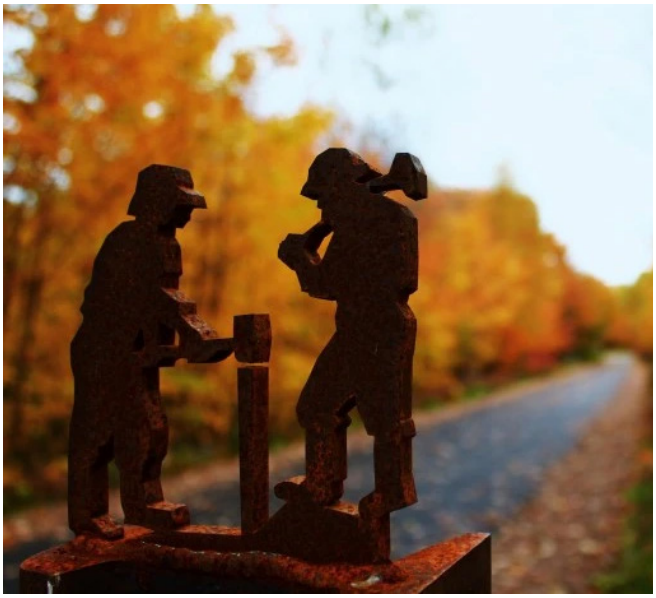
PUBLIC TRANSIT

Marquette County Transit Authority provides public transit throughout Marquette County either on a door-to-door basis or fixed route network. Negaunee Township is on the Marquette-Ishpeming fixed route with transit stops on Midway Drive and at the Marquette County Health Department located at 184 US Hwy 41. This fixed route can take riders to Target, Walmart and Westwood Mall in Marquette Township, the senior centers in downtown Negaunee and Ishpeming. Transit connections are available Monday through Friday 6AM to 7PM, and on Saturday between the hours of 9AM to 5PM.

BIKE, HIKE, ATV AND SNOWMOBILE

Negaunee Township is home to a collection of trails and outdoor recreation pathways. The Michigan Department of Natural Resources has identified four types of designated trails and pathways within the township, including snowmobile trails, hiking pathways, bike trails, and ski trails. The two most notable trails within township boarders are the Iron Ore Heritage Trail and the Snowmobile trail. These two trails are prominent in the southeastern section of the township map as well as the upper northeastern corner.

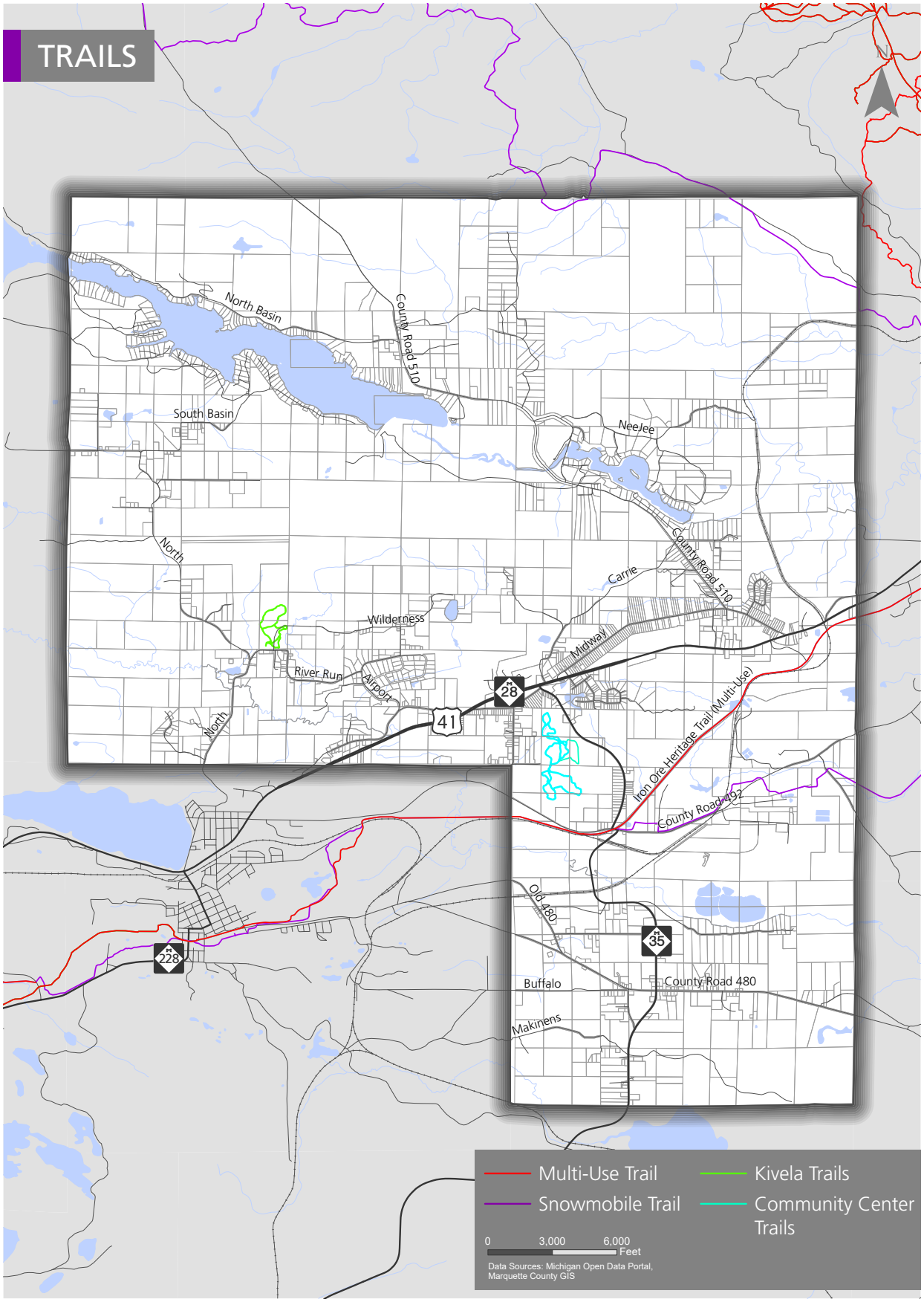
The Iron Ore Heritage Trail (IOHT) is a multi-use trail that allows for uses such as hiking, biking, skiing, and snowmobiling. The year-round trail is approximately 47 miles long and crosses the Marquette Iron Range. Negaunee Township is home to two heritage trailheads, the IOHT Trailhead which includes the 1-mile connecting Spur Trail, and the Eagle Mills Trailhead. Both trailheads include parking, map kiosks, and restrooms. The Iron Industry Museum also offers educational hiking trails. The IOHT trail briefly intersects with the independent snowmobile trail before splitting where the trails meet the M-35 highway.



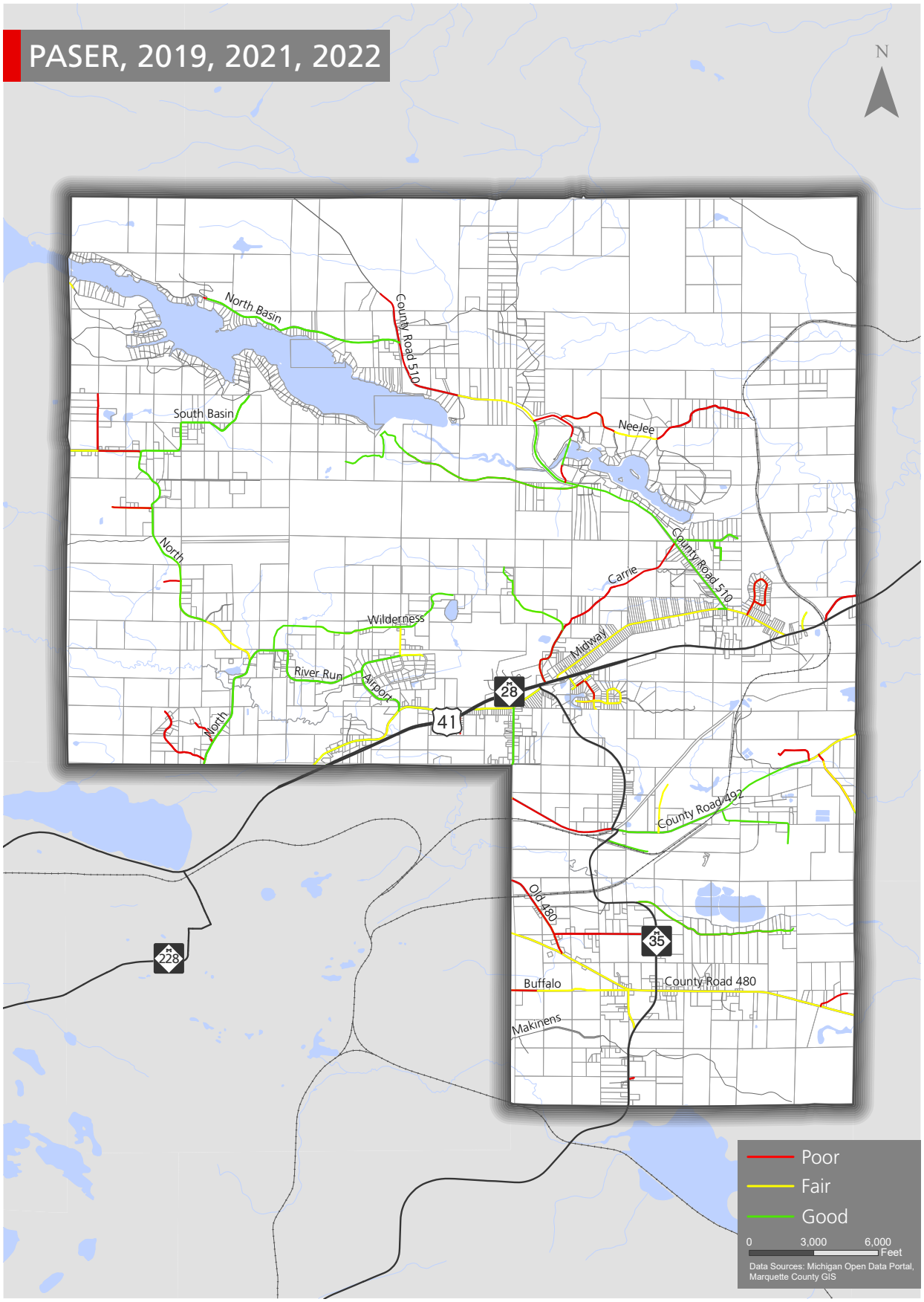
Iron Ore Heritage Trail

Source: Google Images

Map 13: Trails



Map 14: PASER (Road Condition Ratings)



IMPACT ON FUTURE DEVELOPMENT

This lack of connectivity across US-41 will likely result in separate communities emerging north and south of US-41. Current development patterns show that smaller lot single family residential occurs close to, and parallel with, US-41 in a band ranging from ½ to 1 mile in depth. As the distance north and south of the US-41 corridor increases density decreases and less intensive development is found.

Commercial development should be encouraged along US-41. However, development should be perpendicular to the corridor and not parallel. Parallel commercial development will likely result in more curb cuts, access management issues, and continued commercial corridor sprawl. On the other hand, perpendicular commercial development could result in more concentrated, mixed use, and pedestrian oriented development resulting with a defined entrance without the need for additional curb cuts. These developments also create brand and place.

Perpendicular development under construction along US-131 in Bear Creek Township, Emmet County (example reference photo)

Source: Emmet County 2022 Aerial Photography

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8. Economic Development

Negaunee Township's economy has changed since the inception of the Township, but the Upper Peninsula and Marquette County's economy has always been heavily natural resource based.

While the iron ore industry within Marquette County has seen a decline in employment (855 jobs) between 2014 and 2021, the copper, nickel and lead mining has seen an increase of 468 jobs in the same time period. However, both extraction industries account for the largest economic output in the County.

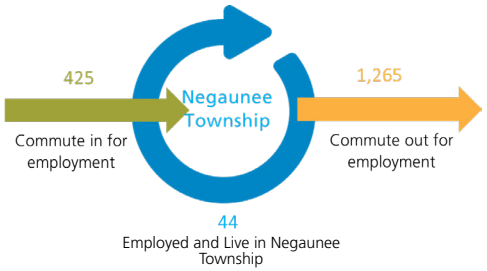
Negaunee Township residents commute outside of the township for employment.

KEY ECONOMIC INDICATORS & INDUSTRIES

Employment

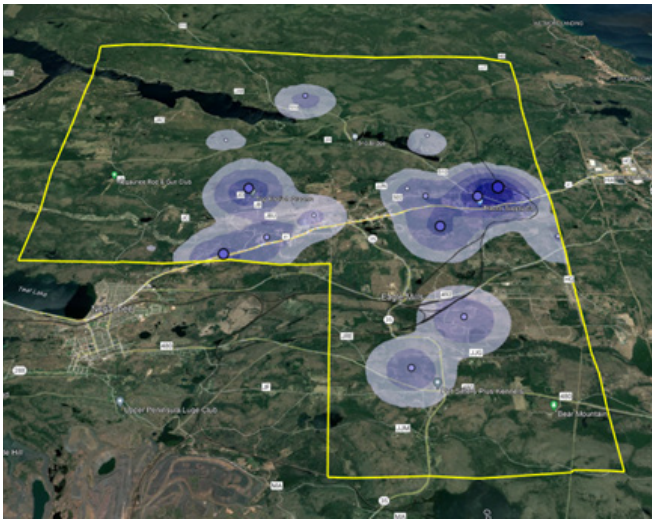
In 2020 there were 1,309 primary workers living in Negaunee Township of which 1,264 (96.6%) commute outside of the Township for their employment while 425 workers travel into the township for their employment. An extremely low number of residents live and work in the Township consisting of 44 jobs. The graph below shows the inflow and outflow of workers and their commuting patterns. Major county employment hubs are located in the City of Marquette with Northern Michigan University and UP Health System, and Marquette Township which accommodates a variety of retail and big box stores.

Figure 15: Commute Patterns



Source: U.S. Census Bureau

There are several employment nodes within the Township determined by jobs per square mile. The highest concentration is near the east intersection of Midway Drive (510) and US-41. In this general area is Tractor Supply, GFL Waste Disposal, Union Carpenters and Millwrights Skilled Training Center, Associated Constructors, Associated Redi-Mix. and Midway Rental & Sales, and Shunk Furniture. The map illustrates in more detail where these employment nodes are located within the Township.

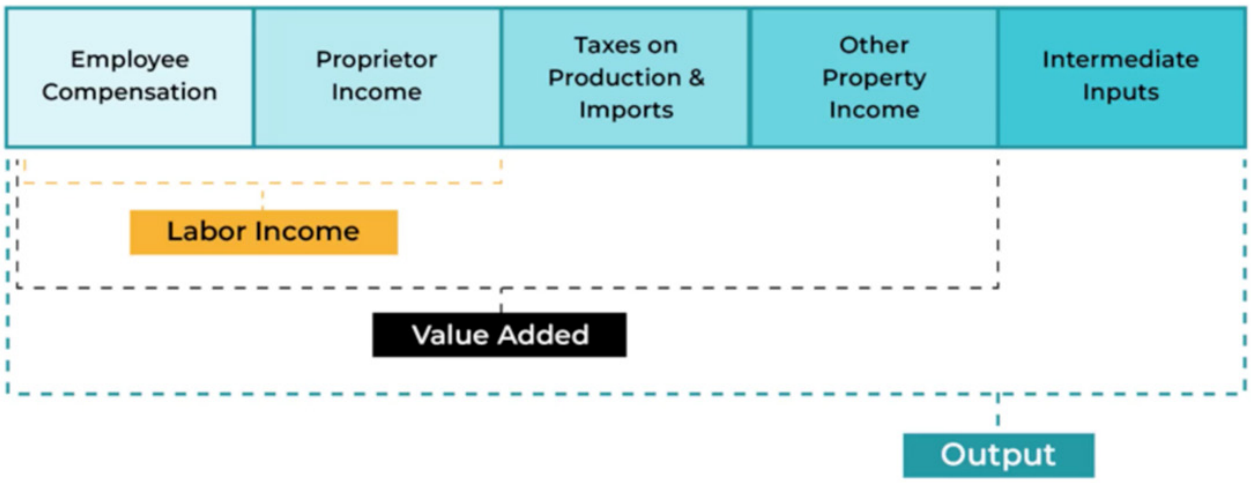


Sector Analysis
Source: ESRI, Beckett & Raeder

Sector Analysis

Economies are a diverse and complex web of relationships. Products on the shelf often go through multiple stages of manufacturing, processing, distribution and sales. IMPLAN, an input-output economic modeling tool, was used to illustrate the interdependency of industries and sectors in Marquette County. The analysis was performed at a county scale to better capture a regional economy while retaining relevance to Negaunee Township. In total, 534 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

Figure 16: Economic Output



Source: IMPLAN, 2021

includes the resources, supply, and manufacturing of goods and services, it does not model sales, use, and disposal activity.

IMPLAN 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 in order 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 534 industries modeled by IMPLAN, 220 are active in Marquette County. The table titled "Top 5 Largest Industries in Marquette County" highlights the five industries with the largest economic output. Iron ore mining has the highest economic output in Marquette County totaling nearly $5,665 million with 489 employees. The second-highest output in the county with just over $525 million was copper, nickel, lead and zinc mining, followed by hospital, contributing close to $212 million in economic output.

Table 9: Top 5 Largest Industries in Marquette County by Output

Industry	Total Economic Output (thousands)	Labor Income (thousands)	Employment
Iron Ore Mining	$5,665,865	$77,268	489
Copper, Nickel, Lead and Zinc Mining	$525,915	$67,721	490
Hospitals	$211,292	$86,109	1,270
Office of Physicians	$177,522	$125,530	1,222
Other Real Estate	$144,158	$7,780	848

Source: IMPLAN, 2021

Table 10: Top 5 Largest Industries in Marquette County by Employment

Industry	Employment	Total Economic Output (thousands)	Labor income (thousands)
Hospitals	1,270	$211,292	$86,109
Limited-Service Restaurants	1,250	$118,138	$28,448
Office of Physicians	1,222	$177,522	$125,530
Full-Service Restaurants	989	$69,217	$23,809
Retail – General Merchandise	857	$71,265	$26,904

Source: IMPLAN, 2021

Table 11: Industry Classifications

	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

Source: IMPLAN, 2021

Three out of the five top employment sectors are restaurants and retail stores which account for 9.5% of county jobs. The other top two are health care related service sector jobs which account for 7.6% of county jobs and 7% of Marquette County's economic output. Although a moderate employer of jobs in the county, iron ore and copper, nickel, and lead mining account for 16% of the county's economic output. Of concern is potential closing of the Eagle Mine in 2027.

To identify economic trends the 2019 figures for Marquette County's industries were compared to the 2014 figures. Industries were then classified into one of four groups: growth, emerging, mature, or declining. The figure titled "Economic Base" charts Marquette County's industries based on their LQ, change in economic output, and size of economic output.

Almost 50% of Marquette County's workers and over half of its economic output are in growth sectors, indicating that Marquette County's economy is strong. Additionally, 29% of industries are in "emerging" sectors, and 9% in "mature" industry sectors which also account for nearly 38% of economic output. While 34% of industries are classified as "declining," these industries only account for a small portion of the economy (roughly 15% of total employment and economic output). The number of industries in decline indicates that the Marquette County economy will continue to transition toward industries that are growth or emerging sectors, suggesting that the area's economy continues to specialize. It also indicates that the number of sectors that are performing well will likely continue and will expand.

Growth industries (industries that are doing well), include copper, nickel, and lead mining, physician's offices," retail categories, and restaurants. Some emerging industries are those in construction, truck transportation, real estate, and scientific research

Table 12: Industry Trends

	Industry Count		Employment		Economic Output ($K)	
	Total	Percent of Total	Total	Percent of Total	Total	Percent of Total
Growth	67	29%	14,848	49%	$2,215,349	48%
Emerging	69	29%	8,735	29%	$1,090,469	24%
Mature	20	9%	2,417	8%	$694,215	15%
Declining	79	34%	4,523	15%	$636,076	14%

Source: IMPLAN, 2014 & 2019

Table 13: Marquette County Top Industry Trends

Top Industries	Growth Industries	Emerging Industries	Mature Industries	Declining Industries
#1	Copper, nickel and lead ($632,909K)	Other Real Estate ($122,259K)	Iron Ore ($189,044)	Hospitals ($235,474K)
#2	Office of Physicians ($180,928K)	Scientific Research ($61,260K)	Electric Power Generation Fossil Fuel ($122,237K)	Insurance Agencies, Brokerages ($43,337)
#3	Monetary authorities and depository credit ($113,523K)	Management of Companies ($60,677K)	Surgical Appliance and Supply ($72,588K)	Wired telecommunications carriers ($33,913K)
#4	Limited-Service Restaurants ($90,375K)	Truck Transportation ($57,635K)	Air Transportation ($64,915K)	Motor Vehicle Seating and Interiors ($29,754K)
#5	Full-Service Restaurants ($69,770K)	Architectural and Engineering ($54,438K)	Rail Transportation ($46,503)	Other Financial Investment Activities ($28,147K)

Source: IMPLAN, 2021

and development. Mature industries include local government, air transportation, iron ore mining, and surgical appliance and supply manufacturing. Declining industries in Marquette County include hospitals, retail-electronics, retail-clothing, insurance agencies and brokerages, and wholesale operations.

Since Negaunee Township is a bedroom community within the greater Marquette region the economic strength of the county will determine to a large extent the economic stability within the Township. Data suggests that Marquette County is still somewhat reliant on the industries associated with mining and mineral extraction but over the decades it has been transitioning to a regional healthcare center, regional retail hub, and tourist destination. This diversity in the various economic sectors will help soften any disruption experienced in other sectors based on national and state economic conditions.

9. Implementation

GUIDING PRINCIPLES

Encourage Sustainable Development

Negaunee Township is defined by its topography, forests, wetlands, scenic viewsheds, and the Dead River Basins. Land development regulations and future development in the Township should be designed with nature.

Utilize the US-41 Corridor

Use the US-41 corridor to encourage more compact and connected residential and commercial development to prevent corridor sprawl. Development should be perpendicular, not parallel to the corridor to minimize access management conflicts and create a greater sense of place. And, pedestrian crossings connecting bith sides of the US-41 and M-28 corridor should be a priority.

Leverage Public Infrastructure

Focus development and redevelopment to areas currently or planned to have access to the Township public water system.

Encourage a Variety Of Housing, Market, Attainable and Affordable

The lack of housing is a regional issue which can't be solved by Negaunee Township alone. Based on the availability of land, location along US-41, and the presence of public water in certain areas, the Township should encourage a variety of housing types and price points. Providing a variety of housing alternatives was highly rated in the community survey along with maintaining a low-density rural atmosphere. People like the location of Negaunee Township because it offers a rural living lifestyle with proximity to shopping and entertainment venues in adjacent communities to the east and west.

Promote the Development of a Mixed-Use District

Commercial development is fragmented along the US-41 corridor. As a result, the Township lacks a sense of place, an identifiable center. Encourage the development of a mixed-use district for commercial, residential and office uses adjacent to the corridor.

Use Parks and Trails to Enhance Our Community

Continue the development and expansion of a recreation system that provides opportunities for residents and serves as a platform to attract new residents to the Township. Parks and trails bring residents together and provide a connection to the heritage of our natural setting. The provision of motorized (snowmobile and ORV) and non-motorized trails were both noted as high priorities in the community survey.

Employment is Regional

Many Negaunee Township residents commute to work within Marquette County. Encourage a strong relationship between land use development and public transportation, and work with other municipalities along the US-41 corridor to enhance the Marq-Tran fixed route network.

THE FRAMEWORK PLAN

The Framework Plan is a generalized vision for how Negaunee Township should evolve in the next ten to twenty years based on local, regional, and national trends. It should not be construed as the future land use map for the master plan.

The State of Michigan Department of Technology, Management and Budget, Bureau of Labor Market Information and Strategic Initiatives (LMISI), forecasts that Marquette County population will continue to increase through 2045. The forecast is based on historical data regarding births, deaths, out-migration and in-migration which result in the county population to increase from 66,554 in 2020 to 70,512 in 2045 requiring 1,677 dwelling units based on 2.36 persons per household.[1] Of interest was the rate in in-migration forecasted in 2020 at 2.3 persons per 1,000 population to 6.2 persons per 1000 population in 2023. This is an indication that people are selecting Marquette County and the Upper Peninsula as desirable places to live and/or work.

Climate is affecting locational decisions. Information developed over the past decade by federal and university researchers indicate that the summers in Houston, Texas could compare with those currently experienced in Pakistan. Other models indicate that Marquette summers and winters will compare with Petoskey and Charlevoix, while southern Michigan will have a climate like northern Tennessee. As a result, Michigan is projected to become a "climate haven" with comparatively milder temperatures with access to fresh water.[2] Forecasts indicate that in the coming decades as many as 50 million Americans will relocate to "climate havens." These relocated residents are often referred to as "climate refugees" and many Michigan real estate markets are already seeing this phenomenon taking place.

Understanding this trend and its implication for planning is extremely important. Although the Marquette County population is projected to increase by LMISI, their forecast doesn't account for the impact of the "climate haven" factor which would likely push the forecasted population higher. As a result, housing, and services to support an increasing population will be needed and should be planned for.

Every community has identified housing as a top priority and it doesn't matter if its market rate, attainable, or affordable, its needed. Solving the housing dilemma will require a regional solution. Not all communities will be able to provide all the various types of housing needed within the market. As a result, some communities will be able to accommodate higher density housing development, while other communities will be able to support single family development. The type and intensity of housing will be determined in part by local policies and preferences, access to employment centers, and type of infrastructure (public or private systems). This will be true for Marquette County. The City of Marquette will likely be positioned to accommodate higher density housing development and likely favor market rate housing due to the presence of Northern Michigan University and the regional hospital. Other communities like Negaunee Township, and the cities of Negaunee and Ishpeming will support a combination of market rate, attainable and more affordable housing products. Collectively, the region will provide the housing typologies needed to support the diversity of income groups. For example, according to www.bestplaces.net the median home price in the City of Marquette is $235,000 compared with Negaunee Township, City of Negaunee, and the City of Ishpeming of $185,000, $184,500, and $116,600, respectively. As a result, it is likely that Negaunee Township will see in the future an increase in family households due to this attractive housing market price point.

A FRAMEWORK FOR THE FUTURE

Many Michigan municipalities began as townships and slowly evolved into villages or cities. This likely will not happen to Negaunee Township with its desire to retain is rural and natural character. However, to accommodate future growth, while preserving the natural environment so desired by the community, it will be important to proactively manage where development occurs.

The US-41 Corridor

The Framework Plan broadly suggests a plan to direct growth to the central section of the Township along the US-41 corridor while preserving the rural character found in the northern and southern extents of the Township.

The map entitled "Framework Plan" illustrates this development concept. Due to the regional importance of US-41 commercial, institutional, and office uses will continue to develop along this corridor. As a result, this form of development will be linear in nature, somewhat fragmented, and vehicular dependent. Further, the corridor doesn't provide any identifiable image or sense of place for the Negaunee Township community but it does serve a function for those businesses preferring a highway exposure. Reconstruction of US-41 in the future should include some aesthetic upgrades as uniform signage for the intersecting roads, periodic landscaped medians to break up the expansive width of the right-of-way, roundabouts at major intersections, and intersection lighting. Local development regulations should consider snow storage strategies without sacrificing opportunities for site screening and landscaping in order to reduce the visual austerity of the corridor.

Town Center

The best opportunity for the Township to create a sense of place is to advance the concept of a mixed-use development at the former Marquette Regional Airport properties. Currently, this collection of parcels is underutilized and developed under a PUD. Planning for a higher intensity, mixed use, pedestrian oriented town center development with an adjacent single-family neighborhood could significantly alter the appearance of the US-41 corridor and provide the retail, dining, and services desired by the current and forecasted population. It would further provide an opportunity to take a well-positioned, relatively flat area with infrastructure, and reverse the storage/warehouse/

Town Center Example
Source: Google Images

Single Family Neighborhoods Example
Source: Beckett & Raeder

light industrial use to a more intense, tax revenue producing property.

Single Family Neighborhoods

Leveraging the public water utility investment of the Township traditional single-family neighborhoods are proposed within the water system service area. These properties could easily accommodate upwards of four to five dwelling units per acre. Development should be based on an integrated street network that provides pedestrian and bicycle access between neighborhoods. These neighborhoods are encouraged along Midway, CR 510, M-35 corridor between CR 492 and US-41.

Rural Residential

Another lower density residential typology, Rural Residential, is proposed north of the mixed-use development along River Run and Wilderness roads. This district would include one dwelling per acre up to one dwelling per 5 acres all served with private septic systems and wells.

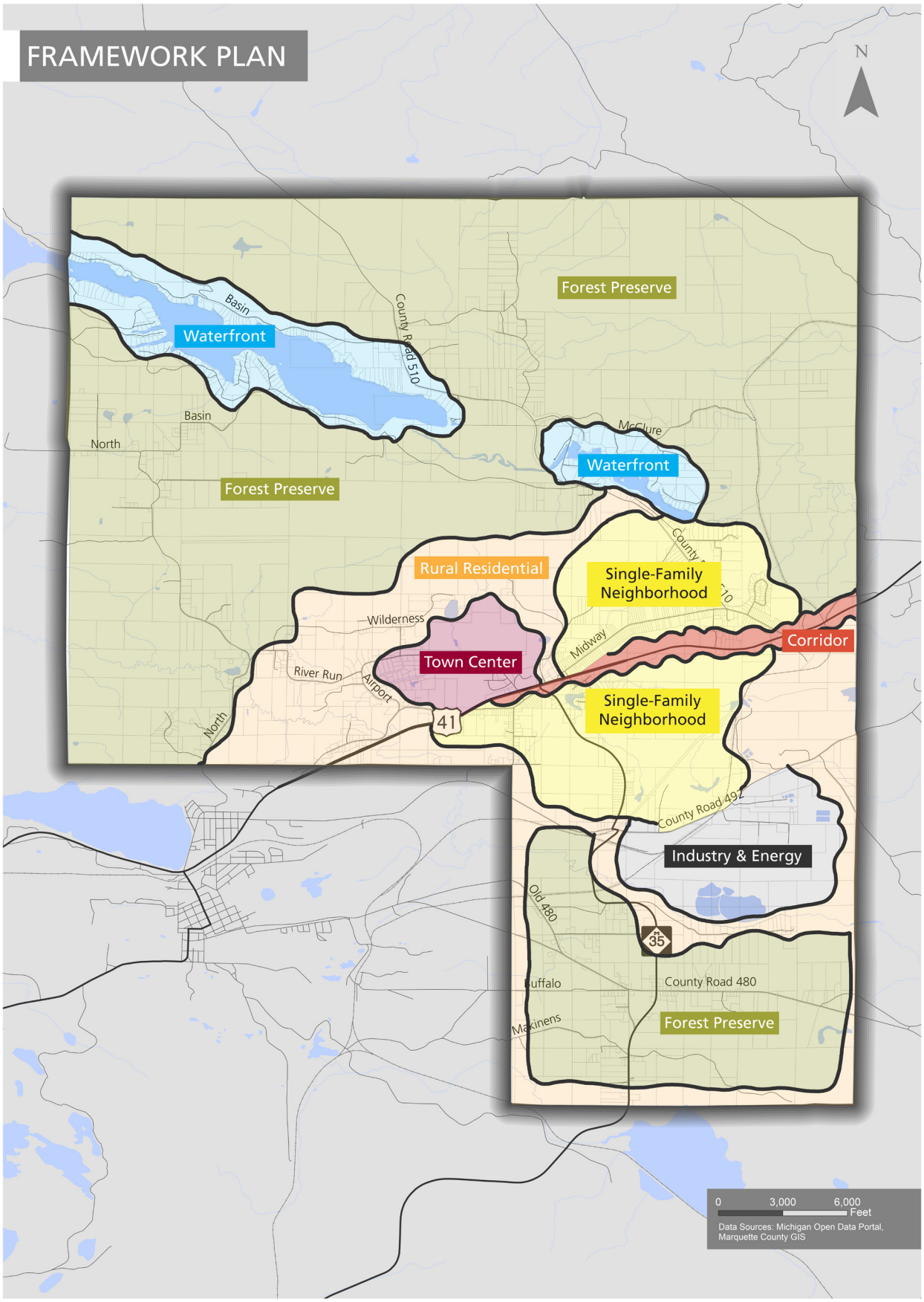
Waterfront Residential

Properties abutting the Dead River Basins are denoted as Waterfront Residential consisting of a variety of lot sizes. Many of these properties are developed and consist of year-round residents and seasonal properties.

Forest Preserve

The northern and southern portion of the Township would be reserved for a residential type called Forest Preserve where dwellings would be established on large parcels consisting of ten to

Map 15: Framework Plan



twenty acres on densely forested lots. Depending on location some of these properties, especially in the northern reaches of the Township, would have commanding viewsheds of Lake Superior and the Dead River Basins.

Industry & Energy

Lastly, east of M-35 and south of CR 492 would be the industrial / energy district for the Township and the greater Marquette region. These properties have access to M-35, CR 492 and rail key locational factors for industrial enterprises and energy entities.

FUTURE LAND USE

The future land use plan for Negaunee Township is based on the more generalized framework plan. The future land use plan and map reflect eleven (11) different land use categories that range from very rural in the northern and southern most reaches of the Township to urban along the US-41 corridor. As noted in the framework plan intensity of development is focused along the US-41 corridor to take advantage of the Township's infrastructure and the intensity of development decreases to the north and south which culminate in rural forest lands. These land use arrangements reflect the Guiding Principles which advocate leveraging public infrastructure, utilize the US-41, and encourage sustainable development.

The Township has a long-term opportunity to create a mixed-use node at the intersection of M-35 and US-41 that would include an internalized development on the former Marquette Regional Airport property with retail, restaurant, office and residential development surrounded by higher-density single family neighborhoods. In addition, these neighborhoods would have access to the Warra Park adjacent to Township Hall, and access to regional trails, such as, the Iron Ore Heritage Trail.

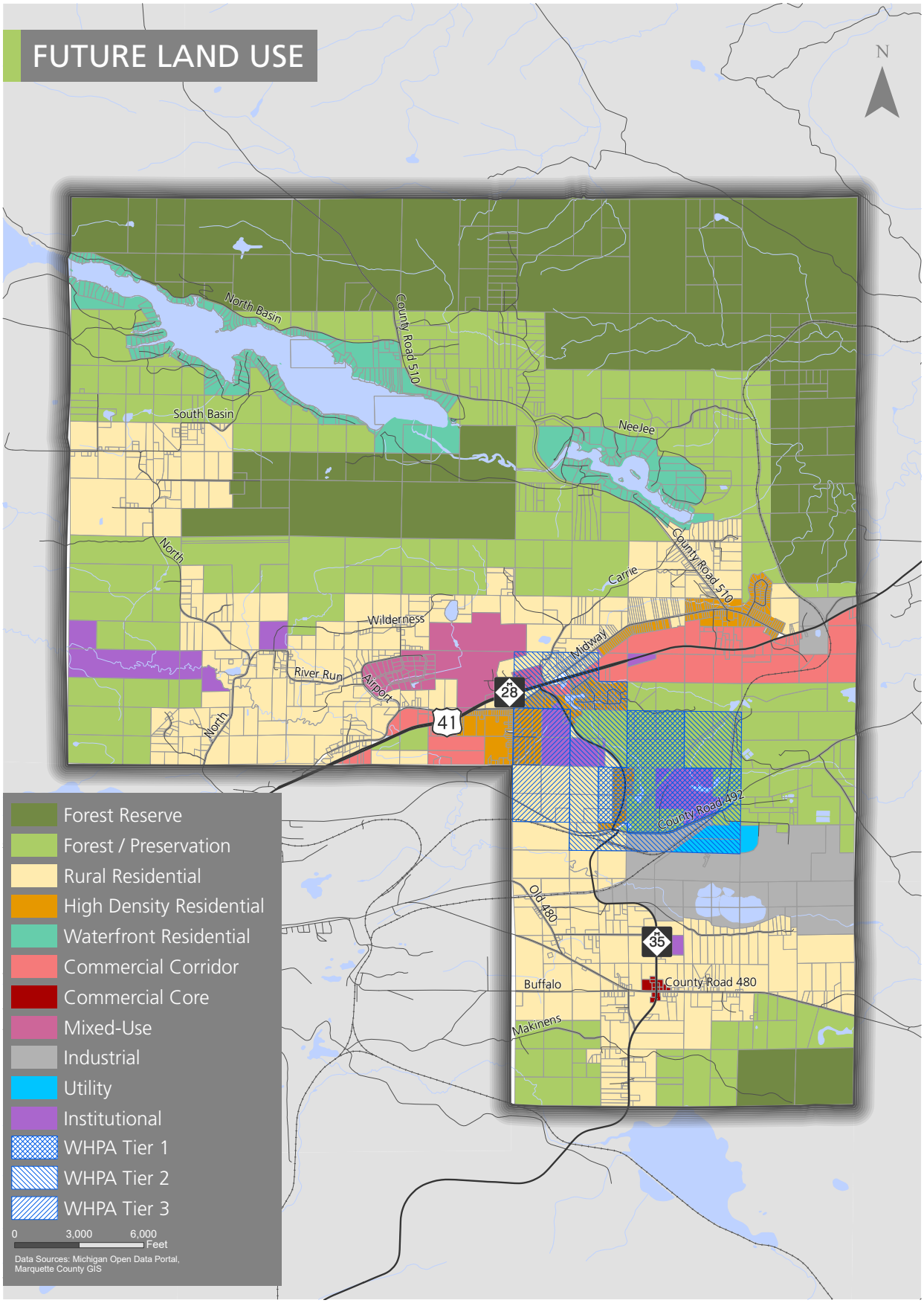
As future regional development progresses outward from the City of Marquette along the US-41/M-28 corridor well-planned and coordinated development can create nodes of development that serve the immediate population while preserving rural forested areas both north and south of the corridor. Corridor development best practices advocate the creation of high-intensity mixed-use nodes located at strategic locations along a corridor versus traditional commercial sprawl.

Table 14: Future Land Use Categories

Future Land Use Category	Intent	Acreage
Forest / Reserve	The Forest / Reserve land use category focuses on the retention of large tracts of forested land in the Township that may or may not be used for commercial logging. If developed for residential purposes the intent is to retain as much of the forested character as possible while preserving this renewable resource.	7,619 (27.6%)
Forest / Preservation	The Forest Preserve land use category has been designated consistent with the Township's goal to encourage very low rural residential development within areas containing natural forests and sensitive topography. Some properties will have designated state commercial forest lands that are regulated through the Michigan Department of Natural Resources programs.	8,229 (29.8%)
Rural Residential	A Residential-Rural land use category has been designated consistent with the Township's desire to retain the township's rural and scenic character, while providing low density housing opportunities. Rural residential land uses are primarily located along the US-41 and CR480 corridors, and North Road in the northwest quadrant of the Township.	6,454 (22.7%)

Future Land Use Category	Intent	Acreage
Waterfront Residential	The Residential-Waterfront category is designed to accommodate single family dwellings on lots ranging from one to five acres and includes properties abutting the Dead River Basins. This development is located on roads with light vehicular traffic. No municipal water or sewer service is anticipated to be available. This residential land use category strives to maintain an ecologically sound balance between human development activities and retain the Township's scenic waterfront character.	1,910 (6.9%)
High Density Residential	The Residential-Neighborhood category recognizes the presence of smaller lot, higher density, residential areas that form traditional neighborhoods. These residential neighborhoods occur along Midway Drive, M-35 north of CR 492, Forest Drive, Perela Court and Horseshoe Lake Circle.	527 (1.9%)
Mixed-Use	A land use category that encourages either horizontal or vertical mixed-use developments that contain a selection of commercial, office and residential uses. The primary site in the Township is the former Marquette Regional Airport properties which are currently underutilized or vacant. The vision would be the development of an intensive, pedestrian oriented, activity center for the Township that creates a sense of place for Township residents.	463 (1.7%)
Commercial Core	The commercial category is designated to accommodate small to moderate scale commercial needs of the Township that serve a designated population. One such area exists at the intersection of M-35 and CR 480.	17 (0.1%)
Commercial – Corridor	This commercial category represents non-residential land use development that occurs along the US-41 corridor. The Township zoning map classifies these parcels as General Business and Restricted Business.	803 (2.9%)
Industrial	Light Industrial category is designated to accommodate light and heavy industrial uses. These uses can consist of mining operations, general or heavy industrial uses, including manufacturing and assembly, storage and distribution, research and development, and contractor establishments.	1,095 (4.0%)
Utility	This designation includes properties that are developed for the production or distribution of energy resources. These facilities may include both non-renewable and renewable production.	96 (0.3%)
Institutional	This designation includes properties under the ownership of public and quasi-public entities that are used for public facilities, such as, parks, land conservancy, cemetery's, municipal infrastructure-related, fire and EMS stations, and churches.	583 (2.1%)

Map 16: Future Land Use



The table below describes each of the eleven (11) future land categories.

ZONING PLAN

The Zoning Plan is the bridge between the future land use map (FLUM) and the Zoning Ordinance. The Zoning Plan specifies what districts should remain, those districts that require some modification to advance the FLUM, and new districts needed to reflect recommendations in the FLUM. The Zoning Plan for Negaunee Township recommends the creation of several new districts. One district in particular, the FR district, or Forest Reserve District, is designed to protect large tracts of forested lands in the north and southeast corner of the Township from over development into smaller tracts of land. Another is the MUX District, or Mixed Use District, which allows for a mix of commercial, office, light industrial, and residential

Table 15: Zoning Plan

Future Land Use Category	Corresponding Zoning District	Zoning Revisions
Forest / Reserve	F (10 acres)	FR New district that requires a minimum of 20 acres per dwelling unit.
Forest / Preservation	F (10 acres)	
Rural Residential	R-2 (1 acre)	
Waterfront Residential	R-4 New District (1 acre)	
High Density Residential	R-1	
Mixed-Use	RB (11,000 Sq.Ft.)	MUX New district that allows a mix of commercial, office and residential land uses situated in a pedestrian-oriented, and walkable setting. Some lighted industrial, research and development uses can be included.
Commercial Core	GB (11,000 Sq.Ft.)	
Commercial – Corridor	I (5 acres)	
Industrial		
Utility		U A new district is designed for nonrenewable and renewable energy facilities.
Institutional		P/QP A new district designated for public and quasi-public land uses, such as, parks, Township-owned properties, cemeteries, County, State and Federal properties.

Example of an Accessory Dwelling Unit

uses of the former Marquette Regional Airport properties.

Other potential modifications to the Negaunee Township Zoning Ordinance (11-2019) could include the following:

Transfer of Development Rights. Incorporate into Article 7; Planned Unit Development, a provision that encourages the Transfer of Development Rights (TDR's) from the forest zones to the moderately development zone based on the land framework analysis. A TDR program seeks to preserve landowners' asset value by moving the right to build a house(s) from a location where forest preservation is encouraged to a location where development is encouraged. The TDR process is usually associated with a planned unit development and the development rights are transferred from the sending zone (forest preserve or forest reserve) to the receiving zone (rural residential or single family zones). The approved planned unit development is eventually recorded at the County Register of Deeds which memorializes the transfer of development rights from the sending parcel to prevent future development on the same parcel.

Renewable Energy. Amend Article 4; General Regulations to include a section on renewable energy, such as, solar, residential wind, and geothermal facilities.

Electric Vehicles (EV's). Amend Article 4; General Regulations to include use of electrical vehicle (EV) charging stations in public facilities, parks, and commercial businesses.

Accessory Dwelling Units. Accessory dwelling units (ADU's) provide added housing opportunities in housing markets with high demand and low supply, like the greater Marquette market. However, increasingly accessory dwelling units are being converted into short term rentals (STR's) which negates their initial value.

Broadband and Gas Utilities Mapping. Map broadband and gas utilities throughout the Township to determine service providers and gaps in service.

Revised Access Management Article. Review and amend the access management regulations to focus on US-41 and M-35 and reduce regulations on minor roads especially where residential

Table 16: Action Plan

ENCOURAGE A VARIETY OF HOUSING, MARKET, ATTAINABLE AND AFFORDABLE HOUSING	
Various municipalities and non-profits are beginning to coalesce around a regional housing strategy and Negaunee Township should be involved in the development of those strategies.	2023-2024
Revise the Zoning Ordinance to create the Forest Preserve (FR) district.	2023 -2024
Although not a pressing issue, the need for a fixed route, regularly scheduled public transit option would assist some households with reliable transportation for employment opportunities in the Marquette area.	2026 -2027

PROMOTE THE DEVELOPMENT OF A MIXED-USE DISTRICT	
Prepare a sub-area plan for the US-41 and M-35 intersection area that includes adjacent single family neighborhoods and the former Marquette Regional Airport properties. The sub-area plan would interface with the Township's infrastructure plan to determine the type and amount of potential land development. This project should include additional community engagement.	2024-2025
Revise the Zoning Ordinance to create Mixed-Use District (MUX).	2024-2025

USE PARKS AND TRAILS TO ENHANCE OUR COMMUNITY	
Implement the recommendations outlined in Table 4 of the Negaunee Township Parks & Recreation Plan. https://files4.1.revize.com/negauneetownshpimi/Negaunee%20Township%20PR%20Plan_Report%20DRAFT_2022-11-21%20(002).pdf	2023-2027

ZONING AMENDMENTS	
Revise Article 7 to include the Transfer of Development Rights (TDR) option in the Planned Unit Development provisions.	2024-2025
Revised Article 4; General Regulations to include Electric Vehicles (EV's) charging stations at certain commercial facilities.	2025-2026
Include Accessory Dwelling Units (ADU's) as a form of year-round housing option in certain residential districts.	2025-2026
Revised Article 4; General Regulations to include renewable energy options in residential districts.	2026-2027

REVIEW MASTER PLAN

Sources

1 Michigan Population Projects by County through 2045, State of Michigan, Department of Technology, Management and Budget, Bureau of Labor Market Information and Strategic Initiatives, September 2019.

2 Ryan Patrick Hooper, Is Michigan prepared to be a climate refuge?, WDET, January 2023, https://wdet.org/2023/01/04/is-michigan-prepared-to-be-a-climate-refuge/#:~:text=It's%20part%20of%20the%20way,to%20lots%20of%20fresh%20water.

Appendix

COMMUNITY ENGAGEMENT SUMMARY

As a community-driven document, community engagement is essential for master planning. The community engagement program this Master Plan was two-fold: 1) an online survey and 2) a community visioning session. It is important to provide multiple venues for people to offer input to help ensure that the Plan is based on broad and representative feedback from the community.

ONLINE SURVEY

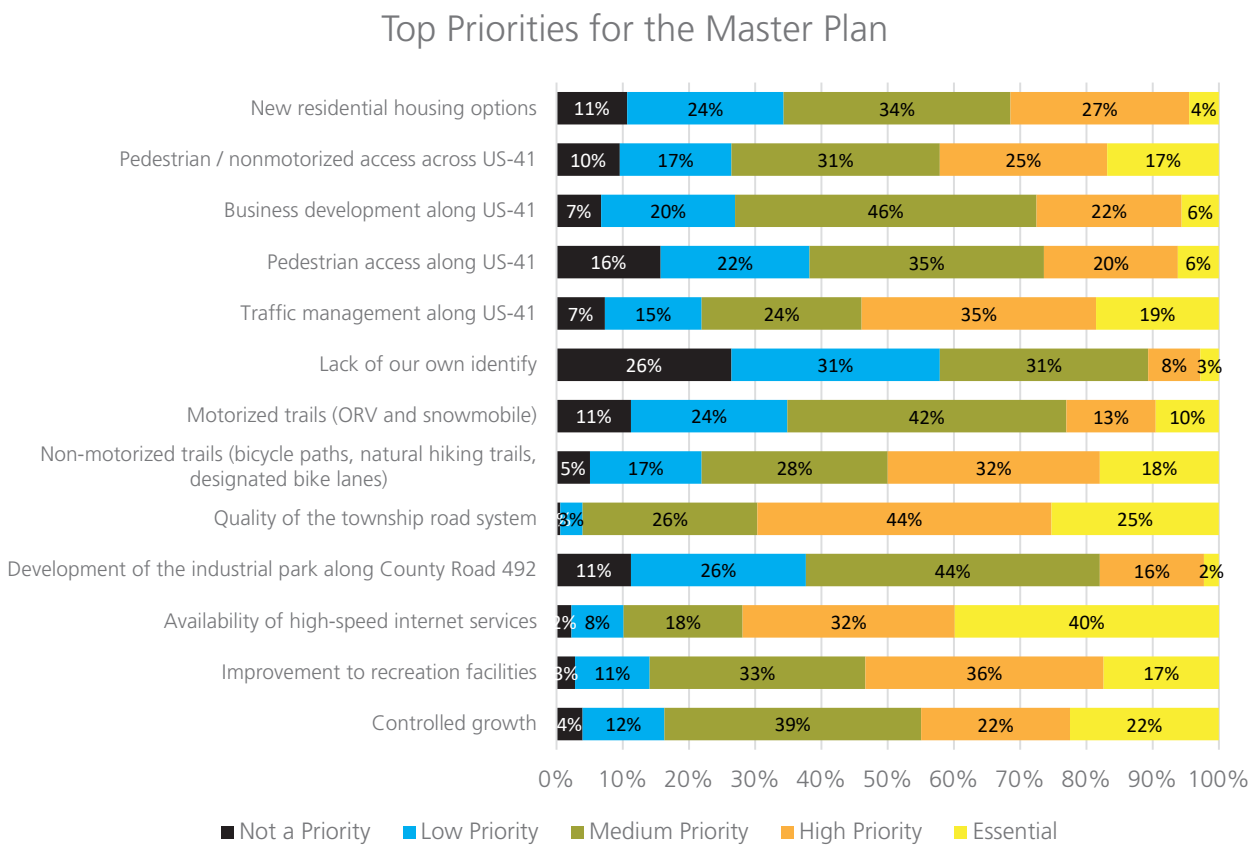
Community members received notice of an online survey through a mailer included in the community newsletter, a paper survey flyer, and via the Township's website and social media pages. At the conclusion of the roughly two-month survey period, there was a total of 102 responses. The survey included was a joint effort between the Master Plan and the Parks & Recreation Plan; below is a summary of survey response results pertaining to the Master Plan.

One-Word Description of Negaunee Township in the Future

Participants were asked to describe Negaunee Township in the future using one word. The most common word choice was "peaceful," followed by "home," "growing," "community," and "safe."

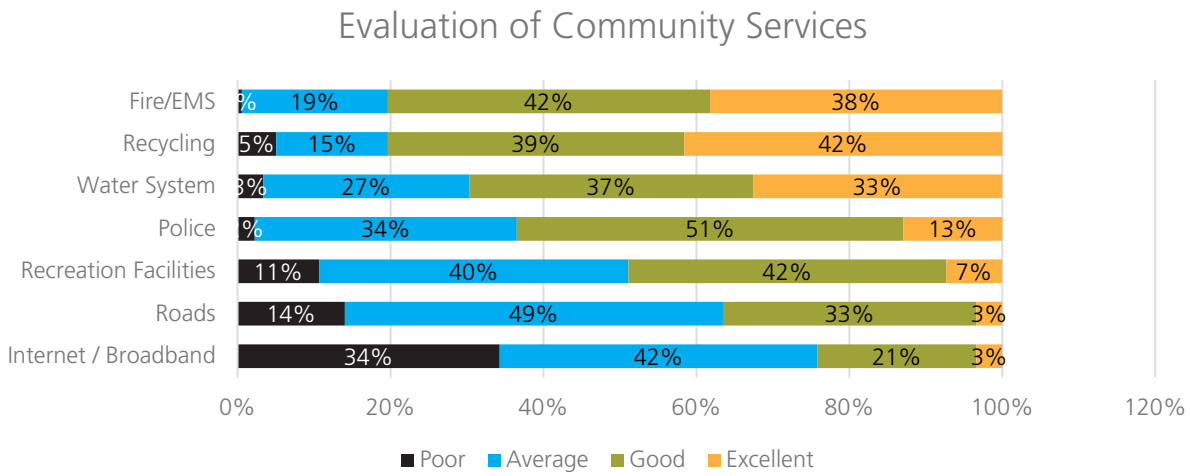
Top Priorities

The survey asked respondents to prioritize topics for the Master Plan. The top priority was availability of high-speed internet service with almost three-quarters of respondents indicating that this is either a high priority (32%) or an essential priority (40%). The second-most-popular choice was the quality of the Township's road system with almost two-thirds of respondents indicating that this is either a high priority (44%) or an essential priority (25%). Traffic management along US-41, controlled growth, and improvement to recreation facilities including non-motorized trails were other top selections.



Evaluation of Community Services

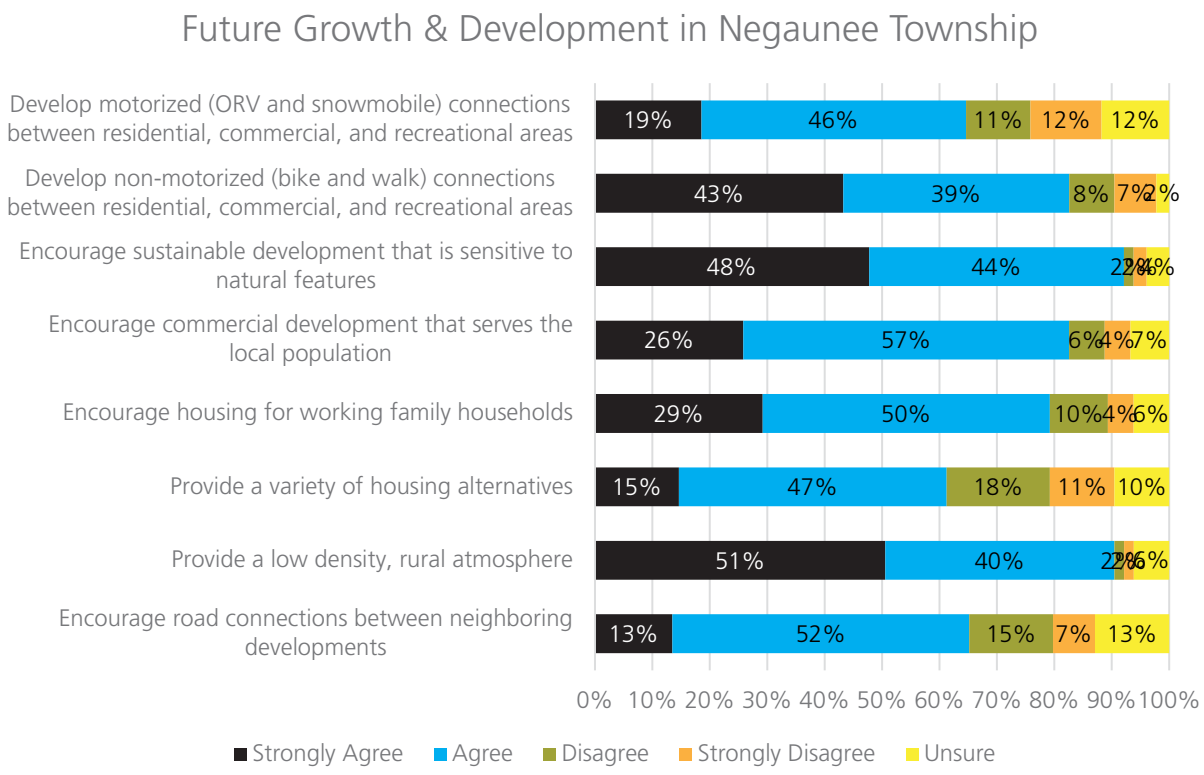
When asked to rate the Negaunee Township's existing services, respondents ranked recycling the highest followed by fire and emergency medical services, water system, police, and recreational facilities. Participants were also asked to rate the importance of services relative to their property from highest to lowest priority. Cell service was rated as the highest priority followed by broadband, natural gas, water, propane gas, and sewer.



When asked about public library services, participants use the City of Negaunee's Public library the most, followed by the Peter White Public Library. Results also indicated that respondents do not frequent the City of Negaunee Senior Citizen Center, despite the variety of services the facility offers. 91% of survey respondents have never used the Senior Citizen Center.

Future Growth & Development in Negaunee Township

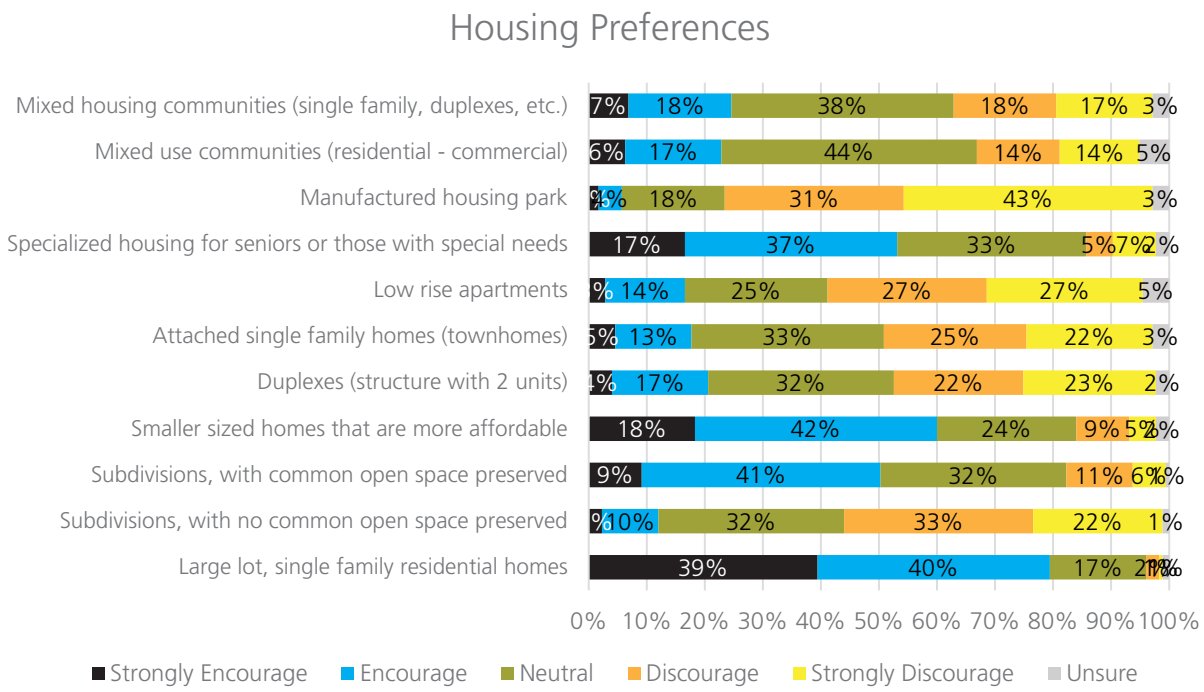
Respondents were asked to indicate their level of agreement with several statements regarding future growth in the Township. There was the most agreement with the goal to "encourage sustainable development that is sensitive to natural features" with nearly all respondents either strongly agreeing (48%) or agreeing (44%) to the statement. "Providing a low density, rural atmosphere" resulted in the second-most level of agreement with 51% strongly agreeing and 40% agreeing with the statement. "Providing a variety of housing alternatives" and "encouraging connections between neighboring developments" yielded the highest percentages of disagreement.



Housing Preferences

When participants were asked to look back on the last 10 years and rate their opinions on residential growth in Negaunee Township, the majority of respondents (63%) believed that residential growth is about right. When asked about preferences on housing types, the most popular housing types were large-lot single-family homes and subdivisions with common open spaces. Results also indicated a relatively strong preference for specialized housing for seniors or those with special needs as over half of survey participants would strongly encourage (17%) or encourage (37%) this type of housing. Mixed housing communities (a mixture of single-family units

and duplexes) along with mixed-use developments also received notable interest. Interestingly, 98% of survey respondents own their homes, and almost all (90%) of these homeowners plan to stay in their current homes for the next five years.

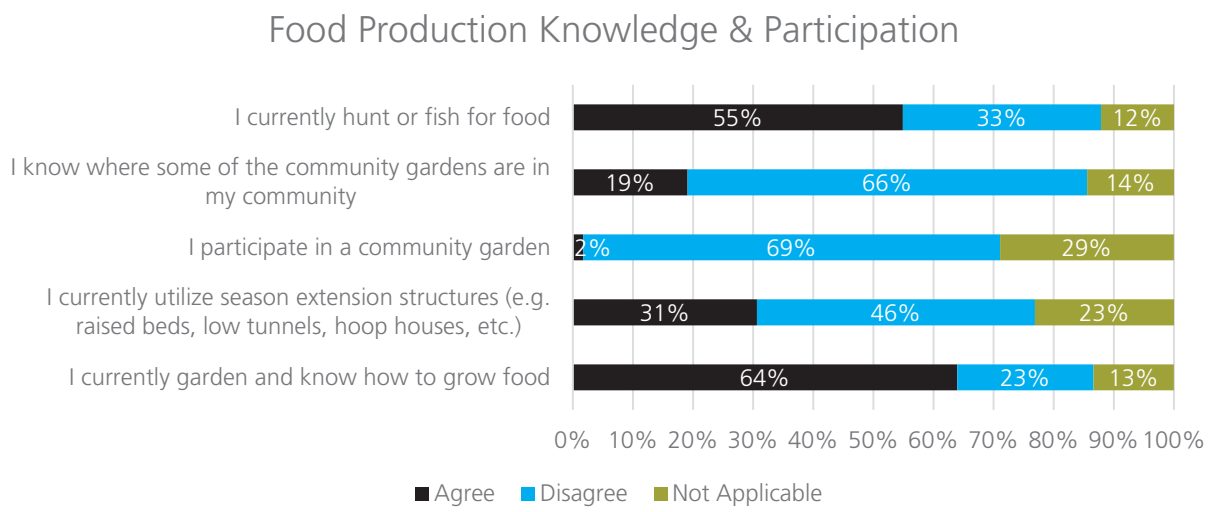


Commercial Growth Preferences

Most participants indicated there are either just the right amount or not enough commercial businesses in the Township. When asked where commercial growth should be located 61% of respondents felt commercial businesses should be located along US-41. Most participants (78%) would like to see more food service establishments and restaurants, and over half (55%) of participants indicated they would like to see more grocery stores, general stores, produce stores. Health care offices and professional offices were also popular amongst respondents (28%).

Local Food Production

The survey included several questions about local food production. The majority (64%) of respondents indicated that they currently garden and know how to grow food, and over half (55%) currently hunt or fish for food. About one-third (31%) of respondents currently use seasonal extension structures for growing food, though fewer people were familiar with community garden efforts in the Township. There was, however, substantial interest in learning more about producing food with over half of participants showing interest in learning more about community gardens (54%) and seasonal extension structures (51%), and 44% interested in learning more about hunting and fishing requirements and regulations. Most survey respondents supported the use of public land for local food production if used for a community garden (78%), and 44% supported the use of public land if used by a nonprofit organization.



Participants were also asked about opportunities for residents to produce food on their own properties. 61% of respondents agreed with the idea of community residents having the option to raise small livestock animals (chickens, rabbits, bees, possibly others) on residential properties with limitations set by local ordinance, while 31% of respondents agreed with reservations. There was even more support for giving community residents the option to locate seasonal extension structures (e.g. raised beds, low tunnels, hoop houses, etc.) in residential yards for optimal food production with 75% of participants agreeing with the idea and 21% agreeing with reservations.

Survey Participant Demographics

Most survey participants have lived in Negaunee Township for a substantial amount of time, with about one-quarter living in the Township between 11 and 20 years, and another quarter for 21-40 years. The majority of respondents (60%) lived on a residential, non-subdivision lot, and almost all participants live on more than one acre of land. Almost all participants reside on a public and paved road.

Most participants were between 35 and 54 years of age and either have two or four members in the household. Almost two-thirds of participants (62%) are working full-time, while about one-quarter of participants (26%) are retired. Of those working, very few work from home.

COMMUNITY VISIONING SESSION

On April 12, 2022, Negaunee Township hosted a community visioning session, and Michigan State University Extension and Beckett & Raeder, Inc. jointly facilitated the event. During the event, participants were asked a series of broad, visioning questions which are summarized below.

Generally, recreation is a top priority in the Township as there is expansive support for enhanced and expanded recreational opportunities. There is strong desire for the ability to access recreational assets on the south side of US-41 from the population center and on the north side of US-41 along Midway Drive. Infrastructure expansion is also a widely supported. That said, there is somewhat of a divide between those that wish to see expanded business growth and development and those that do not desire expanded business development. It will be important for the Township to

appropriately consider zoning regulations, design standards, and motorized and nonmotorized circulation and access to help mitigate any potential negative externalities that accompany business and population growth. Another consideration for the Township's future is prioritizing engagement with younger residents, particularly youth. This theme was prominent in the question on actions to achieve Township goals.

What one word or phrase describes Negaunee Township now?

The top theme for describing Negaunee Township now focused on location as visioning participants described the Township is centralized and convenient. Other top descriptions were desirable, undeveloped, and scenic.

One word or phrase that describes Negaunee Township NOW?	Times Mentioned (#)
Centralized & Convenient	14
Desirable	13
Undeveloped	10
Scenic	8
Growing	6
Affordable	5
Sense of Community	4
Opportunity	1
Progressive	1
Outdoor Recreation	1
Safe	1
Good Water	1

What word or phrase would you like to use to describe the Township in the future?

There were three top themes for how visioning participants described Negaunee Township in the future: expansion of services, predominantly broadband service; more recreation opportunities; and more local businesses. Expansion of these three themes speaks to building on existing strengths in the community.

One word or phrase that describes Negaunee Township in the FUTURE?	Times Mentioned (#)
Expansion of services	16
Recreation opportunities	13

More local businesses	12
Water quality still superior	5
Desirable place to live	4
Reasonable taxes	4
Fiscally responsible Township	3
Respect environment	3
Affordable housing	2
Responsible planning (housing, commercial)	1
Community involvement	1
Stability	1
Diverse	1

What has Negaunee Township accomplished well?

Visioning participants overwhelmingly believed that the Township's services are very good with recycling, and Fire/EMS services being the top items noted. Water quality was also a top item for things that the Township has done well.

What has Negaunee Township ACCOMPLISHED WELL?	Times Mentioned (#)
Recycling	27
Fire Department and EMS	17
Water quality	12
Fiscally responsible	4
Support of community organizations	1
Township Center/Hall & Recreation Center	1
Staff	1
Forward thinking	1
Friendly community	1

What does Negaunee Township look like ten years in the future?

The vision for Negaunee Township ten years in the future aligned with the themes from the question asking for one word or phrase describing the Township in the future. Again, visioning participants indicated a desire to build on existing strengths in the Township with business growth, maintaining and increased recreational activities, and expanded utilities making up the top three themes for this question.

What does Negaunee Township look like ten years in the FUTURE?	Times Mentioned (#)
Growth of businesses	20
Maintained / increased recreational activities	18
Expanded utilities	16
No new developments	7
Overpass (over US-41) for pedestrians/bicycles	3
Affordable housing	2
Unique character	1

Great traffic flow	1
Larger population	1

What actions can we take to achieve our goals?

Interestingly, the top item for actions to take was encouraging more community involvement, indicating a desire to get residents involved in Township decisions. The other top item was raising more revenue.

What actions can we take to achieve our GOALS?	Times Mentioned (#)
Encourage more community support / involvement	21
Raise revenue	19
Infrastructure development	12
Update Master Plan & Zoning Ordinance	8
Communication with residents	7
Cooperation with other municipalities	1

What are our collective priorities?

The top three priorities for visioning participants aligned with responses to previous questions – building on existing infrastructure and recreation were the key themes for participants.

What are our COLLECTIVE PRIORITIES?	Times Mentioned (#)
Expand infrastructure	20
Invest in recreation	19
Safe access from Midway Drive to (and over) US-41	18
Attracting businesses on the US-41 corridor	9
Protect our environment	3
Define unique character and protect it	1
Zoning update and traffic plan	1
Sustainable revenue streams	1

STRENGTHS – CHALLENGES – OPPORTUNITIES – THREATS (SCOT) ANALYSIS

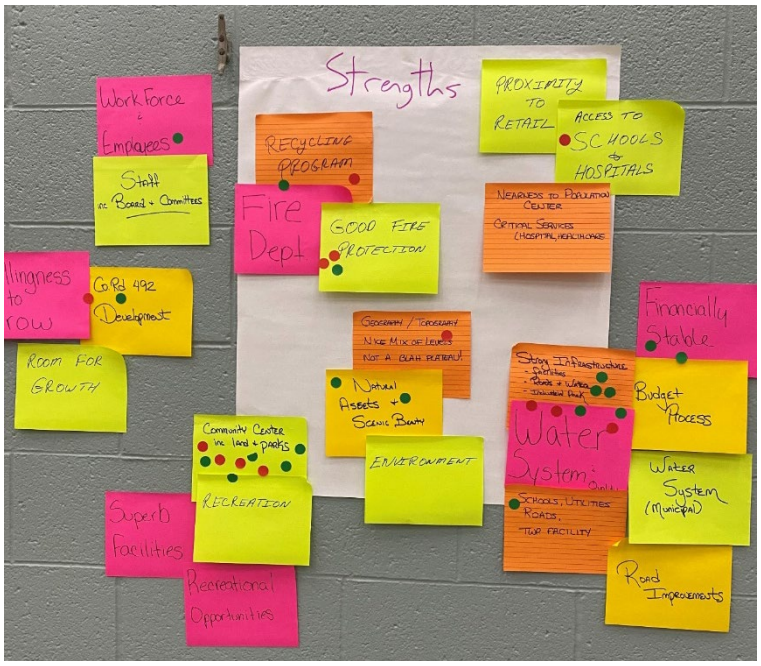
The Negaunee Township boards and commissions participated in a "strengths – challenges – opportunities – threats" (SCOT) exercise on March 22, 2022, and the results of the exercise are summarized below.

One of the main themes that emerged from the exercise was the potential for future success by leveraging the strengths and opportunities associated with the Township's recreation assets and potential. Because recreation is such an important asset in the Township, the Master Plan and Five-Year Parks & Recreation Plan should be aligned. Additionally, there is opportunity to leverage economic development benefits in conjunction with the recreational assets the Township has to offer. Another main theme that emerged was the opportunity for business growth and

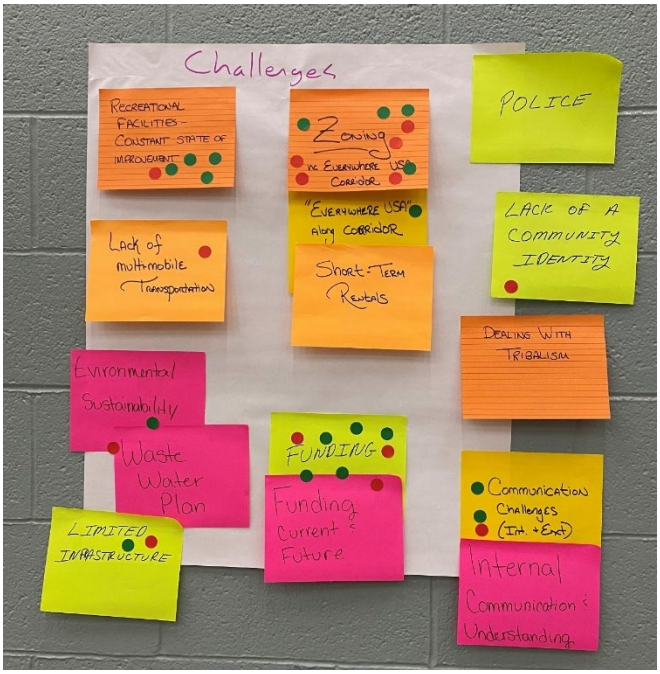
development; however, the out-of-date Zoning Ordinance presents a challenge for achieving desirable growth.

Strengths

Strengths	Times Mentioned (#)
Recreation	9
Infrastructure	9
Services	5
Environment	3
Finance	2
Development	2
Access	1
Staff	1



Challenges



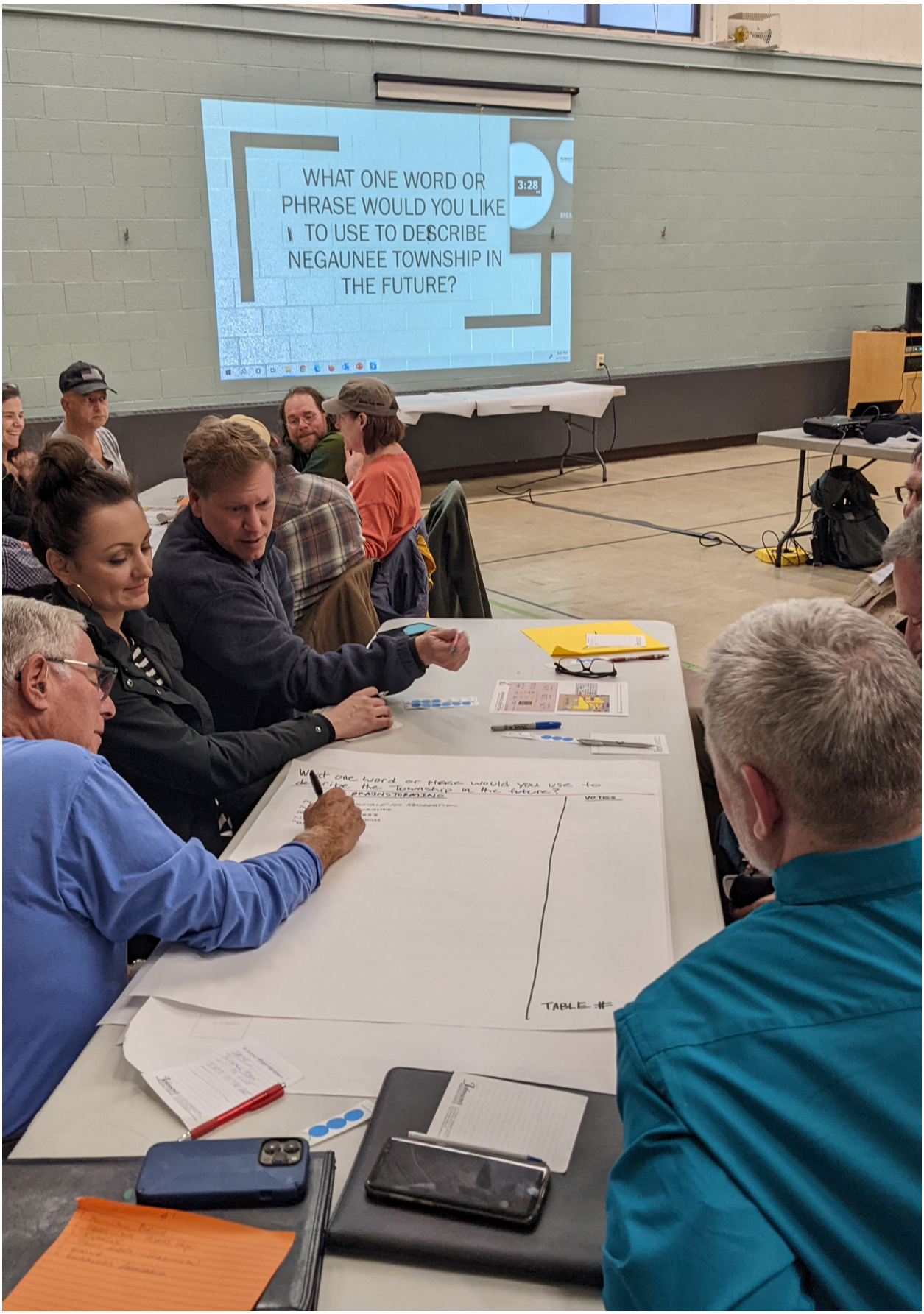
Challenges	Times Mentioned (#)
Zoning	10
Funding	8
Recreation	5
Sustainability	4
Lack of multimodal transportation	1
Lack of community identity	1
Dealing with community tribalism / provincialism / siloing	1
Police	1

Opportunities

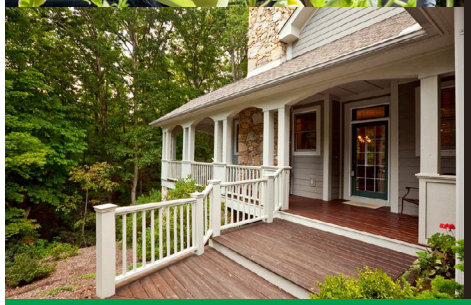
Opportunities	Times Mentioned (#)
Growth & Development	16
Recreation	9
Physical location	5
Residents	2
Relationships	1

Threats

Threats	Times Mentioned (#)
Finance & Economy	8
Telecommunications & utilities	8
Community involvement	6
Health	5
Unfunded mandates	3
Quality of County Roads	2
Annexation by neighboring government	1



Negaunee Township Vision Session (April 12, 2022)



LifeMode Group: Cozy Country Living

Green Acres

6A

Households: 3,923,400

Average Household Size: 2.70

Median Age: 43.9

Median Household Income: $76,800

WHO ARE WE?

The *Green Acres* lifestyle features country living and self-reliance. Avid do-it-yourselfers, they maintain and remodel their homes, with all the necessary power tools to accomplish the jobs. Gardening, especially growing vegetables, is a priority, again with the right tools, tillers, tractors, and riding mowers. Outdoor living features a variety of sports: hunting and fishing, motorcycling, hiking and camping, and even golf.

OUR NEIGHBORHOOD

- This large segment is concentrated in rural enclaves in metropolitan areas.
- Primarily (not exclusively) older homes with acreage; new housing growth in the past 15 years.
- Single-family, owner-occupied housing, with a median value of $235,500.
- An older market, primarily married couples, most with no children.

SOCIOECONOMIC TRAITS

- Education: More than 60% are college educated.
- Labor force participation rate is high at 66.8% (Index 107).
- Income is derived not only from wages and salaries but also from self-employment (more than 13% of households), investments (27% of households), and increasingly, from retirement.
- They are cautious consumers with a focus on quality and durability.
- Comfortable with technology, more as a tool than a trend: banking or paying bills online is convenient; but the Internet is not viewed as entertainment.
- Economic outlook is professed as pessimistic, but consumers are comfortable with debt, primarily as home and auto loans, and investments.

TAPESTRY SEGMENTATION
esri.com/tapestry

Note: The Index represents the ratio of the segment rate to the US rate multiplied by 100.
Consumer preferences are estimated from data by MRI-Simmons.

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LifeMode Group: Cozy Country Living

Green Acres

TAPESTRY SEGMENTATION
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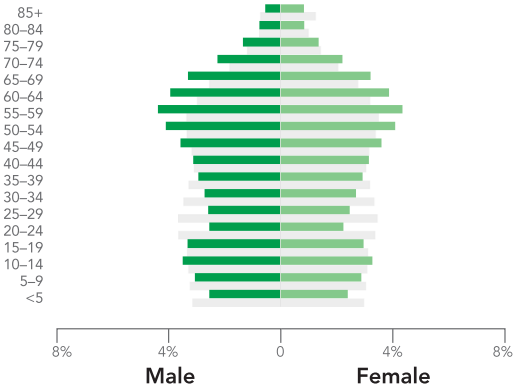
AGE BY SEX (Esri data)

Median Age: 43.9 US: 38.2

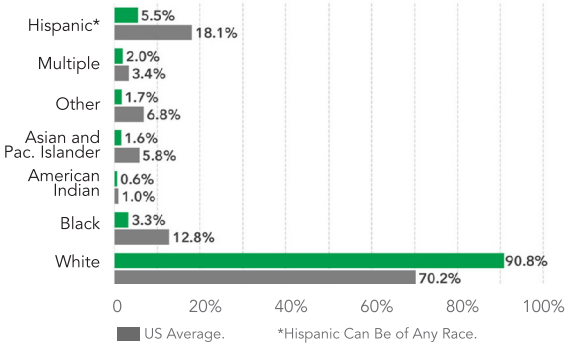
Indicates US



RACE AND ETHNICITY (Esri data)

The Diversity Index summarizes racial and ethnic diversity. The index shows the likelihood that two persons, chosen at random from the same area, belong to different race or ethnic groups. The index ranges from 0 (no diversity) to 100 (complete diversity).

Diversity Index: 26.0 US: 64.0

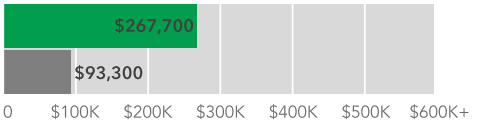


INCOME AND NET WORTH

Net worth measures total household assets (homes, vehicles, investments, etc.) less any debts, secured (e.g., mortgages) or unsecured (credit cards). Household income and net worth are estimated by Esri.

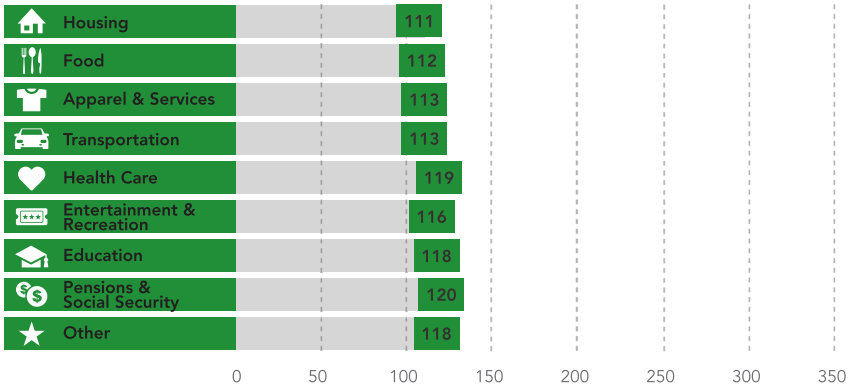
Median Household Income

Median Net Worth



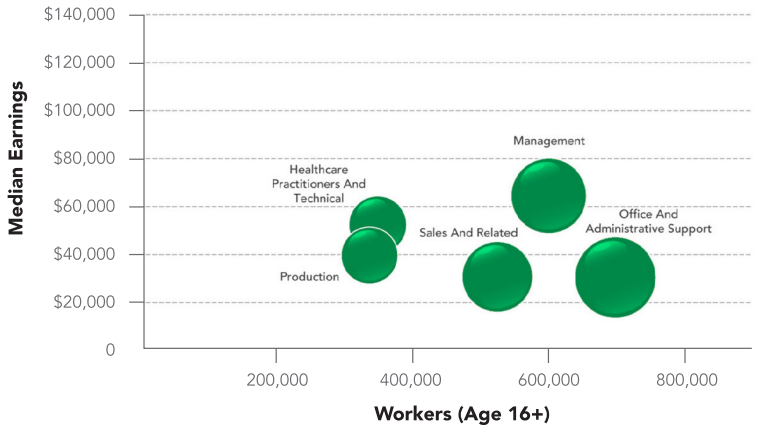
AVERAGE HOUSEHOLD BUDGET INDEX

The index compares the average amount spent in this market's household budgets for housing, food, apparel, etc., to the average amount spent by all US households. An index of 100 is average. An index of 120 shows that average spending by consumers in this market is 20 percent above the national average. Consumer expenditures are estimated by Esri.



OCCUPATION BY EARNINGS

The five occupations with the highest number of workers in the market are displayed by median earnings. Data from the Census Bureau's American Community Survey.



6A

LifeMode Group: Cozy Country Living

Green Acres

TAPESTRY SEGMENTATION
esri.com/tapestry

MARKET PROFILE (Consumer preferences are estimated from data by MRI-Simmons.)

- Purchasing choices reflect *Green Acres* residents' country life, including a variety of vehicles, from trucks and SUVs to ATVs and motorcycles, preferably late model.
- Homeowners favor DIY home improvement projects and gardening.
- Media of choice are provided by satellite service, radio, and television, also with an emphasis on country and home and garden.
- *Green Acres* residents pursue physical fitness vigorously, from working out on home exercise equipment to playing a variety of sports.
- Residents are active in their communities and a variety of social organizations, from charitable to veterans' clubs.

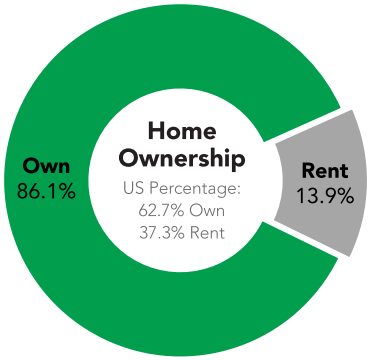
HOUSING

Median home value is displayed for markets that are primarily owner occupied; average rent is shown for renter-occupied markets. Tenure and home value are estimated by Esri. Housing type and average rent are from the Census Bureau's American Community Survey.

Typical Housing:
Single Family

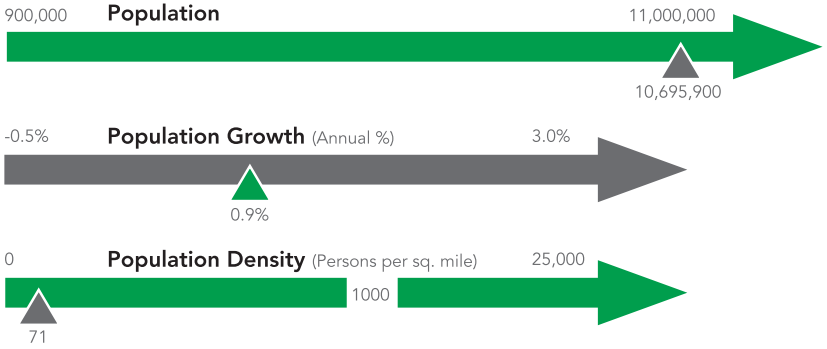
Median Value:
$235,500

US Median: $207,300



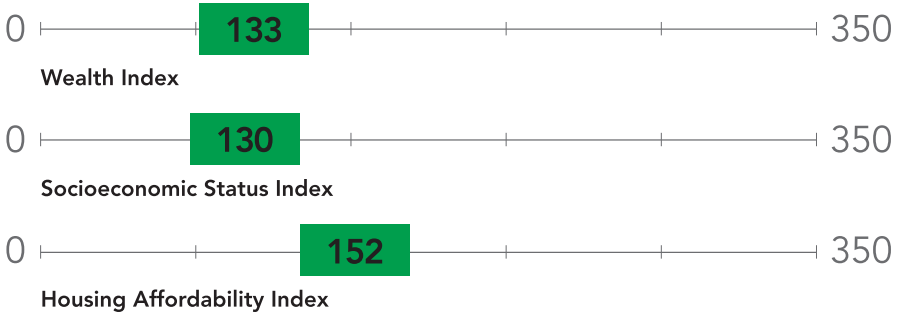
POPULATION CHARACTERISTICS

Total population, average annual population change since Census 2010, and average density (population per square mile) are displayed for the market relative to the size and change among all Tapestry markets. Data estimated by Esri.



ESRI INDEXES

Esri developed three indexes to display average household wealth, socioeconomic status, and housing affordability for the market relative to US standards.



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Green Acres

TAPESTRY SEGMENTATION
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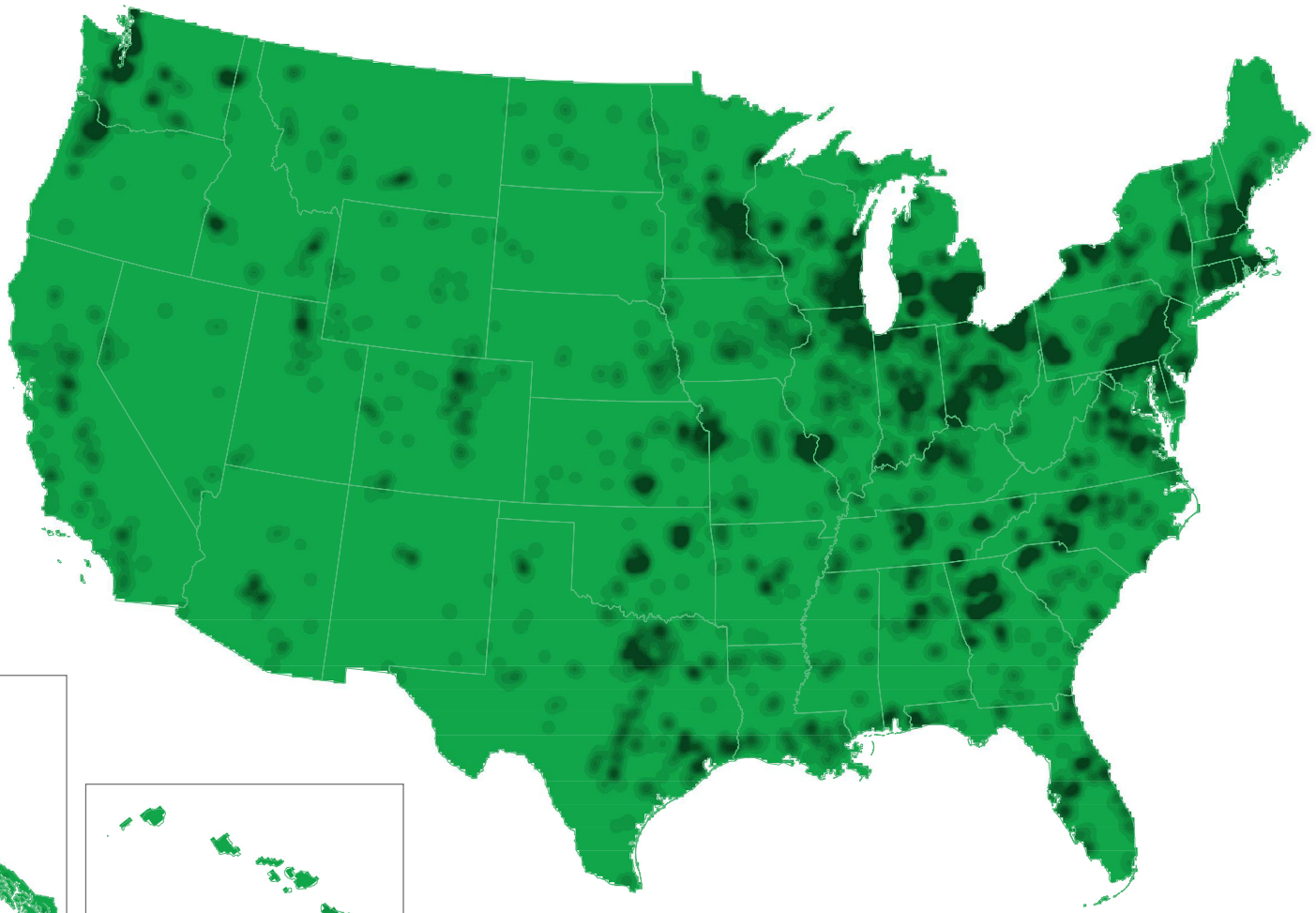
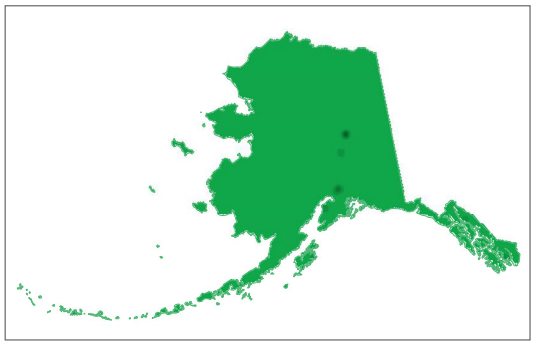
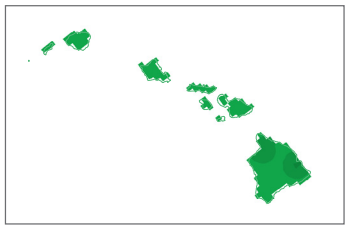
SEGMENT DENSITY

This map illustrates the density and distribution of the *Green Acres* Tapestry Segment by households.







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