

Cedar Area Fire & Rescue
Service Area Assessment
May 30, 2024

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Executive Summary

Cedar Area Fire & Rescue (CAFR) is a full-time fire department providing fire, Advanced Life Support (ALS) medical, and technical rescue services to a four-township area encompassing Cleveland, Centerville, Kasson and Solon Townships. From 2016 to 2024, the department has grown from a part-time Basic Life Support (BLS) transporting agency with three full-time medical/suppression staff to the current full-time ALS transporting agency with nine full-time medical/suppression staff, a full-time fire chief, and additional part-time and administrative support personnel.

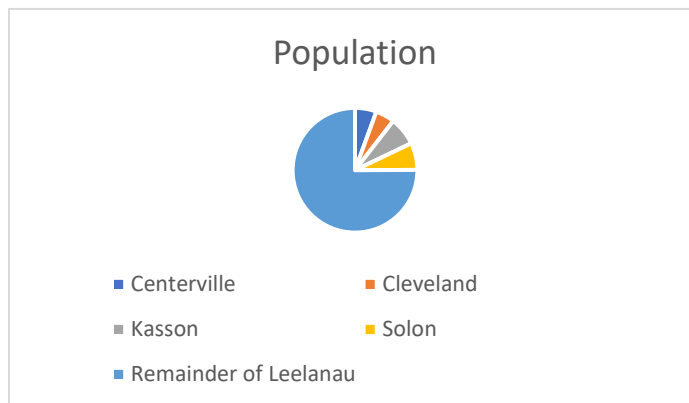
As part of the CAFR 2022-2026 Strategic Plan, the department determined that a second station on the western side of the service area (Kasson and Cleveland Townships) was needed. To quote the Strategic Plan, “Increasing demand for department services and extended response times to the western portion of the service area necessitate the development of a second station.” In addition, the major increase in staff between 2016 and 2024 is placing an increasingly unsustainable occupancy load on the existing Cedar station. Kasson Township has now begun to move forward with the initial stages of planning for a second station.

CAFR staff have developed this assessment document to summarize the current conditions and ongoing trends seen in the service area, including the full- and part-time populations, housing, non-residential occupancies, traffic considerations, service area concerns, and current response times. This assessment also provides recommendations for the development of a second station, including thoughts on the location, preferred utilities, and availability of land. The staff at CAFR hopes that this assessment document will assist Kasson Township with the development of a second station.

Population

As of the 2020 Census, the four townships that make up the CAFR service area had the following full-time populations:

- Centerville – 1,243
- Cleveland – 1,103
- Kasson – 1,647
- Solon – 1,562



Leelanau County overall had a population of 22,301 as of the 2020 census, meaning that 24.9% of Leelanau County’s full-time population is in the service area of CAFR. (2020 US Census) Between 2010 and 2020, the population of Leelanau County increased by 2.7%; it was then estimated to decrease 0.1% between 2020 and 2022, and then projected to increase by 0.7% between 2022 and 2027. This is a slower growth rate than the region as a whole, which experienced 4.3% growth between 2010 and 2020, saw growth estimated at 0.3% between 2020 and 2022, and is projected to see growth of 0.5% between 2022 and 2027. The county saw faster growth than was seen state-wide, however, with the state population only growing 2.0% between 2010 and 2020, estimating no growth between 2020 and 2022, and projecting a 0.2% decrease in population between 2022 and 2027 (Housing North 2023 Housing Needs Assessment).

Population Change			
	2010 to 2020	2020 to 2022	2022 to 2027
Leelanau County	2.7%	-0.1%	0.7%
Region	4.3%	0.3%	0.5%
State	2.0%	0.0%	-0.2%

Between 2010 and 2020, the number of households in Leelanau County increased by 5.1%, but was then projected to flatten with an estimated increase of only 0.1% between 2020 and 2022, and a projected increase of another 1.0% between 2022 and 2027. This is slower growth than the region as a whole, which showed a 7.2% increase between 2010 and 2020, followed by an estimated increase of 0.6% between 2020 and 2022 and a projected increase of 1.0% between 2022 and 2027. It is, however, faster growth than has been shown statewide, with statewide households increasing 4.4% between 2010 and 2020, and having an estimated/projected increase of only 0.6% total between 2020 and 2027 (Housing North 2023 Housing Needs Assessment).

Household Change			
	2010 to 2020	2020 to 2022	2022 to 2027
Leelanau County	5.1%	0.1%	1.0%
Region	7.2%	0.6%	1.0%
State	4.4%	0.3%	0.3%

The median age of the Leelanau County population, already higher than the state average, is projected to continue to increase. Between 2010 and 2022, the median age of the Leelanau County population increased from 50.2 years to 54.2 years, and by 2027 is estimated to grow to 55.1. The population over the age of 75 is expected to increase by 18.9% between 2022 and 2027, with the 65 to 74 population increasing by 8.4%. The 35 to 44 age bracket is also projected to see an increase in population, while all other age brackets are expected to decline in population. By comparison, the region-wide population increased in median age from 44.0 to 46.7 between 2010 and 2022, and is expected to increase to 47.3 by 2027, while the state median age is substantially younger, increasing from 38.8 to 40.9 between 2010 and 2022 and projected to increase to 41.8 by 2027. This results in the average citizen of Leelanau County being over 13 years older than the average citizen of the state as a whole (Housing North 2023 Housing Needs Assessment).

Median Age			
	2010	2022	2027 (Est.)
Leelanau County	50.2	54.2	55.1
Region	44.0	46.7	47.3
State	38.8	40.9	41.8

In 2022, it was estimated that the population of Leelanau County grows by 126% between the population low in January and the population high in July, due to the major influx of tourists, seasonal home owners, and seasonal staff. Over 20% of the population of Leelanau County consists of part-time residents (those who own second homes in the county) during the peak months of June, July and August (Networks Northwest 2022 Seasonal Population Study).

Housing

As of 2022, it was estimated that 62.5% of homes in Leelanau County are considered to be occupied with a split of 88.4% of these being owner-occupied and 11.6% being renter-occupied. The remaining 37.5% of housing stock was considered vacant, the majority of which is generally found to be homes used for seasonal or recreational usage or homes vacant during sale or between rentals. In Northern Michigan, homes used for seasonal or recreational usage “play a significant role in the local housing market” and in 2022 were estimated to make up 79.5% of the vacant housing units and 33.0% of the overall housing units in the county (Housing North 2023 Housing Needs Assessment).

In 2023, it was projected that between 2022 and 2027, 382 rental units need to be constructed in Leelanau County to meet demand for rental housing. In 2023, it was also estimated that between 2022 and 2027, Leelanau County would need 1,953 for-sale housing units to meet the demand for full-time housing in the county. Between September 2022 and March 2023, 103 housing units sold in the county. As of February 28, 2023, there were only 33 housing units for sale in Leelanau County (Housing North 2023 Housing Needs Assessment). Given the low numbers of housing units sold and for sale during the period of the 2023 Housing Needs Assessment study, it can be argued that a substantial number of new housing units will need to be constructed and sold to meet the demand for housing in the county during the 2022-2027 time frame.

Given the share of the full-time population of Leelanau County that resides in the CAFR service area, it can be considered that approximately 95 rental units should be constructed in the service area between 2022 and 2027. To further break these down, the split between the four townships would be approximately 21 in Centerville, 19 in Cleveland, 28 in Kasson and 27 in Solon. In addition, it can be considered that approximately 486 units of housing will need to be for sale between 2022 and 2027 to meet the demand for full-time housing in the service area. This further breaks down into 109 units in Centerville Township, 96 in Cleveland, 144 in Kasson and 137 in Solon.

Needed Housing 2022-2027			
	New Rental Units	For-Sale Housing	Total
Centerville	21	109	130
Cleveland	19	96	115
Kasson	28	144	172
Solon	27	137	164
Leelanau County	382	1,953	2,335

Of the major regional housing projects ongoing as of 2023, one (Cedar Cove Estates in Solon Township) was located in the CAFR service area. This project is planned to add 30 housing units to the service area (Housing North 2023 Housing Needs Assessment).

Commercial and Recreational Zoning

The four-township CAFR service area contains multiple commercial zones, named as Business, Commercial Resort, Recreational, or other. These are scattered throughout the townships, although the majority of them center around villages or along major roadways. See Appendix A for the Zoning Maps for the four townships. The commercial zones in the four-township area include:

- Centerville – Centerville Township has several scattered parcels zoned for Business, in addition to two sections zoned for Commercial Resort along Lake Shore Drive.
- Cleveland – Cleveland Township has multiple Business and Commercial Resort zones along CR-667 (Maple City Road) and M-22. In addition, there is a smaller Business district at the intersection of Stachnik and Sullivan Woods Roads and a large area of Recreational zoned land in the eastern portion of the township. Cleveland Township also includes the largest portion of National Park Service-owned land in the four-township area, mostly in the northwestern portion of the township.
- Kasson – Kasson Township has two large sections and additional scattered parcels of Business zoning along M-72. In addition, there is a small section of Business zoning along Kasson Road, and the center of the village of Maple City is zoned for Mixed Use Commercial. Several square miles in the center of the township are zoned as Gravel and this area includes numerous open-pit mines owned by private companies and municipalities.
- Solon – Solon Township has Business zones in the village of Cedar and along M-72. In addition, there is a Resort/Recreational zone along the south-east edge of Lake Leelanau on the eastern edge of the township.

Many of these zones include numerous businesses, and most have the potential for additional growth. In addition, some commercial-type occupancies are allowed in the majority of generally non-commercial zoning districts in all townships through Special Use Permits approved by the Planning Commissions of each township.

Non-Residential Occupancies

Centerville Township

The majority of the commercial uses in Centerville Township are not considered high-risk occupancies. The recreational uses of the campgrounds/RV parks along Lake Shore Drive in Centerville Township have the potential for high volumes of calls, especially during the summer months. The Township Hall and Holy Rosary Church constitute the assembly-type occupancies for Centerville Township. Agricultural-adjacent uses also give rise to commercial uses, specifically the multiple wineries located in Centerville Township.

Cleveland Township

The majority of the commercial uses in Cleveland Township are not considered high-risk occupancies. The recreational uses in Cleveland Township of the Palmer Woods Recreation Area on Wheeler Road and Pyramid Point Hiking Trail and Camp Leelanau/Kohana north of M-22 have the potential for high-acuity calls. The Township Hall and Lutheran Church constitute the assembly-type occupancies for Cleveland Township.

Kasson Township

Kasson Township has more and larger commercial districts than the two northern townships but also has smaller areas zoned for recreation or owned by the National Park Service. One of the villages served by CAFR, Maple City, is located in Kasson Township. Kasson Township has numerous assembly- or institutional-type occupancies, including Glen Lake Community Schools, Maple Valley Nursing Home, churches, and the township hall. Kasson Township contains one gas station and one propane gas provider. Kasson Township also contains extensive industrial mining operations in the gravel zoning district and is home to the only landfill in the district, located on M-72.

Solon Township

Solon Township has more and larger commercial districts than the two northern townships and also includes a resort recreation area on the far eastern side of the service area. One of the villages served by CAFR, Cedar, is located in Solon Township. Assembly-type occupancies in Solon Township include West Side Community Church and the township hall. Solon Township is home to the largest gas station and the largest propane gas provider in the service area as well as one other gas station and one other propane gas provider.

In addition to its existing commercial areas, as of April 2024, Solon Township is in the process of reviewing and amending their Master Plan, including their Future Land Use maps. The April 2024 draft maps call for expansions to the business-zoned districts in Solon Township, both in the village of Cedar and along M-72, including the creation of a new business-zoned district at M-72 and Cedar Road. While these maps have not yet been approved or incorporated into the current Zoning Map, they have the potential to substantially expand commercial use along M-72 in Solon Township.

Growth Patterns

According to data from the Leelanau County Department of Building Safety, growth continues throughout the four-township area. Single family residential construction and residential accessory construction are relatively similar throughout the four townships. Commercial construction has been seen more heavily in Kasson and Solon Townships, and those are the only townships that have seen multi-family construction. All multi-family construction in the four-township area has happened since 2020.

New permits for residential and commercial construction in the four townships for the period from 2010 through 2023 are as follows:

Centerville Township			
	2010-2014	2015-2019	2020-2023
Residential - Single Family/Mobile Home	11	37	44
Residential - Garage/Accessory Structure	26	27	34
Commercial	1	3	1

Cleveland Township			
	2010-2014	2015-2019	2020-2023
Residential - Single Family/Mobile Home	15	40	39
Residential - Garage/Accessory Structure	10	20	27
Commercial	1	2	3

Kasson Township			
	2010-2014	2015-2019	2020-2023
Residential - Single Family/Mobile Home	29	50	31
Residential - Multi-Family	0	0	4
Residential - Garage/Accessory Structure	25	37	26
Commercial	12	7	13

Solon Township			
	2010-2014	2015-2019	2020-2023
Residential - Single Family/Mobile Home	15	22	39
Residential - Multi-Family	0	0	8
Residential - Garage/Accessory Structure	20	19	13
Commercial	5	4	1

Traffic Considerations

The CAFR service area is served by an extensive system of state, county, and private roads.

In 2020, RS Engineering, in partnership with the Michigan Department of Transportation and local jurisdictions, conducted a road safety audit on M-72 from Maple City Road to Lautner Road, an approximately 6.25 mile stretch, all of which is within the service area for CAFR. This study considered multiple aspects of traffic data in this area and showed that thousands of vehicles use this stretch of road daily, with traffic peaking at over 500 vehicles per direction per hour at the busiest times. Cedar Road was found to be the busiest intersection studied, with 8,800-11,000 vehicles per day traversing M-72 at this intersection, and while traffic decreased further west, an average of 6,200 vehicles per day

traversed M-72 at Partridge Run Road and an average of 2,400 vehicles per day were counted on Maple City Road north of M-72.

The survey identified four fatal crashes along M-72 between 2015 and 2019, two of which occurred at Cedar Road, one at Maple City Road, and one between intersections at a private driveway. The findings of the study led to the installation of a traffic light at M-72 and Cedar Road; since that installation, no fatal crashes have been recorded on M-72 in the surveyed area. The survey identified 68 overall crashes along M-72 between 2015 and 2019, an average of 13.6 crashes per year requiring some sort of emergency response. The study identified numerous areas for concern regarding safety along the 6.25 mile stretch of M-72. The largest areas of concern identified were “low areas” along the corridor unprotected by guardrails, the area of M-72 between Tilton and Solon Road, the Cedar Valley Run area, the Cedar Road intersection (since upgraded with traffic control device), and the Maple City Road intersection. While county and MDOT engineers will continue working to address these issues, first responders must be prepared to respond to accidents in known areas of concern.

In 2024, Leelanau County released PASER (Pavement Surface Evaluation and Rating) results from a survey conducted in 2023. The study found that county-wide, 51% of the 168.7 miles of primary roads are in good condition, 38% are in fair condition, and 11% are in poor condition. Out of 308.3 miles of local roads county-wide, 25% are in good condition, 50% in fair condition, and 25% in poor condition. However, in the southern part of the CAFR service area, these numbers look significantly different, with only 11% of local roads in Kasson and 15% of local roads in Solon being considered in good condition. See below for a full summary of PASER ratings in Leelanau County.

Mileage and PASER Ranking

	Good	Fair	Poor		
Primary Roads (mileage based)					
State Wide	27%	38%	35%	Miles	
Primary Roads	51%	38%	11%	168.7	
Local Roads (mileage based)					
State Wide	20%	35%	45%	13,049.0	
County Wide	25%	50%	25%	308.3	
				Miles	% of Total
Glen Arbor Twp	55%	40%	5%	15.658	5%
Leelanau Twp	34%	44%	22%	44.457	14%
Centerville Twp	32%	49%	19%	25.994	8%
Suttons Bay Twp	32%	55%	13%	38.671	13%
Bingham Twp	27%	58%	15%	27.509	9%
Cleveland Twp	25%	50%	25%	26.454	9%
Empire Twp	16%	65%	19%	18.323	6%
Leland Twp	15%	54%	31%	30.618	10%
Solon Twp	15%	40%	45%	15.896	5%
Elmwood Twp	12%	57%	31%	28.937	9%
Kasson Twp	11%	43%	46%	35.823	12%

While CAFR is not responsible for the maintenance and upgrades of infrastructure, the department is responsible for responding to incidents that are the likely outcome when that infrastructure is poorly

maintained. In addition, poorly maintained infrastructure can easily lead to extended response times as emergency apparatus must travel more slowly or take alternate routes to incidents.

Service Area Concerns

There are several general areas of the CAFR service area that present concern for emergency services response due to a variety of factors:

- Downtown Maple City – This area of older, closely-set buildings presents a challenge for firefighting operations and a potential for extensive fire spread.
- Downtown Cedar – This area of older, closely-set buildings presents a challenge for firefighting operations and a potential for extensive fire spread.
- Southeast Solon Township – Southeast Solon Township has the potential for extensive growth in both residential and non-residential occupancies, due to its proximity to the quickly-growing areas of Traverse City, Elmwood Township, and Garfield Township. Developers of both residential and commercial occupancies have shown ongoing interest in this region of the service area, and numerous potential developments and re-zonings are currently in the process of being requested in Solon Township. This potential growth is coupled with an extended travel distance from the existing Cedar station.
- Southwest Kasson Township – Southwest Kasson Township currently has the longest travel distance from both the Cedar station and 24/7 staffed mutual aid department stations. Commercial developments continue to be requested and built along M-72 in this region in addition to ongoing expansion of the gravel pits in the center of the township.
- Northwest Cleveland Township – Northwest Cleveland Township is another portion of the CAFR coverage area that has extended travel distances from both the Cedar station and 24/7 staffed mutual aid department stations. While this area is not heavily populated, it does generate a number of high-acuity calls due to the recreation areas located on Wheeler Road and in National Park Service lands.
- M-72 Corridor – The M-72 corridor has a history of both high call volumes and high acuity calls. This corridor overlaps with the areas of concern of both southeast Solon Township and southwest Kasson Township. The corridor includes a large portion of the commercial and industrial occupancies in the CAFR service area and sees increasingly large volumes of traffic (and associated incidents) from both residents and visitors.

Response Times

Response times vary greatly from the current station in Cedar to the outlying edges of the service area. While drive times to calls within Cedar can take only a minute or two, the average drive time for all calls in 2023 was just over 9 minutes. Some portions of the service area average drive times of 11 to 12 minutes and outlying areas along the north- and south-western corners of the service area saw drive times of 15 minutes or more. Responses to emergencies along M-72 frequently have a drive time of 10 minutes or more. When added to the time taken for dispatch and departure from the station, this means that calls along the outlying boundaries of the service area can see response times from 911 call to arrival on scene of almost 20 minutes. In southwestern Kasson Township this response time cannot be improved by mutual aid, as drive time from the closest full-time mutual aid station is just as long to

these areas. See Appendix 2 for maps of the current service coverage from the Cedar station and full-time mutual aid stations.

It must be noted that while emergency vehicles have the ability to drive with lights and sirens when needed, this only serves to request that traffic give the emergency vehicle the right-of-way on the road. Poor road conditions, including everything from inclement weather to road construction that makes roads impassable to the standard hills and curves of Leelanau County roads, lead to emergency vehicles having to travel at the same pace as (or slower than) other traffic, regardless of their ability to use lights and sirens. This means that in the event of a snow storm, a culvert replacement, or numerous other potential events, the response times discussed in the preceding paragraph could be even longer.

Recommendations

Based on the conditions examined for this assessment, the staff at Cedar Area Fire & Rescue recommend that a new station be constructed in Kasson Township. This station should be located to have the greatest impact possible on the highest number of current and future residents, businesses, and visitors.

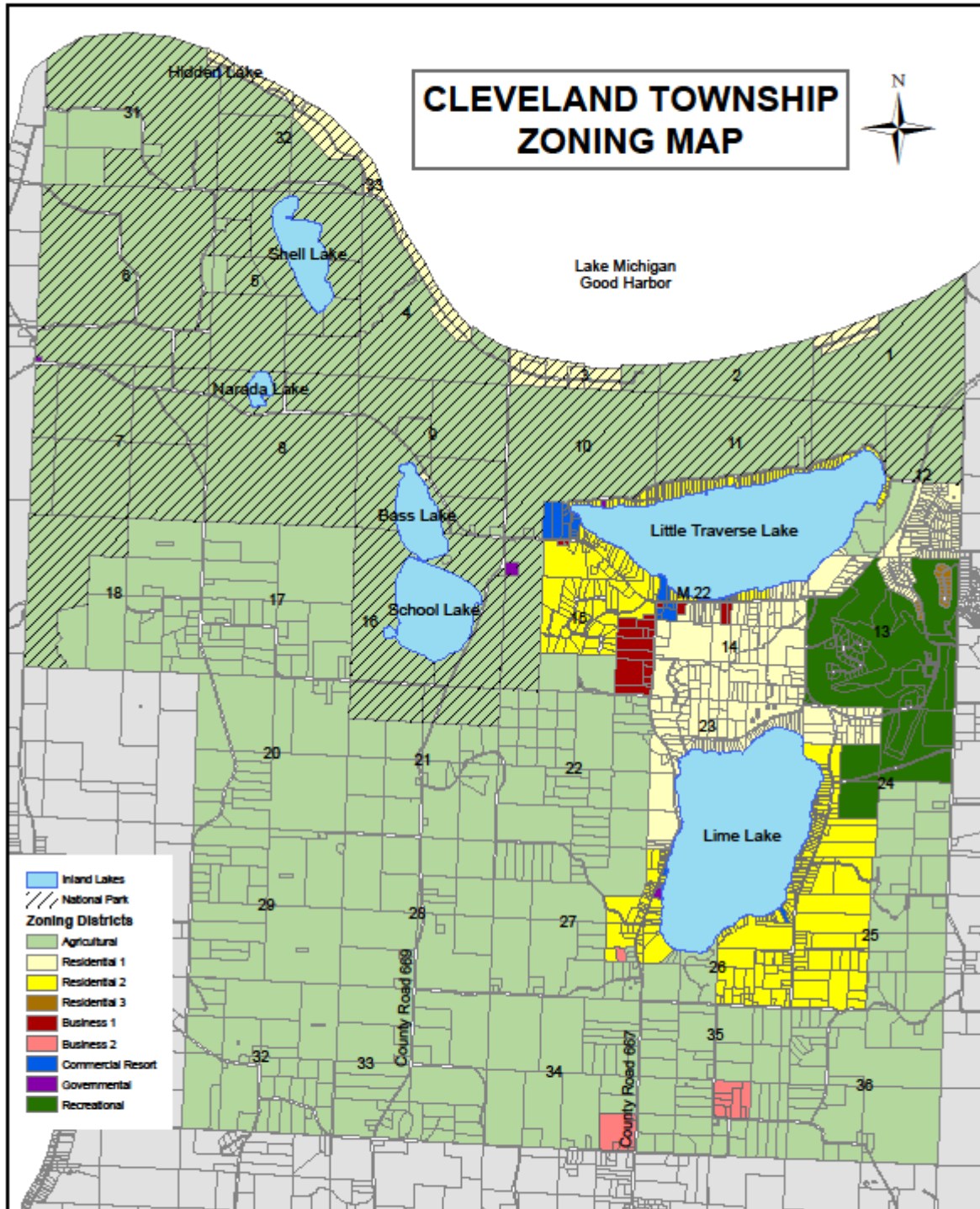
Due to the accelerating growth seen in residential and commercial growth in Kasson and Solon Townships, the large amount of traffic on M-72, and the current extended response times to numerous locations of concern, the current recommendation of the Cedar Area Fire & Rescue Fire Chief is that the station be located on or near M-72, specifically in the area between Coleman Road and Maple City Road. See Appendix 2 for maps of the proposed service coverage of a station in this area. A station in this location will fill a large service hole in western Kasson Township, provide improved service to almost the entire stretch of M-72 in the CAFR service area, and improve coverage of numerous occupancies and areas of concern in the service area.

It is preferable that the station be placed on a parcel of property at least 5 acres in size, to allow for the greatest benefit for ISO (insurance) ratings. It is recommended to attempt to find a parcel that has easy access to three-phase power and natural gas to allow for appropriate utilities. The parcel should front on a Class-A Road with good visibility in both directions to allow for easy ingress and egress by emergency vehicles, staff, and community members. Availability of property may be a key factor in the decision-making process for the location of a new station, and private seller opportunities will need to be researched, given that as of May 29, 2024 there are no realtor-listed properties in Kasson Township which meet these criteria.

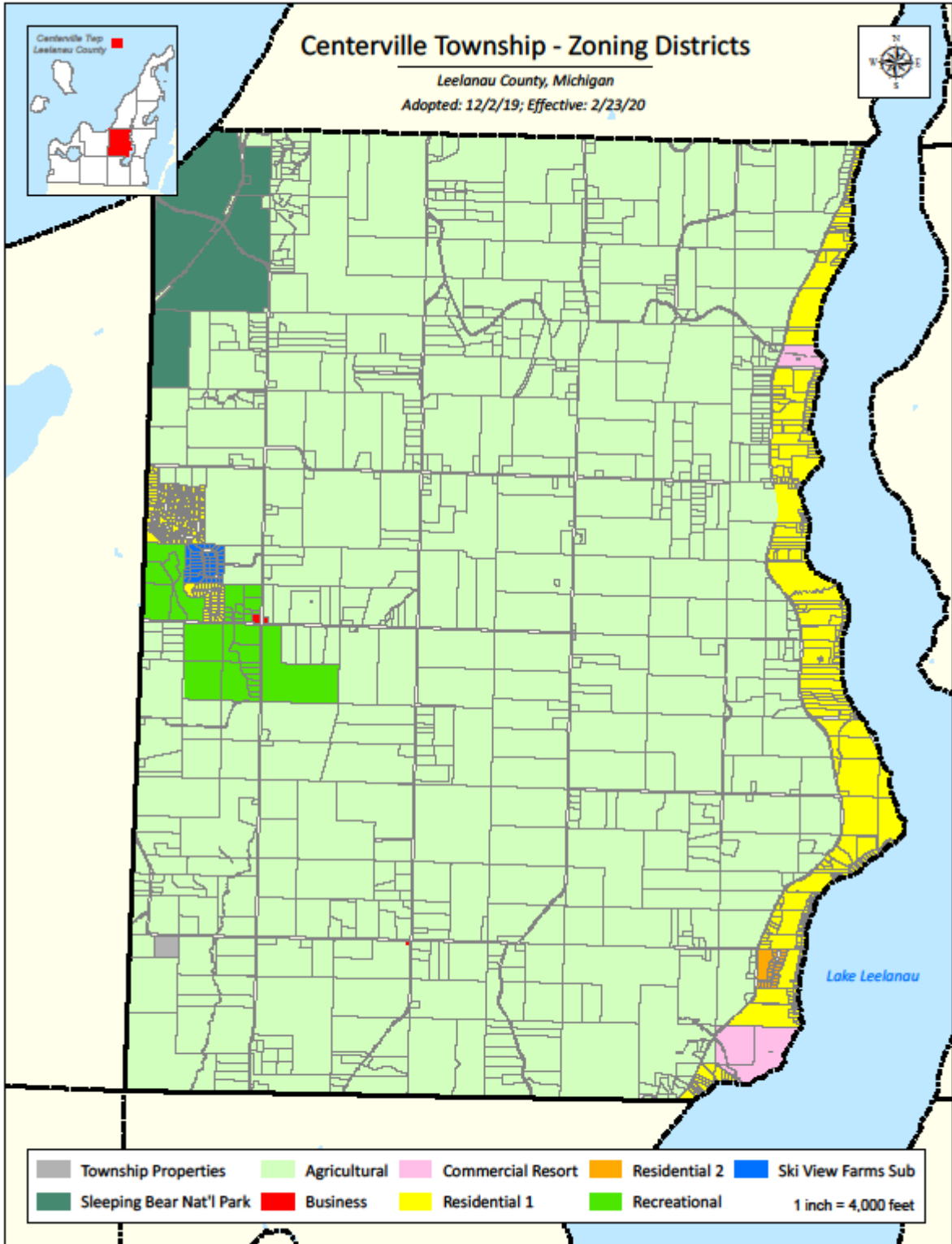
Sources

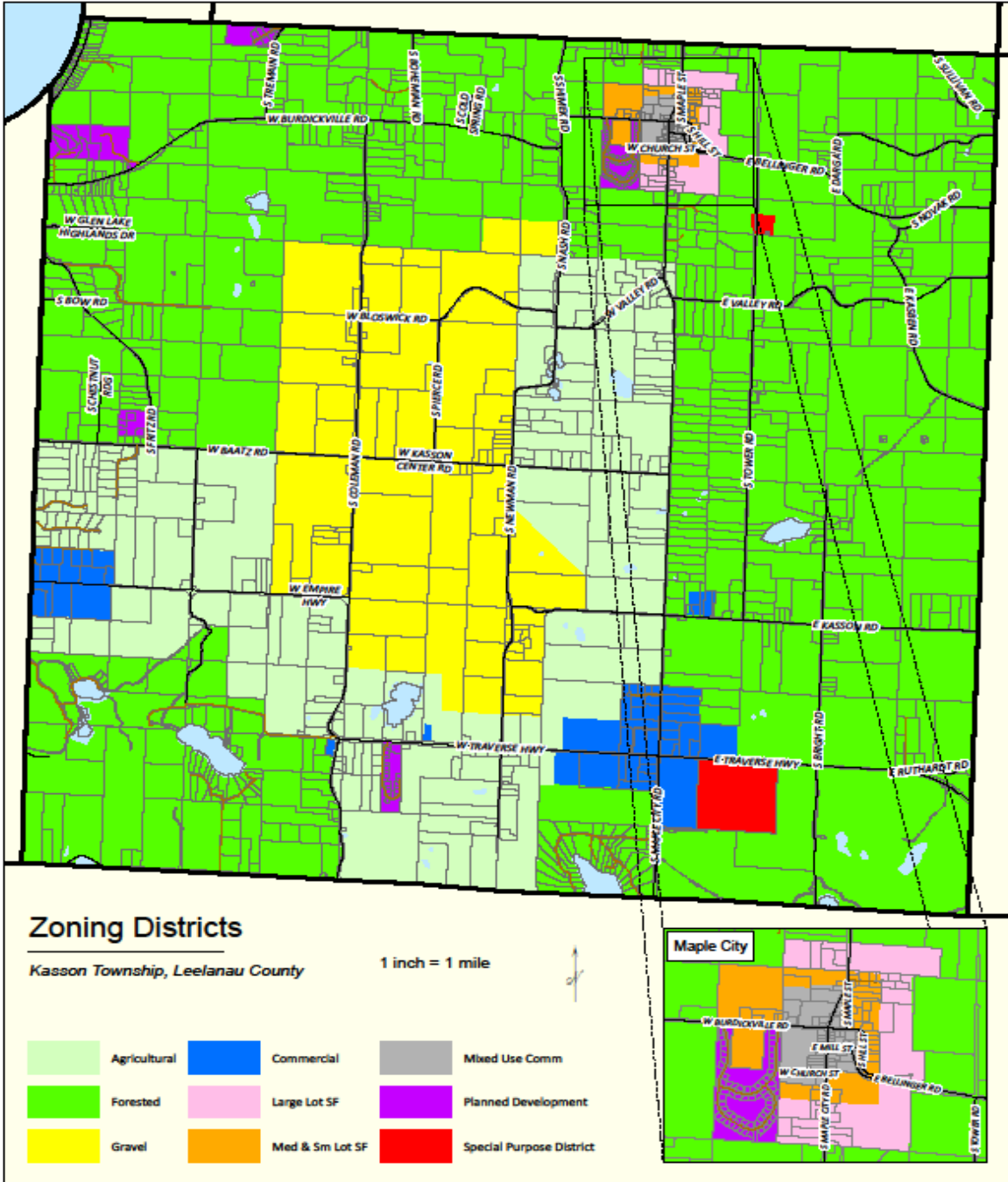
- 2020 United States Census
- Housing North 2023 Housing Needs Assessment
(<https://static1.squarespace.com/static/61768dc8a236c639b8fe44ec/t/649c3611a9ae9c791c30a16a/1687959077783/RS+Northern%2C+MI+22-463+%28Housing+Needs+Assessment%29.pdf>)
- Networks Northwest 2022 Seasonal Population Study for Northwest Lower Michigan
(<https://www.networksnorthwest.org/userfiles/filemanager/49nwyzb28vz3voy6gk/>)
- Township Zoning Maps – Centerville, Cleveland, Kasson, Solon – As of 4/18/2024
- Solon Township Draft Future Land Use Maps – As of 4/18/2024
- Leelanau County PASER Summary, January 2024
- Road Safety Audit, M-72 (Traverse Hwy) from Maple City Road to Lautner Road (CS 45021, JN 203002)
- Leelanau County Department of Building Safety, 2024 Data

Appendix 1 - Zoning Maps



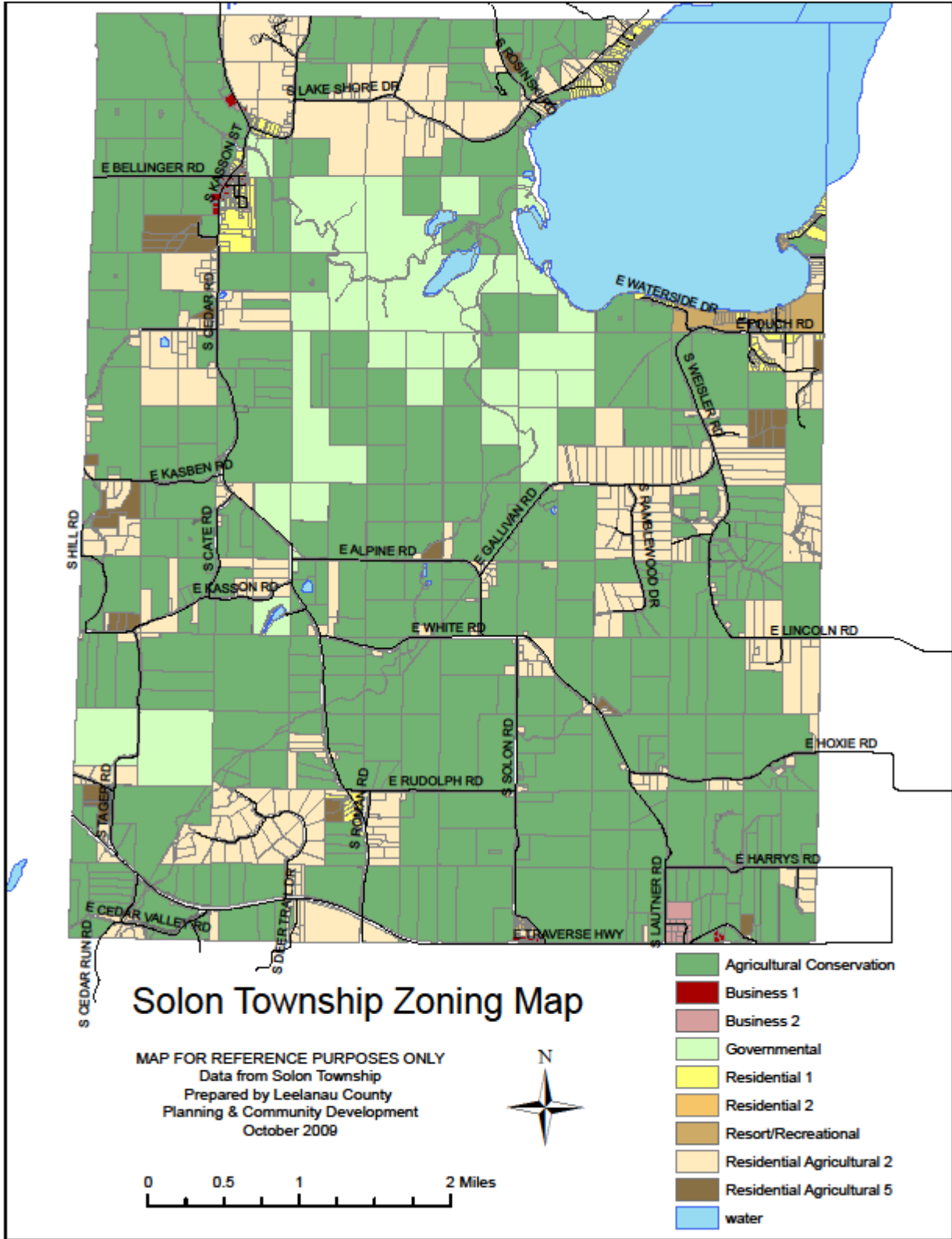
Map for Reference Purposes Only
 Data from Cleveland Township
 Prepared by Leelanau County
 Planning & Community Development
 September 2012





This map is prepared by Leelanau County for reference purposes only. Leelanau County is not liable for any errors that may be found in this map.

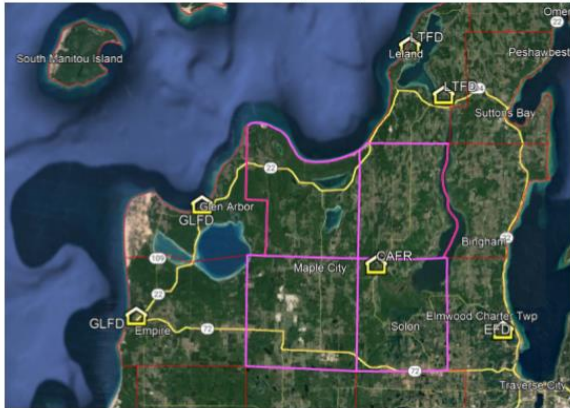
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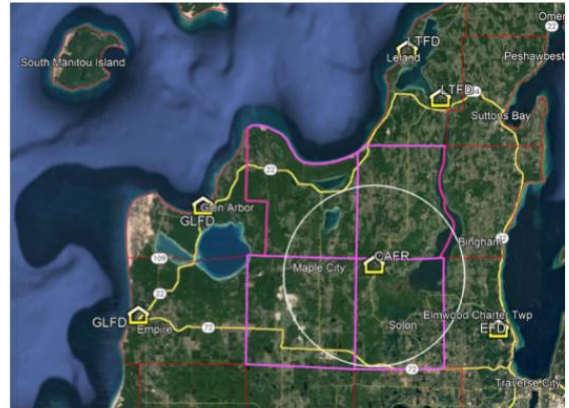
Appendix 2 – Service Area Maps

Existing County Fire Station Layout and Response Area

Existing Fire Station Shown With Other Leelanau County Departments

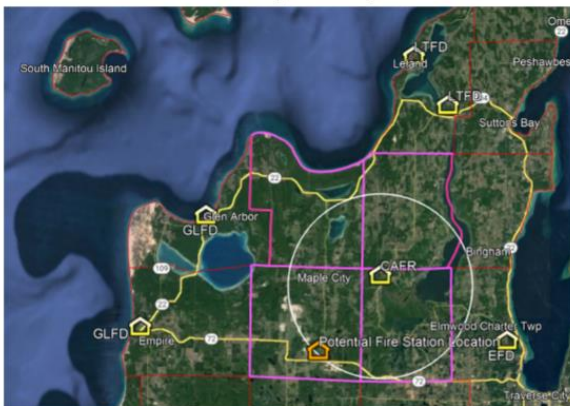


White Line Represents a 5-Mile Radius From The Existing Fire Station



Potential Fire Station Area #1

Potential Area For Additional Station – M-72 & Maple City Road



Orange Line Depicts A 5-Mile Radius From That Location

