



VILLAGE OF WILLIAMS BAY

250 Williams Street | PO Box 580 | Williams Bay | WI | 53191 | vi.williamsbay.wi.gov

Phone: 262-245-2700

NOTICE

PROTECTIVE SERVICES COMMITTEE MEETING

WEDNESDAY, JUNE 12, 2024 AT 4:00 PM

Village Hall Council Room

250 Williams Street

Williams Bay, WI 53191

AGENDA

The following agenda items may be considered for Discussion, Consideration, or Action

- I. Call to Order
- II. Roll Call
- III. Consideration and Possible Action on Public Administration Associates (PAA) Public Safety Study; Staffing and Fleet Projections Re Williams Bay Fire Department & Fontana Emergency Medical Services (EMS)
- IV. Discussion or Action on Next Steps, Including Possible Long-Term Agreement with the Village of Fontana for Emergency Medical Services
- V. Adjourn

George Vlach

Protective Services Chair

Requests from persons with disabilities, who need assistance to participate in this meeting or hearing, should be made to the Village Clerk's office in advance so the appropriate accommodations can be made.

Posted: 06/11/2024 4:00 PM

STAFFING AND FLEET PROJECTIONS

Village of Fontana-
Police and Fire
Departments



Village of Williams Bay-
Fire Department



Prepared by:
Public Administration
Associates, LLC.

Goals of the Study

- ▶ Make recommendations regarding the future of public safety operations
Emphasizing:
 - ▶ Projected staffing
 - ▶ Vehicle/apparatus needs
 - ▶ Potential station locations
 - ▶ Guidance on future station design needs



What are the issues if any?

- The Fire Stations of both communities have space and structural issues
- Concerns in meeting future demand
- Dwindling Paid On-Call/Volunteer Staff
- Future regional efforts



Fontana Facts Significant to Public Safety

Year	2020 Projection	Current Permanent	2025 Projection	2030 Projection	2035 Projection	2040 Projection
Permanent	1,872	1,875	1,715	1,730	1,690	1,630
Seasonal	8,400	8,400	8,400	8,400	8,400	8,400
Total Population	10,080	10,275	10,115	10,130	10,090	10,030

Demographics

Median Age -55.6 Walworth County 40.5 years

25-44 age 27.4% of population in 2000 to
16.3% in 2015

Over-64 group 48% of population

Area and Property Risk

3.5 square miles

66% of the Village's total land area is
residential or mixed residential

Williams Bay Facts Significant to Public Safety

	2020 Census	Current Population	2025 Projection	2030 Projection	2035 Projection	2040 Projection
Permanent	2,953	2,989	3,184	3,433	3,701	3,991
Seasonal	2,953	2,989	3,184	3,443	3,701	3,991
Total	5,906	5,978	6,368	6,876	7,402	7,982

Demographics

Median Age -48.2 Walworth County 40.5 years

Over-64 group 27% of population

92% of Village residents commute outside of Williams Bay for work

Area and Property Risk

2.8 square miles

31% of the Village's total land area is residential or mixed residential

Fontana Fire and EMS Department

- ▶ Provides Fire response and Emergency Medical Ambulance Service at the Paramedic level to the Villages of Fontana and Williams Bay by contract
- ▶ Fire Chief (Part-time)
- ▶ Assistant Chief (Part-time)
- ▶ 13 Firefighter Paramedics Full-time Career- Part-time Equivalent of 1 FTE
 - ▶ 4 Minimum on Duty in Station (s) 24/7;
 - ▶ Chief Officer or Part-time in station Weekdays 7-5, 1 Part-time peak times on weekends
- ▶ 4- Part-time
- ▶ 16 Paid-on-Call Department members on roster



Fontana Fire and EMS Department

- ▶ One station-shared with Police Department
- ▶ One Station
- ▶ 3- Ambulances (One leased from Williams Bay)
- ▶ 2-Engines
- ▶ 1- Quint (Combination Engine and Ladder Truck)
- ▶ 1- Grass/Brush Truck
- ▶ 2- Boats
- ▶ Dive/Rescue Trailer
- ▶ Command Vehicle



Call Type	One year data			6 month data		
	2022-23 Outside of Village	2022-23 in Village	2022-23 Total Calls	2023 Outside of Village	2023 in Village	2023 Total Calls
Fire:						
Building Fire	5	0	5	9		9
Cooking Fire	2	0	2	1	2	3
Vehicle Fire	2	0	2			0
Fire Other	1	2	3	1	1	2
Outdoor Fire	4	4	8	1	1	2
Rescue:						
EMS Call	337	228	565	203	92	295
Vehicle Accident	10	7	17	4	7	11
Invalid Assist	15	19	34	2	3	5
Water Rescue		4	4	2	0	2
Rescue Other		3	3		1	1
Hazardous Condition:						
CO Alarm	2	15	17	1	7	8
Gas Leak	1	8	9		5	5
Wire Down		4	4		2	2
Haz Mat Spill/Leak		1	1		0	0
False Alarms:						
Alarm, no fire, false	6	54	60	2	29	31
Sprinkler malfunction		0	0		0	0
Smoke Scare	2	4	6		1	1
Service Call:						
Cover/Move Up	7		7	1		1
Cancelled En Route	26	7	33	9	5	14
Misc. Service Call	2	13	15	1	8	9
Total Calls	422	373	795	237	164	401

Demand for Service



Service Performance

Response time	2022-23 in Village	2023 in Village
<6 minutes	82%	74%
<10 minutes	98%	94%
>10	2%	6%



What is “Good” Response Time Performance

NFPA 1720 Standard for the Organization and Deployment of Fire Suppression, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments

- ▶ Urban areas (1,000 population/sq. mile) of 15 personnel on scene in 9 minutes total response time or less 90% of the time.
- ▶ Suburban areas (500-1,000 population/sq. mile) 10 personnel on scene with a response time of 10 minutes or less, 80% of the time
- ▶ Rural areas (500-1,000 population/sq. mile and 6 personnel on scene in 14 minutes 80% of the time for

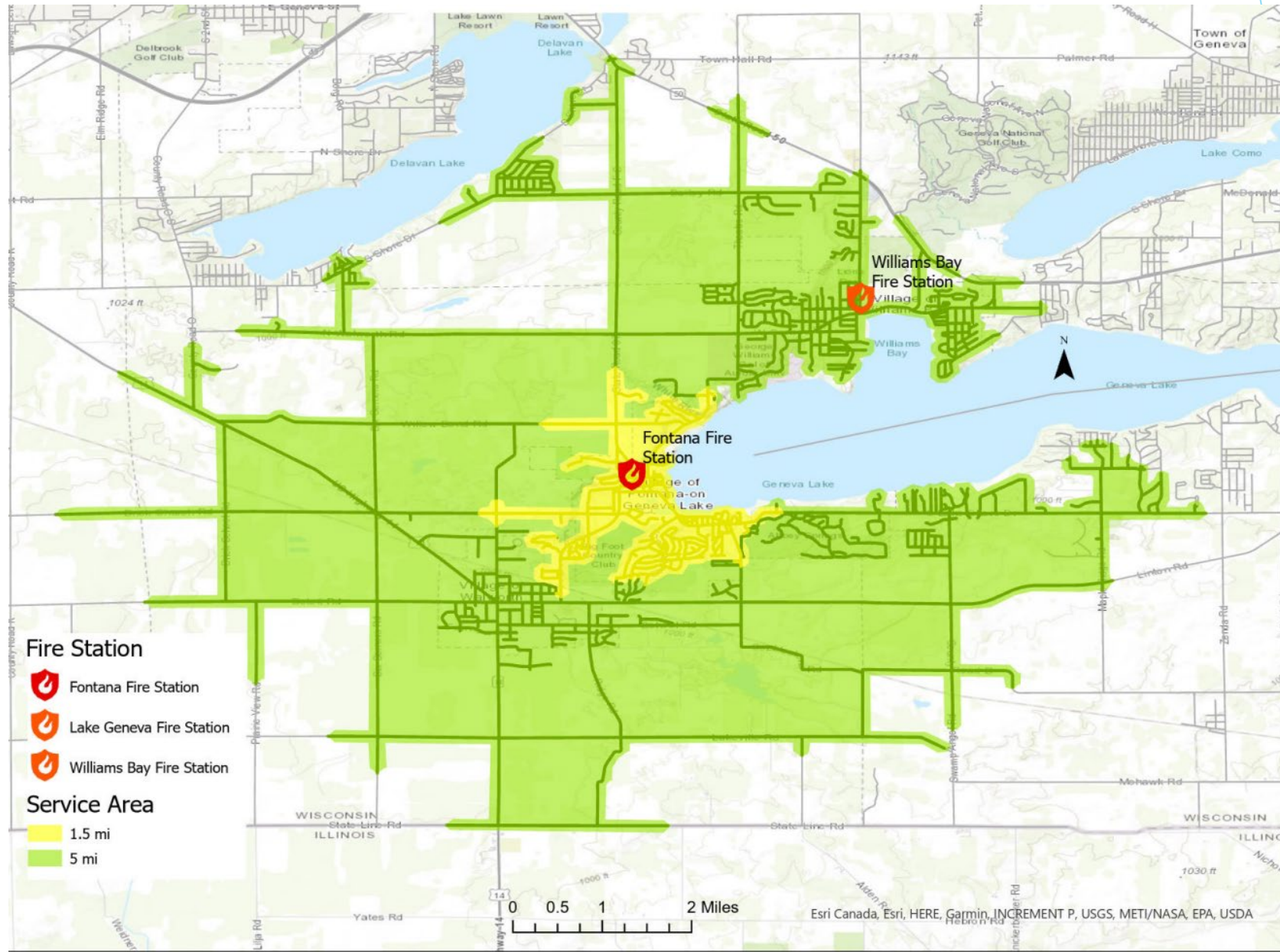


Insurance Service Office ISO Rating

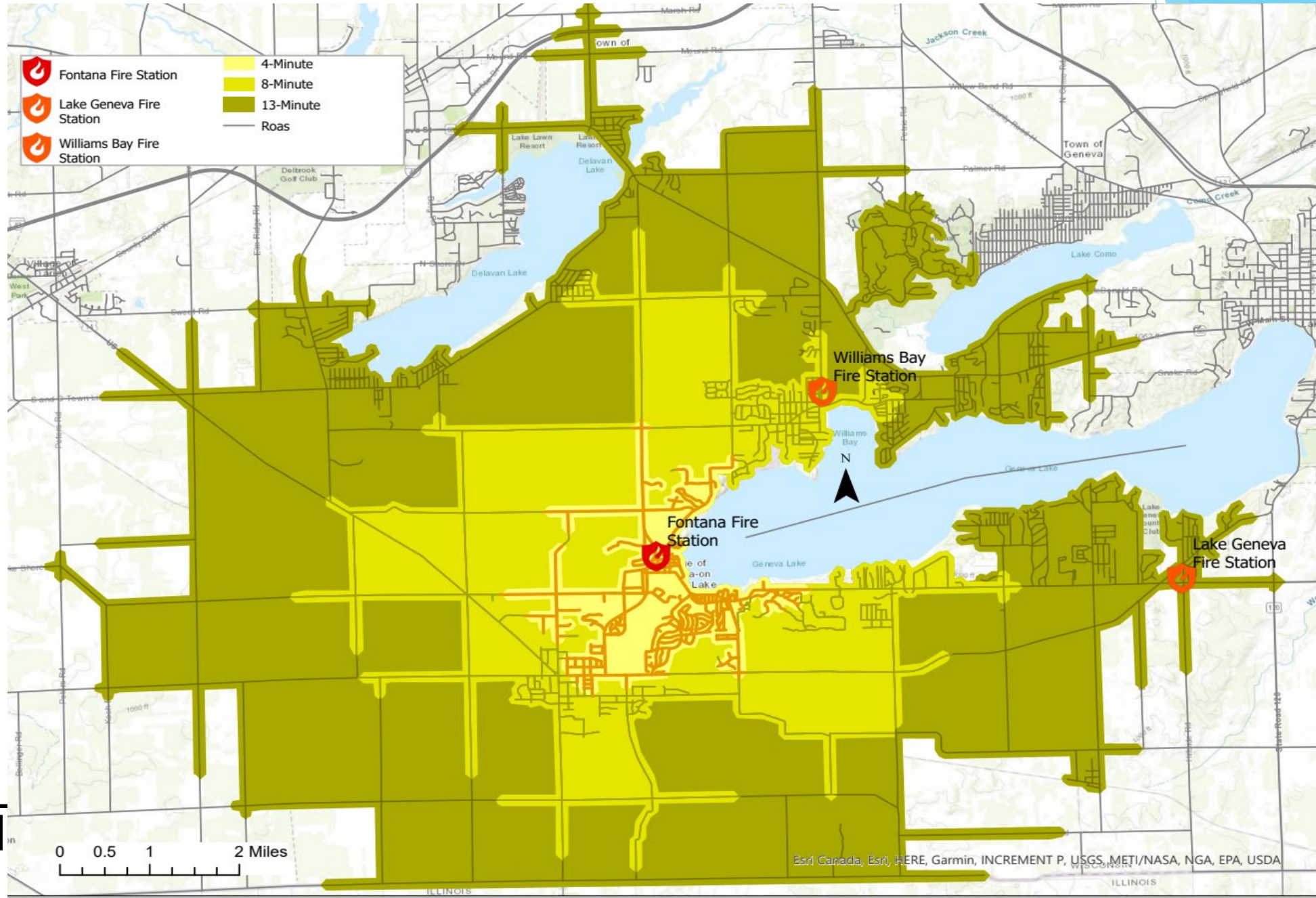
- ▶ Overall ISO Rating Is on a scale of 1-10, with 1 being the best.
- ▶ Three areas rated, Dispatch/Communications- Fire Department-Water Supply
- ▶ Fire Department Rating
 - ▶ Maximum Credit for response is less than 1.5 miles
 - ▶ Must be within 5 miles of the station to receive any fire department credit
 - ▶ Personnel credit
 - ▶ 4 per Fire Company
 - ▶ Paid on Call Staff/Volunteers counted as 1/3
- ▶ Current rating for the Village of Fontana is 3/3y



Village of Fontana Current Station ISO Distance



Village of Fontana Current Response Travel Times



Williams Bay Fire Department

- ▶ Provides Fire Response to Village of Williams Bay
- ▶ All Members are Paid-on-Call
- ▶ Fire Chief
- ▶ Assistant Chief
- ▶ 3-Captains (1-EMS)
- ▶ 2-Lieutenants
- ▶ 16-Firefighters Paid on Call Department on roster



Call Type	2020	2021	2022	2023
Fire:				
Building Fire	5	5	7	9
Cooking Fire	0	1	0	
Vehicle Fire	2	1	0	2
Fire Other	2	1	3	18
Outdoor Fire	2	7	3	0
Rescue:				
EMS Call	5	4	4	0
Vehicle Accident	7	4	3	4
Invalid Assist	0	2	3	
Water Rescue	3	4	1	
Rescue Other	1	1	2	
Hazardous Condition:				
CO Alarm	10	5	5	
Gas Leak	4	6	4	3
Wire Down	2	7	3	
Haz Mat Spill/Leak	4	1	0	
False Alarms:				
Alarm, no fire, false	50	55	29	62
Sprinkler malfunction	0		0	0
Smoke Scare	0	15	24	
Service Call:				
Cover/Move Up		3	2	2
Cancelled En Route	31	19	10	
Misc. Service Call	7	5	9	1
Total Calls	135	146	112	101

Demand for Service

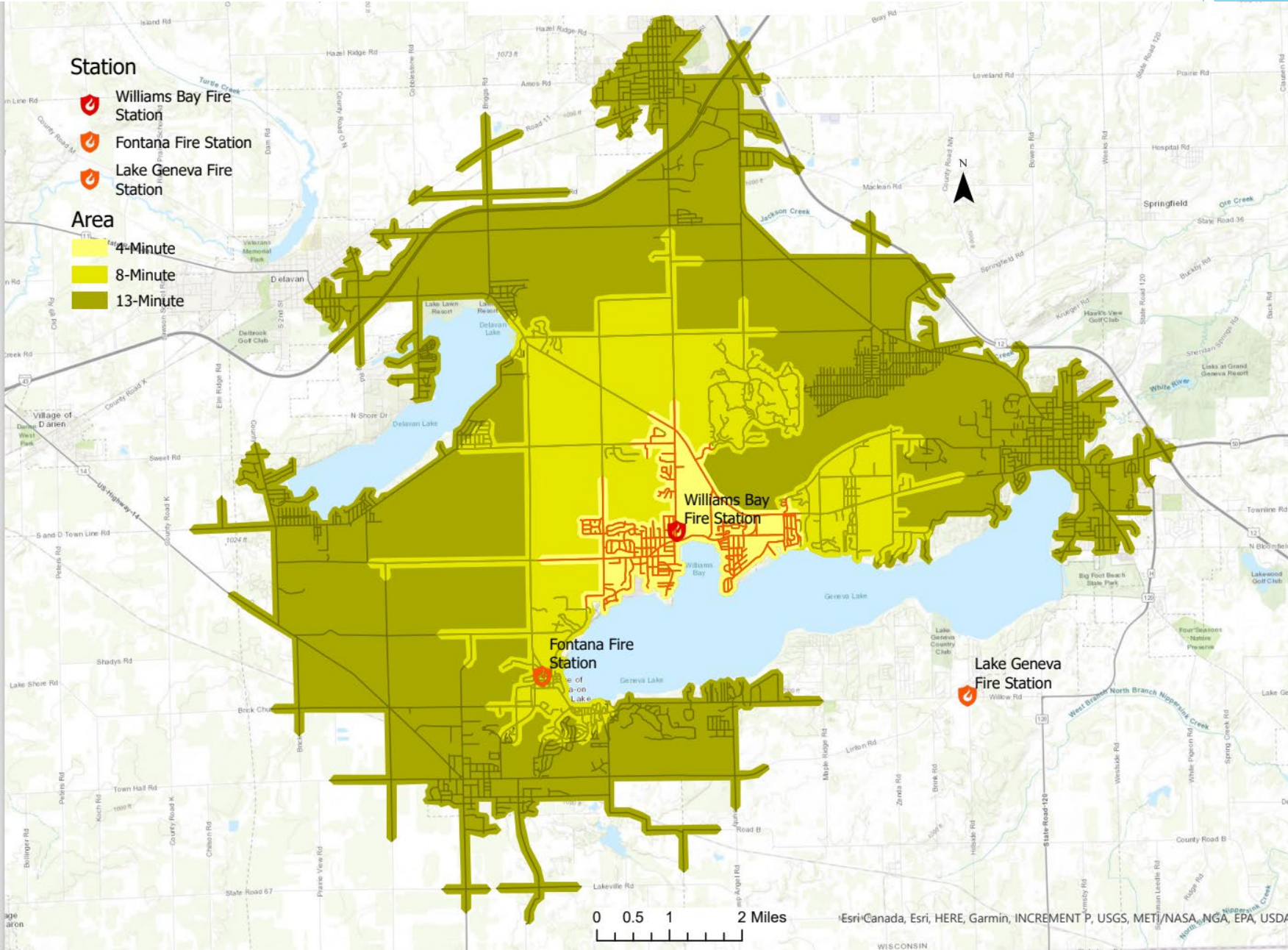


Service Performance

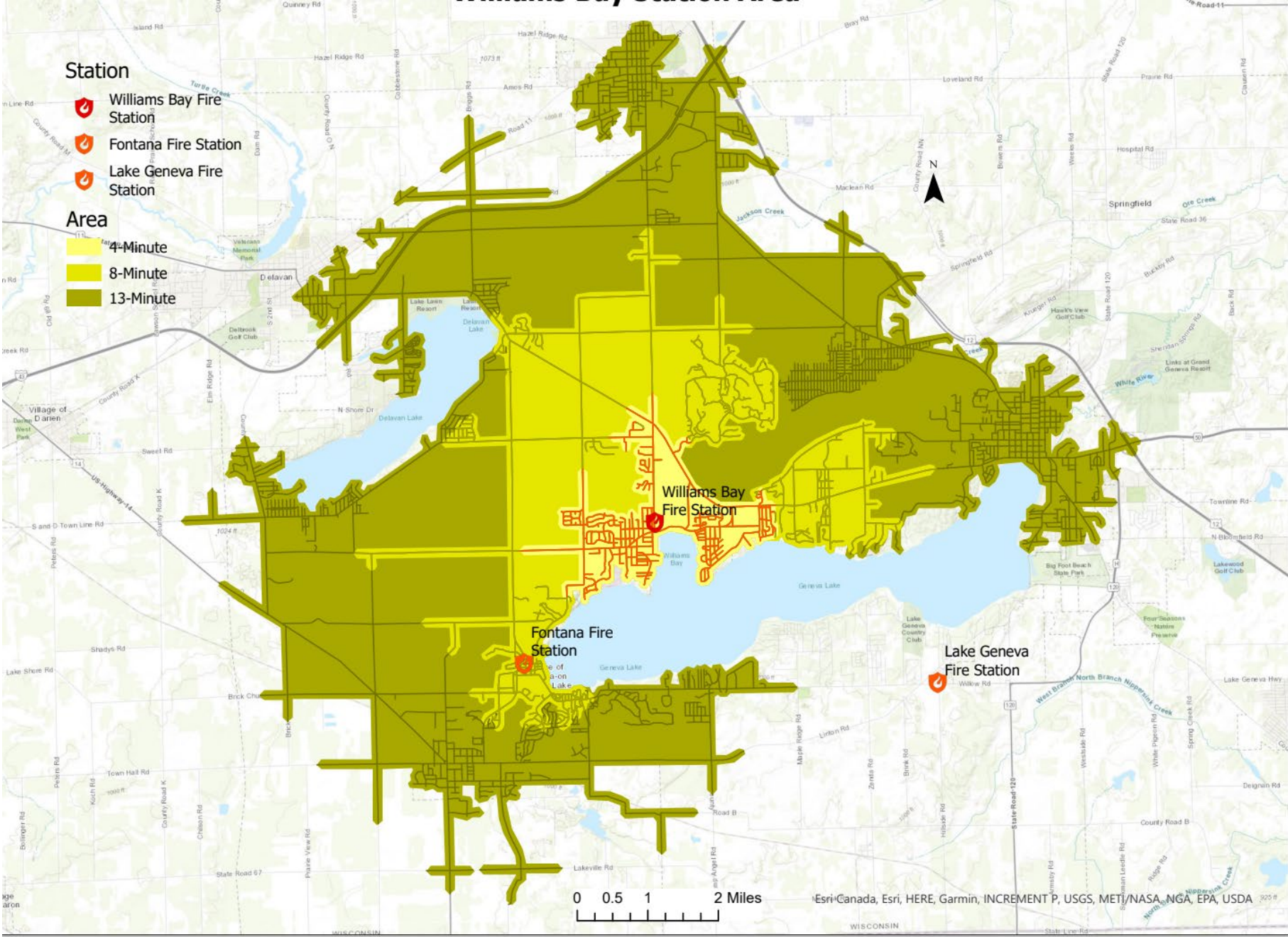
Response time	2022	2023
<6 minutes	67%	54%
<10 minutes	98%	82%
>10	1%	18%



Village of Williams Bay Current Station ISO Distance



Village of Williams Bay Current Response Travel Times



Future Station Considerations

- ▶ Maintain or improve response travel times
- ▶ Adequate space for current and future station needs
- ▶ NFPA 1710/1720 Standards for location and staffing
- ▶ ISO Rating System
- ▶ Available land
- ▶ Future regional efforts



Shared Station Hwy 67 and Walworth Rd

Advantages

- ▶ Land space
- ▶ Shared training/meeting space

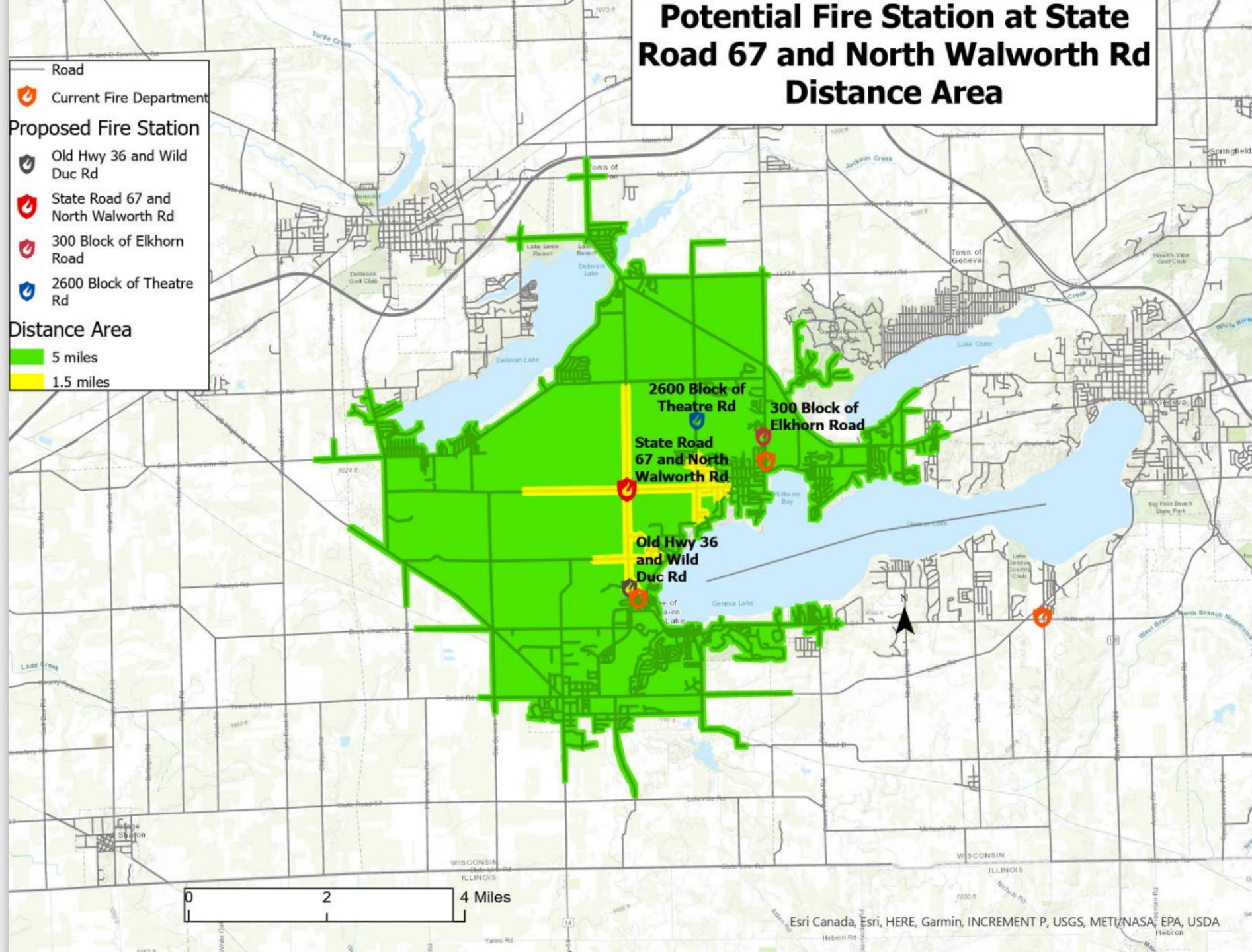
Disadvantages

- ▶ Does not meet response time parameters for either community
- ▶ Not located in either community
- ▶ Limited economies of scale with two separate departments

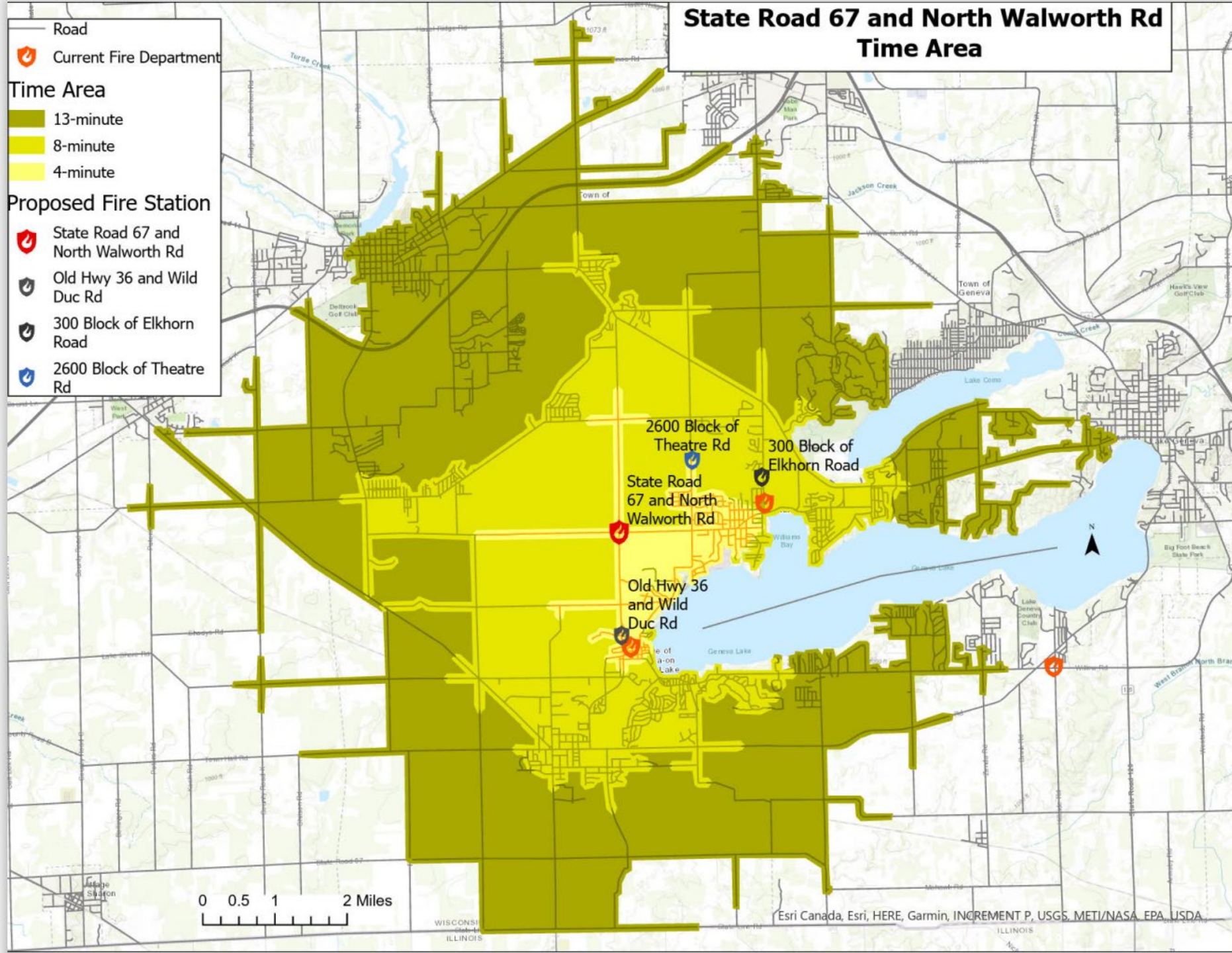


Potential Fire Station at State Road 67 and North Walworth Rd Distance Area

- Road
- Current Fire Department
- Proposed Fire Station**
 - Old Hwy 36 and Wild Duc Rd
 - State Road 67 and North Walworth Rd
 - 300 Block of Elkhorn Road
 - 2600 Block of Theatre Rd
- Distance Area**
 - 5 miles
 - 1.5 miles



State Road 67 and North Walworth Rd Time Area



Fontana Station Apparatus and Staffing

Staffing the current need for Fontana:

7:00 AM to 5:00 PM Monday through Friday (two options):

Engine: 1 cross-trained Firefighter/Paramedic Driver/Operator

Ambulance: 2 (two cross trained Firefighter/Paramedics)

With a POC response

Or

Engine: 1 cross-trained Firefighter/Paramedic Driver/Operator

1- cross-trained Officer/Paramedic

Ambulance: 2 (two cross-trained Firefighter/Paramedic)

With a POC response

5:00 PM to 7:00 AM

As currently staffed

4-cross trained Firefighter/Paramedic

With a POC response



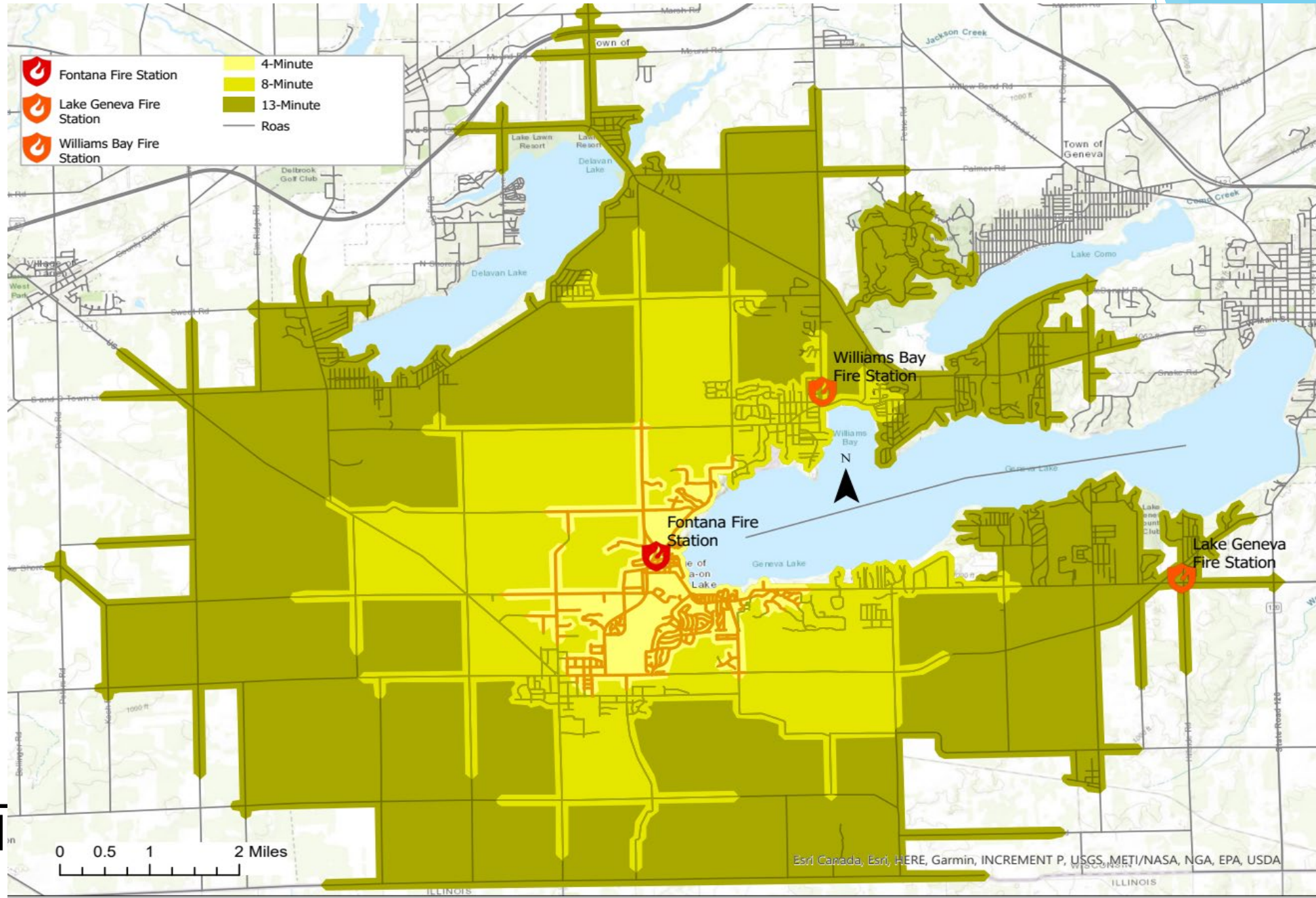
Fontana Station Apparatus and Staffing

- ▶ Future Staffing- in 24 hour staffing potential need
 - ▶ Engine 4 Personnel
 - ▶ Ambulance 2 Personnel
 - ▶ Quint 3 Personnel
 - ▶ Chief 1 Person
 - ▶ Station Should be designed for at least 10 Personnel
 - ▶ Added Capacity can also be used to staff up for peak demand times
- ▶ Fire Apparatus
 - ▶ Primary Staffed Engine
 - ▶ Reserve Engine
 - ▶ Quint Ladder Truck
 - ▶ Primary Ambulance
 - ▶ Reserve Ambulance
 - ▶ Brush/Tow Vehicle
 - ▶ Air Boat
 - ▶ Command Vehicle
 - ▶ Tech Rescue Trailer

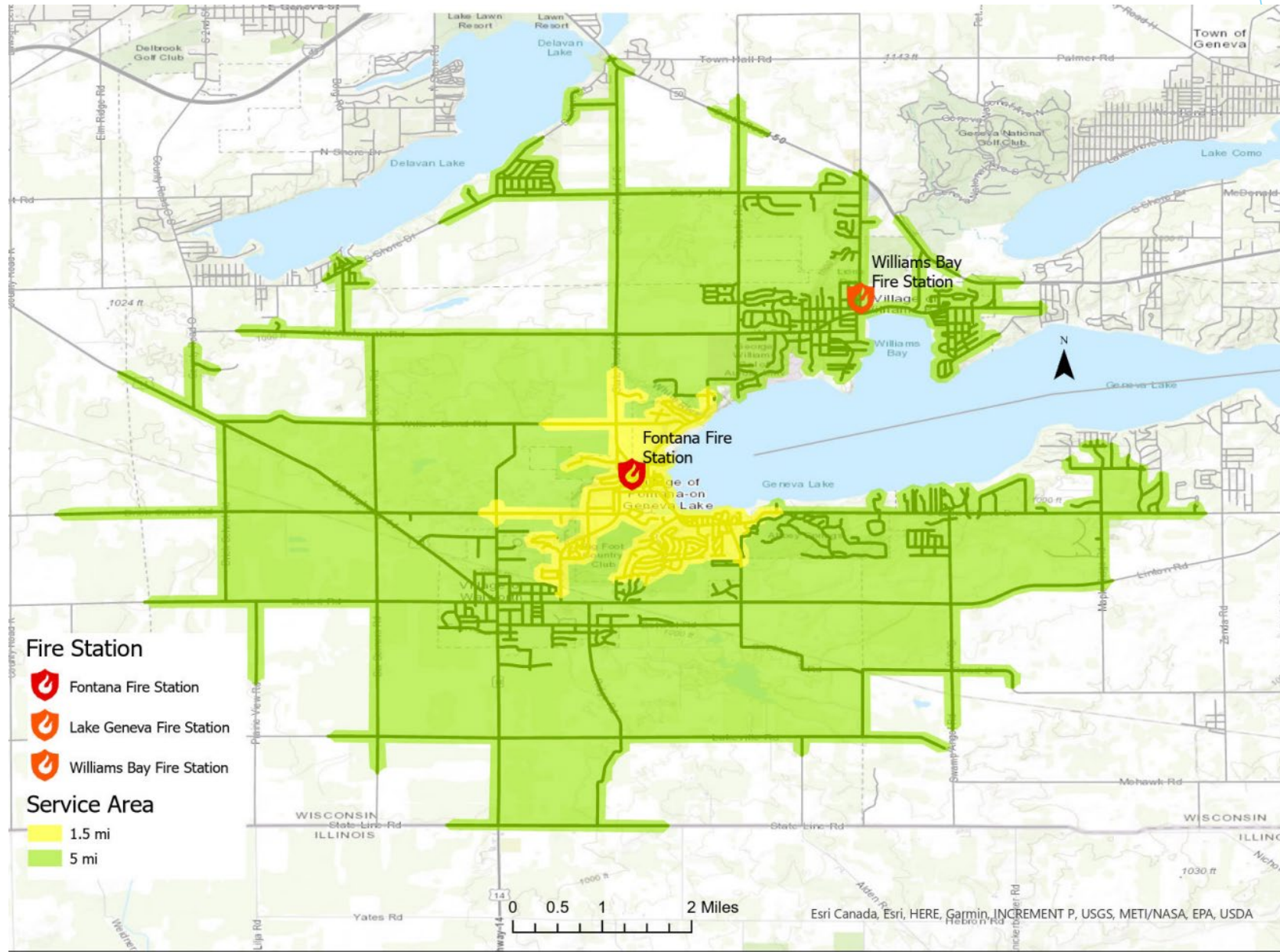


* Recommend off site storage for Fire Boat other Equipment

Village of Fontana Current Response Travel Times



Village of Fontana Current Station ISO Distance



Recommended Fontana Station Location Current Site



Relocate Police
Department to
Separate Facility- Wild
Duck Road

Police Stations not
location dependent
for response time



Vacate Williams Street



Staged Reconstruction beginning with
Parking area and space from Williams
Street

Additional Issues with Williams Bay Station and Department



Fire Department is not a
Municipal Department

Recommend transition to Municipal
Department as soon as possible



Current Station is co-owned
by Williams Bay Volunteer
Fire Department and Village

Original 1936 section land and build owned
by Williams Bay Volunteer Fire Department
Additions to the rear and parking lot owned
by the Village

Williams Bay Station Apparatus and Staffing

- ▶ Staffing for Current Need:
Accommodations for 2-
Paramedics allowing for 24-
hour station staffing
- ▶ Future Staffing:
 - ▶ Engine- 4 Personnel
 - ▶ Ambulance-2 Personnel
- ▶ Apparatus (2 bay station)
 - ▶ 1-Engine
 - ▶ ! Ambulance
 - ▶ ! Brush/Grass Truck with ATV

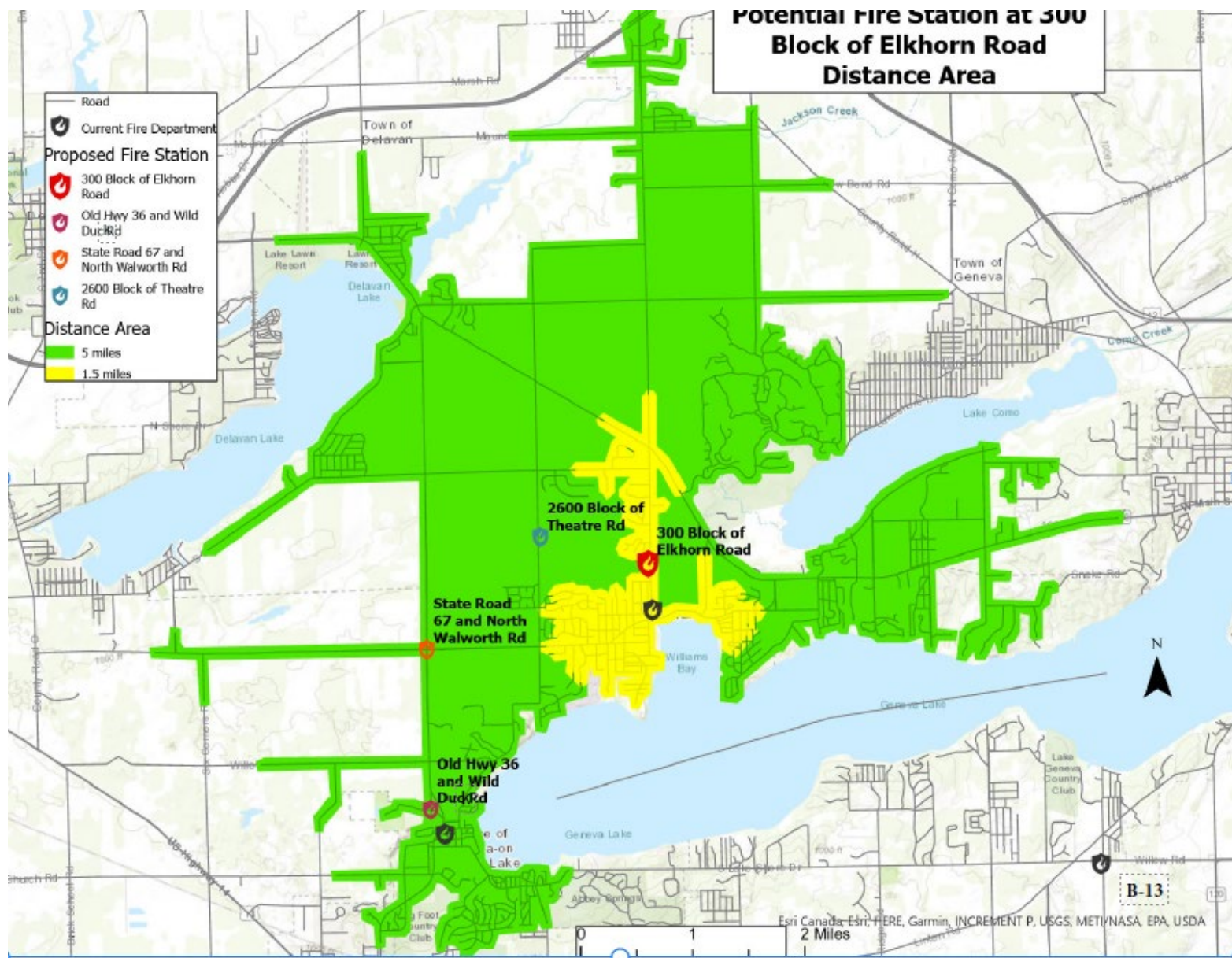


Recommended Williams Bay Station Site

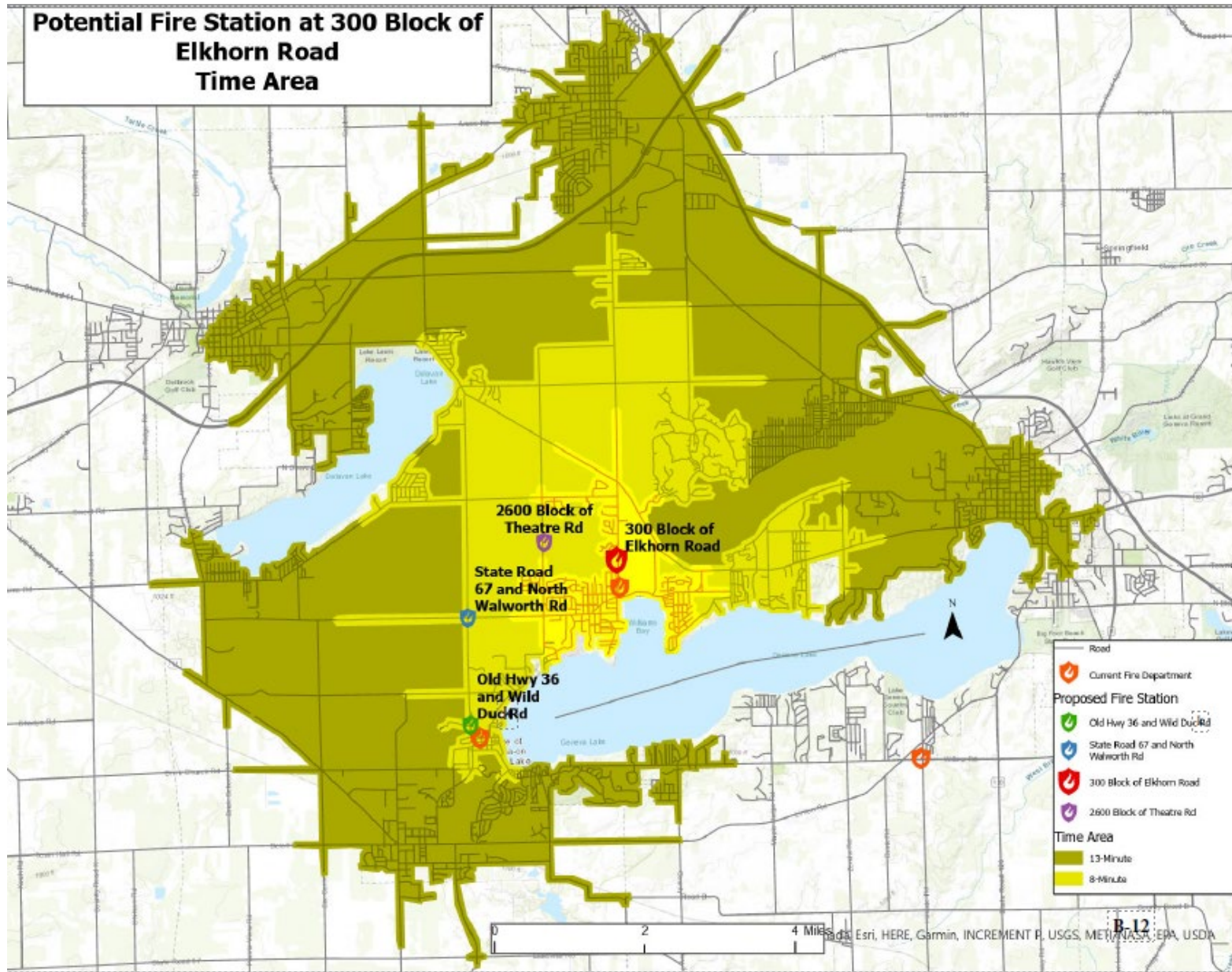
300 Block of Elkhorn Road

- ▶ Relocate Lions Fieldhouse and Community Gardens to Theatre Rd.
- ▶ Construct New Station
- ▶ Maintain space for reserve apparatus in old station
 - ▶ Until regional efforts develop





Potential Fire Station at 300 Block of Elkhorn Road Time Area



Future Regional Considerations

- ▶ The majority of Fire Departments in the region rely on neighboring departments for structure fires and complex incidents
- ▶ Paid on Call/Volunteer rosters are decreasing
- ▶ Fire Apparatus Cost are sky rocketing
- ▶ Demand for service is not decreasing



Future Regional Considerations

- ▶ Immediate Need
 - ▶ Standardize Standard Operating Guidelines with all departments that rely on each other for initial response to structure fire and other large incidents
 - ▶ Develop a training program based on these SOG's that all departments follow
 - ▶ A training officer shared by the regionally cooperating departments should be put into place to develop, coordinate and deliver this training

* Assure that the training and education provided under this section are based upon the fire department's written standard operation guidelines." SPS 330.07 Wis. Admin. Code Emphasis added



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Long Term Regional Considerations

- ▶ Sharing reserve apparatus
- ▶ Sharing specialty apparatus
- ▶ Sharing Fire Prevention services
 - ▶ Functional Consolidation
- ▶ Sharing Staff

Regional effort does not need to be countywide. Create service areas that make sense; not based on government borders



A close-up, low-angle shot of a police car's emergency lights. The lights are red and yellow, and are flashing. The background is blurred, showing what appears to be a city street at night.

Fontana Police Department Staffing

- ▶ Metrics Used For Analysis
 - ▶ Officers per 1,000 population compared to other agencies
 - ▶ Calls for service compared to other agencies
 - ▶ Current staffing challenges in law enforcement
 - ▶ Assessed future needs

Officers Per 1,000 Population

	Perm. Pop.	Sworn	Non-sworn	Offs./1,000 Pop.
Fontana (V)	1,875	8	1	4.27
Williams Bay (V)	2,989	8	0	2.67
Lake Geneva (C)	8,635	29	11	3.36
Delevan (C)	8,487	23	7	2.71
Delavan (T)	5,232	14	4	2.67
*Lake Delton (V)	3,501	25	4	7.14

Calls For Service

	Sworn	Calls for Service	CFS per Officer
Fontana (V)	8	6,285	785.63
Williams Bay (V)	8	10,226	1,278.25
Lake Geneva (C)	29	21,000*	724.14
Delevan (C)	23	30,000*	1,304.35
Delavan (T)	14	4,498	321.29
*Lake Delton (V)	25	8,000	320

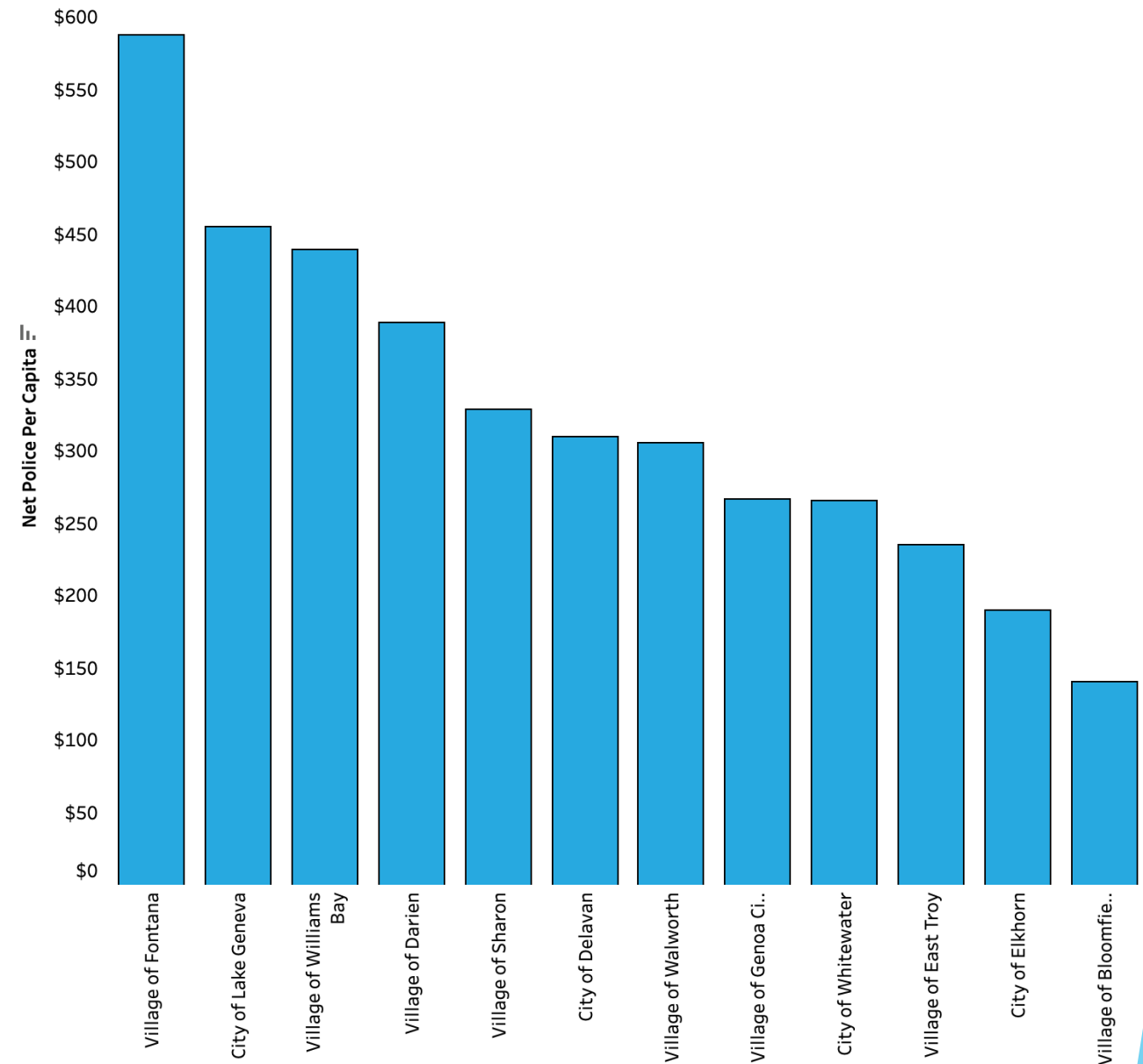
Table 7. Calls for Service – Monthly Distribution 2022

2022	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL CFS
Monthly Total	440	345	440	517	545	537	714	643	608	533	487	476	6,285

Current Staffing Challenges in Law Enforcement

- ▶ The “Great Resignation” of 2021 and beyond
 - ▶ P.E.R.F - 5% decrease in hiring for law enforcement positions at the same time there was double digit increases in both retirements and resignations
 - ▶ Overall worker shortage
 - ▶ Less desirable than in past

Comparison by County: Net Police Spending in Walworth County



Assessing Future Staffing Needs

► Calls for Service - Year to Year

Year	Total CFS
2016	4,479
2017	4,851
2018	5,158
2019	5,735
2020	5,316
2021	6,048
2022	6,285

► Historical Staffing

- Static for past two decades except for recent addition of one officer
- No longer able to maintain part-time seasonal staffing levels

► Population Growth - minimal

► Technology/Trends/Societal Expectations





Fontana Police Future Staffing/Fleet Projections - 25 Years

- ▶ Increase of sworn staff by 2-4
 - ▶ One position being a full-time investigator
- ▶ Increase one non-sworn staff - digital evidence management
- ▶ Fleet increased by 1-2 squads if staffing increases realized

Questions



PUBLIC SAFETY STUDY: STAFFING AND FLEET PROJECTIONS

Village of Fontana- Police and
Fire Departments

Village of Williams Bay- Fire
Department



Public Administration Associates

May 2024

PAA
Consultants:

Timothy Franz
David Bretl
Josh Wescott

FONTANA AND WILLIAMS BAY PUBLIC SAFETY STUDY

Table of Contents

I. INTRODUCTION.....	3
II. SERVICE AREA DESCRIPTIONS.....	3
A. Village of Fontana.....	3
B. Village of Williams Bay.....	5
III. FIRE DEPARTMENT REVIEWS.....	7
A. Fontana.....	7
1. History.....	7
2. Personnel and Organization.....	8
a. Personnel and Organization: Recommendations.....	10
3. Apparatus and Equipment.....	10
a. Apparatus and Equipment: Recommendations.....	13
4. Facilities.....	14
5. Service Demand and Performance.....	16
a. Call Volume.....	16
b. Performance.....	19
c. Staffing Conclusions.....	22
B. Williams Bay.....	23
1. History.....	24
2. Personnel and Organization.....	25
a. Personnel and Organization: Recommendations.....	27
3. Apparatus and Equipment.....	28
a. Apparatus and Equipment: Recommendations.....	30
4. Facilities.....	31
5. Service Demand and Performance.....	33
a. Call Volume.....	33
b. Performance.....	36
c. Staffing Conclusions.....	39
IV. FUTURE STATION AND STAFFING NEEDS.....	39
A. Potential Station Locations.....	41
B. Recommended Locations.....	43
C. Apparatus and Staffing Considerations for New Stations.....	44
1. Fontana Sation Staffing and Apparatus Needs.....	44
2. Williams Bay Sation Staffing and Apparatus Needs.....	48
D. Future Regional Cooperation Considerations.....	49
V. OVERALL RECOMMENDATIONS.....	50

A. Recommendations for both communities	50
B. Recommendations-Fontana	51
C. Recommendations-Williams Bay	52

VI. APPENDICES

A. Fontana Fire Department Organizational Chart	A-1
B. GIS Mapping of Station Locations	B-1
1. Fontana's Existing Station	B-2
2. Williams Bay Existing Station.....	B-4
3. Potential Shared Facility (STH 67 and North Walworth Road.....	B-6
4. Potential site (Fontana) Wild Duck Road.....	B-8
5. Potential site Williams Bay (Theater Road)	B-10
6. Potential site Williams Bay (Elkhorn Road)	B-12
C. Fontana Police Study (Provided only in Fontana's report)	

I. INTRODUCTION

The Village of Fontana-on-Geneva Lake (“Fontana”) engaged Public Administration Associates, LLC (“PAA”) to perform a study of its police and fire departments. The study’s primary aim is to make recommendations regarding the future of public safety operations, emphasizing projected staffing, vehicle/apparatus needs, and potential station locations. Fontana’s next goal is to retain an engineering/architectural firm to design a new fire station or municipal facility to replace its current police/fire facility. The results of this study will increase the probability that any new facility will be appropriately sized and located to serve the community in the future.

The Village of Williams Bay (“Williams Bay”) subsequently retained PAA. Given the current partnership between Fontana and Williams Bay, this was a logical outreach. Like the Fontana study, the goal of this portion of PAA’s work is to make predictions regarding the future of fire/EMS in Williams Bay with an emphasis on projected staffing and vehicle/apparatus needs. As to facility needs, the fire station in Williams Bay is lacking in a number of respects. One such limitation, by way of example, that directly impacts service delivery is the lack of overnight quarters for staff. If those were provided, paramedic response time would significantly improve in the Bay. An example of an operational option to be considered is tasking Fontana personnel (paid for, in part, by Williams Bay taxpayers) with fire responses in Williams Bay. That change would likely result in improved response times and effectiveness.

Since the two communities are currently parties to an intergovernmental agreement for the provision of ambulance and Emergency Medical Services, the merits of a shared facility are addressed. The Williams Bay portion of this study does not include its police department.

II. SERVICE AREA DESCRIPTIONS

A. Village of Fontana

The Village of Fontana-on-Geneva Lake (“Fontana”) is located in southeastern Wisconsin on the western banks of Geneva Lake in Walworth County. The center of the Village contains the harbor area and a small commercial district. The Village is predominantly a single-family residential community consisting of both seasonal and permanent residential units and fully served by a public water system and hydrants. In general, the area outside of the central harbor area is comprised of tree-covered rolling hills. Fontana has attracted visitors for decades due to its proximity to the Chicago, Milwaukee, and Madison metropolitan areas.

Fontana encompasses approximately 3.5 square miles. The most extensive land use (66% of the Village’s total land area) is residential or mixed residential. Most of this development is

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[Fontana/Williams Bay| Public Safety Staffing and Fleet Projections](#)

- 3

located in areas along the lakefront and in subdivisions along North Lake Shore Drive and South Lake Shore Drive. An older, single-family residential area is located in the historic core of the Village. The next largest land use (20%) is comprised of private park and recreation areas, mostly golf courses, followed by public park and recreation areas at 6%. Commercial land use comprises only 2%, with woodland and open space filling the remaining area of the Village at 5%. While most of the structures are single-family dwellings, many of them rival the size, challenges, and fire risk of commercial structures. The 40-acre Abbey Resort and Fontana Spa complex, located in the southeastern corner of the Village, is the largest structure in the Village and represents its greatest “Target Hazard,” Target hazards are defined as significant hazards: those that can strain a fire department’s response capability. For example, target hazards could include hospitals, schools, churches, and factories.

Fontana’s current population, according to the Wisconsin Department of Administration (“DOA”), is 1,875. It is important to note that this is the Village’s permanent resident population. This population has been relatively stable since 1980, with permanent resident totals ranging between 1,600 and 1,700 for the past 35 or more years. This figure does not account for seasonal residents, which expand Fontana’s population significantly during the summer months. According to the Village’s comprehensive plan, the Village’s 2017 seasonal population was estimated to be approximately 6,700. According to the plan, the Village’s total 2017 peak population (consisting of both permanent and seasonal residents) averages approximately 8,400 persons daily (assuming an average of four persons per household during the peak season). Population and estimated population growth as determined by the Wisconsin Department of Administration are shown in Table 1 below, along with the seasonal population based on the comprehensive plan.

Table 1. Fontana current and future population projections (Source: Wisconsin DOA)

Year	2020 Projection	Current Permanent	2025 Projection	2030 Projection	2035 Projection	2040 Projection
Permanent	1,872	1,875	1,715	1,730	1,690	1,630
Seasonal	8,400	8,400	8,400	8,400	8,400	8,400
Total Population	10,080	10,275	10,115	10,130	10,090	10,030

It should be noted that the DOA estimate is the most conservative of the seven methodologies studied during the preparation of the Village’s Comprehensive Plan. The most aggressive projection (compounded growth 2010-2017) places the resident population at 1,865. This study’s recommendations will accommodate either population estimate.

In terms of demographics, the median age of a Village resident is 55.6 years, about 1.4 times the Wisconsin median age of 39.9. Forty-eight percent of the population is over the age of 64, while the age group of 20 to 50 comprises only 24% of the population. These statistics are significant for two reasons that impact fire and Emergency Medical Services. First, the 20 to 50-year-old age group fills most volunteer/paid-on-call (“POC”) firefighter

positions in the typical community. In Fontana, this potential labor pool is much smaller than the state average in terms of the proportion of its overall population. For a variety of reasons, the recruitment of volunteer/POC firefighter members is extremely challenging throughout the country. The demographics of Fontana further exacerbate this challenge. The second impact of an aging population relates to the demand for services. Statistically, older residents require significantly more Emergency Medical Services than younger ones.

Concerning future growth, the comprehensive plan calls for maintaining the Village as a predominantly single-family residential and natural resource-based recreational community. The plan also identifies that by 2040, the Village will need approximately 66 new acres of land, slightly over one-tenth of a square mile, to accommodate permanent future population and housing demand.

B. Williams Bay

Williams Bay is located along the northwest shore of Geneva Lake in southwestern Walworth County. The Village is bordered by the towns of Linn, Geneva, Delavan, and Walworth, with the neighboring Village of Fontana-on-Geneva Lake located to the southwest and the City of Lake Geneva to the east.

Williams Bay's municipal limits cover approximately 2.8 square miles. The majority of developed land within Williams Bay is single-family residential. The Village's central neighborhoods have smaller lots than a traditional urban grid street system. Newer subdivisions around the Village's edges are characterized by larger lots and relatively narrow streets curving through hilly terrain. This area can be characterized as "urban forest." Steep, long, narrow driveways further limit access to some homes on the lakeshore. Twenty-nine percent of the Village's land use is single-family dwellings. Areas of multi-family residential development (2%) are scattered throughout the Village, mainly located along the shore of the bay and north of East Geneva Street on the east side of Williams Bay. The Village's modest central business district (1% of land use) is located at the intersection of Geneva Street (State Highway 67) and Walworth Avenue. A significant percentage of Village land (11%) is dedicated to institutional uses. These uses are located throughout the community and include Aurora University's George Williams College on the west end of Williams Bay, several camps, Yerkes Observatory, schools, churches, and municipal facilities. George Williams College recently closed, and the campus buildings are essentially vacant at this time. Williams Bay Health Services skilled nursing facility and the adjacent Sherwood Lodge present the most significant target hazards for the Village. Several youth camps are located on Geneva Lake in the southwestern portion of the Village. These have been in operation for many decades but have not been as substantially occupied as they were before the COVID-19 pandemic. An additional 13% of the land is comprised of conservancy and public parklands, with 27% listed as agricultural or undeveloped.

The Village's population has grown steadily since the 1970s. Except for the period of 2000 to 2010, population growth percentages experienced each decade have ranged from 14 to

20 percent. According to the Wisconsin DOA, the current permanent population is 2,989. The DOA projected that by 2040, Williams Bay's permanent population would grow to 2,960. According to the comprehensive plan, the Village's population doubles during the summer months. Table 2 displays the Wisconsin DOA past and current population estimates as well as a seasonal estimate, which doubles the population. As the DOA 2040 estimate has already been achieved, we have utilized the 2025 to 2040 estimates found in the Village's comprehensive plan (compounded growth rate).

Table 2. Williams Bay Current and Future Population Projections

	2020 Census	Current Population	2025 Projection	2030 Projection	2035 Projection	2040 Projection
Permanent	2,953	2,989	3,184	3,433	3,701	3,991
Seasonal	2,953	2,989	3,184	3,443	3,701	3,991
Total	5,906	5,978	6,368	6,876	7,402	7,982

The median age of a Williams Bay resident is 48.2 years, about 20% higher than Wisconsin's median age of 39.9 years. Twenty-seven percent of the Village's population is over the age of 64, while the age group of 20 to 50 comprises only 27% of the population. These statistics are significant for two reasons that impact fire and Emergency Medical Services. The first is that the 20 to 50-year-old age group fills most volunteer/POC firefighter positions in the typical community. Williams Bay's available volunteer pool is much smaller than that found in the average Wisconsin municipality. The second is that older residents are greater users of Emergency Medical Services than younger ones. As a result, Williams Bay is more likely to have a greater EMS demand than the average Wisconsin community, as the over-64 age group is almost 1.5 times higher than the state average. Another interesting impact of the current Volunteer/POC model is that a very high percentage of Village residents commute outside of Williams Bay for work (92%), and the vast majority of people employed in the Village live somewhere else (88%). Both figures are much higher than the overall percentages in Walworth County, making recruiting new POC members more challenging.

With regard to future growth, the comprehensive plan recognizes a future growth potential while remaining a small, friendly community of year-round and seasonal residents, businesses, and institutions developed in harmony with Geneva Lake, natural resources, and surrounding rural areas. Following this vision, the community profile is unlikely to significantly change in the future, but there is certainly room for the Village to expand and experience population growth.

Given that this study is looking at not only the public safety facilities of each village but also the feasibility of a shared facility, we also benchmark several characteristics of the departments to national standards using the combined populations of both villages. This data, displayed in Table 3, utilizes both communities' current 2024 permanent populations and seasonal estimates.

Table 3. Combined Fontana and Williams Bay populations

Year	Current permanent population	2040 population projection
Permanent	4,864	5,621
Seasonal	11,389	12,391
Total Peak Population	16,253	18,012

The two villages are similar in that they are predominately residential communities with high seasonal populations. Williams Bay has a higher permanent population and more large commercial structures but a lower peak seasonal population. Conversely, Fontana has a greater seasonal population and fewer commercial and institutional structures. Regardless of the seasonal population change, the structural fire risk/potential is a constant, while EMS demand (caring for people) will obviously increase as the population grows and ages. This community risk profile presents the unique challenge of designing services that meet these peak demands. In addition, the population profile presents challenges above and beyond those experienced by other communities of similar size in utilizing Volunteer /POC resources.

III. FIRE DEPARTMENT REVIEWS

A. Fontana

The Fontana Fire Department was reviewed in the following areas: Service type, personnel and staffing, apparatus, and service demand. This examination is best accomplished by using performance measures established by national rating organizations. The first source is the standards and research material produced by the National Fire Protection Association (NFPA), an independent agency that develops model codes and standards for the fire service. This agency also conducts research and publishes the data. The other benchmark data is from the Insurance Service Office (ISO), also a national rating organization. The ISO routinely evaluates fire departments, which provides information to insurance companies to use in setting fire insurance rates. This rating system is known as the Public Protection Classification Program. Ratings range from Class 1, the best possible score, to Class 10, which is essentially no fire protection. This evaluation is comprised of scores awarded in three areas: Emergency Communication 10% (911 system and radios), Fire Department 50% (all fire department operations including training), and Water Supply (Municipal Water system) 40%. The Fontana Fire Department currently has a 3/3Y rating; the Y is for the areas beyond 1,000 feet of the municipal water system and within 5 miles of the station. In these areas, the fire protection

delivery system is superior except for a lack of a water supply system capable of the minimum fire flow criteria of 250 GPM for 2 hours.

1. History

The Village of Fontana Fire Department was formed in 1930 as a Chapter 181 non-stock corporation, which was typical of most small volunteer departments at the time. It primarily provided fire protection to the Village of Fontana. In the early 1970s, a separate "Rescue Squad," a non-profit group, was formed to provide ambulance service. In approximately 2012-2013 the Rescue Squad was dissolved as a separate organization and became a part of the Fire Department. Due to limited POC availability, the Fire Department eventually added two privately contracted personnel to provide EMS service during daytime hours, twelve hours per day, seven days per week. This coverage was increased to 24 hours per day in 2017. In May 2022, the Chapter 181 fire department was transitioned to the Village of Fontana to become a municipal department. The contract for private EMS personnel was terminated, and personnel were recruited and hired by the Village of Fontana. The Fire Department is clearly and legally established as a municipal department operating pursuant to Village Ordinance 34-76.

2. Personnel and Organization

The Fontana Fire Department is a combination fire department with an authorized roster of 14 full-time equivalent employees. These positions are currently filled with 13 full-time personnel and the equivalent of one FTE used to cover peak demand staffing periods. There are also 16 POC/part-time employees and four part-time employees. The Fire Chief and Assistant Chief positions are part-time. Between the two command positions, 40 hours of in-station and weekday coverage are provided. The Department's organizational structure is set forth in Appendix A of this report. The Fire Chief (filled by an acting Chief at the time of this report's writing) is the Department's chief administrative officer. The Village is fortunate to be able to fill this position with a highly qualified individual who can meet the needs of the Department on a part-time basis. The Village should be prepared that this will need to become a full-time position at some point. In addition to being the Department's chief administrative officer, the Fire Chief responds to emergencies during the assigned business week and from home during off hours (nights and weekends). The Assistant Chief is second in command and performs similar duties and provides similar response coverage.

Currently, the Department staffs four firefighter/EMT or Paramedic positions 24 hours per day, seven days a week, supplemented by POC and off-duty member response. Through an agreement with the Village of Williams Bay, two of these full-time positions staff one ambulance in the Williams Bay fire station from approximately 8:00 a.m. to 5:00 p.m. seven days a week. This crew returns to the Fontana fire station each day for a meal break, and a different crew often replaces them. At 5:00 p.m., that crew is picked up and returned to Fontana.

The National Fire Protection Association (NFPA) conducts an annual fire department profile survey. The most recent available data is for 2020. The first data to be reviewed compares the organization type to other communities of similar populations. Since full-time career staff is the Department's predominant membership, Fontana's combination model most closely fits the "Mostly Career" category.

Table 4. Fire Department Type by Population Protected NFPA 2020 Survey

Population	All Career	Mostly Career	Mostly Volunteer	All Volunteer
Under 2,500	1%	2%	7%	91%
2,500-4,999	2%	4%	22%	72%
5,000-9,999	7%	12%	37%	44%
10,000-24,999	26%	29%	33%	12%

The data in Table 4 shows that 91% of communities with populations under 2,500 are protected by all volunteer departments. When Fontana's peak population of 10,275 is considered, however, it places the Village in the 10,000 to 24,999 range. Only 12% of communities in this range feature all volunteer departments. Another way to look at this is that 55% of municipalities in the greater than 10,000 population range are protected by a combination career/POC model. Given the unique demographics of Fontana, national benchmarks support the Village's mostly career/combination model.

Table 5 shows the number of firefighters per 1,000 population protected in the Midwest. One can see that as the population increases, the number of firefighters per 1,000 decreases. This is the result of several factors. From the perspective of economies of scale, a fully-staffed engine company is comprised of the same number of personnel, whether it is serving a city with a population of 2,400 or one of 5,000. Moreover, a number of positions can be spread over a larger population (one chief, for example). Second, as the population being served increases, there is a greater tendency to employ more career staff and fewer Volunteer/POCs.

Table 5. Average Volunteer/POC Firefighters per 1,000 population- Midwest

Population	Volunteer/POC Firefighters per 1,000 Population
Under 2,500	19.58
2,500-4,999	6.45
5,000-9,999	3.58
10,000-24,999	1.15

When considering Fontana's permanent population, the Village has 8.9 Volunteer/POC firefighters per 1,000 residents, less than half the Midwest average. Utilizing peak population, the rate is 1.6 per 1,000. Given that the peak population is closer to the 5,000 to 9,999 category, this rate is less than half the 3.58 average. The number of POC personnel on the Department's roster did not occur by design. It is what the Village's population can provide. In Wisconsin and across the country, the number of Volunteer/POC firefighters is in decline. The unique characteristics and demographics of the Geneva Lake area exacerbate this trend. The Department should continue to recruit and retain as many POC members as possible, but as the trend is clear. The Department will need to continue to place greater reliance on career staff. Service demand and performance are better indicators of what this level should be, as combination departments have many variables in their staffing patterns. The performance of this staffing will be reviewed in the service demand section, and additional recommendations and observations regarding personnel will be made.

a. Recommendations/observations

1. The demographics and characteristics of the community present a greater-than-normal challenge to recruit Volunteer/POC Firefighters/EMTs. These trends are likely to continue into the future. As the Village's population ages, existing Volunteer/POC Firefighter/EMTs will retire, and their replacements will be hard to find. Every effort should be made to recruit new Volunteer/POC Firefighter/EMTs, but the reality is that it will be necessary to increase the number of career staff over time. For a variety of reasons, Wisconsin's labor pool will make hiring even career, benefitted positions a challenge.
2. Recruitment and retention of POC personnel need to be closely monitored, and a Key Performance Indicator ("KPI") should be established regarding the ideal number of POC personnel to be maintained on the Fire Department's roster. KPIs should also be established for the number of POC personnel responding to incidents and the time it takes them to report to the station. These KPIs will establish objective standards indicating when additional full-time positions must be added.
3. The Fire Chief position will eventually need to become a full-time position. Absent the unique circumstances of the individual currently filling this role, it would already need to be a full-time position.

3. Apparatus and Equipment

The apparatus fleet of the Fire Department is listed below in Table 5. The firefighting apparatus of the fleet consists of two engines (pumpers or pumping apparatus), a Quint, and a brush truck with an ATV. One of the engines is designated as a "squad," indicating that it carries additional vehicle extrication and rescue equipment. The designation also defines its role in the Mutual Aid Box Card System (MABAS). The "Quint" is essentially an aerial ladder/truck company apparatus with engine/pumper capability. The term Quint describes its five main functions: Fire pump, hose, water tank, aerial device, and ground/portable

PUBLIC ADMINISTRATION ASSOCIATES

Fontana/Williams Bay | Public Safety Staffing and Fleet Projections

- 10

ladders. The brush truck and ATV are for access to off-road grass/brush fires and are reasonable and necessary for the area and risk protected. The Department has three ambulances, two of which are located in the Fontana station. Fontana leases the third from Williams Bay, which is kept in the Williams Bay station.

Table 6. Fontana Fire, Rescue, and Ambulance Fleet

Type	Year	Description
Quint (Aerial)	2014	Quint 75' 2000 GPM pump & extrication
Squad	2007	Engine 2000 GPM pump & extrication
Engine	2000	Engine 2000 GPM
Brush Truck	2016	Brush Rig 125 gal. tank, UHP pump, and foam
Ambulance	2008	Advance Life Support Ambulance
Ambulance	2018	Advance Life Support Ambulance
Ambulance	2023	Advance Life Support Ambulance
Command	2023	Chevrolet Tahoe
Boat	2005	Lake Assault 28 FT Boat with 1500 GPM pump
Air Boat	2018	MRA Air Boat 22', Enclosed Cabin
ATV		125 gals, water
Trailer		12' Atlantic Special Ops Trailer Dive and Rescue

Compared to other departments serving similarly-sized populations, the Fire Department is right-sized in terms of the number of engines (pumpers) in place. Most smaller communities have at least two engines, as the departments are usually designed for somewhat autonomous operation. From this perspective, they need the second engine for a reserve and/or to meet minimum fire flow capacities. Table 7 displays the data from the NFPA survey on fire apparatus. Each of the different categories is also reviewed as to the credit they were assigned in the latest Insurance Services Office (“ISO”) Public Protection Classification (“PPC®”) Summary Report.

Table 7, Number of Engine companies by community size

Population	1	2	3 to 4	5 or More
10,000-24,999	9%	33%	47%	10%
5,000-9,999	14%	45%	36%	3%
2,500-4,999	23%	50%	24%	1%
Less than 2,500	41%	39%	9%	0

The ISO credits the Fire Department with a score of 5.91 out of 6 possible points for engines. This score also reflects equipment carried on the apparatus, so there may have been some minor deduction in this area.

The ISO also lists 3,000 gallons per minute (GPM) as the maximum fire flow required for the Department to deliver. The Basic Fire Flow for the community is determined by the review of the Needed Fire Flows for selected buildings in the community. The fifth-largest Needed Fire Flow is determined to be the Basic Fire Flow. This flow can be achieved by either of the Fire Department's two engines, as they each have a 2,000-gallon-per-minute pump capacity. This does not include the added pump capacity available with the Quint. The Department received 3 out of 3 possible points for pumper capacity.

Table 8. Number of Aerial Apparatus by Community Size

Population	0	1	2	3 or more
10,000-24,999	49%	47%	3%	0%
5,000-9,999	73%	26%	1%	0%
2,500-4,999	89%	10%	0%	0%
Less than 2,500	96%	4%	0%	0

Regarding aerial apparatus or ladder trucks, most communities of similar population, even considering Fontana's peak population, do not have one. However, population should not be the only consideration regarding need. The ISO evaluates the number of needed ladder-service trucks based on the number of buildings three stories or 35 feet or more in height, buildings with a Needed Fire Flow greater than 3,500 GPM, and the method of operation. Response areas not needing a ladder company should have a service company. Ladders, tools, and equipment normally carried on ladder trucks are needed not only for ladder operations but also for forcible entry, ventilation, salvage, overhaul, lighting, and utility control. As shown in the Williams Bay section of this report, that community does not own an aerial ladder truck. It does, however, receive credit for a "ladder service company," as this evaluation also considers this equipment being carried on other vehicles. Fontana, which actually operates a Quint, received a Ladder Service credit of 1.92 out of a possible 4 points. This credit of less than four may also be due to how the ISO evaluator scored the Quint, possibly giving half credit as an engine, or this item also reviews equipment carried, so there may be some deficiency in that area.

The ISO did not provide any credit for a reserve engine or aerial ladder truck, which is not unusual for a community of this size.

Table 9. Other Suppression Apparatus by Community Size

Population	1	2	3 to 4	5 or More
10,000-24,999	24%	23%	20%	11%
5,000-9,999	23%	25%	26%	10%
2,500-4,999	21%	28%	30%	10%
Less than 2,500	23%	28%	29%	10%

"Other suppression apparatus" refers to vehicles such as water tankers/tenders, brush fire apparatus, and command vehicles. The Department has two vehicles that fit the category of "other suppression apparatus;" the command vehicle and the brush fire apparatus. It should be noted that 40 to 50 percent of communities in this population range have three or more vehicles in this category. This is because smaller communities tend to serve rural areas without a water supply and, therefore, need to operate tank trucks, also known as "tenders." The entire area protected by the Fontana Department has a municipal water supply, so these types of apparatus are unnecessary.

There is no comparative data for the Department's boats or rescue equipment, but given Fontana's location on Geneva Lake, this is necessary equipment. The director of the Walworth County Dive Team stated that the Fontana Fire Department serves as an "equipment cache" location.

Benchmark data for the number of ambulances operated within systems is less readily available than for fire apparatus. With a system of two "front line" or staffed ambulances, a third ambulance is necessary for routine maintenance and repair. Fontana has achieved this goal. Two ambulances are located in the Fontana station. One is staffed 24 hours a day, and the other is staffed in the evenings/overnight when the crew from Williams Bay returns.

The Department's vehicles are well-maintained and equipped with the necessary hose and equipment for the community's needs and risks. Apparatus and equipment are checked at the required intervals in compliance with state regulations.

a. Recommendations/observations

1. The Department's apparatus fleet is comparable to departments of similar size in the nation when considering the seasonal population that must be protected.
2. The front-line fleet meets the ISO requirements for the fire protection area.
3. There is no need to acquire additional apparatus based on the area and population protected. While apparatus will need to be replaced over time, the fleet will unlikely need any additions in the next 25 years.
4. Some apparatus, such as the brush vehicle and ATV, are duplicated in almost all of the fire stations surrounding Geneva Lake. Consideration should be given to

engaging in cooperative efforts to share some of these "specialty" type apparatuses in the future.

5. Other potential apparatus needs and capacity will be discussed later in the report when the fleets are looked at collectively.

4. Facilities

The station was evaluated for its functionality and compliance with safety standards.

Apparatus Bay

The apparatus bay is shared with the Police Department. It is very apparent that this building has structural issues, as there are very large cracks in the concrete floor and uneven pavement. We understand that several attempts have already been made to remediate this situation without long-term success. The settling of the building is so severe that one of the service doors to the apparatus bay is inoperable. The first two bays on the eastern end of the building are reserved for police vehicles. These bays are not full-depth as they are on the opposite end of the building, which is aligned with the office/living quarters section of the Police and Fire Departments. The next bay, which is not full-depth, houses the primary response ambulance. The remaining three bays of the station align with rear bay doors at the back of the station and could technically be used as drive-through bays. The rear of these bays, however, are used to store the Department's fire and airboat, reserve ambulance, and grass fire apparatus. The front sections of these bays house two engines and the Department's ladder truck. The spacing of the apparatus in the front bays fails to meet modern standards. It is difficult for someone to pass by a vehicle with a door open or for routine vehicle checks to occur simultaneously.

Personal protective equipment is stored on racks in the apparatus bay in the area behind the ambulance as well as near the west wall of the apparatus bay. This is a very common station design, but designs in the last ten years have changed dramatically regarding the storage and access of personal protective equipment. Ideally, this gear should be stored in a separate room and protected from UV light, which contributes to the material's premature breakdown. This room should also be directly accessible from the outside of the building/firefighter emergency parking area to reduce turnout time from the station. These storage areas also need to include adequate space and an aisle way for POC firefighters to "dress out" and still allow other firefighters to pass by, given the staggered response times of personnel to the station. The breathing air compressor and SCBA cylinder fill station are located on the apparatus floor. This had been located in the mezzanine area but needed to be moved to create more space for a training room and lounge area. This equipment should be located in a separate clean room.

Decontamination and Washer/Drying Area

The Department has a commercial washer/extractor for turnout gear located off the rear apparatus bay area. This room also serves as a storage area for cleaning supplies for the

apparatus floor. Due to limited space issues, the dryer is actually located outside of this room under the stairs to the mezzanine. This equipment should be in a room designated for decontamination and separated from other uses.

Locker Room/Showers/Restrooms

Personal lockers are located in the bedroom area. The station does not have separate shower facilities for men and women. There are only showers in the men's restroom. This requires female employees to essentially schedule their time to use the shower and lock the doors. Men's and women's locker and shower facilities are needed, not just for on-duty personnel but also for POC personnel. All personnel should have access directly to the shower area from the apparatus bay so they can remove their contaminated uniforms and go directly to the shower. Having the lockers nearby allows for a change into clean uniforms or, in the case of POC personnel, a change of clothes before returning home to avoid cross-contamination of cancer-causing agents from exposure to smoke and other fire gases.

Day Room

A day room has been created in space on the mezzanine level. This room is actually inviting and appears fairly comfortable, but lacks any windows to the outside. A larger, more accessible day room may also attract POC staff to spend more time in the station. Although a comfortable and attractive dayroom may appear to be a "luxury item," it is an important recruitment and retention tool.

The station does not have a workout facility. Since stress and strains are the number one cause of injuries to firefighters, promoting firefighter fitness is paramount to safety. The Department should consider providing space and equipment for its members to maintain their fitness.

Office Space

Office space is very limited in this building. The Fire Chief and assistant chiefs share a very narrow and cramped office space. This space is so small when both chiefs were present, we needed to use the conference training room on the second floor for discussions as the office space permitted room for only one visitor. Through interviews and discussions, it was pointed out that this office was once a stairwell to the second floor/mezzanine area. There is also an office off the apparatus bay in the southeast corner facing Fontana Boulevard. It's a small triangular room likely originally intended to be used for dispatch. It is now utilized as the watch room/office for on-duty personnel. There is currently no office space dedicated to fire inspection/prevention. A general statement about office space is that there are not enough separate offices for the functions of the Department to be carried out efficiently.

Training Room

A training conference room has been constructed on the mezzanine level across from the lounge area. Although small, it is marginally able to accommodate staff. The recently remodeled room has modern audio/video support for training.

Kitchen/Dining

The station has a kitchen area shared with the Police Department and a room with a table and chairs for dining. The room also serves as the Police Department's locker room. The space in this area does not serve either of these functions well.

Sleeping Quarters

A sleeping quarters or dorm area was added to another available space off of the hall leading to the kitchen and dining area. There are separate sleeping areas for staff as well as lockers. While functional, this area is also very cramped and represents a compromise given the available space. There is no room for additional sleeping areas in the station.

In addition to the structural issues of the building, which indicate the need for major reconstruction or replacement, the functional space of the building suggests the same need. This building was not designed to house 24-hour staff, and while the Department has done its best to utilize and adapt the space available, this facility is still lacking in all functional areas.

5. Service Demand and Performance

The following section reviews areas of demand for services and the performance of systems in meeting this demand. These items are reviewed to determine if current staffing is meeting performance expectations and to identify trends affecting or which could affect performance in the future, requiring additional resources to meet that demand.

a. Call Volume

The first area reviewed in this section is the type and number of calls for service and the location of the calls. Data suitable for this analysis is available only from June 2022 through the end of November 2023. While limited, this is the most relevant data to review as it represents the current model of the Department in both operations and area covered. The data is broken down by the first year of service, June 2022 to June 2023, and just under six months, June to November 2023. The data is further sorted by calls within the corporate limits of Fontana, outside of the Village, and total calls. The purpose of separating the calls by location is to evaluate the current fire station location and response time performance. The incidents outside the Village include those that were responded to in Williams Bay under the current emergency medical services contract. Williams Bay calls, together with mutual aid calls, comprise the majority of calls responded to by the Fontana Fire Department. This data is presented in Table 10. This data shows that incidents involving fire are, fortunately, very low in Fontana. This is most likely because the majority of construction is relatively new and very well maintained. Another factor affecting this is that a significant number of residential units are unoccupied during the year.

Table 10. Fontana Fire Department Calls by Type (within and outside of the Village)

	One year data			6-month data		
Call Type	2022-23 Outside of Village	2022-23 in Village	2022-23 Total Calls	2023 Outside of Village	2023 in Village	2023 Total Calls
Fire:						
Building Fire	5	0	5	9		9
Cooking Fire	2	0	2	1	2	3
Vehicle Fire	2	0	2			0
Fire Other	1	2	3	1	1	2
Outdoor Fire	4	4	8	1	1	2
Rescue:						
EMS Call	337	228	565	203	92	295
Vehicle Accident	10	7	17	4	7	11
Invalid Assist	15	19	34	2	3	5
Water Rescue		4	4	2	0	2
Rescue Other		3	3		1	1
Hazardous Condition:						
CO Alarm	2	15	17	1	7	8
Gas Leak	1	8	9		5	5
Wire Down		4	4		2	2
Haz Mat Spill/Leak		1	1		0	0
False Alarms:						
Alarm, no fire, false	6	54	60	2	29	31
Sprinkler malfunction		0	0		0	0
Smoke Scare	2	4	6		1	1
Service Call:						
Cover/Move Up	7		7	1		1
Cancelled En Route	26	7	33	9	5	14
Misc. Service Call	2	13	15	1	8	9
Total Calls	422	373	795	237	164	401

EMS/fire incidents occur, on average, just over one time per day within the Village of Fontana. The Department, which includes the ambulance assigned within the Village of Williams Bay, responds to just over two calls per day, on average. Calls outside of Fontana actually make up a greater percentage of the Department's demand for service. As with most fire departments that provide EMS, EMS incidents make up the greatest percentage of calls for service. The next most frequent incident type is false alarms. The number of false alarms is higher in Fontana than in most communities of its size. This is due to the fact that many of the single-family homes are protected by alarm systems. This is typically not the case in most areas of the country.

Table 11: Fontana incident trend data by year



Taking a general three-year look back on incidents, call volume was relatively stable from 2020 to June 2021. However, the trend clearly shows the addition and impact of providing EMS service to Williams Bay under contract.

While demand for service does not always directly follow the trend line of population growth, it is unlikely that the increase in call volume will impact station design during the next 25 years.

While reviewing this data, it is important to show the communities to which the Fontana Fire Department responds most frequently. While the Department has responded to a mutual aid request as far away as Hartford, Wisconsin (61 miles away), most calls for mutual aid come from within Walworth County. While station location should be predominately based on providing service to the immediate response area of the station, a regional view also needs to be considered as to where the next areas of demand will be. The top four most frequently served municipalities are listed in Table 12 below.

Table 12. Top four municipal demand areas of the Fontana Fire Department

Call Location	Jun. to Dec. 2022	2023
Fontana	187	337
Williams Bay	174	412
Walworth	8	21
Lake Geneva	7	8

b. Performance

Response time is often used as a key performance measure of a fire department, coupled with delivering adequate personnel for the type of response situation. There are two national standards in this regard; one is NFPA 1710 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, and NFPA 1720 Standard for the Organization and Deployment of Fire Suppression, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments. Interim Fire Chief Richard Manthy states that while the Department has not adopted performance standards goals, it strives to meet NFPA 1710 for its performance standard benchmarks on response time. Technically, the standard that is more applicable for the Fontana Fire Department is NFPA 1720, as the definitions contained within that standard state that it is to be used for volunteer and combination departments. We will look at the performance of the Department from the perspectives of both of these standards.

NFPA 1720 calls for a response for structure fire incidents in urban areas (1,000 population/sq. mile) of 15 personnel on scene in 9 minutes total response time or less 90% of the time. In suburban areas, the standard is based on having ten personnel on scene with a response time of 10 minutes or less, 80% of the time, and six personnel on scene in 14 minutes, 80% of the time for rural areas. NFPA 1710 has one standard regardless of population density: a travel time of less than 4 minutes and a time of less than 90 seconds for turn out from the station once the alarm is received, together with a 30-second dispatch time. To simplify this, the requirement is a total response time of 6 minutes or less 90% of the time. With regard to personnel, the standard requires four personnel on a fire company in addition to achieving the response time. It also requires a total response force of 15 personnel to be assembled in eight minutes. There are additional requirements for both standards, however we will limit our analysis to these two items. In addition to the NFPA standards, which primarily address fire, NFPA 1710 also includes a component for emergency medical services. This requirement calls for basic life support (EMS first responder or EMT) to arrive on scene in under 6 minutes, 90% of the time, and an advanced life support unit (paramedic) to arrive within 8 minutes, 90% of the time. This emergency medical service standard is aimed at life-threatening emergencies, however. From a system design perspective, service should be built around the ability to provide this level of response when needed. Table 12 lists the response time and staffing goals outlined in NFPA 1720.

Table 13. NFPA 1720 Response Time and Staffing Goals

Demand Zone	Demographics	Staffing & Response Time	Meets Objective
Urban	>1000 sq. mile	15/9	90%
Suburban	500-1000 sq. mile	10/9	80%
Rural	< 500 sq. mile	6/14	80%
Remote	Travel > 8 miles	4	90%

The data presented is the total response time, which includes turnout and travel time. Turnout time is the time from notification of the call to being enroute. Travel time is the time from starting en route to arriving on scene, and total response time is the sum of both of these times. These two components and the time it takes to process a call at the 911 center make up what a citizen understands to be the response time or total response time. The data in the tables is presented in "fractals" versus averages. Fractals are more performance-specific and present a better measurement for expectation versus averages or medians, showing that half of the data is above or below the number presented.

Note that there are some limitations to the data currently available to the Department. When looking at POC department responses, turnout time is a very important performance measure. This can vary by time of day and day of the week, depending on the availability of POC staff. The times presented are for the first single unit to arrive on scene, which in most cases is an ambulance with two personnel. These times do not show us when the total response force of all units has assembled at a structure fire, which is a key performance measure.

Table 14. Total Response Time within the Village of Fontana

Response time	2022-23 in Village	2023 in Village
<6 minutes	82%	74%
<10 minutes	98%	94%
>10	2%	6%

Response time was also computer-modeled utilizing GIS mapping from the current station and can be viewed in Appendix B (pages B-2 and B-3). Mapping shows that most of the Village falls within a four-minute travel time. As previously stated, travel time plus turnout time comprise the total time from alarm notification to arrival on scene. Based on mapping and historical data, the current station location provides a good location from travel and response time performance perspectives. While response times were slightly longer in the first half of 2023, there is not enough data to say that this is a trend. They should, however, continue to be monitored. Turnout time should be broken out and monitored in the future to determine if some time may be gained in this area. NFPA 1710 calls for this time to be less than two minutes for staffed stations.

The ISO rating schedule also reviews and rates response time in the item “Deployment Analysis.” This item examines the number and adequacy of existing engine and ladder-service companies to cover built-upon areas of the municipality. A determination is made of the percentage of built-upon area within 1½ miles of a first-due engine company and within 2½ miles of a first-due ladder-service company. The Department received 7.68 out of 10 points in this evaluation area. We also analyzed the 1.5-mile distance from the current station, and this map is provided on page B-2. This map shows that the great majority of the Village is within 1.5 miles of the current station.

While response time and distances are important measures, the number of personnel responding to incidents within these time parameters is of greater importance. This is also addressed in the 1710/1720 standards in terms of the number of responders needed per fire company to comprise an effective response force. The NPFA 1710 standard calls for an engine company of four to be on scene in 6 minutes or less 90% of the time and a full force of 15 personnel assembled on scene in 9 minutes 90% of the time. NPFA 1720, the standard for suburban areas, calls for assembling ten personnel in 9 minutes. In our opinion, Fontana fits into the suburban category with regard to building density. With staffing a minimum of two in the station, the response time is generally met, but the required number of personnel is not. This in-station force is supplemented by POC personnel and automatic aid from neighboring communities. While we do not have specific recorded data on the POC response, information gathered in interviews suggests that this response generally takes two to five minutes to assemble a crew at the station, usually comprised of between two and three personnel at best. The ISO recognizes a total of 4.50 on-duty personnel in Fontana and an average of 5.00 on-call personnel responding to first-alarm structure fires. The Department has an automatic aid agreement for any reported structure fire. In that case, one additional engine company and chief officer from Walworth are called, and an additional engine is called from either the Town of Linn (South Shore area) or Williams Bay (North Shore area). Assuming that each engine responds with four personnel, this would bring nine additional personnel to the scene. Without the specific data we cannot say with certainty that the Department is meeting the time of full assembly of a staffing force.

NFPA 1710 and 1720, although industry best practices, are not legal requirements for staffing in the State of Wisconsin. Staffing is referenced in two separate requirements in the

Wisconsin Administrative Code. Those are Wisconsin Safety and Professional Services (SPS) chapters 314 and 330. SPS 314 covers fire prevention activities but also includes eligibility requirements for receiving 2% fire dues. Concerning the latter, every year, all insurers conducting fire insurance business in Wisconsin must pay the state 2% of all premiums they have collected for insurance loss by fire. The state also contributes 2% of premiums paid to the local government property insurance fund for the insurance of public property other than state property. To qualify to receive fire dues, a municipality must have a local fire department that satisfies all of the criteria, including the following staffing criteria:

“Singly, or in combination with another fire department under a mutual aid agreement, can ensure the response of at least four firefighters, none of whom is the chief, to a first alarm for a building..” Section 101.575(3)(a)2 Wis. Stats.

SPS 330 of the Wisconsin Administrative Code, which addresses fire department safety and health, adds the following regarding staffing in section SPS 330.14(3)(a):

“A fire fighter using SCBA and operating in an interior structural fire shall operate in a team of 2 or more fire fighters. Except in the case of a structural fire that can be controlled or extinguished by portable fire extinguishers, a back-up team of at least 2 fire fighters wearing SCBA shall be assigned to remain available to perform assistance or rescue activities. One back-up team member with a charged line shall be assigned to a safe non-affected area in or near the structure. The other back-up team member shall remain within voice contact and may be assigned to additional roles so long as this individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any fire fighter working at the scene. At least one additional member shall be assigned to remain outside the structural fire and monitor the operations.”

A conclusion can be drawn from the statute and administrative rule that a fire emergency incident should involve a minimum of four personnel plus an incident commander. The latter requirement can be inferred from the statute’s directive that the four responding personnel shall not include the chief and section SPS 330.14 of the Wisconsin Administrative Code, which sets forth certain responsibilities of an incident commander.

c. Staffing Conclusions

Based on the performance data presented, industry best practices (ISO and NFPA), and State regulations, we draw the following conclusion for staffing.

At the present time, to ensure an initial response that meets state requirements and industry best practices, minimum in-station staffing should consist of four personnel 24 hours per day. These personnel should staff an engine and ambulance, a concept called cross-staffing. Two personnel would primarily be assigned to the paramedic ambulance and two to the engine company. This staffing would allow a four-person engine company to be assembled on scene in six minutes or less 80% of the time and continue to provide a paramedic ambulance on scene at the same performance level. The majority of non-EMS incidents that the Department responds to can be resolved by a single-engine company. With the current call volume

PUBLIC ADMINISTRATION ASSOCIATES

Fontana/Williams Bay| Public Safety Staffing and Fleet Projections

- 22

experienced in the Village, this concept should provide adequate call coverage for the foreseeable future in combination with POC support and automatic aid for structure fires. The cross-staffing concept usually raises the question of how the same crew can cover both units. The answer is in the analysis of how much time the on-duty units are engaged in emergency response. Emergency services use a formula referred to as unit hour utilization (“UHU”) to determine the amount of time a unit is engaged in emergency response and, therefore, how this affects availability for additional calls. A unit hour utilization of 0.3 would indicate that the unit is engaged in emergency calls 30% of the day. It is generally understood that the 0.3 mark, as a best practice, is the maximum amount of time any unit should be engaged in emergency calls in order to ensure availability. As the UHU approaches and exceeds .30, it becomes less likely that the unit will be available when a call for service comes in. We calculate the current UHU of the ambulance assigned to Fontana to be 0.03 UHU for EMS calls. This leaves the ambulance and personnel assigned available, on average, just under 23 hours per day for fire response. In the event the ambulance crew is unavailable when a fire incident occurs, POC personnel can be utilized to staff the first-due engine.

Single station current need

Engine	Cross-trained Firefighter/ Paramedics	2
Ambulance	Cross-trained Firefighter/ Paramedics	2
Total 24-hour in-station staff		4

In addition to emergency response duties, on-duty crews perform state-required fire prevention inspections of commercial properties, residential occupancies over three units, and short-term rental inspections. These crews also complete their ongoing fire and EMS training requirements during on-duty periods.

B. Williams Bay

The Williams Bay Fire Department was reviewed in the following areas: Service type, personnel and staffing, apparatus, and service demand. This examination is best done using performance measures established by national rating organizations. The first source is the standards and research material produced by the National Fire Protection Association (NFPA), an independent agency that develops model codes and standards for the fire service. This agency also conducts research and publishes the data. The other benchmark data used is from the Insurance Service Office (ISO), also a national rating organization. The ISO routinely evaluates fire departments, providing information to insurance companies to use in setting fire insurance rates. This rating system is known as the Public Protection Classification Program, and the ratings range from Class 1, which is the best possible score, to Class 10, which is essentially no fire protection. This evaluation is broken down into three areas: Emergency Communication 10% (911 system and radios), Fire Department 50% (all fire department operations including training), and Water Supply (Municipal Water system) 40%. The Williams Bay Fire Department currently has a 4/4Y rating. The Y rating is for those areas

PUBLIC ADMINISTRATION ASSOCIATES

Fontana/Williams Bay| Public Safety Staffing and Fleet Projections

- 23

or properties with a fire department system that includes a creditable dispatch center and fire department but no creditable water supply. The specific component ratings of this system are reviewed further in this report.

1. History

According to the Williams Bay Historical Society, the Williams Bay Volunteer Fire Department was established in 1923. The Department operates under bylaws that were last published in 1948. It is somewhat unclear to members of the Department and Village officials what type of organization the Fire Department is. Since the Department operates under bylaws, it was most likely originally organized as a private corporation under Chapters 181 or 213 of the Wisconsin statutes. Chapter 181 governs non-stock corporations. Chapter 213 is another mechanism for private individuals to create a fire department for the protection of property in rural areas. A Chapter 213 department is generally linked to a municipality through a contract to provide fire protection services. In some respects, the Williams Bay Department operates like a private corporation. The Department's administration and certain aspects of its finances are handled directly by the Department rather than the municipality. The Village does, however, pay fire personnel directly.

Rather than clearly establishing a village fire department, section 49-1 of the Williams Bay Code of Ordinances ("Village Code") states as follows:

"The Williams Bay Fire Department is officially recognized as the Fire Department serving the Village of Williams Bay."

This statement is commonly seen in municipalities that receive fire protection services from a private corporation. Section 49-4 of the Code also suggests that the Department is an entity separate from Village government. It states that:

"[t]he Williams Bay Fire Department shall be organized and governed pursuant to its bylaws. A copy of the current department bylaws shall be placed on file with the Village Clerk."

The final indication that the Department may technically operate independently from the Village is the fact that the Williams Bay Volunteer Fire Department partially owns the current fire station. Contrast this treatment with Village of Fontana ordinances, previously referenced, which "establish" a fire department, place the chief "in command of the fire department, subject to direction of the village board, village president and the village administrator" and make subordinate personnel employees of the Village. Fontana Village Ordinance Sec. 33-76 et seq.

If the Williams Bay Fire Department is not a municipal department, there are some issues of concern. In addition to bylaws, to be legally recognized as a Chapter 181 or 213 Department, articles of incorporation and annual reports must be on file with the Wisconsin Department of Financial Institutions. A search of Wisconsin corporate records revealed none of these

documents. In addition, private fire departments typically have a contract spelling out the details of the services they will provide to the municipalities they protect. We are aware of no such contract. While it is outside the scope of this study, it is essential to bring these issues to the attention of Village leaders. For a number of reasons, it is in the best interest of both Fire Department personnel and the Village to clarify the status of the Department before any legal issues arise. We suggest a review of this matter by the Village Attorney as a logical first step.

2. Personnel and Organization

The Williams Bay Fire Department is a Volunteer/POC department with a roster of 22 members. However, not all of these members are considered active, and one member is only available during the summer months (which, fortunately, is peak demand time). The Department did not provide an organizational chart outlining the chain of command but did provide a roster with position titles. The organizational structure includes the Fire Chief, who is the administrative officer of the Department and is in charge of operations. The Assistant Chief is second in command with the traditional role of serving as “backup” for the Fire Chief.

There are a number of subordinate officer positions: three Captains and three Lieutenants. One of the Captains is assigned as head of EMS, along with one Lieutenant. This role has diminished, with this service now primarily provided by Fontana under contract. State-required fire prevention inspections are conducted by a part-time fire inspector.

The remaining 17 personnel are firefighters, one of whom is currently in training. Interview data states that a turnout of four to five is typical during daytime hours and seven to eight in the evenings. There are some members of the Department on the roster who no longer respond to calls but attend meetings. Through an agreement with the Village of Fontana, two full-time positions staff one ambulance in the Williams Bay fire station from approximately 8:00 a.m. to 5:00 p.m. seven days a week. This crew returns to the Fontana fire station each day for a meal break, and a different crew often replaces them. At 5:00 p.m., that crew is picked up and returned to Fontana.

The ambulance, which is owned by the Village of Williams Bay and leased to Fontana, remains in the Williams Bay station. As part of the agreement, the Williams Bay Fire Department may use the ambulance for special activities in Williams Bay, such as athletic events, parades, and events conducted in Village parks. The agreement does not call for a specific role in providing 911 response coverage by Williams Bay personnel; only that the Fire Chief of Fontana may call upon Williams Bay personnel to assist under their direction. Williams Bay POC personnel are called on occasionally for assistance with cardiac arrest and patient movement. They are not initially dispatched but called out after the fact. Automatic dispatching of Williams Bay personnel on cardiac arrest calls, at a minimum, should be considered for service improvement. As a practice, Fontana sends the second ambulance on these calls, as well.

The National Fire Protection Association (NFPA) conducts an annual fire department profile survey. The most recent available data is for 2020. The first data point reviewed compares the organization type to other communities of similar populations. Williams Bay falls into the all-volunteer category for fire service. This term is also used to define POC-staffed fire departments.

Table 15. Fire Department Type by Population Protected NFPA 2020 Survey

Population	All Career	Mostly Career	Mostly Volunteer	All Volunteer
Under 2,500	1%	2%	7%	91%
2,500-4,999	2%	4%	22%	72%
5,000-9,999	7%	12%	37%	44%
10,000-24,999	26%	29%	33%	12%

According to Table 15, 72% of fire departments in the country that protect a population in the 2,500-4,999 range do so with all volunteer fire departments. When the peak population of 5,978 is considered, this number drops to 44%. The “mostly volunteer” category includes combination fire departments that have more POC than career staff. Looking at the Village’s permanent population of 2,989, it shows that, nationally, 22% of communities with this population are protected by a combination department. This increases to 37% if the Village’s peak population is considered. A key element that is not differentiated in this survey is whether or not the departments provide EMS transport. In our experience, this fact has a significant impact on smaller combination departments, often necessitating the addition of career staff.

Table 16 shows the number of firefighters per 1,000 population protected in the Midwest. One can see that as the population increases, the number of firefighters per 1,000 decreases. There are two causes for this result. The first is an economy of scale, as a number of positions are divided over a greater population. The second is that as the population being served increases, there is a greater tendency to have more career staff and fewer Volunteer/POCs.

Table 16. Average Volunteer/POC Firefighters per 1,000 Population Midwest

Population	Volunteer/POC Firefighters per 1,000 Population
Under 2,500	19.58
2,500-4,999	6.45
5,000-9,999	3.58
10,000-24,999	1.15

When considering the permanent population of Williams Bay, the Department has 7.36 Volunteer/POC firefighters per 1,000 population, slightly more than the Midwest average. However, of the roster of 22, our review reveals an active roster closer to 12 members, which would put this number at 4.08. Utilizing peak population and the 12 active roster members puts the ratio at 2 Volunteer/POC firefighters per 1,000 population, which is significantly less than the 3.58 national average. The number of POC personnel on the Department is similar to what we found in Fontana. The number of POC personnel on the Department's roster did not occur by design. It is what the Village's population is able to provide. In Wisconsin and across the country, the number of Volunteer/POC firefighters is in decline. This trend is exacerbated by the unique characteristics and demographics of the Geneva Lake area. The Department should continue to recruit and retain as many POC members as possible, but the trend is clear. The Department will need to continue to place greater reliance on career staff. Service demand and performance are better indicators of what this level should be, as combination departments have many variables in their staffing patterns. The performance of this staffing will be reviewed in the service demand section, and additional recommendations and observations will be made regarding personnel.

a. Personnel and Organization: Recommendations/observation

1. Determining the legal status of the Department should be a high priority for stakeholders. We recommend that ordinances be revised to clearly recognize the Department as a municipal fire department. If the Williams Bay Volunteer Fire Department wishes to continue to exist as an entity separate from the City for charitable and benevolent purposes, it should ensure that the necessary articles of incorporation are drafted and filed and bylaws amended to reflect its new role.
2. The demographics and characteristics of the community present a greater-than-average challenge to the recruitment of Volunteer/POC Firefighter/EMTs. These trends are likely to continue into the future. As the Village's population ages, existing Volunteer/POC Firefighter/EMTs will retire, and their replacements will be hard to find. Every effort should be made to recruit new Volunteer/POC Firefighter/EMTs, but the reality is that it will be necessary to increase the number of career staff over time. For a variety of reasons, Wisconsin's labor pool will make hiring even career, benefitted positions a challenge.
3. Recruitment and retention of POC personnel need to be closely monitored, and a Key Performance Indicator (KPI) on the ideal number of POC personnel should be established. KPIs should also be established for the number of POC personnel responding to incidents and the time they report to the station. These KPIs will be a key indicator of when full-time positions need to be added.

3. Apparatus and Equipment

The Department's apparatus fleet is listed below in Table 17. The firefighting apparatus consists of two engines (pumpers or pumping apparatus), a squad/"crash truck," a dive team truck, and a brush truck with an ATV. The "crash truck" carries tools and equipment and is also used to transport personnel on mutual aid requests. The dive truck is a step van-type vehicle used to carry the dive equipment for the Department's members of the Walworth County dive team. The brush truck and ATV are to access off-road grass/brush fires and are reasonable and necessary for the area and risk protected. The Department has one ambulance, which is leased to and used by the Fontana Fire Department.

Table 17. Williams Bay Fire, Rescue, and Ambulance Fleet

Type	Year	Description
Engine	2012	Engine 1500 GPM pump & extrication
Engine	2018	Engine 1500 GPM pump
Crash Truck	2016	Squad/Equipment Truck
Brush Truck	2016	Brush Rig 125gal tank, UHP pump, and foam
Dive Truck	2008	Step Van with Dive Rescue Equipment
Ambulance	2022	Advance Life Support Ambulance
ATV		Pump w/125 gals. water

In comparison to other departments serving similar populations, the Department is right-sized in terms of the number of engines (pumpers) in place. Most smaller communities have at least two engines as the departments are usually designed for somewhat autonomous operations and have their own backup engine. From this perspective, they need the second engine for a reserve and/or to meet minimum fire flow capacities. Table 18 displays the data from the NFPA survey on fire apparatus. Each of the different categories is also reviewed as to the credit they were assigned in the latest Insurance Services Office, Public Protection Classification (PPC©) Summary Report.

Table 18. Number of Engine Companies by Community Size

Population	1	2	3 to 4	5 or More
10,000-24,999	9%	33%	47%	10%
5,000-9,999	14%	45%	36%	3%
2,500-4,999	23%	50%	24%	1%
Less than 2,500	41%	39%	9%	0

The ISO credits the Department with a score of 6 out of 6 possible points for engine companies. The ISO lists 2,500 gallons per minute (GPM) as the Basic Fire Flow required for the Department to deliver. The Basic Fire Flow for the community is determined by the review of the Needed Fire Flows for selected buildings in the community. The fifth-largest Needed Fire Flow is determined to be the Basic Fire Flow. This flow can be achieved by each of the Department's two engines alone, as they each have a 1,500 GPM pump capacity. The Department received 3 out of 3 possible points for pumper capacity.

Table 19. Number of Aerial Apparatus by Community Size

Population	0	1	2	3 or More
10,000-24,999	49%	47%	3%	0%
5,000-9,999	73%	26%	1%	0%
2,500-4,999	89%	10%	0%	0%
Less than 2,500	96%	4%	0%	0

With regard to aerial apparatus or ladder trucks, most communities with a population comparable to Williams Bay, even considering its peak population, do not have one. However, population should not be the only consideration regarding need. The ISO evaluates the number of needed ladder-service trucks based on the number of buildings three stories or 35 feet or more in height, buildings with a Needed Fire Flow greater than 3,500 GPM, and the method of operation. Response areas not needing a ladder company should have a service company. Ladders, tools, and equipment normally carried on ladder trucks are needed not only for ladder operations but also for forcible entry, ventilation, salvage, overhaul, lighting, and utility control. As shown previously in this report, Williams Bay does not own an aerial ladder truck. It does, however, receive credit for a "ladder service company," as this evaluation also takes into consideration this equipment being carried on other vehicles. The Department received a credit for Ladder Service of 3.08 out of a possible 4 points. The ISO did not provide any credit for a reserve engine or aerial ladder truck, which is not unusual for a community of this size.

Table 20. Other Suppression Apparatus by Community Size

Population	1	2	3 to 4	5 or More
10,000-24,999	24%	23%	20%	11%
5,000-9,999	23%	25%	26%	10%
2,500-4,999	21%	28%	30%	10%
Less than 2,500	23%	28%	29%	10%

"Other suppression apparatus" refers to vehicles such as water tankers/tenders, brush fire apparatus, and command vehicles. The Department has two vehicles that fit this category: the crash truck and the brush fire apparatus. The crash truck may be credited with the "Ladder Service Company" in the ISO rating. It should be noted that 40 to 50% of communities in this population range have three or more vehicles in this category. This is due to the fact that most of the small communities in this category also serve rural areas without water supply and need water tankers/tender apparatus. The entire Williams Bay Fire Protection area has a municipal water supply, so these types of apparatus are unnecessary.

There is no comparative data for the Department's dive rescue equipment, but given its location on Geneva Lake, water rescue equipment is needed. In discussions with the director of the Walworth County Dive Team, Williams Bay is not considered an "equipment cache" location as is Fontana. Not all fire departments that have members on the team have a dedicated apparatus to transport team members and their equipment (there are currently two Department members on the team). The Dive Team director states that this vehicle is an added piece of apparatus by the Department's choice, not by the direction of the county team. Strong consideration should be given to eliminating this piece of apparatus when considering space needs for a future station or when the need to replace the truck arises. Dive team equipment could be stored in the station and placed on other apparatus as needed, which is the practice of dive team members on other departments.

Benchmark data for the number of ambulances in systems is not as readily available. The unit in the Williams Bay station is owned by the Village of Williams Bay but leased to the Fontana Fire Department and currently staffed by Fontana personnel during weekday hours, seven days a week. During evening hours, the ambulance remains at the Williams Bay station, and the ambulance response is from the Fontana station.

The Department's vehicles are well-maintained and equipped with the necessary hose and equipment for the needs and risks of the community. Apparatus and equipment are checked at the required intervals to be compliant with state regulations.

a. Apparatus and Equipment: Recommendations/observations

1. The Department's apparatus fleet is comparable to departments of similar size in the nation when considering the seasonal population.
2. The front-line fleet meets the ISO requirements for the fire protection area.
3. There is no need for additional apparatus. While equipment will need to be replaced over time, based on the area and population protected, it is unlikely the fleet will need any additions in the next 25-plus years.
4. Some apparatus, such as the brush vehicle and ATV, are duplicated in almost all of the fire stations surrounding Geneva Lake. Consideration should be given in the future to cooperative efforts to share some of these "specialty" type apparatus.
 - a. The dive truck falls into this category and is not considered a necessity by the MABAS dive team.

5. Other potential apparatus needs and capacity will be discussed later in the report when the fleets are looked at collectively.

4. Facilities

The original fire station in Williams Bay was constructed in 1936. This portion of the station and the lot on which this section is located is owned by the Williams Bay Volunteer Fire Department. Two additions were made to this station; the first is located immediately behind the original section and consists of a two-apparatus bay. A three-bay section was added to the south of the building. The two- and three-bay additions are on separate parcels of property owned by the Village. This creates some unique issues, given that a single connected building is located on separate parcels and is owned by two different entities. This issue came to light several years ago when the replacement of the station was being considered. The bylaws of the Williams Bay Volunteer Fire Department state that all current and honorary members have the ability to vote on any issues regarding the sale of the fire station, and the vote must be unanimous. The past vote on turning over the fire station to the village did not receive unanimous approval, so the fire station remains in its current location.

This ownership conundrum is certainly a factor that must be considered and will be discussed in our future recommendations section.

While this is not a facility condition or space needs study, we make the following general observations concerning facility functionality and compliance with safety standards for the consideration of stakeholders.

Apparatus Bay

The apparatus bay is divided into three distinct areas: the original 1936 station and two additions to the rear of the station. The original station's three bays are of insufficient size to store most modern fire apparatus. These bays currently house the brush fire apparatus ATV and trailer. The first addition consists of two bays and houses the Dive/Water Rescue vehicle and ambulance. The bays are adequately sized for these two vehicles. There is some storage behind the apparatus in this bay in one corner, including a Self-Contained Breathing Apparatus (SCBA) compressor and fill station. The remaining three-bay addition houses two engines and the squad truck. The bays are generally properly sized for the type of apparatus currently in use but are not up to modern standards for spacing. Spacing between apparatuses does not allow for proper access to response and routine checks and maintenance.

Some personal protective equipment is stored on racks in the apparatus bay in the area behind the ambulance. This is a very common station design. However, designs in the last ten years have changed dramatically in regard to the storage and access of personal protective equipment. Ideally, this gear should be stored in a separate room and protected from UV light, which contributes to the premature breakdown of the material. This room also should be directly accessible from the outside of the building/firefighter emergency parking area to reduce turnout time from the station. These storage areas also need to include

adequate space and aisle way for firefighters to “dress out” and for other firefighters to pass by with the staggered response times of personnel to the station.

Decontamination and Washer/Drying Area

The Department does have a washer /extractor for decontaminating/cleaning personal protective equipment after fires. This equipment is located in the rear of the original apparatus bay section of the station. Ideally, it should be located in a separate space next to the apparatus bay to avoid contaminating other areas of the station.

Locker Room/Showers/Restrooms

The station is not equipped with personal lockers and a shower area with separate areas designated for men and women. This design feature is not just for in-station staffing but for POC personnel as well. Firefighters should have an area to change their clothes after structure fires and take a shower before returning to home or duty in a station. This practice is for the health and safety of the firefighters exposed to toxins and carcinogens in incidents to ensure they are properly decontaminated and prevent cross-contamination with their families and homes. Technically, there is a shower on the first floor of the original section of the station. This space appears to be primarily used as a storage area for floor-cleaning equipment and supplies. It also lacks privacy and is not inviting for its intended use.

There are two restrooms in the station both located in the original section of the station. They are not marked so apparently are unisex facilities. Both are very small and dated. The restroom on the second floor is particularly small because it, like the other spaces located off of the meeting room, are in the “knee wall” area of that floor.

Day Room

There is currently no formal day room area in the station. The training/meeting room is currently used as a day room when the ambulance crew from Fontana is in the station during daytime hours. This room is not comfortable or inviting for relaxation, and this is one of the limitations that keeps the ambulance crew from being in the station for additional hours. Besides the need for in-station staffing, the addition of a true day room may attract POC staff to spend time in the station. Although a comfortable and attractive dayroom may appear to be a “luxury item,” it is a recruitment and retention tool.

The station does not have a workout facility. Since the number one cause of injuries to firefighters is stress and strains, promoting firefighter fitness is paramount to safety. The Department should consider providing workout space and equipment for its members to maintain their fitness.

Office Space

There is one very small office area off of the training room on the second floor. This space is shared by the chief officers and fire inspector. It is in the “knee wall” area of the second floor and a very functional space.

Training Room

The training/meeting room occupies most of the second floor and has modern audio/video support for training.

Kitchen/Dining

A kitchen area is located adjacent to the training room in the “knee-wall” space similar to the office area on the opposite side of the training room. There is room for a stove and refrigerator. However, the height and width of this area severely limit the functionality of this space.

Sleeping Quarters

There are no sleeping quarters in this station, and currently, no space could be converted to provide them. While the Department does not currently have staff manning the station 24 hours per day, bedroom/dorm facilities could provide value now and certainly in the future. Sleeping quarters for at least four personnel would allow for the adequate staffing of one cross-staffed ambulance and engine company.

Location

The location of this station is actually very good from the perspective of response time as it is centrally located in the Village and on the bay, which separates the community into east and west sections. Response time and distance from this station are shown in Appendix B (pages B-4 and B-5). There are, however, some negative aspects to this location. This station is located at the busiest intersection in the Village and is impacted by traffic, particularly during peak tourist season times. The approach aprons to the apparatus bays are very short in the back area and share space with the parking area, making it challenging to back the apparatus into the station. Although the original station is only used for the brush fire apparatus and ATV, the approach apron is very close to the street, which is a state highway. Parking is certainly at a premium on meeting nights, and "no parking" signs are often ignored by the public. Unfortunately, there is no room for expansion on this site.

6. Service Demand and Performance

The following section contains several areas of demand for services and the performance of systems in meeting this demand. These items are reviewed to determine if the current staffing is meeting performance expectations and to identify trends in demand that are affecting or could affect performance in the future and require additional resources to meet that demand.

a. Call Volume

The first area reviewed in this section is the type and number of calls for service. The data available for this analysis was drawn from two separate reporting formats; the first sets of data are from 2020 through 2022, and the second is from 2023. The Department, as well as most of the county, switched records management systems in 2022. This data is presented in Table 21.

PUBLIC ADMINISTRATION ASSOCIATES

Fontana/Williams Bay| Public Safety Staffing and Fleet Projections

- 33

The data shows that the number one call type for fires is “false alarms.” Given the number of single-family residences and condominium units that have alarm systems, this is not surprising and similar to what is experienced in Fontana. A relatively large number of seasonal residences are protected by fire alarm systems. While this places a demand on the Department, having such a high number of residences protected by alarm systems can be viewed positively in the sense that it provides early warning and improved response time to these locations.

It should be noted that 2023 data is based on “initial reason for dispatch.” 2020 through 2022 categories are based on the “actual outcome” of the incident. This is likely why the “Fire Other” number is skewed much higher in 2023. In previous years, many of these calls likely ended up being smoke from some other source (initially mistaken as a fire) and would fall into the category of a “Smoke scare” or a “Miscellaneous service” call. It should also be noted that with the data that we were able to obtain, it was not possible to separate mutual aid calls from calls responded to within the Village of Williams Bay.

Other than the category of false alarms, which is fairly high, the remaining types of calls and distribution are similar to what we have seen in comparable communities and are shown in Table 21 on the next page.

Table 21. Williams Bay Department Calls by Type

Call Type	2020	2021	2022	2023
Fire:				
Building Fire	5	5	7	9
Cooking Fire	0	1	0	
Vehicle Fire	2	1	0	2
Fire Other	2	1	3	18
Outdoor Fire	2	7	3	0
Rescue:				
EMS Call	5	4	4	0
Vehicle Accident	7	4	3	4
Invalid Assist	0	2	3	
Water Rescue	3	4	1	
Rescue Other	1	1	2	
Hazardous Condition:				
CO Alarm	10	5	5	
Gas Leak	4	6	4	3
Wire Down	2	7	3	
Haz Mat Spill/Leak	4	1	0	
False Alarms:				
Alarm, no fire, false	50	55	29	62
Sprinkler malfunction	0		0	0
Smoke Scare	0	15	24	
Service Call:				
Cover/Move Up		3	2	2
Cancelled En Route	31	19	10	
Misc. Service Call	7	5	9	1
Total Calls	135	146	112	101

Calls for emergency medical service within Williams Bay are listed with the data presented earlier in the Village of Fontana section. The emergency medical calls listed in Table 21 are for those calls where the Williams Bay Fire Department provided assistance, such as with vehicle accidents. The average annual number of fire calls in Williams Bay over the last four years is 124. This equates to approximately 2.4 calls per week, which usually is within the means of a POC department with regard to staff capacity.

In looking at fire call volume over the past four years, there is some variance in the number of calls per year, but there is a slight downward trend in the past two years. In reviewing this data and in interviews with staff, the call volume has been relatively stable and not on an increasing trend line.

While demand for service does not always directly follow the trend line of population growth, there is not likely going to be call volume growth that would impact station design in the next 25 years.

a. Performance

Response time is often used as a key performance measure of a fire department, coupled with delivering adequate personnel for the type of response situation. There are two national standards in this regard; one is NFPA 1710 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, and NFPA 1720 Standard for the Organization and Deployment of Fire Suppression, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments. The standard that applies to the Williams Bay Fire Department is NFPA 1720, as the definitions contained within this standard state that it is the one to be used for volunteer and combination departments.

NFPA 1720 calls for a response for structure fire incidents in urban areas (1,000 population/sq. mile) of 15 personnel on scene in 9 minutes total response time or less 90% of the time. In suburban areas, the standard is based on having ten personnel on scene with a response time of 10 minutes or less, 80% of the time, and six personnel on scene in 14 minutes, 80% of the time for rural areas. Table 22 lists the response time and staffing goals outlined in NFPA 1720

Table 22. NFPA 1720 Response Time and Staffing Goals

Demand Zone	Demographics	Staffing & Response Time	Meets Objective
Urban	>1000 sq. mile	15/9	90%
Suburban	500-1000 sq. mile	10/9	80%
Rural	< 500 sq. mile	6/14	80%
Remote	Travel > 8 miles	4	90%

The data presented includes turnout time, travel time, and total response time. Turnout time is the time from notification of the call to being en route. Travel time is the time from starting en route to arriving on scene, and total response time is the sum of both of these times. These two components, along with the time it takes to process a call at the 911 center, make up what a citizen understands to be the response time or total response time. The data in the tables below is presented in "fractals" versus averages. Fractals are more performance-

specific and present a better measurement for expectation versus averages or medians, showing that half of the data is above or below the number presented.

Response time data was only available electronically for sorting purposes for 2023. There are some limitations to the data that is currently available to the Department. Turnout time, when looking at responses from the POC departments, is a very important performance measure. This can vary by time of day and day of the week, depending on the availability of POC staff. The times presented are for the first single unit to arrive on scene, which in many cases is the Fire Chief who responds directly to the scene. These times also do not show the time when the total response force of all units has assembled at a structure fire, which is a key performance measure.

Table 23. Total Response Time within the Village of Williams Bay

Response time	2022	2023
<6 minutes	67%	54%
<10 minutes	98%	82%
>10	1%	18%

Response time was also computer-modeled utilizing GIS mapping from the current station, which can be viewed in Appendix B. Mapping shows that most of the Village of Williams Bay falls within a four-minute travel time. As previously stated, travel time plus turnout time comprises the total time from alarm notification to arrival on scene. Based on mapping and historical data, the current station location provides a good location from a travel and response time performance perspective. While response times were slightly longer in 2023, there is not enough data to say that this is a trend, but it should continue to be monitored. Turnout time should be broken out and monitored in the future to determine if some time may be gained in this area.

The ISO rating schedule also reviews and rates response time in the item titled “Deployment Analysis” This item examines the number and adequacy of existing engine and ladder-service companies to cover built-upon areas of the municipality. A determination is made of the percentage of built-upon area within 1½ miles of a first-due engine company and within 2½ miles of a first-due ladder-service company. The Department received 8.96 out of a possible 10 points in this evaluation area. We also analyzed the 1.5-mile distance from the current station, and this map is provided in Appendix B (page B-4). This map shows that the great majority of the Village is located within 1.5 miles of the current station or, as scored, just under 90%.

While response time and distances are important measures, the number of personnel responding to incidents within these time parameters is of greater importance. This is also addressed in the 1710/1720 standards in the number of responders needed per fire company to comprise an effective response force. The NPFA 1710 standard calls for an engine company of four to be on scene in 6 minutes or less 90% of the time and a full force

of 15 personnel to be assembled on scene in 9 minutes 90% of the time. The NPFA 1720 suburban standard areas call for assembling ten personnel in 9 minutes. In our opinion, Williams Bay fits into the suburban category when considering building density. In reviewing response data from 2023, the Department had five or more personnel per call on 84% of its calls, with eight calls or 7.4% having nine responding members. The ISO recognized ten total on-call personnel responding on average, which is significantly greater than our findings. The average number of on-call personnel responding, according to our findings, is 5.46, although we did find that calls, such as vehicle accidents, structure fires, or other calls involving fire, tended to have greater than five personnel responding. The Department has an automatic aid agreement that calls for a full department response from the Town of Delevan to any reported structure fire. Without the specific data, we cannot say with certainty that the Department is meeting the time of full assembly of staffing force.

NFPA 1710 and 1720, although industry best practices are not legal requirements in the State of Wisconsin for staffing. Staffing is referenced in two separate requirements in the Wisconsin Administrative Code, those being Wisconsin Safety and Professional Services (SPS) chapters 314 and 330. SPS 314 covers fire prevention activities but also includes eligibility requirements for receiving 2% fire dues. With respect to the latter, every year, all insurers conducting fire insurance business in Wisconsin must pay the state 2% of all premiums they have collected for insurance loss by fire. The State also contributes 2% of premiums paid to the local government property insurance fund for the insurance of public property other than State property. To qualify to receive fire dues, a municipality must have a local fire department that satisfies all of the criteria, including the following staffing criteria:

“Singly, or in combination with another fire department under a mutual aid agreement, can ensure the response of at least four firefighters, none of whom is the chief, to a first alarm for a building.” Section 101.575(3)(a)2 Wis. Stats.

SPS 330 of the Wisconsin Administrative Code, which addresses fire department safety and health, adds the following regarding staffing in section SPS 330.14(3)(a):

“A fire fighter using SCBA and operating in an interior structural fire shall operate in a team of 2 or more fire fighters. Except in the case of a structural fire that can be controlled or extinguished by portable fire extinguishers, a back-up team of at least 2 fire fighters wearing SCBA shall be assigned to remain available to perform assistance or rescue activities. One back-up team member with a charged line shall be assigned to a safe non-affected area in or near the structure. The other back-up team member shall remain within voice contact and may be assigned to additional roles so long as this individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any fire fighter working at the scene. At least one additional member shall be assigned to remain outside the structural fire and monitor the operations.”

A conclusion can be drawn from the statute and administrative rule that a fire emergency incident should involve a minimum of four personnel plus an incident commander. The latter requirement can be inferred from the statute’s directive that the four responding personnel

shall not include the chief and section SPS 330.14 of the Wisconsin Administrative Code, which sets forth certain responsibilities of an incident commander.

c. Staffing Conclusions

Fortunately, the Department's current POC staff includes two personnel (the Fire Chief and a Lieutenant) who are also employed by the Williams Bay Public Works Department and have a high degree of availability for quick responses. While a POC crew with the ability to staff a single engine is generally met and adequate for non-structure fire calls (the majority of incidents in the Village), there is less reliability that this initial crew will be made up of personnel with the ability to initiate an offensive fire attack or a rescue requiring entry into the structure. The ability of some members to don self-contained breathing apparatuses is an issue. This may create a delay, particularly during daytime hours, before either Williams Bay personnel with this ability can respond or automatic aid units from the Town of Delavan arrive.

IV. FUTURE STATION AND STAFFING NEEDS

A primary goal of this study was to determine current and future fire station design needs and locations. To determine design needs, consideration must be given to both apparatus and staff. Several critical observations should guide decision-makers; the first is this: The Fontana and Williams Bay fire departments cannot and should not be viewed as individual "stand-alone" departments, that is, departments that are able to handle all incidents themselves. This is not how they operate in reality, and, in fact, this is not the way that any department in the region has operated for some time. Moreover, it is not practically or economically feasible to make fully independent departments a future goal.

The reality is that area departments depend upon each other through mutual aid and automatic aid. Through these formal agreements and informal arrangements, departments will do everything within their ability to prevent their neighbors from failing in matters of life/safety. Williams Bay and Fontana are to be commended for formally recognizing this interdependence and proceeding in a planned manner. It is unfortunate that other area municipalities did not participate in this study; however, it is likely that one or more of them will join this consortium in the future, either through thoughtful planning or by default. Planning increases the probability of an effective and efficient collective response with costs appropriately shared. The alternative, the default model, will produce a collective response to a critical incident but without the features of effectiveness, efficiency, and appropriate cost-sharing. To this end, flexibility is key.

A second maxim to keep in mind is that staffed apparatus and not simply apparatus put out fires, rescue victims and save lives. Emergency apparatuses that cannot be staffed and deployed practically are a burden to the community, increasing costs without improving outcomes.

Several factors drive these rules of thumb. They include the diminishing numbers and availability of POC staff in both communities, Wisconsin's declining working-age population, the employment preferences of younger workers, hiring competition among departments, the

soaring cost of fire apparatus, and the finite ability of taxpayers to pay these escalating costs, to name just a few.

Currently, Emergency Medical Services are more than adequately covered in the two communities by current apparatus and staffing levels. In regard to fire response, the difficulties of POC staffing dictate that now, and even more so in the future, a high degree of cooperation needs to exist among fire departments in the western Geneva Lake area. The reality is that none of these departments, individually, have the ability to provide adequate staffing for a structure fire. In the event of a structure fire, both Fontana and Williams Bay require automatic aid from neighboring departments. Generally, each Department has the ability to respond to smaller routine incidents that can be mitigated with a single fire company. These incidents include events such as fire alarm activations, CO alarms, vehicle accidents, and assisting in ambulance crew and emergency medical incidents. How these stations are staffed and equipped should be viewed with this reality in mind.

To put this into yet another perspective, larger city fire departments are made up of multiple stations, usually with a single engine and ambulance (if they provide EMS transport), and a few stations that may also include a ladder truck and, perhaps, a command vehicle. The crew from a single station has an assigned area that it responds to individually for the above-stated minor incidents and in concert with other stations in the event of a structure fire or a complex rescue incident.

In addition to the perspective presented above, additional information to consider is how the number of stations and apparatus of the two separate villages combined compare to NFPA survey data. Table 24 shows the collective apparatus fleet of the two departments, excluding water rescue equipment and staff cars.

Table 24. Total Apparatus inventory of Fontana and Williams Bay

Apparatus Type	Totals
Engines	4
Ladder Trucks	1
Brush Trucks	2
ATV/Brush	2
Squad/Rescue	1
Ambulances	3

Table 25 displays the number of fire apparatus and stations per 1000 population for comparative cities from the NFPA survey and compares those figures to the permanent and seasonal populations of Fontana and Williams Bay combined.

Table 25. NFPA survey of apparatus and stations per 1,000 population compared to Fontana and Williams Bay combined population

Population	Pumpers per 1,000 population	Other suppression vehicles per 1,000 population	Aerials per 1,000 Population	Stations per 1,000 population
10,000-24,999	0.18	0.13	0.03	0.13
5,000-9,999	0.31	0.29	0.04	0.19
Combined Permanent Population 4,633	0.86	0.65	0.22	0.43
Combined Seasonal Population 15,986	0.25	0.19	0.06	0.13

Based on the combined seasonal population of the two communities, apparatus, and station ownership falls within national norms. NFPA benchmark data (displayed above) would predict the collective ownership of 3 pumpers (2.874), 3 "other suppression vehicles" (2.468), .96 aerials, and 2.08 stations. As shown in Table 24, the actual numbers are four pumpers, five "other suppression vehicles, one aerial, and two stations.

2. Potential Station Locations

The survey data above illustrates that economies of scale may be achieved when serving larger populations. These, however, cannot always be simply and directly applied because of the characteristics of the area served as well as response times. Both of these factors must be considered when determining the ideal number of stations. As can be seen in the maps provided in Appendix B, the current station locations provide very good response travel times and ISO response travel distances. This is good news, but it also poses a challenge because, as we pointed out in previous sections, the fire stations in both villages need replacement. In addition to the current locations, we modeled additional locations based on information gathered in interviews on available properties and sites previously discussed and considered.

The GIS mapping models presented for each location show response travel time on one map and response distance on the other. Travel times are calculated using an industry-standard formula developed by the Rand Corporation. The times are presented in increments of 4 minutes, 8 minutes, and 13 minutes. These increments were chosen based on the NFPA 1710 and 1720 standards. Regarding a station staffed with in-house personnel, assuming a turnout time of two minutes or less, the above-referenced times would provide total response times of 6, 10, and 15 minutes, respectively. When considering the response of POC personnel, the major variable is turnout time; that is the amount of time it takes to get to the station and to be en route to the scene. We did not have specific data on turnout times for the POC response; the general consensus of those interviewed, however, was not less than 5 minutes for POC crews in Fontana and as high as 10 minutes for Williams Bay members (not including the response of the Fire Chief going directly to the scene). The distance maps are based on the ISO ideal benchmarks of a 1.5-mile response for an engine company in densely

populated areas with a municipal water supply and a five-mile maximum response for fire department credit.

Alternate site A: Shared Facility

Intersection of Valley View Drive (Highway 67) and North Walworth Rd./ W. Geneva St. (Inspiration Ministries Area)

Numerous stakeholders identified this site as a potential location for a joint fire station that could serve both Williams Bay and Fontana. The appeal of a joint station is the potential cost savings associated with site acquisition (assuming existing village-owned properties are not utilized) and shared space. The site has the potential to provide more building space than other alternatives that we studied. This additional room could provide an area for department training and a training structure. This site could also provide room for a storage building for seasonally used apparatus such as boats and ATVs. It would allow for the co-location of the Fontana police department, which will be in need of a new home.

If the goal, however, is to maintain current response coverage, in terms of travel time and distance, as much as possible, that goal is unlikely to be accomplished by a single station and specifically not by one at this location. The maps show that this location compromises coverage to the south end of Fontana (the Abby Springs area) as well as to the eastern side of Williams Bay (the area across the bay.) Maps modeling response times and distances for this location can be found on pages B-6 and B-7.

If a key performance measure were established for a response in 10 minutes or less, 90% of the time, and this station was staffed with in-house personnel, this location could be viable. Even with in-station personnel, however, a response time of six minutes or less, 90% of the time, would not be possible from this location for roughly half of each village.

In addition to the response time issue, other factors impact this site. First, a large single station lacks the flexibility of two smaller ones as stakeholders consider adding new partners to this consortium in the future. Second, interviews with staff from both departments indicate that the concept of the two departments being housed under one roof is not viewed favorably by many at this time. This could cause a further reduction in POC staff, which would actually necessitate hiring more full-time personnel. Third, in our opinion, a station shared by two independent fire departments would not create an economy of scale that would make the joint facility more efficient to staff. Using the impetus of a new facility to merge two historically independent departments can have unintended consequences both in operations and building design. If this is a long-term goal, there are better-starting points, in our opinion. Finally, the site is located in the Town of Walworth and would require zoning permission from the Town and County. One factor that needs to be carefully considered if this site is selected pertains to where POC staff live. Increasing the turnout time of POC personnel to the facility would make response times even less attractive.

Alternate site B Fontana

Wild Duck Road and Old Highway 36

This is an appealing location for a Fontana public safety facility because it is vacant and already owned by the Village. It provides reasonable response times within Fontana since it is less than one-half mile from the current station, which provides very good response times. There is adequate space to locate police operations on the site. It would free up the current fire/police station location for redevelopment. While there is land available at this location, specifically a triangular parcel between old Highway 36 and Highway 67, it is not a particularly flat site, which could pose challenges for construction. Based on the computer modeling, this station appears to have the ability to produce response times that are close to current performance. This site could definitely be considered if the Village would prefer not to build on the site of the current fire station, if space needs or difficulties in staging the construction make the current site impractical, or if construction of a larger municipal facility is desired. GIS maps for this site are shown on pages B-8 and B-9.

Alternate site C: Williams Bay Theatre Road

The location in the 2600 block of Theater Road was pointed out to us as a potential station location. The Village had considered this area in a previous attempt to replace its existing station. The location features a very large and open tract of land partially developed into athletic fields. It is already owned by the Village and would provide a very buildable site. The location, however, does not produce response times that compare favorably to the current station location. GIS maps for this site are shown on pages B-10 and B-11.

Alternate Site D: Williams Bay 300 Block of Elkhorn Rd Hwy 67 and Stark Street

This site was not under consideration at the start of the study but was identified by PAA as a location possessing favorable response times and distances and already owned by the Village. It also avoids traffic and ownership issues associated with the current station. There are obviously other uses taking place on the site, including the Lion's Field House and community gardens. Loss of space at the field house could be offset by providing meeting space in a new fire facility, while the community gardens could be moved to Village-owned property on Theater Road, for example. GIS maps for this site are shown on pages B-12 and B-13. This option will be discussed in greater detail in the following section.

B. Recommended Locations

Based on the GIS modeling and reviewing the locations that will best meet NFPA 1720 and ISO benchmarks, we recommend the villages be covered by two stations at the following locations.

In the Village of Fontana, the current fire station location produces the best response time performance for the Village overall. It is quite common for us to find this situation as the early developers of communities often chose a very central location for their fire station. The difficulty with this site is that it is the current location of the fire and police departments. It is not clear that the police department could be accommodated on this site and may well have

to be moved. Given that police are patrol-based, their response times are not significantly dependent on station location. Obviously, demolition and rebuilding on this site while continuing to provide services would be a challenge.

One idea passed along to us that we believe merits consideration would be to vacate Douglas St. between 3rd Avenue and Fontana Boulevard to gain additional space and allow for construction to begin on at least a portion of the new station before the old station is razed. The apparatus bay portion of the new station, or at least the majority of that space, could be constructed in the area that is currently the parking lot and Douglas Street. At least the minimum apparatus of one engine and ambulance could be moved into this space, and temporary living quarters, such as an office trailer, could be kept on site for staffing while the remainder of the building is constructed. An additional consideration for configuring the station on the property in this way is that the apparatus bay could be designed with drive-through access for the engine and the ambulance, which are the most frequently used apparatus. If need be, during construction, the remaining apparatus could be stored off-site, perhaps at the public works facility on Wild Duck Road. If this option were selected, one possibility would be to construct a permanent storage building for the Department at the Wild Duck Road property. This could be a simple, metal storage building with heating, allowing for the ability to store seasonal fire apparatus, such as the boat, and other equipment not needed in emergency situations. This would be a more cost-effective solution than utilizing expensive fire station space for routine storage needs. This storage site could also include a fire training facility and, perhaps, be offered for use to neighboring departments.

For the Village of Williams Bay, we recommend the construction of a replacement station at the 300 Block of Elkhorn Road (Highway 67) and Stark Street. As previously stated, this location currently has existing additional uses, including community gardens, the Lions Club Field House, and parking for the field house and Kishwaukee Nature Preserve. It would appear possible to retain the existing nature preserve parking and still have sufficient space to construct a station with ingress/egress directly to Highway 67. The community gardens could be moved to Village property on Theater Road, and community meeting space could be provided at the new fire station.

C. Apparatus and Staffing Considerations for New Stations

Based on the performance data presented, industry best practices (ISO and NFPA) and State regulations we make following recommendations for current and future staffing. The focus of this section is on emergency response needs and not on the administrative and support needs of the fire station.

1. Fontana Station Staffing and Apparatus Needs

At the present time, to ensure an initial response that meets state requirements and industry best practices, minimum in-station staffing should be comprised of four personnel during daytime hours on weekdays. This staff should ideally be in addition to the chief officer on

duty. These personnel would cross-staff an engine and ambulance, similar to current practices. This staffing would provide for a four-person engine company to be assembled on scene in six minutes or less 80% of the time and continue to provide a paramedic ambulance on scene at the same performance level.

We present two options for accomplishing this. The first would be to have two personnel primarily assigned to the paramedic ambulance (as is the current practice) and two to the engine company. The chief officer on duty could act as the fire officer of the engine company. The other position would be filled by a cross-trained firefighter equipment operator to drive and operate the apparatus. We recommend that any additional full-time staff be cross-trained as firefighters and paramedics to allow for flexibility in response and apparatus assignment. This would require at least one additional full-time position for the weekday coverage and additional part-time personnel to cover paid leave time.

The second and preferred option would be similar to the above, but rather than relying on a chief officer to fill the officer position on the engine, this position would be filled by a cross-trained fire officer/paramedic. This would provide a true four-person fire company in addition to the chief for initial response to all alarms of fire. This option would require two additional full-time staff and an additional part-time member to cover paid leave time. At this staffing level, even if the ambulance was already assigned to an EMS incident, it would still allow a three-person engine company to be assembled in the station if the chief on duty would assist in staffing the engine. While this does not technically meet the NFPA standards, three personnel is a common staffing level in many departments in this state.

The ability to staff an engine and or ambulance from the station consistently is the primary objective of this staffing model. The majority of non-EMS incidents that the Department responds to can be resolved by a single-engine company. With the current call volume experienced in the village, this concept should provide adequate call coverage for the foreseeable future in combination with POC support and automatic aid for structure fires. This assumes that POC staff availability continues at current levels. Maintaining a POC response force is critical for this staffing model and maintaining a reasonably affordable level of Fire Protection and EMS coverage. While this model puts less pressure on the need for POC members to respond as often as they currently do, it will hopefully improve their availability for those calls where they are absolutely needed. These types of calls include vehicle accidents, water or other technical rescue situations, and calls being reported as structure fires. Responses to calls reported as structure fires need to be immediate and cannot be delayed until being confirmed by the first-arriving company. This response should also be considered for alarms to target hazards or larger structures, which would essentially be buildings greater than one and two-family dwellings.

Staffing the current need for Fontana:

7:00 AM to 5:00 PM Monday through Friday (two options):

Engine:	1 cross-trained Firefighter/Paramedic Driver/Operator
Ambulance:	2 (two cross-trained Firefighter/Paramedics)

With a POC response

Or

Engine: 1 cross-trained Firefighter/Paramedic Driver/Operator

1- cross-trained Officer/Paramedic

Ambulance: 2 (two cross-trained Firefighter/Paramedic)

With a POC response

5:00 PM to 7:00 AM

As currently staffed

4-cross trained Firefighter/Paramedic

With a POC response

The next step in future staffing that will need to be considered is when facilities are in place permitting 24-hour coverage in Williams Bay. When that happens, we would assume the second ambulance and the two personnel would be located at the Williams Bay fire station 24 hours a day, seven days a week. When this occurs, if POC staff are able to provide two personnel in a less than five-minute turnout time from the station (in addition to the captains and chief officers that respond directly to the scene), a POC staffing model for evening hours may be sufficient. This is proposed because, in our interviews with both full-time and POC staff, evening hours and weekends produce a more favorable and reliable POC response. We recommend that if this step is implemented, turnout time performance measures be closely monitored and reported. When the POC response does not maintain an acceptable performance level, the next most cost-effective option would be to fill night and weekend possessions with paid on-premise personnel. The difference between paid-on-premise personnel and full-time staff is that paid-on-premise positions can be filled by POC and part-time personnel. This approach does create some cost savings related to benefits. Another very important advantage of the paid-on-premise staffing model is keeping POC personnel more engaged in the Department and improving the likelihood of their retention. When the staffing model options that have been presented are no longer effective in meeting performance expectations, the next alternative would be to add an additional 24-hour staff. This would consist of four personnel cross-staffing an engine and ambulance 24 hours a day, which, with the current call volume, would be sufficient.

A goal of this report was to not only look at current staffing levels and options but to project what future maximum staffing levels might be. The goal of this analysis is to ensure that a new fire station or stations will include sufficient space to support operations for the next 25 years. This look into the future, is where the perspective of regional cooperation, discussed at the beginning of this section, really comes into play. A determination as to what fire apparatus can be reasonably staffed is an important first step.

We will start this analysis with the minimum apparatus required and the necessary full-time personnel to staff it. While decision-makers can hope for the best in terms of a robust POC roster in the distant future, trends suggest that this will not be the case, and more full-time positions will need to be added to the staffing mix. At a minimum, this station should have an engine company and ambulance. To fully staff each of these companies requires a crew of two on the ambulance and up to four on the engine. This would result in a total of six personnel, which is the minimum staff the station should be designed to house.

PUBLIC ADMINISTRATION ASSOCIATES

Fontana/Williams Bay| Public Safety Staffing and Fleet Projections

- 46

The next piece of apparatus and staffing to consider is the Quint/ladder truck, which is designed to be used as an engine, a ladder truck, or, if required, both. Given that the Fontana station is centrally located between the neighboring stations of the Town of Linn, the Village of Walworth, and the Village of Williams Bay, it makes sense from a regional perspective that these apparatus be maintained in Fontana. Looking at the mapping models, this provides a ladder truck within an eight-minute travel time to all parts of the villages of Walworth and Williams Bay and within 13 minutes to the majority of the towns of Linn and Walworth. The current practice is, depending on the type of call received, such as a structure fire, that the Quint may be the first apparatus to respond. With the frequency of need for an aerial ladder/truck company being low, we believe this flexible staffing practice will serve the needs of Fontana and its immediate neighbors for the foreseeable future. Consideration could be given, depending on future regional cooperation, to staff this station with a Quint only and an ambulance. A structure fire response utilizing the three neighboring stations could bring two engines along with the Quint and ambulance. Assuming the fire apparatuses are each staffed with four personnel, this would put 15 personnel on scene, also assuming the response of a chief officer. There are three other ladder trucks in the Geneva Lake area. The next closest ladder truck apparatus is in the Town of Delevan, which is five miles or an eight-minute travel time to the center of Fontana.

We do not believe it would be cost-effective or necessary to staff the Quint and an engine with full-time staff; therefore, our recommendation for minimum staffing in the station remains at six. There are two additional staffing considerations, however. The first one concerns the chief officer position and the need for 24-hour coverage. While not currently needed, again because it is centrally located between three other stations, it would be prudent to allow space for this potential future need. Even though we do not see the need for an additional fire company being staffed 24 hours a day, seven days a week, with this being a tourist destination with a fluctuating population, room for staffing an additional company of up to four should be strongly considered. Therefore, the recommended maximum 24-hour staffing capacity that the station should be designed for is ten.

In the previous paragraphs, we discussed staffing both an engine and ladder truck/Quint in this station, as well as an ambulance. This is the minimum space needed for this station in terms of apparatus bays. The remaining apparatus in the current station consists of a reserve engine and specialized response equipment. We will start with specialized response equipment. We recommend that one bay space be included for the airboat and tow vehicle (which doubles as a brush/grass fire truck.) While not used frequently, these two pieces of apparatus need to be readily available for quick response. The Department also has a fire boat, but when it is in service during the season, it is docked in the water. The time it spends in this station is generally just for storage. It cannot be quickly deployed. Since space in the fire apparatus bay is costly, we recommend that an off-site storage building for the boats and the Department's other storage needs be considered. The Department's ATV is another seasonal apparatus that could be swapped with the previously referenced ice rescue boat depending on the time of year.

One additional bay to accommodate the reserve engine and ambulance is needed, which could be in the same bay, as the apparatus are in reserve. The command vehicle could be co-located depending on length of bays and room in the reserve bay or in front of the grass/fire apparatus.

While the scope of this report did not include a space needs study, we also recommend the inclusion of a training room in any new station design. A training room with a capacity of at least 40 persons would accommodate all current Fontana members as well as staff from neighboring stations. This training space should be built with direct access to the outside and the ability to be secured from the rest of the station. In addition to providing training space, it could function as a community meeting room.

2. Williams Bay Station Staffing and Apparatus Needs

Current staffing at the Williams Bay station is an ambulance with two full-time personnel. The remaining company is staffed by POC personnel. At a minimum, a new station should provide 24-hour accommodations for the two firefighter/paramedic staff members. To properly plan for the future, however, a new station should be designed to accommodate a fully-staffed ambulance and engine company, or six personnel.

Given the amount of undeveloped land within the Village, we recommend that the brush/grass fire apparatus and ATVs be located in the station. This apparatus would not be directly staffed but would be available when needed. Depending on the station design, a space behind the ambulance could be made available for a reserve engine if needed.

As in our recommendations to Fontana, we suggest the inclusion of a training room in any new station design. A training room with a capacity of at least 40 persons would accommodate all current Williams Bay members as well as staff from neighboring stations. This training space should be built with direct access to the outside and the ability to be secured from the rest of the station. In addition to providing training space, it could function as a community meeting room.

We gave strong consideration to the future regional perspective when analyzing the apparatus needs for this station. Were a new station to be constructed, we recommend that the Village-owned portions of the existing fire station be utilized for storage, rather than building more costly new space. Apparatus, which is not required in emergency situations, including the reserve engine, could be stored there. This approach allows the Village to make use of its assets (the portions of the station that it owns.) It defers the disposition of the 1936 section to another day. The Williams Bay Fire Department Association would own and be responsible for the 1936 section of the station. As regional efforts continue to develop, there will likely not be the need to replace much of the equipment cached in the Village-owned portion of the old station. With the cost of apparatus becoming unaffordable, area departments will likely share specialty and reserve equipment with greater frequency. As the inventory in the two additions dwindles, the Village can determine the future use of that portion of the site.

While we advise against making any major investment and improvements to the present Williams Bay fire station, some consideration should be made to making the station more accommodating for the contracted ambulance crew. A significant factor limiting their time in the station, and therefore in the Village of Williams Bay, is the lack of proper facilities. Even a small investment of two comfortable lounge chairs, a television with cable access, a computer, and a workspace for these employees would provide a major temporary improvement at little cost. The timeline for building a new station and occupying it could be several years. Anything that can be done in the meantime to improve this current situation would be money wisely spent. Inasmuch as this part of the station is under the control of the Williams Bay Volunteer Fire Department, the Village should work cooperatively with the Department on any improvements.

D. Future Regional Cooperation Considerations

We close by summarizing a theme that we have emphasized throughout this report. Numerous stakeholders in Fontana and Williams Bay have reiterated the message that we have heard in other Walworth County communities that we have worked with in recent months. The future of fire response in this region has already arrived. Excluding the City and Town of Delavan, fire departments in the area west of Geneva Lake are reliant on a cooperative effort (mutual aid) for major fire incidents.

Since this is already an operational norm, an immediate issue that needs to be addressed is the implementation of common standard operating guidelines (SOGs) to govern structure fires and other multi-company incidents. These SOGs can then be used to develop and guide standard training among the collaborating departments. This is not just a best practice but is actually a legal requirement, part of SPS Chapter 330 of the Wisconsin Administrative Code. It states in relevant part:

“Every fire department shall do all of the following:

(1) Establish and maintain a member training and education program that identifies specific goals and objectives for the prevention and elimination of occupational accidents, injuries, illnesses, exposures to communicable disease, and fatalities.

(2) Assure that the training and education provided under this section are based upon the fire department’s written standard operation guidelines.” SPS 330.07 Wis. Admin. Code *Emphasis added.*

This is an old standard that applies to individual departments, that was developed when, for better or worse, departments operated far more autonomously. The reason for the rule, however, is more important than ever. With multiple departments responding to serious life/safety incidents, efficient and safe operations depend on a common set of basic rules. Policy manuals, SOGs and standardized training support this goal.

To put this into perspective, imagine a football team that is made up of members of four or more teams on game day. These teams do not operate from the same playbook, nor do they practice plays together on a regular basis, if at all. Regardless of the individual skills of any

player or even a group of players, they will not be successful unless the entire team is operating in a coordinated effort.

Building upon this last statement, emotions and pride in individual departments need to be put aside and the focus needs to be on the outcomes that are required to serve residents and visitors on the worst day of their lives.

The first step in this direction is one that costs far less than a new engine: the cooperative development of standard operating guidelines among the departments that regularly respond together to initial calls to structure fires. A shared training officer among these departments would go far to ensure that this goal would be achieved. This concept is sometimes referred to as a functional consolidation. Departments do not become completely merged. Their histories and identities can be retained, but in practice, they are able to play as a single team. For the safety of firefighters and for the sake of the community, this cannot simply be a paper exercise. Not only must members of the fire service be committed to this approach, but elected stakeholders must be, as well. Inquiring about the status of SOGs, policies, and training, keeping abreast of statistics, and establishing key performance indicators, in tandem with the leadership of the fire department, are within the capabilities of any elected official. Two questions that put this in perspective are these: If it was your loved one who was having a medical emergency, how long would you want them to wait for help? Would it matter to you which Department answered the call?

More impactful fiscal steps will follow as trust is developed among departments, including sharing apparatus and relying on others to arrive with specialized equipment and staff. Standardizing and right-sizing of apparatus resources will soon become a necessity with the cost of a new fire engine at over one-million dollars and with ladder trucks selling for twice that amount.

These facts will confront all departments, along with the realities already being faced regarding the recruitment and retention of paid-on-call staff. The question that needs to be asked is how can we maximize the efficiency of this staff? Without the vision to retain a paid-on-call workforce as part of this regional effort, the cost of providing fire and emergency medical services will be overwhelming.

We are aware that there are discussions about studying fire service from a county perspective; we hope those bear fruit. In reality, however, communities cannot wait years to address a very pending need; they need to work on a daily basis to improve and regionalize service. The first step we suggest is the functional consolidation of training. This type of model is not new and has been in place on the East Coast for years. Individual fire companies continue to serve their communities and retain their community/company names but function as part of a larger department. Paid-on-call personnel work side by side with career members to staff that company. This vision should guide the important decisions that lie ahead.

IV. OVERALL RECOMMENDATIONS/OBSERVATIONS

A. Recommendations for both communities.

1. Both communities should give serious consideration to funding a training officer position that would serve both departments. Other regional departments should be encouraged to participate in this collaborative effort. A training officer will ensure that all personnel are trained to a common standard. This is critical to efficient and safe operations.
2. Every effort should be made to recruit new Volunteer/POC Firefighter/EMTs. Volunteer/POC staff play an important role and are far less costly to employ than full-time staff. Given demographic challenges, however, both communities should be prepared for a POC roster that will likely shrink in the future. The reality is that it will be necessary to increase the number of career staff over time.
3. The addition of full-time personnel to each Department should not be triggered by an arbitrary timetable but rather by the failure to achieve Key Performance Indicators (KPIs). Recruitment and retention of POC personnel need to be closely monitored, and a Key Performance Indicator ("KPI") must be established regarding the ideal number of POC personnel to be maintained on the Fire Department's roster. KPIs should also be established for the number of POC personnel responding to incidents and the time it takes them to report to the station. These KPIs will establish objective standards indicating when additional full-time positions need to be added.
4. The two Villages should strive for a longer-term intergovernmental agreement. Given numerous factors including the lead time that is required for hiring, the consequences of downsizing (if required), budgetary impacts and retention of staff, a multi-year agreement would provide for far more predictability by all stakeholders.
5. We do not recommend a shared facility in the area of Highway 67 and CTH F. Response times from that location do not compare favorably to existing station locations. Even if a single entity were providing Fire/Emergency Medical Service to both communities, we would recommend a two-station model.

B. Recommendations/observations- Fontana

1. The Fire Chief position will eventually need to become a full-time position. Absent the unique circumstances of the individual currently filling this role, it would already need to be a full-time position.
2. The apparatus fleet of the Department is comparable to departments of similar size in the nation when considering the seasonal population that must be protected.

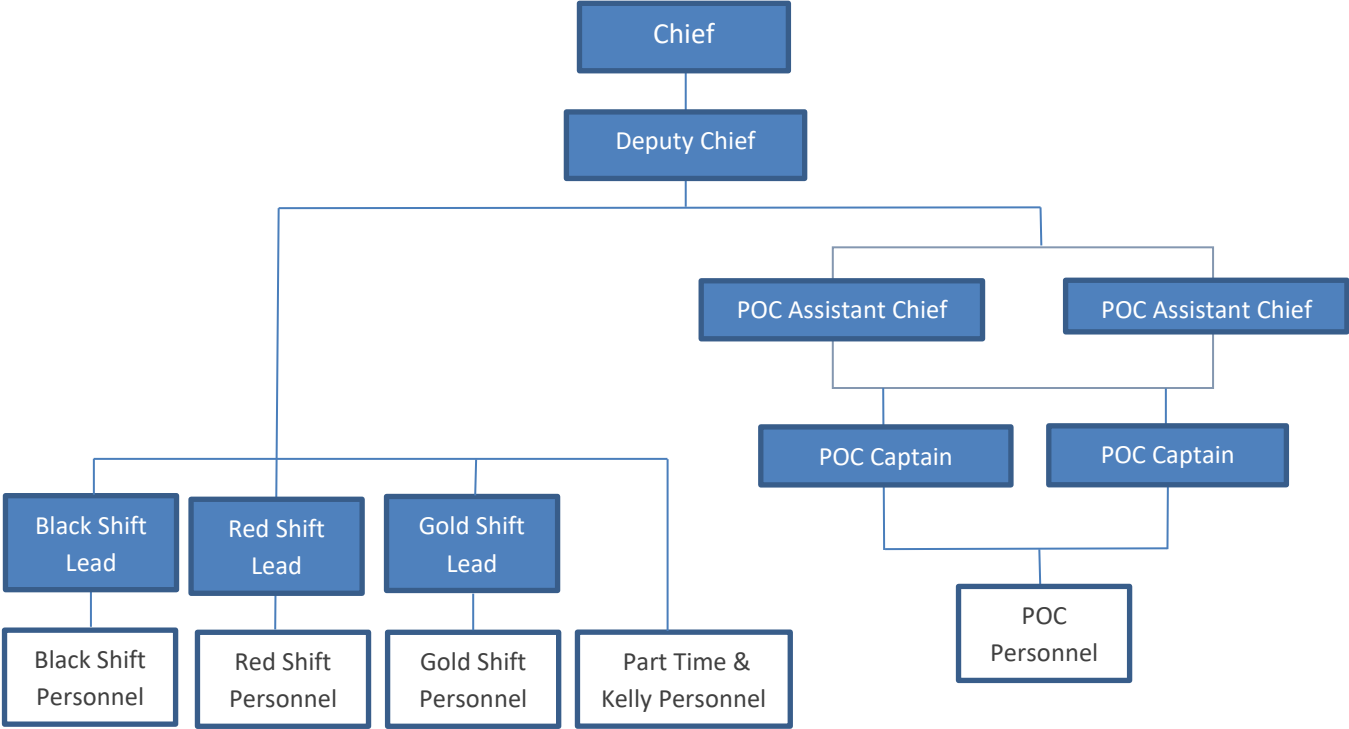
3. The front-line fleet meets the ISO requirements for the fire protection area.
4. There is no need to acquire additional apparatus based on the area and population protected. While apparatus will need to be replaced over time, it is unlikely the fleet will need any additions in the next 25 years.
5. Some apparatus, such as the brush vehicle and ATV, are duplicated in almost all of the fire stations surrounding Geneva Lake. Consideration should be given to engaging in cooperative efforts to share some of these "specialty" type apparatuses in the future.
6. We think serious consideration should be given to constructing a new fire station on the site of the current station as the land is already owned by the Village, and the location produces the best response times of the sites that are practically available.
7. As an alternative site, we recommend the construction of a new facility on Village-owned land on Wild Duck Road.
8. A new station should be designed to accommodate up to 10 personnel.

C. Recommendations/observations- Williams Bay

1. Determining the legal status of the Department should be a high priority for stakeholders. We recommend that ordinances be revised to clearly recognize the Department as a municipal fire department. If the Williams Bay Volunteer Fire Department wishes to continue to exist as an entity separate from the City for charitable and benevolent purposes, it should ensure that the necessary articles of incorporation are drafted and filed and bylaws amended to reflect its new role.
2. The apparatus fleet of the Department is comparable to departments of similar size in the nation when including seasonal population.
3. The front-line fleet meets the ISO requirements for the fire protection area.
4. There is no need for additional apparatus. While equipment will need to be replaced over time, based on the area and population protected, it is unlikely the fleet will need any additions in the next 25-plus years.
5. Some apparatus, such as the brush vehicle and ATV, are duplicated in almost all of the fire stations surrounding Geneva Lake. Consideration should be given in the future to cooperative efforts to share some of these "specialty" type apparatus.

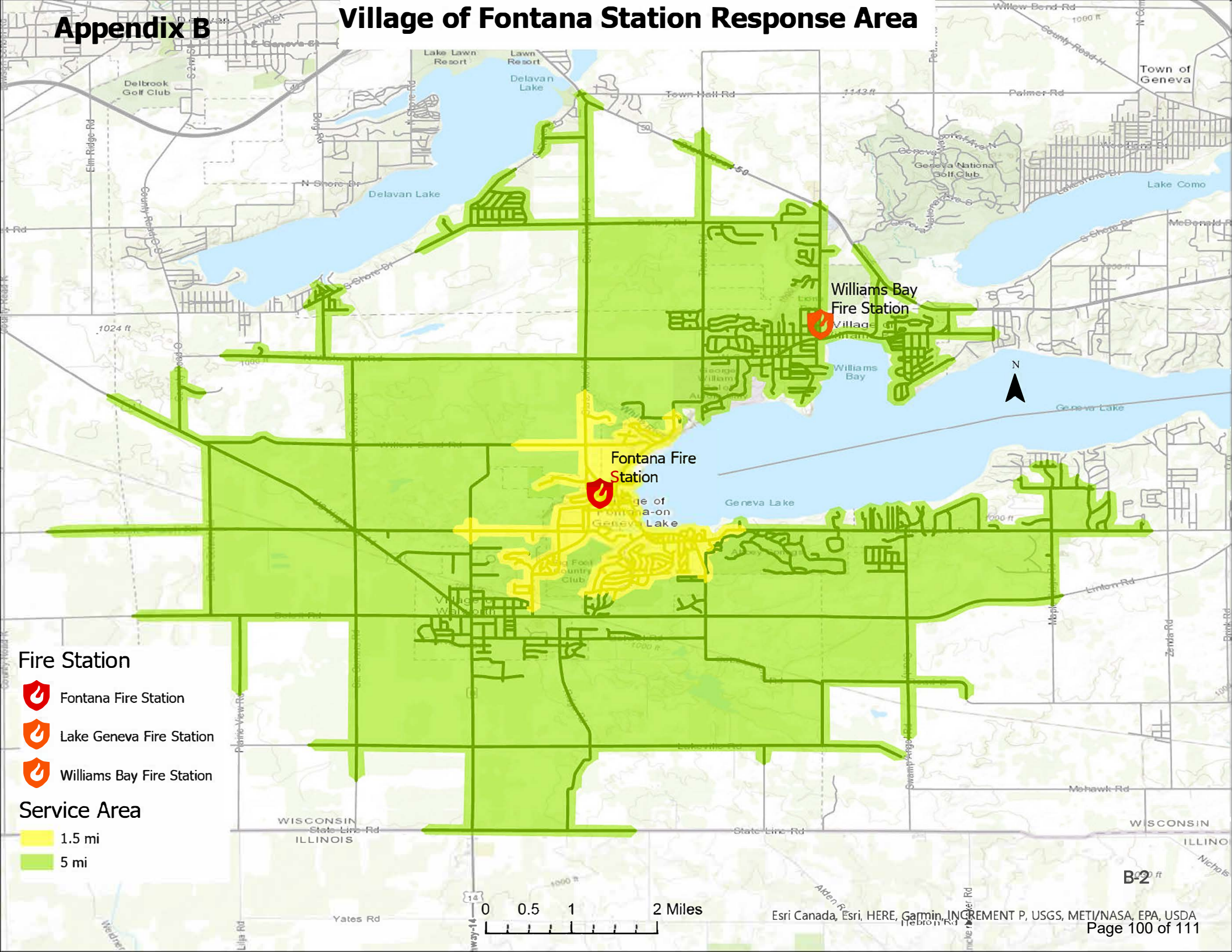
6. We do not recommend the replacement of the dive truck when it reaches the end of its useful life.
7. The Village should construct a fire station that provides accommodations for full-time staff. Doing so would increase the time that a staffed ambulance is available in Williams Bay from eight hours per day to 24 hours per day.
8. We recommend that a fire station be constructed at the 300 Block of Elkhorn Road (Highway 67) and Stark Street.
9. At a minimum, a new station should provide 24-hour accommodations for the two firefighter/paramedic staff members. To properly plan for the future, however, a new station should be designed to accommodate a fully-staffed ambulance and engine company, or six personnel.
10. Steps should be taken to allow the current full-time EMS personnel from Fontana to respond as fire firefighters to fire calls occurring in Williams Bay. Doing so would significantly improve response times as well as the size of the force that is able to arrive at a fire call.
11. In the interim period, before a new fire station is constructed, the Village should take steps to make the current station more accommodating to the full-time EMS staff. Simple measures such as the addition of two comfortable lounge chairs, television, and computer workstation would be good temporary improvements. In making these improvements, one must be mindful that the living quarters section of the current station is owned by the Williams Bay Volunteer Fire Department, and any improvements must be coordinated and approved by them.

FONTANA FIRE DEPARTMENT
ORGANIZATIONAL CHART



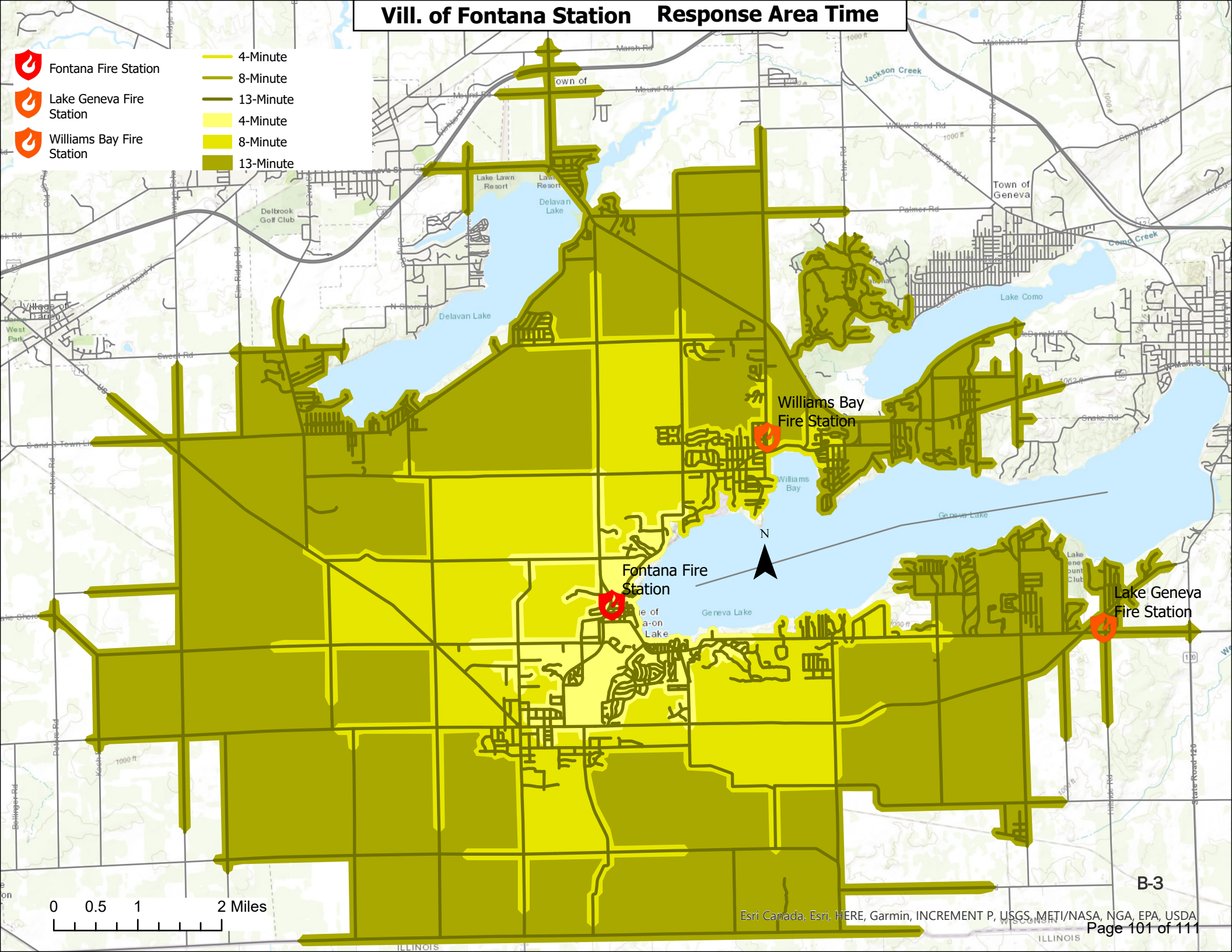
APPENDIX B GIS MAPPING OF STATION LOCATIONS

1. Fontana's Existing Station	B-2
2. Williams Bay Existing Station.....	B-4
3. Potential Shared Facility (STH 67 and North Walworth Road.....	B-6
4. Potential site (Fontana) Wild Duck Road.....	B-8
5. Potential site Williams Bay (Theater Road)	B-10
6. Potential site Williams Bay (Elkhorn Road)	B-12



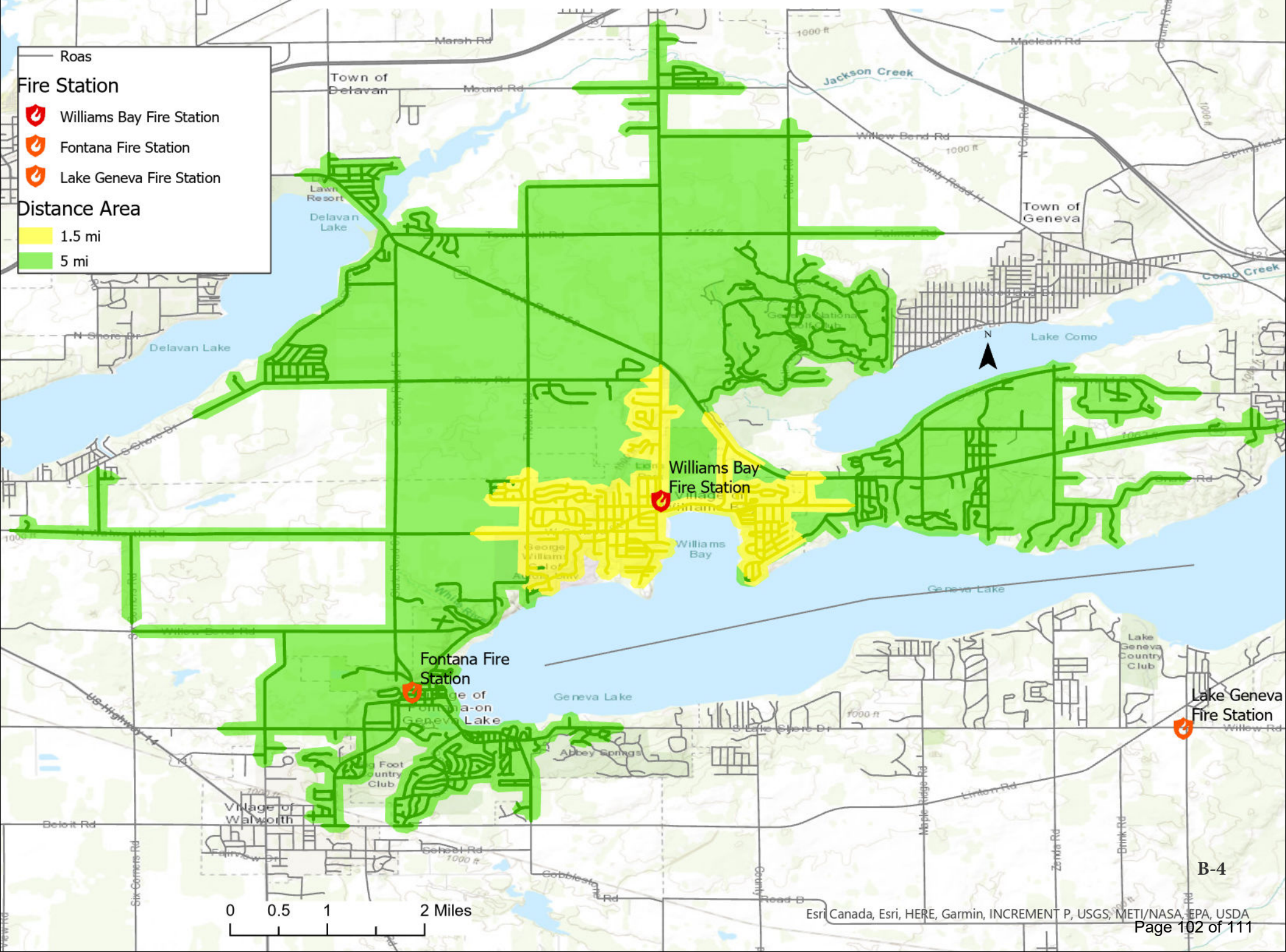
Vill. of Fontana Station Response Area Time

- Fontana Fire Station
- Lake Geneva Fire Station
- Williams Bay Fire Station
- 4-Minute
- 8-Minute
- 13-Minute
- 4-Minute
- 8-Minute
- 13-Minute



B-3

Williams Bay Fire Station Distance Area Area



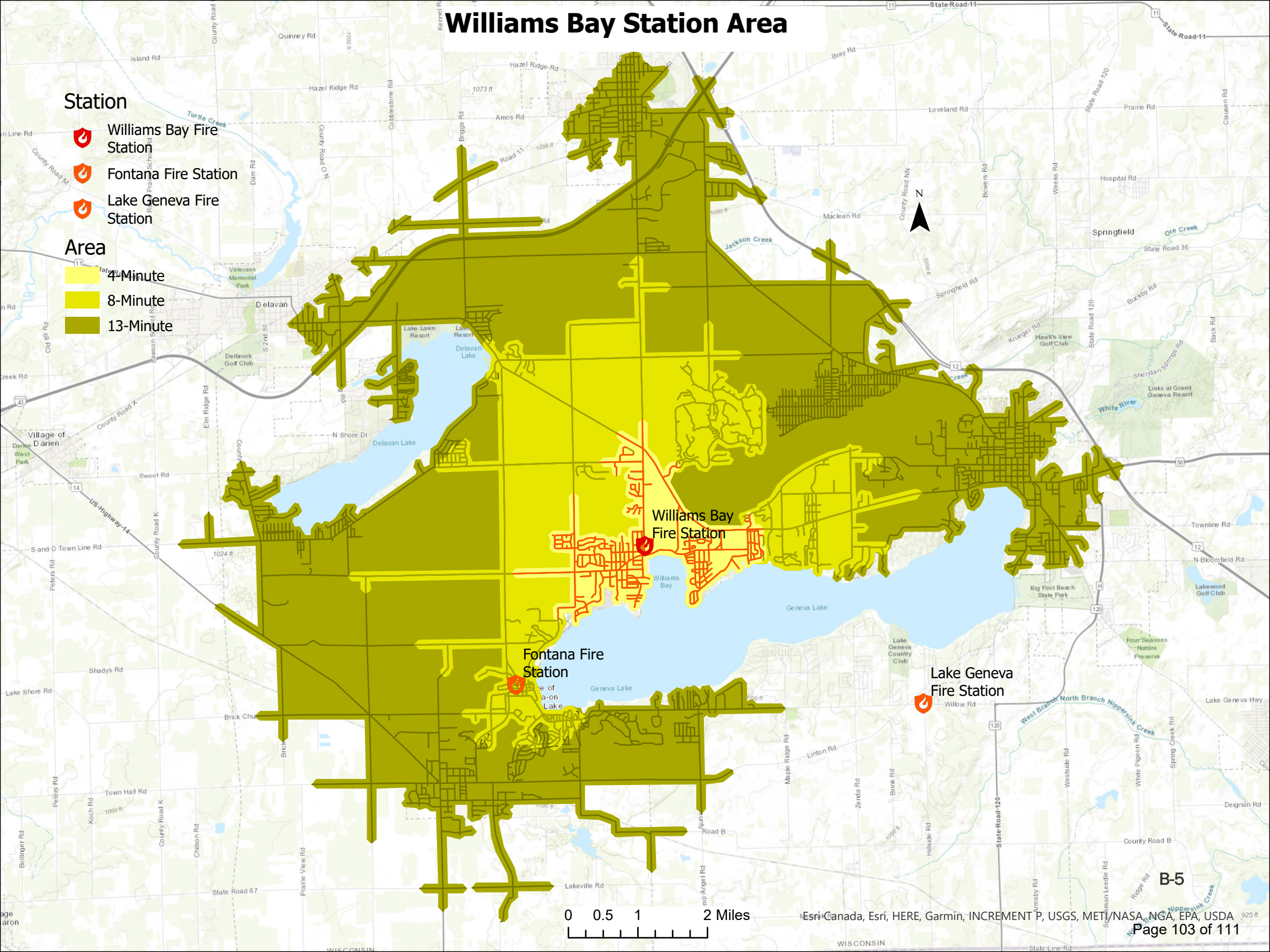
Williams Bay Station Area

Station

-  Williams Bay Fire Station
-  Fontana Fire Station
-  Lake Geneva Fire Station

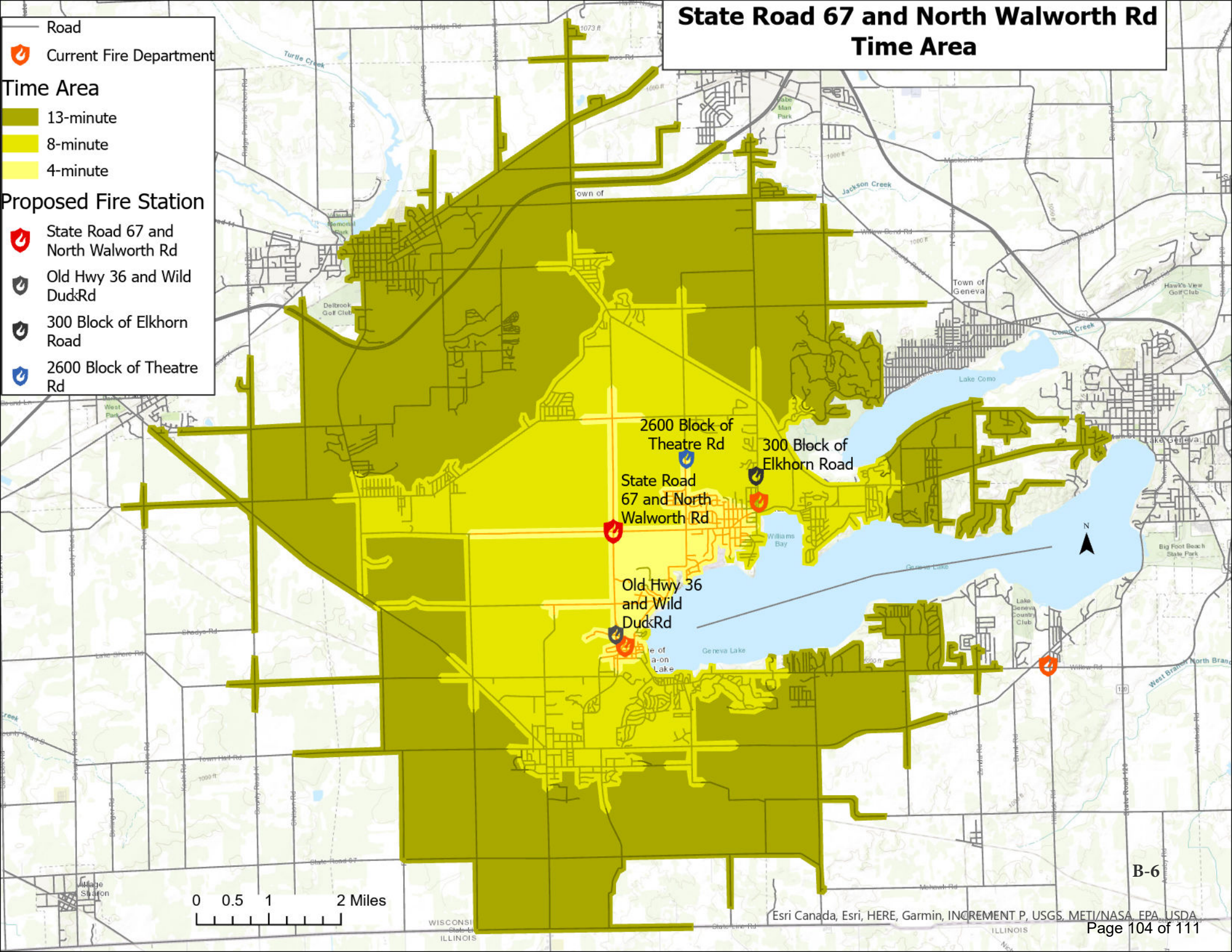
Area

-  4-Minute
-  8-Minute
-  13-Minute



State Road 67 and North Walworth Rd Time Area

- Road
- Current Fire Department
- Time Area
 - 13-minute
 - 8-minute
 - 4-minute
- Proposed Fire Station
 - State Road 67 and North Walworth Rd
 - Old Hwy 36 and Wild Duck Rd
 - 300 Block of Elkhorn Road
 - 2600 Block of Theatre Rd



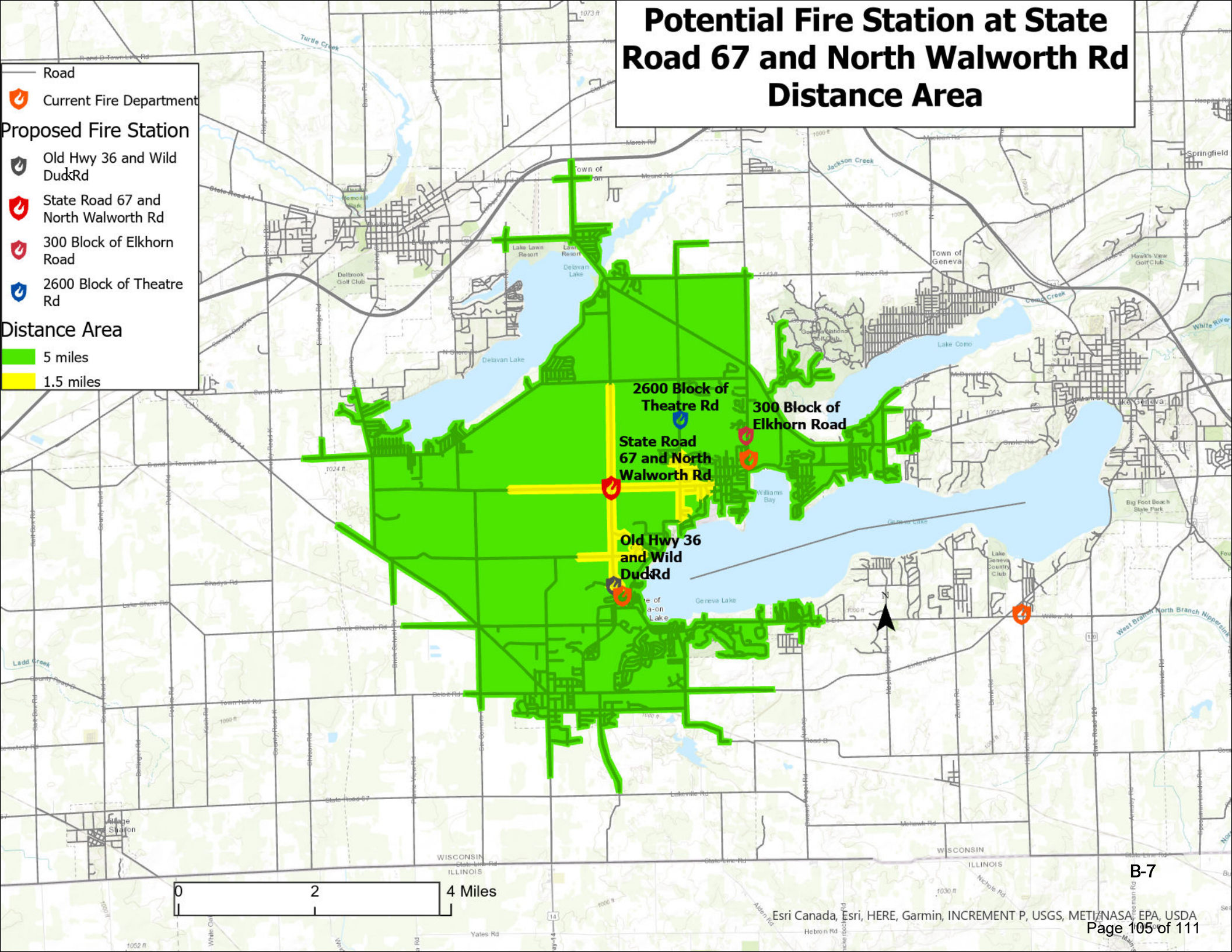
B-6

Potential Fire Station at State Road 67 and North Walworth Rd Distance Area

- Road
- Current Fire Department
- Proposed Fire Station**
 - Old Hwy 36 and Wild Duck Rd
 - State Road 67 and North Walworth Rd
 - 300 Block of Elkhorn Road
 - 2600 Block of Theatre Rd

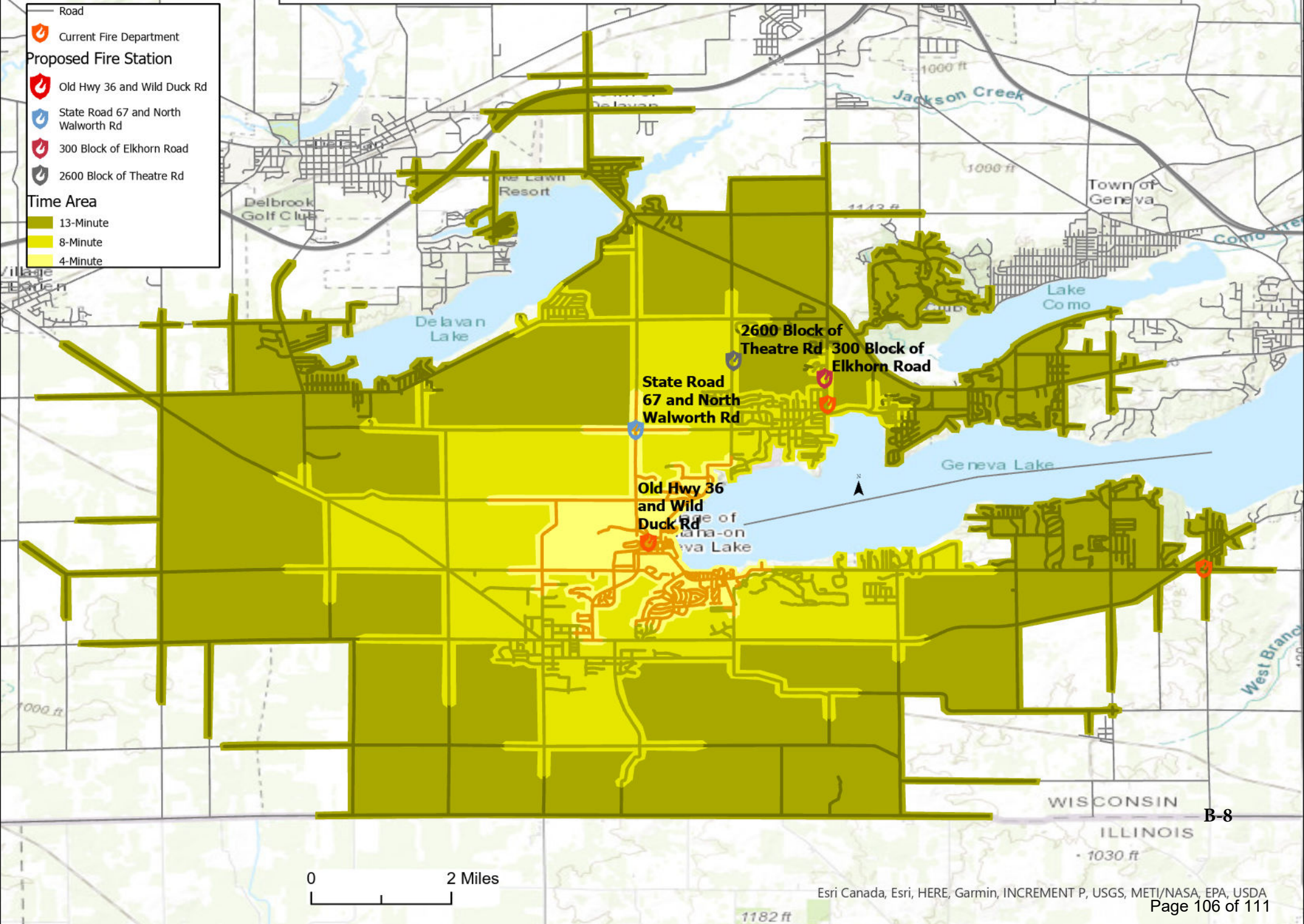
Distance Area

- 5 miles
- 1.5 miles



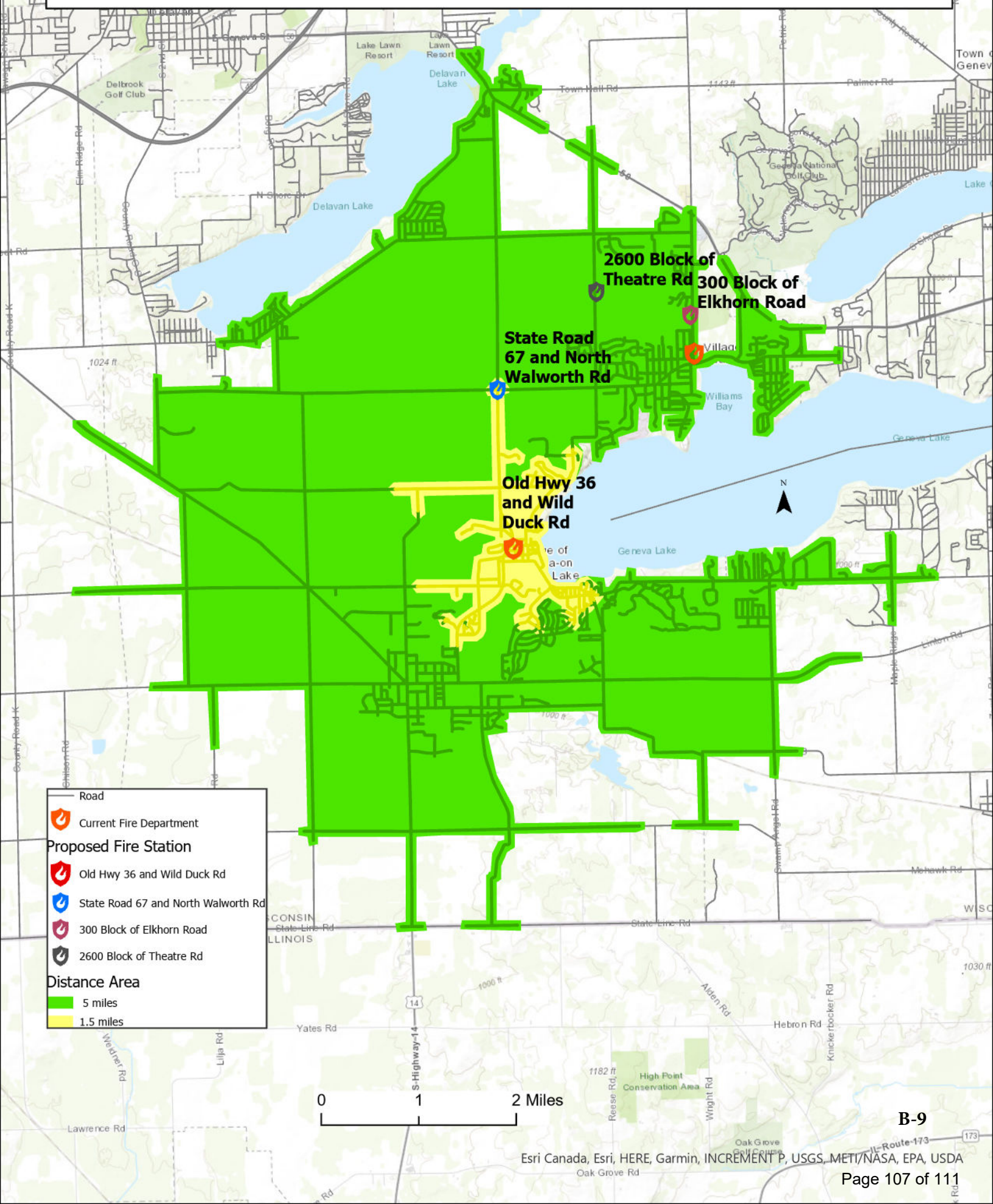
Potential Fire Station at Old Hwy 36 and Wild Duck Rd Time Area

- Road
- Current Fire Department
- Proposed Fire Station
- Old Hwy 36 and Wild Duck Rd
- State Road 67 and North Walworth Rd
- 300 Block of Elkhorn Road
- 2600 Block of Theatre Rd
- Time Area
- 13-Minute
- 8-Minute
- 4-Minute

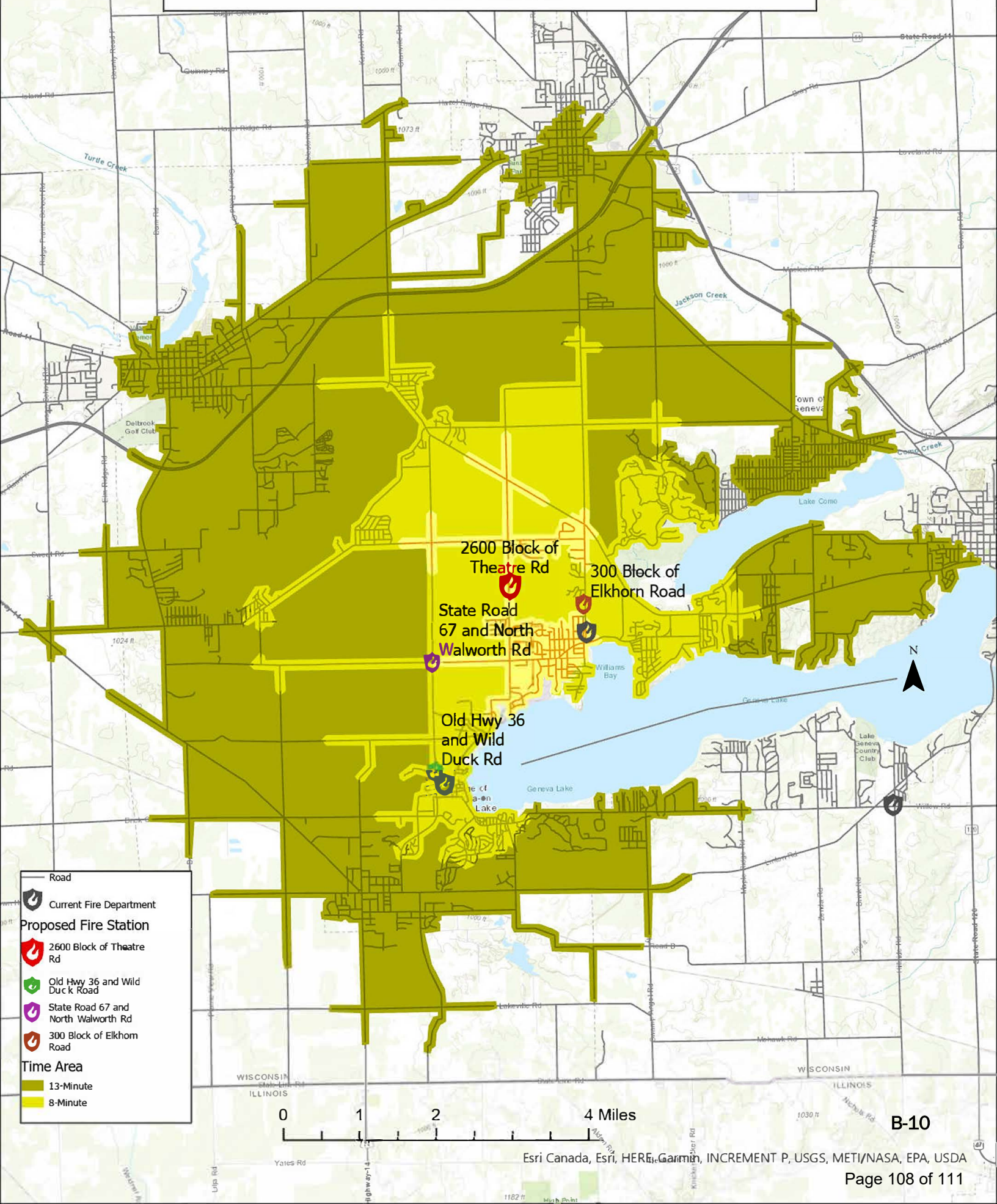


B-8

Potential Fire Station at Old Hwy 36 and Wild Duck Rd Distance Area

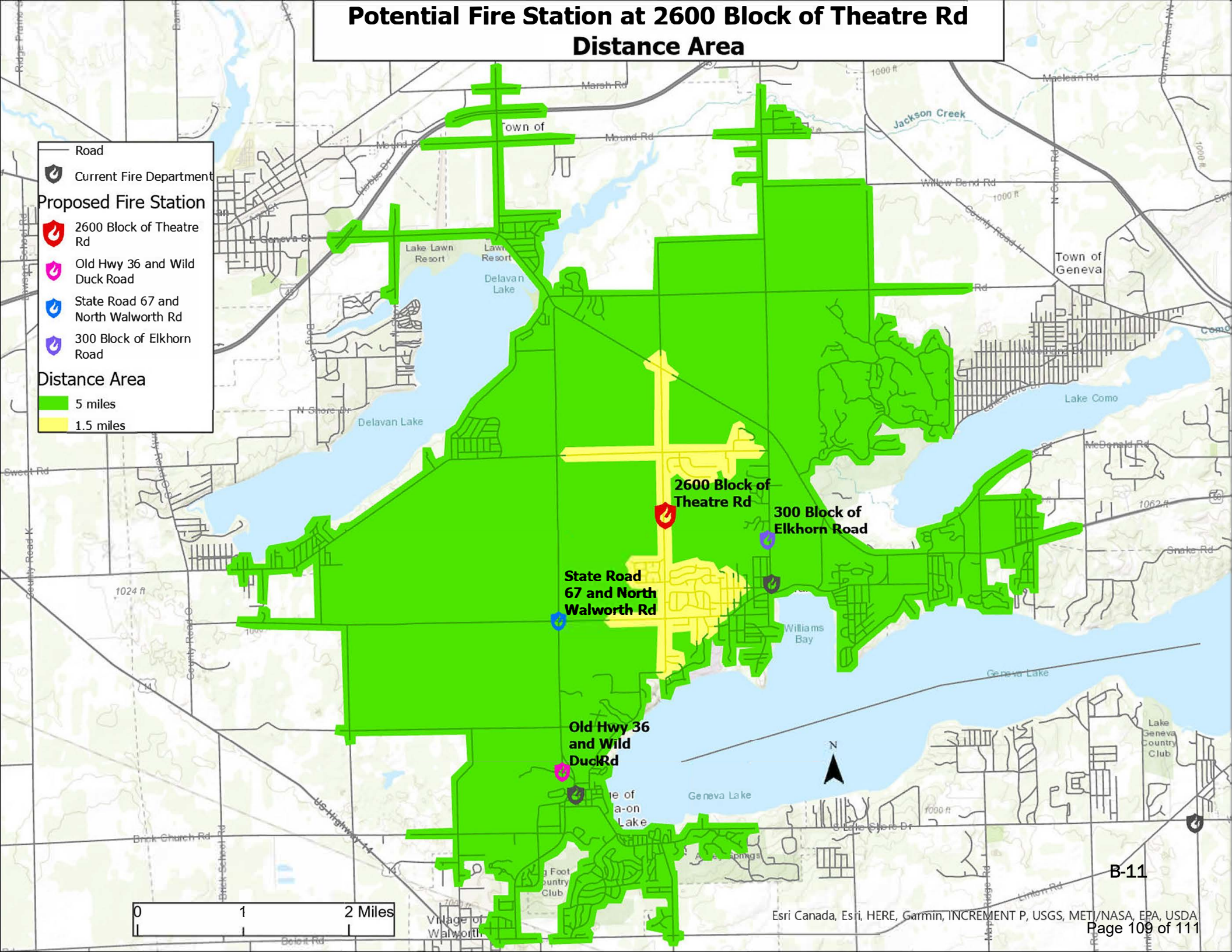


**Potential Fire Station at 2600 Block of Theatre Rd
Time Area**



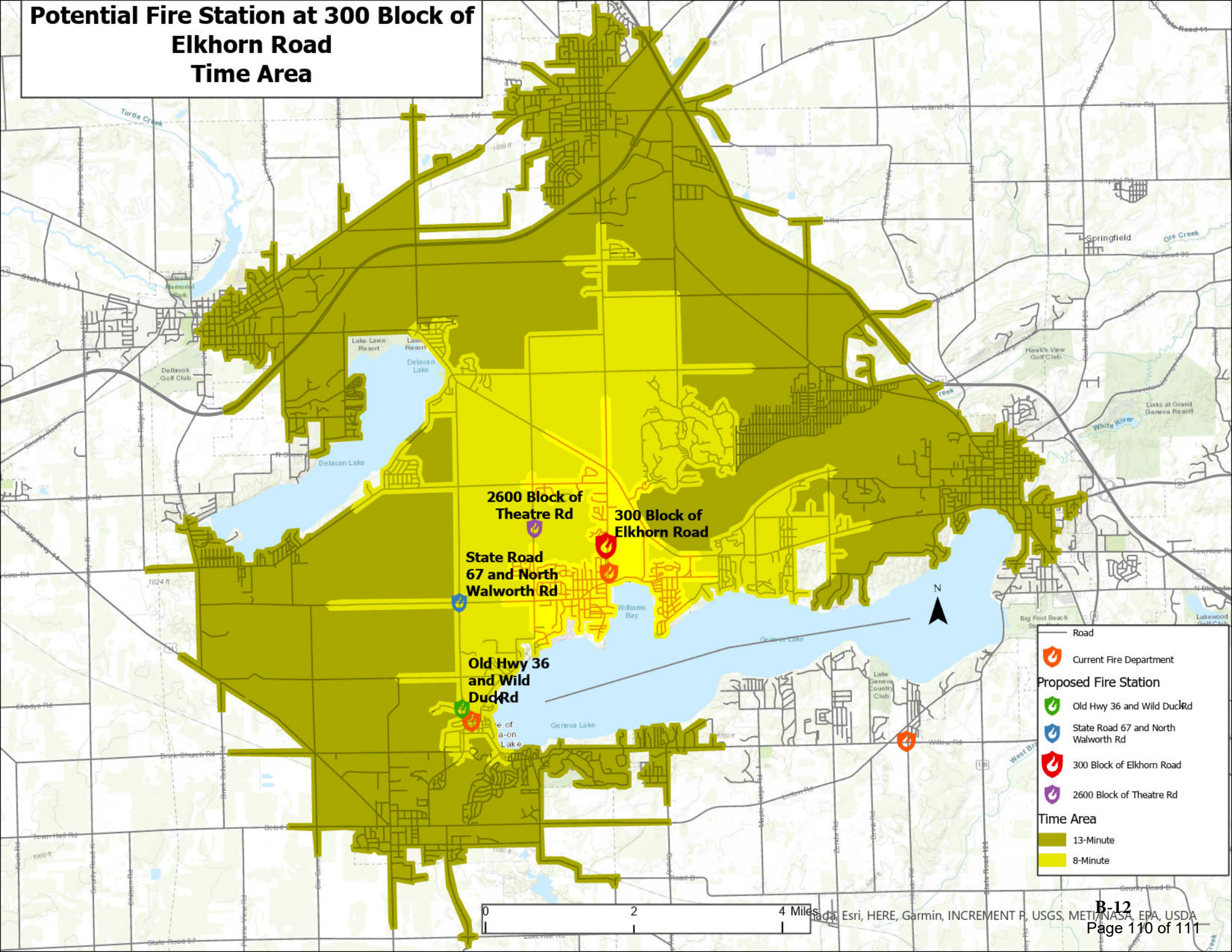
Potential Fire Station at 2600 Block of Theatre Rd Distance Area

- Road
- Current Fire Department
- Proposed Fire Station**
 - 2600 Block of Theatre Rd
 - Old Hwy 36 and Wild Duck Road
 - State Road 67 and North Walworth Rd
 - 300 Block of Elkhorn Road
- Distance Area**
 - 5 miles
 - 1.5 miles



B-11

Potential Fire Station at 300 Block of Elkhorn Road Time Area



Road

Current Fire Department

Proposed Fire Station

Old Hwy 36 and Wild Duck Rd

State Road 67 and North Walworth Rd

300 Block of Elkhorn Road

2600 Block of Theatre Rd

Time Area

13-Minute

8-Minute

Potential Fire Station at 300 Block of Elkhorn Road Distance Area

Road

Current Fire Department

Proposed Fire Station

300 Block of Elkhorn Road

Old Hwy 36 and Wild Duc Rd

State Road 67 and North Walworth Rd

2600 Block of Theatre Rd

Distance Area

5 miles

1.5 miles

